



Connect to Your Future

College of Lake County 2016/17 Catalog



Welcome to the College of Lake County

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2016 Fall Semester

August 15-20	Faculty / Staff Development Week (Registration / Advisement Ongoing)
August 22	Classes Begin
September 5-6	Labor Day Recess (no classes)
October 18	Mid-Semester
October 31	Priority Registration for Spring Begins (for current students only)
November 3	Open Registration for Spring Semester Begins
November 23-27	Thanksgiving Recess (no classes)
December 10-16	Final Exams
December 16	Semester Ends

2017 Spring Semester

January 9-14	Faculty / Staff Development Week (Registration / Advisement Ongoing)
January 16	Martin Luther King Jr. Day (no classes)
January 17	Classes Begin
March 6	Priority Registration for Summer and Fall Begins (for current students only)
March 9	Open Registration for Summer and Fall Begins and Continues through August
March 13	Mid-Semester
March 20-26	Spring Vacation (no classes)
May 6-12	Final Exams
May 12	Semester Ends
May 13	Commencement

2017 Intersession

May 16	Classes Begin
May 29	Memorial Day Recess (no classes)
June 2	End of Session

2017 Summer Session

June 5	Classes Begin
July 2	Mid-Session
July 4	Independence Day Holiday (no classes)
July 29	End of Session

2017 Fall Semester

August 14-19	Faculty / Staff Development Week (Registration / Advisement Ongoing)
August 21	Classes Begin
September 4-5	Labor Day Recess (no classes)
October 17	Mid-Semester
October 30	Priority Registration for Spring Begins (for current students only)
November 2	Open Registration for Spring Semester Begins
November 22-26	Thanksgiving Recess (no classes)
December 9-15	Final Exams
December 15	Semester Ends

2018 Spring Semester

January 8-13	Faculty / Staff Development Week (Registration / Advisement Ongoing)
January 15	Martin Luther King Jr. Day (no classes)
January 16	Classes Begin
March 5	Priority Registration for Summer and Fall Begins (for current students only)
March 8	Open Registration for Summer and Fall Begins and Continues through August
March 12	Mid-Semester
March 19-25	Spring Vacation (no classes)
May 5-11	Final Exams
May 11	Semester Ends
May 12	Commencement

2018 Intersession

May 15	Classes Begin
May 28	Memorial Day Recess (no classes)
June 1	End of Session

2018 Summer Session

June 4	Classes Begin
July 1	Mid-Session
July 4	Independence Day Holiday (no classes)
July 27	End of Session

Established by the citizens of Lake County within the framework of the Illinois Master Plan for Higher Education, the College of Lake County is a comprehensive community college dedicated primarily to meeting the post-secondary educational needs of individuals within District 532. The College of Lake County is accredited by the Higher Learning Commission, 230 S. LaSalle St., Suite 7-500, Chicago, IL 60604-1413, (312) 263-0456 or (800) 621-7440.

Mission Statement

The College of Lake County is a comprehensive community college that delivers high quality, accessible learning opportunities to advance student success and strengthen the diverse communities we serve.

Vision Statement

College of Lake County strives to be an innovative educational institution offering exceptional learning experiences and to be widely recognized for student success, business and community partnerships and for the achievements of faculty, staff and alumni.

Values

We hold these values to be the cornerstone to fulfilling the College's mission.

1. **Learning:** Compels us to create an atmosphere of academic excellence and life-long learning by pursuing the best ideas, approaches and methods.
2. **Integrity:** Requires us to work together honestly and respectfully.
3. **Quality:** Commits us to ongoing continuous improvement and excellence.
4. **Service:** Calls on us to serve as a force for improving the educational, economic, social and cultural quality of life of our students and the community.
5. **Accountability:** Guides us to be responsible and exercise good stewardship.
6. **Diversity:** Drives us to embrace and respect the uniqueness of students, employees and community members.

Goals and Objectives

The College of Lake County sets forth the following goals and objectives for Fiscal Year 2016-2017:

1. **Advance student learning, success and completion.**
The college will help students identify and work toward their educational goals and prepare them to participate in the workforce.
2. **Maximize educational opportunity and equity in student outcomes.**
The college will enhance, develop and promote educational opportunities and work to increase enrollment and external partnerships.
3. **Promote excellence in the areas of Diversity, Global Engagement, Sustainability, and Wellness as strengths within the college and Lake County community.**
The college will strive to build an inclusive community that recognizes, values and respects people of all cultures and ways of life while cultivating social justice, global citizenship and environmental responsibility.
4. **Enable a culture of innovation, excellence and continuous improvement.**
The college will promote employee engagement to create and sustain a culture of high performance, intellectual growth, collaboration and innovation that supports continuous improvement of academic programs and college processes.

CLC Mission and Goals

College of Lake County Learning Outcomes

The goal of the CLC Learning Outcomes is to prepare students for life-long learning, to maintain high academic standards, and to advance student success in future academic work and careers. The skills represented in the learning outcomes are developed by completing coursework across the curriculum and by participating in student organizations and clubs.

Critical Thinking

Identify issues, define vital questions and analyze evidence that lead to well-reasoned judgments and conclusions.

Oral Communication

Communicate ideas verbally that are well-organized, appropriate to audience and purpose and use an effective delivery.

Writing

Compose well-organized and well-supported texts that are appropriate to audience and purpose and that, when applicable, demonstrate the ability to integrate the ideas of others.

Reading

Comprehend a variety of texts in order to enhance understanding of content and make inferences that lead to new insights and ideas.

Information Literacy

Find, analyze, and use information in order to answer questions, develop new questions, and create knowledge through ethical participation in learning communities.

Quantitative Literacy

Compute, reason and solve quantitative problems from a wide array of authentic contexts and everyday life situations

Technological Competency

Select and apply contemporary forms of technology to solve problems, compile information or produce a product.

Diversity and Social Justice

Engage with and learn from ideas, belief and behaviors different from one's own. Identify concrete ways to contribute to a fair and just world.

The College of Lake County offers students a variety of educational options. Many come to CLC looking for education that will lead immediately to a satisfying career. Other students come to gain college credit so that they may transfer to a four-year college or university. Still others come to develop a specific job skill, to improve their ability to speak and write the English language or to continue the process of life-long learning. Some students come to the college undecided about their futures. To meet the needs of all of these students, CLC offers a variety of programs of study.

Transfer Education

Students who come to the College of Lake County in order to earn credits that are transferable to a four-year college or university will find a wide range of programs designed to prepare them for work at the junior level. These programs lead either to an Associate in Arts (A.A.), an Associate in Science (A.S.), an Associate in Engineering Science (A.E.S.), an Associate in Fine Arts (A.F.A.) or an Associate in Arts in Teaching (A.A.T.) degree at CLC. Classes in these programs are comparable to those offered in the first two years at a four-year institution.

Students are urged to select the college where they would like to transfer and design their program to meet the requirements of that institution. For specific information on which courses are transferable to a given college or university, students should consult the Counseling Center.

Requirements for the Associate in Arts, Associate in Science, the Associate in Engineering Science, Associate in Fine Arts and Associate in Arts in Teaching degrees are listed on pages 48-112.

Career Education

Many students are working to gain skills and knowledge in a field in order to find a job in that career area when they leave CLC. Some of these students take only a few career courses to reinforce and improve skills they already possess. Other career students enroll in a two-year program that leads to an Associate in Applied Science degree (A.A.S.) or a shorter sequence that leads to a certificate. See page 113 for more information.

Many CLC career students are recent high school graduates. Some have recently completed a high school equivalency program (GED). Many others are re-educating themselves to keep up with changes in the workplace. Trained and skilled individuals are needed to meet increasingly exacting qualifications in many fields. Career programs prepare students to step directly into this fast-moving age of technological change. The college currently offers over 40 specialized career programs, many of which are available both day and evening.

The college also offers programs to meet the needs of students whose first language is not English, or students who have their GED or high school diploma, but have not yet met College Reading and Writing Readiness standards. The Carl Perkins Supported Career Programs offers academic support in the areas of Administrative Office Systems, Automotive and HVAC. Students in these certificate programs may receive assistance in the form of in-class tutoring, additional academic support classes and career assistance upon certificate completion. For more information call (847) 543-2672.

In addition to the career programs offered within the CLC district, there are several joint educational agreements in effect that allow CLC students to attend programs at other institutions that are not offered at CLC at greatly reduced costs.

Such agreements exist with the following institutions:

- Elgin Community College in Elgin, Ill.
- Gateway Technical College in Kenosha/Racine/Elkhorn, Wisc.
- Harper College in Palatine, Ill.
- Kankakee Community College in Kankakee, Ill.
- McHenry County College in Crystal Lake, Ill.
- Oakton Community College in Des Plaines, Ill.
- Triton College in River Grove, Ill.

For more information about joint agreements see page 209 or contact the assistant director for Educational Affairs at (847) 543-2310.

Developmental Education

CLC is committed to helping students develop the skills that are needed for college-level courses and programs. Because of this commitment, the college requires that all new students meet the language and mathematics requirements specified as prerequisites for college-level courses.

Students who need to review or develop their language or mathematics skills are encouraged to enroll in one or more of the skills enhancement courses until they develop college-level skills in reading, writing and/or mathematics. Students who need work in all three areas will be limited to courses that do not require college-level reading, writing and mathematics.

Students for whom English is their second language and have not achieved language proficiency are required to enroll in academic ESL classes such as ELI 100, 101, 102, 103, 104, 105, 106, 107 and 108. Placement in a specific course depends on ESL placement test scores (COMPASS) and recommendations of faculty.

Programs of Study and Educational Options

Testing

One way students may show College Reading and Writing Readiness and Basic Algebra Readiness is by taking the Academic Proficiency Test, administered by the Testing Center. For information on other ways to show College Reading and Writing Readiness and Basic Algebra Readiness, see page 374. The Academic Proficiency Test includes a Language Skills test and a Mathematics test. This test is administered at all three CLC Testing Centers. Please call for further information:

Grayslake Campus, Grayslake: (847) 543-2076

Lakeshore Campus, Waukegan: (847) 543-2120

Southlake Campus, Vernon Hills: (847) 543-6544

Courses

Instruction in mathematics, writing and reading is provided by specific courses in the various divisions and modules in the Tutoring Centers. Students who have questions about courses in mathematics, writing or reading should contact a counselor, advisor or the appropriate division office:

Engineering, Math and Physical Sciences:

Room T302, (847) 543-2044

Communication Arts, Humanities and Fine Arts:

Room B210, (847) 543-2040

Counseling Center: C Wing, (847) 543-2060

Tutoring

Individual tutoring by trained professionals and by student peers is available at all three campuses.

The Tutoring Centers support writing across the curriculum. Help is available not only for all levels of English courses but also in relation to any course that has a writing component. Offering individual support for all levels of writing ability, peer and specialist tutors help students become more confident and more proficient writers by identifying their strengths and weaknesses.

The centers provide tutoring in mathematics, science, accounting and computer skills. Tutors also assist students with math-related questions from other courses. Additional help is available through study groups, supplemental texts, workbooks, software and online resources. In addition, the Grayslake Tutoring Center offers a math computer lab.

Coaching for Academic Success (CAS)

An academic coach is assigned to students enrolled in pre-college level mathematics and English courses designed to develop the skills needed for college-level work. Coaches follow up on academic alerts from instructors, provide intrusive academic support, connect students directly to resources and help students track their academic progress. Students are encouraged to connect with their academic coach for support. For more information, contact CAS in Room L123 or at (847) 543-2763.

Adult Education

Adult Education classes are intended for people who live in Lake County. They are not appropriate for students with B1, B2, F1, F2, J1 or J2 visas, nor are they appropriate for short-term visitors to the U.S.

In general, students must be at least 18 years old in order to enroll in Adult Education classes. However, 16- and 17-year-olds may register with an official Secondary School Reference Form signed by their local high school authorized representative. U.S. high school graduates and 16-year-olds must meet additional eligibility requirements. New students must attend an orientation session before scheduling a placement test and attending classes.

The Adult Basic Education, GED and ESL division provides several specific types of educational opportunities and is funded in part by grants from the federal government representing 32 percent of the total cost of the program.

Adult Basic Education

Adult Basic Education (ABE) provides individualized and class instruction in reading, general language development, writing, mathematics and life skills. Students proceed at their own pace.

English as a Second Language

English as a Second Language (ESL) classes are for students whose primary language is not English. Speaking, listening, reading and writing skills are taught. Students may enroll at the beginning, intermediate or advanced level.

General Educational Development

General Educational Development (GED) classes prepare Lake County adults who have not completed high school to take the GED exam. In addition to the GED exam, students must pass the Constitution Test before they are awarded a high school equivalency certificate. This exam and classes are offered in English and Spanish.

Perkins Supported Career Training

Support classes are offered for ESL and GED students with Federal Perkins grants for the following career programs: Administrative Office Systems, Automotive Technology and HVAC Engineering Technology.

Non-Credit Opportunities

Workforce and Professional Development Institute: www.clcillinois.edu/wpdi

The Workforce and Professional Development Institute (WPDI) offers a variety of programs designed to improve organizational performance and profitability and enhance professional skills. Organizations and employees in both the private and public sectors benefit from WPDI programs and services.

Through **Client Solutions**, training programs may be delivered for groups of employees to address specific skill gaps and organizational needs. Programs can be customized to an organization's specific objectives and can be delivered either onsite or at one of CLC's campuses. Training program topics include manufacturing and industrial technologies, managerial and supervisory skills, computer skills, basic skills development, English as a Second Language, business writing, presentation skills and workplace foreign languages. College credit courses can also be offered onsite to enhance employee development. Professional coaching and career coaching are also available for all levels of management and teams within the organization. For more information, contact Client Solutions at (847) 543-2615 or via email at corporatetraining@clcillinois.edu.

Through **Professional Development (PD)**, individuals enroll in courses designed to help develop their career skills. With PD training programs, students will enhance their current workforce skills or learn new ones. A variety of training programs prepare individuals for licensure, license renewal or certification requirements of outside agencies or organizations. With the constantly changing work environment, gaining new skills or preparing for an alternative career is a smart strategy. The course selection includes computer skills, real estate licensure preparation, business skills, human resources, training for beverage and alcohol seller and servers (BASSET), professional interpreting and concealed carry license training. Individuals can also learn vocational skills through programs like truck driver, forklift operator private investigation, private pilot ground school and home inspection training programs. PD also offers online training programs provided by several vendors. For more information, call (847) 543-2615 or email professionalworkshops@clcillinois.edu.

The **Healthcare and Nursing Continuing Education** courses provide opportunities to maintain, obtain or enter the health care profession or achieve career goals. Courses are for health care professionals who have been out of the nursing profession for a time and need to update their skills to obtain employment. Courses include Pharmacy Technician, CPR Basic and Refresher, CNA recertification. Veterinary Assistant and continuing education courses for massage therapists are also offered. For more information call (847) 543-2615 or email professionalworkshops@clcillinois.edu or visit www.clcillinois.edu/professional.

The **Illinois Small Business Development and International Trade Center (IL SBDC ITC)** at CLC has been working with businesses since 1985. Grant funded, the center provides expert business advice and counsel to Lake County businesses to grow domestically and globally. The center provides access to a wide array of resources from funding preparation, market selection, trade compliance, strategic planning and everything in between. Call to schedule an appointment with one of the expert advisors and take your business to the next level. Small business workshops are also available online and in class to provide skill growth and development. For more information or to schedule an appointment, call (847) 543-2033, email illinoisSBDC@clcillinois.edu or visit www.clcillinois.edu/sbdc-itc.

If you are a small, minority-, veteran- or women-owned business, the **Construction Business Development Center (CBDC)** is here to assist you to "Move Illinois." The "Move Illinois: The Illinois Tollway Driving the Future" program is a 15-year, \$12 billion capital program, with Small Business Set Aside (SBSA) projects from \$50,000 up to \$1,000,000 and unbundled projects up to \$5,000,000. Qualify to make competitive bids on these projects with FREE assistance from the CBDC. Through one-on-one counseling sessions and conversations with our Construction Business Specialist, as well as other special educational events, you'll learn what you need to know to do business with the Illinois Tollway system. The Construction Business Development Center is a collaboration between the Illinois Tollway and the Illinois Community College Board in partnership with select community colleges, including College of Lake County. For more information, call (847) 543-2615.

The **Judicial Services** department, in partnership with the 19th Judicial Circuit of Illinois, offers a variety of programs for the court system. The Defensive Driving Program, offered since 1991, allows motorists who have received a minor traffic violation in Lake County the option to take classes under court supervision. The classes are accredited by the National Safety Council and emphasize defensive driving techniques. The National Safety Council's program "Alive at 25" is also available for teen drivers. The Family Parenting Program is for parents with minor children who are seeking dissolution of marriage. The Live Victim Impact Panel is designed to affect the behavior and state of mind of those convicted of DUI and related offenses. The Volunteer Probation Support Program recruits, trains and assigns volunteers to work with adults and juveniles during probation periods, providing support, mentoring and supervision. For more information on these programs contact Judicial Services at (847) 543-2185.

Programs of Study and Educational Options

Personal Enrichment

Personal Enrichment offers non-credit programming in a pleasant, comfortable atmosphere for learners of all ages. Students can enjoy leisure, recreation and personal enrichment classes that enhance personal growth and expand individual experiences. Students can take a trip, learn to dance, improve physical fitness, relive history or appreciate the arts. Classes range from one-day workshops to semester-length courses. Students learn new skills, meet new people and develop new hobbies in a relaxed environment. Whatever the interest, offerings are available for the entire family. Visit www.clcillinois.edu/personalenrichment.

Gifted Children Classes (Grades 7-8)

To enroll in the Fast-Paced program for gifted and talented children, students must achieve a SAT score of 500 or above for math and 450 or above for verbal.

Youth Classes (Grades 1-12)

A variety of educational and recreational programs are offered for students in grades 1-12. Programs include academic enrichment in math, test prep, writing, STEM and the arts.

Summer Youth Camps (Grades 1-12)

Camp Explore offers premium summer programs for youth including LEGO®, the arts, math, technology, STEM and ACT test prep.

Discovery

The Discovery program for adult learners 50-plus years of age offers exciting and creative courses. Short-term classes are offered that cover a wide variety of topics including theatre, art and day trips and tours for fun or personal development. College instructors or community professionals facilitate most sessions. For more information call (847) 543-2615.

For more information on these programs, call the Center for Personal Enrichment at (847) 543-2615, visit www.clcillinois.edu/personalenrichment or email cpeinfo@clcillinois.edu.

Philosophy Statement for the First-year Experience at the College of Lake County

We at CLC believe that the first-year experience is critically important in providing the foundation for a student's college success. The first-year experience occurs during the first half of a student's program of study.

Recognizing the unique challenges facing first-year students of all ages, the college community is determined to work with students to do whatever is necessary to help them reach their educational potential.

Staff, faculty and board members will do their part in:

1. Creating a safe and welcoming campus environment
2. Communicating clearly defined transition paths for career and transfer students
3. Providing high quality instruction and academic rigor
4. Engaging students in the learning process
5. Establishing positive mentoring and advising relationships with first-year students
6. Communicating college resources available to first-year students
7. Promoting inclusion and an appreciation for social and cultural diversity
8. Assisting students in becoming involved and integrated into the College of Lake County community
9. Listening to students and providing follow-up
10. Considering the unique characteristics, responsibilities and life experiences of community college students
11. Ensuring evaluation and improvement of the first-year experience

Students will do their part in:

1. Taking responsibility for their learning and education
2. Attending class and being prepared
3. Participating actively in the learning process
4. Communicating issues or concerns for early resolution
5. Seeking out resources provided by the college
6. Engaging diverse ideas and people with openness and mutual respect
7. Exploring opportunities for involvement in the College of Lake County community
8. Building relationships with faculty, staff and peers

Admission Policy

CLC provides a wide range of learning opportunities to meet the various educational needs of students from diverse educational backgrounds. The college welcomes all who may benefit from its courses and programs of study. An individual will be admitted to the college by completing the Student Information Form found at www.clcillinois.edu/apply. The college serves those who are high school graduates, others who are 18 years of age or older, and individuals under 18 years of age who meet established criteria.

Admission to the college does not guarantee entrance into all courses or programs of study. Entrance into specific programs may depend on other criteria such as age, evidence of language and mathematics skills and level of education. Students taking college-level courses must demonstrate college-level competency in language and mathematics. In addition, students are required to complete specified prerequisites prior to enrollment in certain courses.

The college reserves the right to limit enrollment because of space or budget restrictions, to establish selective admission requirements and to give preference to residents of Community College District #532.

Please visit www.clcillinois.edu/apply for a Student Admission Form. Specific requirements can be found on page 373.

Admission to Associate in Arts, Associate in Science, Associate in Engineering Science, Associate in Fine Arts and Associate in Arts in Teaching

To qualify for unconditional admission to these programs, students must provide evidence that they have attained a certain level of knowledge in the arts and sciences through previous learning. Evidence may be provided by observing the following procedures:

1. Successfully complete the admission requirements. See pages 373-375 for more information.
2. Submit either a high school transcript or a student profile report from the American College Testing (ACT) Program showing the achievement listed below:
 - A. High school transcript showing successful completion of the following:
 - **Four years of English** emphasizing written and oral communication and literature.
 - **Three years of social science** emphasizing history and government.
 - **Three years of mathematics** including introductory through advanced algebra, geometry, trigonometry or fundamentals of computer programming.
 - **Three years of science** including laboratory science.
 - **Two years of electives** from any combination of foreign language, music, vocational education or art.Up to three of the 15 required units of course work may be redistributed by deducting no more than one unit from each of the categories of social science, mathematics, science and electives and completing those units in one of the other categories.
 - B. ACT Student Profile Report showing the completion of the high school course distribution requirements listed above or standard scores of 21 or higher for English, reading, mathematics and science reasoning.
 - C. SAT Report showing scores of 500 or higher for verbal and mathematics.

Admission and New Student Information

The Office of Admissions will consider exceptions to these procedures on an individual basis for students who have completed 30 or more semester hours of course work with grades of C or better from an accredited college or university, those with an associate degree from an accredited college or university and those who present equivalent course work or test scores.

Students who are unable to provide any of the forms of information indicated above will be conditionally admitted to the degree program and will be required to complete all of the following prescribed College of Lake County courses:

English:	ENG 121 English Composition I
Speech:	CMM 121 Fundamentals of Speech
Mathematics:	Any mathematics course required for the A.A., A.A.T., A.S., A.E.S. or A.F.A. degree in this catalog
Science:	Any lab science course from the list required for an A.A., A.A.T., A.S., A.E.S. or A.F.A. degree in this catalog
Social Sciences:	Any social science course required for an A.A., A.A.T., A.S., A.E.S. or A.F.A. degree in this catalog
Humanities:	ENG 122 English Composition II or any humanities course required for an A.A., A.A.T., A.S., A.E.S. or A.F.A. degree in this catalog

See pages 48-112 for courses required for degrees.

Please see the section on advising on page 27 of this catalog for further information.

Admission to Limited Enrollment Health Career Programs

Health career programs are open to a limited number of students.

Computed Tomography, Dental Hygiene, Health Information Technology, Magnetic Resonance Imaging, Medical Imaging, Registered Nursing and Surgical Technology students must complete a special screening procedure. Preference is given to legal residents of Community College District 532, including other community college districts with which CLC has an appropriate joint educational agreement, prior to considering out-of-district, out-of-state or international student applicants.

Please see the section on Associate in Applied Science Programs of Study on pages 114-214 of this catalog for further information including selective admission requirements.

Admission for Students Under the Age of 18 or Currently Attending High School

A student under the age of 18 or currently attending high school must submit a CLC Secondary School Reference form signed by a parent and an official of the secondary school of current or last attendance. To apply, submit the following credentials to the Office of Admissions.

1. Completed CLC Student Admission Form, which can be found at www.clcillinois.edu/apply.
2. Completed CLC Secondary School Reference form signed by a school representative and parent. Home schooled students will have the form signed by the parent or home school representative.

Admission for Students Age 16-17 Enrolling in Adult Education Classes Only

Students who are 16-17 years of age and are enrolling in adult education classes only should submit the following credentials to the Office of Admissions:

1. Completed CLC Student Admission Form, which can be found at www.clcillinois.edu/apply.
2. Completed CLC Secondary School Reference form signed by a school representative and parent. Home schooled students will have the form signed by the parent or home school representative.

Dual Enrollment/Dual Credit

The dual enrollment and dual credit programs at CLC offer high school students opportunities to earn college credit prior to graduating from high school. Dual enrollment allows high school students to enroll in CLC's regularly scheduled classes. Dual credit courses are offered under agreements between CLC and specific local high schools. High school students should check with their high school counseling office to see if their school participates in dual credit and to see what courses are available. Students who participate in dual enrollment or dual credit must meet CLC's academic proficiencies as identified in the college catalog. Students who are concurrently enrolled in high school (public, private or homeschool) are not eligible for federal Title IV funds. For additional information, contact the Dual Credit and College Readiness department at (847) 543-2030.

Admission for Students Under the Age of 16

A student under 16 years of age must be judged by both the high school and the College of Lake County to possess both exceptionally high academic ability and maturity to handle the discipline and personal skills required for successful completion of college work.

A student less than 16 years of age is required to submit all of the credentials outlined below to the Office of Admissions in order to enroll in credit courses:

1. Official school transcript(s) showing successful completion of the most advanced course offerings from the high school in the subject area in which the student wishes to enroll at CLC
AND
A letter of recommendation from the high school department outlining the student's intended course or study at CLC.
- Home-schooled students should submit the following credentials to the Office of Admissions: A letter from the home educator listing completed curricula
AND
A letter of recommendation from the home educator outlining the student's intended course of student at CLC.
2. Completed CLC Student Admission Form which can be found at www.clcillinois.edu/apply.
3. Completed Secondary School Reference form for students less than 16 years of age.
4. Middle school students must provide a letter from their district high school confirming that the high school cannot academically accommodate the student's needs and that the educational level needed exceeds the high school level.
5. All students must submit independent documentation of exceptional student ability through a standardized test. Acceptable standardized tests are listed on the Secondary School Reference form.

In addition to providing items listed above, students must meet all course prerequisites prior to the CLC division dean's consideration.

Admission of International Students

**Refer to addendum for replacement text for this section.*

International students are defined as any individual admitted into the U.S. on an F-1 student visa or issued the Form I-20 Certificate of Eligibility approved for study at CLC.

International students must be at least 17 years old and have completed the equivalent of an American high school education (12 years of formal education). International students must enroll in a minimum of 12 credit hours each semester.

Application deadlines are:

July 1 for fall semester, November 1 for spring semester and April 1 for summer session.

To apply, the following must be submitted:

- Completed International Student Application
- Completed CLC Student Admission Form, which can be found at www.clcillinois.edu/apply
- Official, certified, English translated copy of secondary school record, indicating completion
- Credit evaluation of college/university transcript for transfer, if applicable
- Evidence of sufficient financial support, including original bank letter and affidavit of support, as necessary
- Passport size photo
- A TOEFL exam is not required for English language training. Students who submit an official minimum score of 527/197/71 (paper-based/computer-based/Internet-based) will qualify for regular academic classes
- Completed International Student Agreement
- Completed International Student Transfer Form, if transferring from another U.S. institution

For further information about admission requirements, contact the international admissions specialist at (847) 543-2733.

Servicemembers Opportunity College

The college has been designated a Servicemembers Opportunity College (SOC) by the Department of Defense and the American Association of Community Colleges. Servicemembers Opportunity College Associate Degree (SOCAD) student agreements are available in many different curriculums offered at the college. CLC is committed to Great Lakes Naval Base personnel and their families. The college's in-district admission policies apply to all service personnel as well as to their families. For more information on applying for a SOC agreement, contact the Servicemembers Opportunity College Representative at (847) 543-2971.

How to Enroll at CLC: Steps for New Credit Students

Step 1

Complete a Student Admission Form.

You may complete the form online at www.clcillinois.edu/apply. CLC will process the form within one business day, however, it may take up to 10 business days before you receive your official acceptance letter in the mail. Visit www.clcillinois.edu/admission or call (847) 543-2090 for information about requirements for students under age 18 and for admission to academic programs with additional requirements.

Step 2

Learn your CLC myLogin and set up your account.

When your application has been processed, you will be given a CLC myLogin username and temporary password as part of the admission process. If you provided an email address on your application your username and password will be emailed to you. All new students will also receive an official admission letter with their login information via U.S. Mail. Your username and password will give you access to the myCLC Portal, including myStudentCenter, your source for registration information, class search, adding and dropping classes, making payment, viewing your class schedule, grades, transcript and many other features. Once you have your username and temporary password, you can set up your account at myclc.clcillinois.edu.

Step 3

Demonstrate that you meet proficiencies and prerequisites.

CLC has established language and math (basic algebra readiness) proficiency requirements. These proficiencies are basic requirements for college-level courses. Details on how to meet these requirements are on page 374. Additionally, some courses, such as college-level math, may have other prerequisites. The prerequisites for each course are included with the course listings in class schedules and the college catalog.

Have your documentation for proficiencies and prerequisites sent to the Office of Admissions, 19351 W.Washington St., Grayslake, IL 60030. Or use fax (847-543-3061) or email (to registrar@clcillinois.edu). For questions about proficiencies or prerequisites, call (847) 543-2061. For information about taking CLC placement tests, call the Testing Center at (847) 543-2076.

Step 4

Apply for financial aid and scholarships.

If you are concerned about paying for college, apply for financial aid. CLC offers a complete package of financial aid options (state and federal grants, scholarships, loans and work-study). We encourage students to apply, even if they think they may not be eligible. Many factors go into determining financial aid eligibility, so don't assume you won't qualify. For information, contact the Office of Financial Aid in the B Wing on the Grayslake Campus, call (847) 543-2062 or visit www.clcillinois.edu/financialaid. CLC's federal financial code is 007694.

Step 5

Attend a New Student Orientation (NSO) Session)

If you completed high school within the last two years and have not attended any other college or university, you are **required** to attend an in-person NSO session, which includes an academic planning meeting with an academic advisor, a meeting with a financial aid representative and class registration assistance. Complete steps 1 through 4, and then register for an in-person NSO at www.clcillinois.edu/nso.

If you graduated from high school more than two years ago, it is **recommended** that you complete the Online NSO, which can be found at www.clcillinois.edu/nso. Complete steps 1 through 4, and then meet with an academic advisor or counselor for assistance with course selection and registration. For information on meeting with an advisor or counselor, call (847) 543-2060.

Step 6

Complete the Registration Process.

If you did not register during a New Student Orientation, use this catalog to select your classes. Register using the **student portal** ("myCLC" at www.clcillinois.edu). If you need personal assistance, come to the Welcome and One-Stop Center in the B Wing at the Grayslake Campus, the Student Services office at the Lakeshore Campus or the Campus and Student Support Center in Room V130 at the Southlake Campus.

Step 7

Important Revisions!

Please read.

Pay Tuition and Fees by the Due Date.

CLC enforces tuition payment deadlines, so it is important to make payment arrangements by your payment due date. You must pay in full or set up an installment payment plan. Financial aid students must set up an installment payment plan under the “deferred” option. The installment plan only goes into effect if your aid does not cover your full tuition and fee obligation. A new drop process is in effect. Veterans: Refer to the Veteran’s Benefits Enrollment Form for payment plan requirements.

Visit www.clcillinois.edu/payment for details on drop dates and payment options. For more information about tuition payment, call (847) 543-2085. For information about financial aid, call (847) 543-2062.

Step 8

Get your textbooks.

CLC has a bookstore on each campus with the Grayslake Campus stocking books for all classes. Ordering online at clcbkst.com is the best way to find out pricing and availability. Orders can be picked up at any campus or shipped to your home. When buying in store, please print the Course Material List from myStudentCenter to order. Currently, over 350 titles can be rented. Information can be found on the CLC Bookstore website or by calling (847) 543-2086.

Printed Admission Forms are available at all three CLC campuses. If you have any questions about the application process, contact Enrollment Services at info@clcillinois.edu or call (847) 543-2090.

Admission Information for Non-U.S. Citizens

If you are not a U.S. citizen and have questions about attending the college, contact Kimy Lopez at (847) 543-2380.

Steps to Graduate

Graduation Planning

Counselors, faculty and academic advisors help students determine if they are meeting or have met the graduation requirements to earn a degree or certificate. Students may contact the Counseling, Advising and Transfer Center for more information at (847) 543-2060, or in the B Wing on the Grayslake Campus.

1. Meet with an appropriate advising professional to make sure you are meeting the requirements for the catalog term you are following.
2. If you have satisfied all the degree requirements, complete a Petition for Graduation online at www.clcillinois.edu/petition, during the last semester of your course completion. The deadline for students completing their coursework in the fall is October 1, spring semester is February 15 and summer session is July 1.
3. You will receive the results of the evaluation of your petition approximately four to six weeks after the petition deadline for the term you have designated as completing your requirements.
4. A commencement ceremony is held annually in the month of May for summer/fall graduates and spring/summer candidates.

Transcripts

You may request an official transcript of your CLC academic record online through myStudentCenter or by mail or fax using the printable transcript request form found at www.clcillinois.edu/studentrecords. At this time there is no fee for this service. However, a nominal fee might be charged for this service in the future.

Transcript requests are completed within two to four working days. Requests submitted online through myStudentCenter have a faster processing time. To avoid delay, make sure all required information is provided. If you have an outstanding financial obligation to the college, your transcript will not be released until the obligation has been cleared.

If you would like to pick up your transcript order instead of having it mailed, you may do so in the Welcome and One-Stop Center in the B Wing on the Grayslake Campus, during normal business hours. You must present a photo ID in order to have the transcript released. If someone is picking up the transcript on your behalf, you must include that person’s name on your transcript request and that person must also present a photo ID when picking up your transcript. It is important to note that since it takes at least two business days to process your transcript request, you are advised to call the Welcome and One-Stop Center to make sure the transcript is available before arriving to pick it up.

Financial Information

Tuition and Fees

Tuition and fees are subject to change through actions of the CLC Board of Trustees or changes in the calculation of out-of-district fees in accordance with the state formula. Regular tuition and fees effective for Fall 2016 are as follows:

In-District	
Tuition (per credit hour)	\$ 112.00
Comprehensive Fee (per credit hour)	\$ 9.05
Technology Fee (per credit hour)	\$ 5.00
Instructional Equipment Fee (per credit hour)	\$ 3.00
Capital Fee (per credit hour)	\$ 5.95
Total Tuition and Fees	\$ 135.00

Tuition and fees for non-credit courses (courses that do not lead to a state-approved degree or certificate) cover the cost of instruction. No state or local tax monies are used to support these courses. Out-of-district and out-of-state tuition is determined on a semesterly basis. Please refer to the current class schedule for this information.

The comprehensive fee supports student activities, student services, including child care, Program Board activities, the student newspaper, tutoring and infrastructure improvements as well as help to defray the costs of parking lot improvements and campus safety expenditures.

The College of Lake County reserves the right to assign “variable tuition” for some high-cost programs. Variable tuition rates may vary by program and will generally include additional tuition costs for individual courses within selected career programs. Programs with variable tuition rates will be noted within the course schedule.

Student Residency Status

Students are classified according to residency status at the time of admission to the college for purposes of tuition assessment and enrollment.

Proof of Residency

Evidence of district residency shall be based on ownership and/or occupancy of a dwelling in Community College District #532 and may be verified by displaying one of the following:

- Illinois driver’s license or ID card issued by Illinois Secretary of State Office
- Illinois voter ID card

OR

By displaying two of the following, which must display the student’s name and current address:

- lease
- mortgage or home purchase contract

- auto registration
- tax bill
- paycheck stub
- official mail of current bill statements such as cell phone, utility, credit card, auto insurance

Residents of the College District

Students who are at least 18 years of age and who have occupied a dwelling within Community College District #532 for at least 30 days prior to enrolling at CLC are considered “in-district.” There are some communities within Lake County that CLC only serves a portion of its residents. If you reside on a community college border, your property tax bill or voter registration card will identify your community college.

Residents of Illinois, Out-of-District Students

An out-of-district student is one who resides in Illinois but is not a resident of Community College District #532 as defined above. Lake County Illinois residents living within the Barrington public high school district are classified as out-of-district Illinois resident students.

Out-of-State Residents

An out-of-state resident is one who has not lived within Illinois for at least 30 days prior to the beginning of the semester, or has declared his/her permanent residence to be outside the state of Illinois.

Special Tuition Categories

The following categories have special tuition rates based upon their particular status.

Senior Citizen Tuition

All in-district residents who are 60 years of age or older at the time of registration may enroll in credit courses offered by the college at one-half the regular tuition rate with all other fees remaining unchanged. Vocational credit courses (1.6 vocational credit) offered by Professional Development also qualify for the one-half tuition discount with all other fees remaining unchanged. The senior citizen waiver does not apply to Personal Enrichment classes.

All residents of the college district who are 65 years of age or older at the time of registration and who qualify financially according to Illinois Statute may enroll in credit courses (Professional Development and Personal Enrichment courses are not included) offered by the college without paying tuition or activity fees. Applications for the Senior Citizen Tuition Waiver are available in the Financial Aid Office, B Wing or online at www.clcillinois.edu/faforms.

Business Educational Service Agreement

Students who live outside of the CLC district and are currently employed full time (35 or more hours per week) by an entity located in the college's district may enroll at CLC under the Business Educational Service Agreement and pay the current in-district tuition rate, including prevailing comprehensive fee, regardless of their place of residence. For more information, contact the Office of Admissions at (847) 543-2061.

In-District Military Personnel Tuition

Military personnel who are citizens of the United States and who are on extended active duty in one of the uniformed services of the U.S. and who are stationed and present in Community College District #532 in connection with that service, will receive the current in-district tuition rate including the prevailing activity fee by displaying a valid U.S. uniformed services identification card. Spouses and children of such military personnel are also eligible for the in-district tuition rate.

In compliance with state and federal law, any individual utilizing Chapter 33 or Chapter 30 VA Educational Benefits will receive the current in-district tuition rate and prevailing comprehensive fees. To utilize the benefits(s), the individual must turn in a copy of their Certificate of Eligibility to the Veteran Student Services and make a formal request for certification by filling out the Veterans Benefits Enrollment Form (electronic) in the student portal, MyStudentCenter.

Cost to Attend CLC

Many full-time students want to know what it will cost to attend CLC for an entire year. To help answer that question, the college has developed two standardized budgets for the 2016-17 school year. There may be minor variations in these numbers due to tuition increases or changes in federal guidelines. For changes in these figures, visit the Budget for Attending CLC section on the CLC website.

Listed below are various fees and payment options for students.

Course Fees

Course fees are charged for some courses that incur extraordinary expenses for consumable supplies used by students or that have an unusual delivery system, e.g. private lessons.

Variable Tuition

Variable tuition is charged for some courses to offset the costs of these higher cost programs. Variable tuition is currently charged for courses in nursing, dental hygiene and massage therapy.

Additional Fees

Additional student expenses may be incurred for specific classes or specialized instruction as indicated in the current semester schedule of classes.

Commencement Fees

A commencement fee, which includes cap and gown purchase, is assessed to each student who participates in the commencement exercises. The college issues the diploma free of charge, and it is mailed approximately one month after the degree or certificate has been conferred.

Method of Payment/Installment Plan

Students may pay for tuition and fees online using e-Check (automated debit to a personal checking or savings account) or by using a credit card (Visa, MasterCard, Discover or American Express). Students may also pay at the Welcome and One-Stop Center using cash, check, money order or credit card. Checks and money orders may also be mailed into the Cashier's Office. CLC offers an Installment Payment Plan for scheduled payments during the semester. For details on the payment plan see "Paying for College" at www.clcillinois.edu/paying-for-college.

Approximate Student Budget for Students

Living with Parents

Tuition and Fees	\$3,780.00
Books and Supplies	1,428.00
Room and Board	2,044.00
Personal Expenses	1,540.00
Transportation	\$1,876.00
	<u>\$10,668.00</u>

Approximate Student Budget for Students

Not Living with Parents

Tuition and Fees	\$3,780.00
Books and Supplies	1,428.00
Room and Board	5,264.00
Personal Expenses	1,540.00
Transportation	\$1,876.00
	<u>\$13,888.00</u>

The costs listed above are based on attending two semesters (14 credit hours per semester) at in-district tuition rates. See also the out-of-district and out-of-state tuition rates to compute the tuition and fee components of your projected budget.

Use these budgets as a tool to calculate your educational expenses. Keep in mind that they are *average costs*. Your actual costs will vary according to your tuition rate, the number of credit hours you take, the books you will need to purchase/rent and your living arrangements.

Attendance

The responsibility for attendance at all scheduled class and laboratory meetings rests with each individual student. When students are absent for reasons of illness or emergency, they are responsible for course work missed and should consult with the instructor before or at the next meeting of the class. Students who find it necessary to be absent from a class should inform the instructor in advance, if possible.

Religious Observance

The college accommodates individual students' religious observances in regard to admissions, class attendance, scheduling of examinations and work. To request accommodation, students who expect to miss classes, examinations or other assignments as a consequence of their religious observance shall provide instructors with advance notice of the date or dates they will be absent. Absence from classes or examinations for religious observance does not relieve students from responsibility of any part of the course work required during the period of absence. Students who believe that they may not have been reasonably accommodated should contact the instructor of the class or the academic division dean. If the issue is not resolved at the department level, students may seek redress through the Addressing Students' Academic Concerns policy and the Student Rights and Responsibilities Policy.

Withdrawal Policy

Important dates such as withdrawal deadlines are provided to you on your class schedule and many faculty list these dates on the course syllabus. These dates may differ from class to class. Please consult your class schedule for specific dates for your class. It is your responsibility to withdraw from a class that you no longer wish to attend.

Your transcript and the grade for the course may vary depending on the time at which you withdraw or request to withdraw from a course. The table below briefly outlines the actions you must take and the potential outcomes if you decide to withdraw from a course. If you are unsure of what to do, please speak with your instructor or contact an advisor or counselor.

If you wish to withdraw:	You must:	What you will see on your transcript:
Prior to the Refund Date (see your class schedule for date)	Withdraw from course via MyStudentCenter	Transcript will not reflect enrollment in the course
Between the Refund Date and the 75% point of the class (see your class schedule for date)	Withdraw from course via MyStudentCenter	A grade of W will be recorded on your transcript
Any time after the 75% point of the class but before completion of the final exam or assignment	Request withdrawal from your instructor and follow their direction.	If you are passing the course and obtain your instructor's approval: a grade of W will be recorded on your transcript
		If you are failing the course: a grade of FW will be recorded on your transcript (this has the same impact on your GPA as a grade of F)

Note: If you are still enrolled in a class after the midterm date for that course you will receive a grade for that course that will impact your GPA unless you take action to withdraw yourself.

Registration

Students are responsible for officially registering in classes they attend. Registration for the Fall Semester begins the preceding March, registration for Spring Semester begins the preceding November. Summer registration begins in March.

Registration must be completed on or prior to the first day of class. Registration is available online. Students requiring assistance may contact the Welcome and One-Stop Center at the Grayslake Campus, the Student Services Office at the Lakeshore Campus in Waukegan or the Campus and Student Support Center at the Southlake Campus in Vernon Hills.

Late Registration

CLC strictly enforces its policy that students may not register for a class after it has begun. The policy states that the final day to enroll is midnight of the first day of the specific class. After that first day, late enrollment will be allowed only under extraordinary circumstances approved by the dean of the division for the class.

Institutional Withdrawal for Non-Attendance

The college may administratively withdraw students who have never attended class, who stopped attending class without officially dropping or whose attendance is so sporadic that they would not be able to complete the course requirements. Students who are withdrawn by the institution on the midterm or final grade rosters will be assigned an appropriate withdrawal grade and a date of last attendance of the mid-term date of the semester. Students who are withdrawn by the institution will remain responsible for all tuition and fees charged for the class. The withdrawal grades are defined below:

- WN Withdrawal of a student who never attended. The WN grade has no impact on GPA.
- WS Withdrawal of a student who stopped attending. The WS grade has no impact on GPA.
- FW Withdrawal of a student who stopped attending and instructor deemed as failing. The FW grade will be included in the GPA.

Financial aid students who drop, withdraw or otherwise fail to complete all of their classes for a term will be subject to Title IV return of funds calculation. See pages 21-25 for more information on financial aid.

Withdrawal of Veterans and Military Personnel

Veterans and military personnel who are deployed (including training at U.S. or overseas locations) or called to active duty may withdraw anytime during the semester in which they are enrolled and called to active duty. The date of the official notice of orders for deployment will serve as the date of withdrawal, and the withdrawal request must be submitted to the college by the end of the semester in which the withdrawal occurs. If the effective date occurs after the 75 percent point between the start and end of the class, a grade of W will be recorded. This policy also applies to the spouses of veterans and military personnel. See www.clcillinois.edu/military.

Involuntary Withdrawal

Students who pose a direct threat of harm to self or others, or who substantially impede the lawful activities of other members of the college community may be involuntarily withdrawn by college administrators, pursuant to this Policy and to the Involuntary Withdrawal Procedures developed and adopted by the college.

A student should not be subject to involuntary withdrawal when disciplinary, academic or other administrative responses are available. The procedures and specifications given in the Involuntary Withdrawal Procedures apply in those situations in which, in the judgment of the appropriate administrators, the response through the Student Rights and Responsibilities Policy and Procedures are insufficient. See Student Rights and Responsibilities Policy and Procedures.

Pursuant to the Family Educational Rights and Privacy Act (FERPA), 20 U.S.C. §1232g, the college reserves the right to disclose and release student records and personally identifiable information without consent to appropriate persons during a period of emergency if the information released is necessary to protect the health or safety of students or other individuals. (Board policy 403.1)

Medical and Catastrophic Incident Withdrawal

The college, upon request and with appropriate documentation, may administratively withdraw a student due to **serious illness or related medical issues** that prohibit the student from completing his/her classes. Documentation will be required from a physician or licensed medical professional.

The college, upon request and with appropriate documentation, may administratively withdraw a student due to **catastrophic circumstances** that prohibit the student from completing his/her classes. Documentation will be required from a government agency, social service organization, first responder or similar entity.

The request for withdrawal and relevant documentation must be received no later than 60 days after the end of the semester for which the student is seeking a withdrawal. This policy will be administered by the Office of the Associate Vice President of Student Development.

Reinstatement of Withdrawn Students

Students who withdraw from classes and subsequently request to be re-enrolled must present compelling reasons for reinstatement. Consult the Records Office for procedures.

Drop for Non-Payment

Students who do not pay in full or set up an installment payment plan for tuition and fees by their due date are subject to being dropped from all classes. The dates for the “drop for non-payment” process are publicized in the Schedule of Classes and on the website. The college will attempt to notify students who are dropped for non-payment, but it remains the student’s responsibility to check enrollment status.

Students who are dropped by this process before the term starts are eligible to re-enroll if seats are available. They must pay by the new due date assigned. **Students may not attend classes if they are not officially enrolled.**

Students who are dropped by this process after the term has started may be reinstated. In order to be reinstated in the same classes, a student must request a “reinstatement” form from the course instructor. The student will be reinstated by bringing the form to the Welcome and One-Stop Center.

Refund Policy

Students are responsible for officially dropping classes they do not intend to complete. See pages 18-19 for Registration, Attendance and Withdrawal Policies. Tuition and fee refunds will be issued to eligible students who officially drop on or before the drop deadline for the class. The date of the drop is a student administration system assigned and recorded date and is determined by the successful completion of the drop transaction.

Refund Schedule

Multiple-day Classes

Drop on or before start of class Drop before 15% of class days pass	100% refund
Drop after 15% of class days pass	No refund

One-day Classes

Drop the day before class	100% refund
Drop on or after the day of class	No refund

A full refund of tuition and fees is granted if the college cancels a class. When academically advisable, the administration may approve full or partial refunds of tuition or fees when students exchange one course for another.

When a student is unable to attend class due to uncontrollable and unforeseen circumstances such as extended hospitalization, a prorated tuition and fee refund may be made based upon a documented appeal. The appeal form may be obtained from the Cashier’s Office.

Financial Obligation

All unpaid tuition and fees after the final due date will be subject to the collection procedures of the college, including placing holds on future registration, withholding transcripts and lastly, referring the matter to a collection agency and the Illinois Debt Recovery Program.

Financial Aid Office

Grayslake Campus
B Wing
(847) 543-2062
Federal School Code: 007694

The Financial Aid Office provides financial assistance to qualified students who, without such assistance, would be unable to attend. In order to honor this commitment, the college participates in a variety of federal, state and institutional programs. The different types of aid offered by the college are grants, loans, campus employment and scholarships.

Financial Aid at-a-Glance

Federal student aid is defined as financial assistance, is offered through the U.S. Department of Education and is available to those students enrolled in an eligible program at a school participating in federal student aid programs. School expenses such as tuition and fees, room and board, books, supplies and transportation are covered by federal student aid. Most federal aid is need-based. The three most common types of aid are grants, loans and federal work-study.

College of Lake County currently participates in the following Federal programs:

- Federal Pell Grant
- Federal Supplemental Educational Opportunity Grant (FSEOG)
- Federal Work Study Program (FWS)
- William D. Ford Federal Direct Loan (Direct Loan) Program
- Veterans Educational Benefits

Who Gets Federal Student Aid?

Eligibility for most federal student aid programs is based on financial need, along with several other factors. The information a student provides on their Free Application for Federal Student Aid (FAFSA) determines his/her eligibility.

Basic eligibility requirements indicate that students must:

- Demonstrate financial need (for most programs)
- Be a U.S. citizen or eligible noncitizen (for most programs)
- Have a valid Social Security number (SSN).
- Register with the Selective Service if you are a male between the age of 18 and 25 (if you have not already), or obtain a status information letter from the Selective Services System. For more details visit www.sss.gov.
- Work toward a degree or certificate in an eligible program
- Maintain satisfactory academic progress once in school.
- Show, by one of the following means, proper qualification to obtain a postsecondary education:
 - A high school diploma or a General Education Development (GED) certificate.
 - Complete a high school education, approved under state law, in a home school setting.

- Be enrolled at least half-time in an eligible program for Direct Loan Program Funds.
- Complete and sign a Free Applications for Federal Student Aid (FAFSA) stating that:
 - You are not in default on a federal student loan and do not owe money on a federal student grant and
 - You will use federal student aid only for educational purposes.

Application Procedures

To apply for the FAFSA:

1. Collect all the documents needed to apply. This includes income tax returns, W-2 forms and other records of income. The full list is located at www.fafsa.gov.
2. Complete the FAFSA between January 1, 2016 and June 30, 2017. There will be NO exceptions to the deadline date! Apply as soon as possible, after January 1, to meet school and state aid deadlines. The fastest and easiest way to apply is through www.fafsa.gov.
3. Check your data. The Department of Education will send you your Student Aid Report (SAR), which is the result of your FAFSA. Your complete, correct SAR will contain your Expected Family Contribution (EFC). This number is used to determine your federal student aid eligibility.
4. Check your “To Do List.” If we need more information from you, we will contact you by mail or email and add items to your “To Do List.” Be sure to keep your address current with the Admissions Office and check your “To Do List” in myStudentCenter and student email account often for any updates. Students can access financial aid information, holds and checklists for financial aid processes via myStudentCenter. Failure to address holds and “to do” items by published deadlines can result in delays or ineligibility for aid.
5. Watch for an Award Notification. After a review of your SAR, we will prepare a letter outlining your aid eligibility.

Financial Information

Student Aid from the State of Illinois

The Illinois Student Assistance Commission (ISAC) provides financial aid for college education through the many gift assistance programs it administers. As an approved participant in any of the gift assistance programs administered by ISAC, postsecondary institutions may receive funds on behalf of eligible students.

Some specialized Illinois programs have separate applications. Detailed information about Illinois programs is available at www.isac.org. Illinois offers various financial aid programs based on merit, need and/or course of study. Many Illinois programs also require students to complete the FAFSA form.

College of Lake County currently participates in the following State programs:

- Monetary Award Program (MAP)
- Silas Purnell Illinois Incentive for Access (IIA)
- Grant Programs for Dependents of Police/Fire/Correctional Officers
- Minority Teachers of Illinois (MIT) Scholarship Program
- Illinois Veterans Grant (IVG)
- Illinois National Guard (ING) Grant
- MIA/POW Scholarship

How to Contact the Financial Aid Office

We are located in the B Wing at the Grayslake Campus. Limited office hours are available at the Lakeshore and Southlake campuses.

Office Hours:

Grayslake: 7:30 a.m. to 7:30 p.m. Monday–Thursday
7:30 a.m. to 4:30 p.m. Friday
(847) 543-2062 phone
(847) 543-3062 fax

Lakeshore: (847) 543-2183

Southlake: (847) 543-6526

Please check the Financial Aid Office website at www.clcillinois.edu/financialaid for current hours.

Procedures and Guidelines

Census Date and Financial Aid Awards

Students who are eligible for financial aid and enroll at CLC receive an award notification, which lists each type of financial aid they may receive. The award amount shown in the award notification is based on full-time enrollment in an eligible program. The actual amount of aid a student receives will be based on enrollment as of the financial aid census date. Please refer to the “Important Dates” web page for the 2016-2017 Aid Year census dates. At census, the financial aid office will “freeze” student enrollment and adjust awards to the correct amount, based on actual aid eligible hours enrolled as of that time. If a student enrolls in late-starting classes after the student’s census date, those classes will not be eligible for financial aid. If the award of aid includes a class that has not yet started, the student will not be able to drop that class without contacting a financial aid specialist. The aid will be adjusted after the student is permitted to drop and they may be required to return a portion of the aid received.

Late applicants (awarded after the scheduled census date) will be processed during the remainder of the semester. The amount of the award will be based on enrollment in aid-eligible classes at the time the award is processed. Late awards will be disbursed during the next scheduled disbursement.

Bookstore Charges

Students with anticipated credit balances on their student account, based on anticipated financial aid, will be allowed to charge books in advance of receiving Financial Aid in the CLC Bookstore. Check the Financial Aid website at www.clcillinois.edu/fadates to determine the dates when book charges are accepted. Items charged in the Bookstore are paid when a student’s aid is disbursed.

Disbursements

The Financial Aid Office will credit funds to student accounts according to a disbursement schedule set up each semester. Contact the Financial Aid Office or check the Financial Aid website at www.clcillinois.edu/fadates for the dates on which we will release aid to student accounts.

Federal Financial Aid Refund Policy (Title IV)

The Higher Education Amendments of 1998, Public Law 105-244, established how Title IV eligibility is determined when a student completely withdraws from school. The Department of Education required this provision be implemented by all schools starting in October 2000.

These requirements do not dictate an institution’s refund policy as it relates to institutional charges incurred by the student. Instead, the institution is required only to determine the amount of Title IV funds a student has earned as of the date he or she ceases enrollment prior to the planned completion date. The amount of Title IV funds earned by the student is based on the amount of time the student was enrolled; *it has no relationship to the student’s incurred institutional charges.*

The 2011 Program Integrity Final Regulations define that a student is considered to have withdrawn when they do not complete all days **scheduled to complete** within a semester. Students enrolled in courses that do not span the entire semester are considered to have withdrawn if at the time of a withdrawn course(s) the student is not actively attending another course. Students enrolled in courses that do not span the entire semester are not considered to have withdrawn if at the time of withdrawing from the course(s) a written confirmation of intent to attend a future course(s) within the current semester is provided. The written confirmation of intent must be provided at the time of withdrawal.

The percentage of Title IV funds earned by a student who fully withdraws or is considered to have withdrawn is calculated by simply dividing the number of calendar days the student was enrolled by the number of calendar days the student was scheduled to attend during the semester. Students who are administratively withdrawn on the midterm or final grade rosters will have the class midterm date as their withdrawal date. For example: If a student was scheduled to attend 112 calendar days and withdrew on the 28th calendar day, they would be entitled to 25 percent of their Title IV funds (28 days attended/112 days in semester = 25 percent).

Schools are required to calculate the Return of Title IV Funds up through the 60 percent point of each semester or period the student was scheduled to attend. After the 60 percent point it is considered that the student has earned 100 percent of the Title IV funds disbursed. For more information on the college's withdrawal policies, please refer to the withdrawing from a class section on page 18.

Please feel free to contact the Financial Aid Office if you have any questions concerning this provision.

Is Student a Withdrawal?

1. Did the student cease to attend before completing or fail to begin attendance in a course scheduled to attend?
 - If yes, go to question 2
 - If no, student not a withdrawal
2. When ceased to attend or failed to begin attendance in a scheduled course, was the student attending other courses?
 - If yes, student not a withdrawal
 - If no, go to question 3
3. Did the student confirm attendance in a later course within the current semester? (Course must begin within 45 days of withdrawal)
 - If no, student is a withdrawal.
 - If not a withdrawal, Pell recalculations may apply

Ineligible Programs and Courses

In order to be eligible to receive financial aid, a student must be enrolled in and actively pursuing a degree or certificate in an eligible program of study. The college offers a wide range of associate degrees and certificates in eligible programs. The Associate in Arts, Associate in Science, Associate in Engineering Science, Associate in Fine Arts, Associate in Arts in Teaching and most Associate in Applied Science degree programs are eligible. Most career certificate programs that require at least 16 credit hours to complete are eligible as well. (See a financial aid specialist for more information on eligibility.)

The college offers courses that meet a wide range of community need. Some courses are not eligible to be included in a financial aid award. Eligible courses are those that may be applied to completion of a degree or certificate, and/or developmental courses that are at a post high school level and prepare a student to take college-level classes. Courses that do not meet these criteria, non-credit courses, adult education courses as well as audited courses and some career courses are not eligible for financial aid. Only courses required to complete a student's program of study are eligible for financial aid. Special circumstances exist for students taking courses as prerequisites for program admission.

Students may only receive financial aid for up to 30 hours of developmental courses.

Refund Checks

The Business Office will issue refunds by direct deposit (ACH) or by check to students based on credit balances within 14 days after their financial aid is credited to their student account. The Business Office will deduct tuition and fees from the student's account before refunding the remaining balance. Students can grant permission to use their aid refund to pay for other charges. Please contact the Financial Aid Office or check the Financial Aid website at www.clcillinois.edu/fadates for the dates on which the Business Office generates student refunds.

Academic Standards for Financial Aid Recipients (SAP)

Federal and state regulations require that students make satisfactory and measurable academic progress in their academic work in order to continue to be eligible for federal and state financial aid. At CLC the effective date that begins to measure satisfactory academic progress is the last date to drop a class with no record. This date is specific to each class and is at a point when 15 percent of the class length has passed. Excluded from these standards are courses in Adult Basic Education (ABE), English as a Second Language (ESL), General Education Development (GED), Vocational Skills Technology, Contract Training, Continuing Education and General Studies.

Financial Information

Satisfactory academic progress is measured in three distinct ways:

1. **Course Completion Rate** - Students must successfully complete at least 67 percent of all cumulative credit hours attempted at CLC. A successful completion is defined as earning a grade of D or better. Withdrawals (official or unofficial), incompletes, repeated classes and remedial courses are included in hours attempted. Students who do not comply with the requirement will be put on a one-semester warning, but will still receive financial aid for that semester. If 67 percent completion rate is not achieved by the end of that semester, they will be restricted and will no longer be eligible for financial aid until good standing is restored.
2. **Cumulative Grade Point Average (GPA)** - Students must have a 2.00 cumulative GPA to graduate from the college, and therefore, must maintain a 2.00 cumulative GPA. The GPA calculation for SAP includes developmental courses that are not included in the college's GPA calculation. Students who do not comply with the requirements will be put on a one-semester warning, but will still receive financial aid for that semester. If a 2.00 GPA is not achieved by the end of that semester, they will be restricted and will no longer be eligible for financial aid until good standing is restored.
3. **Program Time Frame to Complete Degree** - Students may pursue completion of a degree program on a full- or part-time basis, but the federal government requires that students make progress toward degree completion in a timely fashion. Progress toward completing a degree is measured not by calendar time, but by the total number of attempted hours allowed to complete a degree. Students must be able to complete their program of study within 150 percent of the hours required for the program.

Once a student's attempted hours reach 100 percent of the hours required for the program, the student will be placed on warning status. When the student's attempted hours reach 110 percent, the student is placed on restricted status and is not eligible for financial aid at the college until it is confirmed that the program can be completed within 150 percent of the hours required. Students who cannot complete their program of study within 150 percent of the hours required are placed on restricted status and are no longer eligible to receive aid at the college.

Note: A student with a program time frame calculation that moves from below 100 percent to 110 percent and greater within the same semester will be placed directly on restricted status and will not have a warning period.

- 3) For example, a student pursuing a 60 credit hour associate degree will need to complete the program within 90 attempted hours. The student will continue to be eligible for financial aid until he/she has attempted 66 credit hours (110 percent of the required number of hours for the degree), at which point confirmation is needed that the program can be completed within 150 percent of the required hours for continued eligibility. Degrees or certificates of varying lengths are prorated accordingly. Changes in majors and additional degrees include all attempted hours. Time frame calculation will be measured using the current catalog program requirements.
- 3) Included in the count of attempted hours is all attempted course work taken at CLC, transfer credit accepted from other institutions and any Advanced Placement or CLEP credit. All withdrawal grades, failing grades and incompletes, as well as repeated courses and remedial course work, are considered hours attempted and are included in the maximum time frame.

Satisfactory, Warning and Restriction Status

A student will be considered in **satisfactory** status as long as he/she meets the requirements described above.

A student will be placed on **warning** status for failing to meet GPA and/or course completion rate requirements and/or program time frame falls between 100 percent and 110 percent as described above, but **will** be allowed to receive financial aid.

A student will be placed on **restricted** status for failing to meet requirements 1, 2 or 3 as described above and **will not** be eligible to receive financial aid.

Appeal Process

Any student placed on Satisfactory Academic Progress (SAP) restricted status has the right to appeal. All students requesting a SAP Appeal should complete the following steps:

1. Complete a financial aid workshop (see details at www.clcillinois.edu/faworkshops). Upon completing the workshop, the student will receive their SAP Appeal Form.
2. Meet with a counselor in the Counseling Center and complete an SAP Planning Form.
3. Provide a detailed statement explaining the circumstances resulting in your failure to meet Satisfactory Academic Progress standards (including third party documents as applicable).
 - All appeals must be complete and provide detailed information about extenuating circumstances. Extenuating circumstances include: personal illness/accident, serious illness or death within the immediate family, auto accident or other situation beyond the reasonable control of the student.

- Third-party documentation is required when applicable with each appeal. Documentation may include, but is not limited to, copies of medical records, accident reports and/or letters from an academic advisor, work supervisor or other counselor. Appeals for additional degrees will be considered on a case-by-case basis.
- Appeals must be submitted in the term for which the student is seeking financial aid. Appeal forms will not be accepted unless all documentation is included with the form.
- Appeals must include a statement explaining the reason for not meeting the SAP standards and what changes have been made to ensure future success.
- All appeal decisions are final.

Students with approved appeals will be placed on a probation status for one term. At the end of the probation period, students who meet the terms of the probation will remain eligible for aid for the subsequent semester.

Students who do not meet the terms of their probation are returned to restricted status.

Verification

The process of documenting the information a student provides on his/her FAFSA is called **verification**. If a student's application is selected for verification, and he/she does not provide the documents requested by the school, the student will not receive federal student aid. The student also might not receive aid from other nonfederal sources. Students should submit all requested documentation by deadlines published by the Financial Aid Office. Students must submit verification documents by federal deadlines posted in the Federal Register. See the Federal Register or your Financial Aid administrator.

If any discrepancies are found between the information you submitted on your FAFSA and the data on your verification documentation, the Financial Aid Office will make corrections to your FAFSA and, if necessary, adjust your financial aid awards.

2016-17 Verification Items may include:

- Number in household
- Number in college
- Food stamps (SNAP), if receipt reported on FAFSA
- Child support paid if amount reported on FAFSA
- Certain Federal Income Tax information
- Certain untaxed income and benefits
- High school completion status
- Identity/statement of educational purpose

Please be aware of some changes to the verification process for the upcoming award year. Applicants are strongly encouraged to utilize the IRS Data Retrieval Tool during the application process. This tool allows tax information to be electronically pulled from the IRS website onto the FAFSA application. If the retrieval tool is not utilized, and 2015 federal taxes were required to be filed, a copy of a 2015 Federal Tax Transcript, along with parent's transcripts for dependent students, will be required. Visit our web page at www.clcillinois.edu/financialaid for more information.

Repeated Courses

A student may receive financial assistance one time for a repeated course. Third attempts will not be counted in the calculation for federal student aid.

Financial Aid Online

For news, updates and additional information about applying, receiving and maintaining your financial aid awards, please visit the Financial Aid Office website at www.clcillinois.edu/financialaid.

Students can access financial aid status information via myStudentCenter. Log in to myStudentCenter at www.clcillinois.edu and click "View Financial Aid" in the Finances section on the main page. Next, select the aid year from the list of available years. If there are no awards pending, the application may still be under review.

College of Lake County Foundation Scholarships

The College of Lake County Foundation is a private non-profit 501c3 charitable organization. Its mission is to raise scholarship funds for our students. Most Foundation scholarships are designed to benefit students who need financial assistance. To learn more about the Foundation's scholarship program, please visit www.clcillinois.edu/scholarships. For more information about Foundation scholarships, call (847) 543-2634.

The CLC Foundation provides grants for innovative educational and cultural programs which support student success initiatives involving faculty, staff and students. The CLC Foundation serves as an administrative channel for accepting gifts to the college, which may include cash, securities, planned gifts, major gifts, automobiles, machinery, medical supplies, land, works of art and library materials. All gifts to the CLC Foundation are tax deductible to the extent allowed by law. The CLC Foundation Office is in the E Building on the Grayslake Campus. For more information, call (847) 543-2091.

Student Body Profile

Our student body reflects the diversity of the Lake County community. In the fall of 2015 there were 14,964 students attending the college. These students represent a wide range of age groups, gender, racial and ethnic backgrounds.

College-Level Students

In the fall of 2015, there were 12,871 college-level students enrolled at CLC. Nineteen percent of students graduating from Lake County high schools in the previous spring enrolled at CLC in the fall. Students in the 18-24 year old age group made up 65 percent of the student body. Students aged 25-34 comprised the second largest segment at 18 percent of the total. The average age of the college-level student body was 25 years old. Minorities comprised 43 percent of the student body. Hispanic students accounted for the largest single minority group (28 percent).

The majority of college-level students (68 percent) attended part time while 32 percent attended full time. Forty-one percent attended in the evenings and 66 percent in the daytime. Just under 7 percent of students attended classes on the weekends. Graduate follow-up surveys indicate that students who continue their education after graduating from CLC are well prepared for their classes. Among the fiscal year 2014 graduates who responded to the survey and entered the labor market after completing an A.A.S. degree or long-term certificate program, 74 percent of those employed full-time found work in fields related to their area of study.

Adult/Vocational Education Students

In the fall of 2015, there were 2,144 adult/vocational education students enrolled at the College of Lake County. The majority (59 percent) of these students are enrolled in English as a Second Language classes. Students in the 25-34 year old age group made up 30 percent of the student body. Minorities comprised 76 percent of the student body. Hispanic students accounted for the largest single minority group (64 percent).

The majority of adult/vocational education students (93 percent) attended part time. Evening students outnumbered day students 51 percent to 43 percent. Twenty-four percent of adult/vocational students attended classes on the weekends.

Academic Advising

The college is committed to and values quality academic advising and recognizes its link to student success and retention. Academic advising is a systematic and multidimensional process designed to help students reach their academic and career goals. Students may contact the **Counseling, Advising and Transfer Center** at (847) 543-2060, www.clcillinois.edu/depts/cou if they need academic advising.

Advising Responsibilities of Advisors

Academic advisors, counselors and faculty provide academic advising to students according to students' needs, students' credit hours and the advising professionals' expertise. All advising professionals are responsible for providing accurate information to students, treating students with respect, educating students about the advising process and encouraging students to be active participants in the advising process. All advising professionals assist students in reaching their goals and make appropriate referrals when necessary. See below for how to locate the appropriate advising professional.

Advising Responsibilities of Students

Students are responsible for contacting an advising professional when they need help with academic planning. They are responsible for, but not limited to, being active participants in the advising process by asking questions, taking notes, reading information in the college catalog and class schedule, considering or following through on advisors' recommendations, learning the graduation and other requirements for their programs of study and learning how to schedule and register for classes. Students who are unclear about their educational or career goals should seek assistance from a CLC counselor to develop those goals.

Counseling, Advising and Transfer Center

Students may see an academic advisor or a counselor, depending on their circumstances and number of credit hours. Generally, new students and continuing students with 25 or fewer credit hours will meet with an academic advisor. Continuing students who have not met academic standards, or who plan to transfer and have more than 25 credits will typically meet with a counselor. Counselors meet with students for other reasons as well. See below for a list of counseling services and locations.

Counselors and academic advisors also assist students with using college and career resource information available in printed form and on computers. Transfer guides for public universities and many private universities are available at CLC's three campuses and www.clcillinois.edu/transferinfo.

Academic advisors and counselors are available at the Grayslake Campus:

Counseling, Advising and Transfer Center

19351 W. Washington St., Grayslake, IL 60030

C Wing

Monday through Thursday 7:30 a.m. to 7:30 p.m.

Friday 7:30 a.m. to 4 p.m.*

Call (847) 543-2060 to schedule an appointment.

* Holiday and break hours may vary.

Counselors and academic advisors* are also available at the following locations:

Lakeshore Campus

Student Services Center

111 N. Genesee St., Waukegan, IL 60085

Room N211

Call (847) 543-2186 to schedule an appointment.

Southlake Campus

Campus and Student Support Center

1120 S. Milwaukee Ave. Vernon Hills, IL 60061

Room V130

Call (847) 543-6501 to schedule an appointment.

* Advisors are available at the Lakeshore and Southlake campuses during registration periods.

Mandatory Advising

Advising Professional (academic advisor, counselor or faculty member):

- **New Student Advising Hold**

Recent high school graduates (within the last two years) entering college for the first time are required to meet with an academic advisor during the New Student Orientation (NSO) Advisement Session. For more information, visit www.clcillinois.edu/nso.

- **35th Hour Advising Hold**

All degree or certificate-seeking students are required to meet with an advising professional (academic advisor, counselor or faculty member) prior to registering for their 35th college credit hour.

Outside of these two mandatory advising checkpoints, all students are strongly encouraged to meet with an advising professional each and every semester. Academic advising is designed to ensure that students start and stay on the right path to reach their goals. Advising professionals will explain degree requirements and/or complete a graduation or degree progress checklist with the student, make recommendations and remove an advising hold (if present) to allow registration for classes.

Academic Divisions

All CLC students who are pursuing an Associate in Applied Science degree or certificate and have more than 30 credit hours, including enrolled hours, should meet with a faculty advisor in their program. Any student who would like to learn more about an academic division or related career field may also consult with faculty. Students can find their academic programs in this catalog by checking the index and turning to the page with the program requirements; the academic division office is listed below the title of the academic program. Academic division offices are located on the Grayslake Campus. For more information on how to contact a faculty advisor, call the appropriate academic division office listed below. Please note that faculty advisors are not always available during the week of final exams, between semesters or during the summer session.

Division Offices

Biological and Health SciencesRoom B210
(847) 543-2042

Business and Social SciencesRoom T302
(847) 543-2047

Communication Arts,
Humanities and Fine ArtsRoom B210
(847) 543-2040

Engineering, Math and Physical Sciences ..Room T302
(847) 543-2044

Counseling Services Available through the Counseling, Advising and Transfer Center

Counselors provide career and personal counseling services for all students and academic advising for designated student populations. Counselors are available at all three campuses: Grayslake, C Wing, (847) 543-2060; Lakeshore, Room N211, (847) 543-2186; and Southlake, Room V130, (847) 543-6501.

Assessment

A counselor can help students gain more knowledge about themselves, their learning styles and how they fit into the world of work through the use of career inventories and other assessments and exercises.

Career Counseling

Students may meet with general counselors and career counselors to get help with choosing a major or career. These professionals use their career development expertise and formal training to guide students through a process of self-assessment, career research, decision-making and goal-setting. Self-assessment includes a guided exploration of values, interests, personality traits and skills. Career research enables students to gather information about tasks, responsibilities, required education and training, salary, job outlook and more. You can also investigate opportunities such as co-operative education, internships, volunteerism and more!

Benefits of career counseling include:

- Find a good fit between you and a career
- Save time and money on school
- Experience peace of mind by having a plan
- Engage in choosing your future
- Explore options in a supportive environment

For more information contact: Counseling, Advising and Transfer Center, C Wing, (847) 543-2060.

Educational Development

Counselors can assist students in making the transition to college life and getting oriented to the college environment. They can also assist students who want to become more successful in school, need to meet academic proficiencies, and/or want to return to good academic standing. Students work with a counselor to develop an academic plan, to select appropriate classes and to learn strategies for success in school through individual conferences, workshops and classes in which they can learn study skills, methods for managing time, test-taking techniques and other strategies for becoming a better student. See PDS 124 and PDS 120 in the course section of this catalog.

Personal Development

Counselors assist with personal growth and life planning and/or with personal problems that interfere with progress in school by providing individual or group sessions or referrals to appropriate community agencies. See PDS 121 and PDS 123 in the course section of this catalog for Personal Development courses.

Personal Counseling and Crisis Intervention

Counselors provide help to students who may be in crisis and serve as a first-line resource for faculty and staff to immediately assist students. Counselors assist with personal growth and life planning, and/or with personal problems that interfere with progress in school by providing individual sessions or referrals to appropriate community agencies. Related courses: PDS 121 and PDS 123.

Academic and Transfer Planning

Develop strategies to become more successful in school, meet academic proficiencies and achieve and maintain good academic standing. Counselors help interpret transfer guides, program outlines and transfer requirements for four-year schools. They also assist student with choosing a transfer university and provide academic and transfer planning services within the context of helping students meet career and life goals. Related courses: PDS 120 and PDS 124.

Services for Students with Disabilities provided by the Office for Students with Disabilities (OSD)

The Office for Students with Disabilities (OSD) is located in the Learning Assistance Center at the Grayslake Campus. The OSD provides academic accommodations, information and support to students with disabilities. Through the use of assistive technology, the OSD assists students via a broad range of software and hardware services, both within the department and throughout the college. Common academic accommodations include:

- Sign language interpreters
- Note takers
- Extended exam time
- Audio recorders
- Magnification devices
- Testing accommodations

To request accommodations, students must follow standard procedures outlined by the OSD.

1. Students must disclose their disability to the OSD as soon as possible.
2. The college reserves the right to request updated or additional documentation before granting specific requests if documentation is old or incomplete.
3. Each semester, students must request accommodations through the OSD.
4. Upon approval of a student request, the student and an OSD staff member will complete an Instructor Notification Form (INF) stating the particular accommodations.
5. The student is responsible for giving the instructor notification form to his/her instructor and discussing the accommodations.

Additional information may be obtained by calling the OSD at (847) 543-2055 or visiting www.clcillinois.edu/osd. All student records are kept strictly confidential and maintained separately from other school records.

The programs and facilities at the College of Lake County comply with Section 504 of the Rehabilitation Service Act of 1973 and the Americans with Disabilities Act of 1990 and its amendments.

Addressing Student Concerns

The Guide for Addressing Student Concerns is outlined within the Policies Governing Student Life beginning on page 32 of this catalog. This information is also posted throughout the college.

CLC Police

A safe campus environment is only achieved through partnerships with students, faculty, staff, community and the Police working together to achieve a common goal. The CLC Police partner with all groups through Campus Watch, special classes, committees, and electronic media to achieve this goal. The College of Lake County Police Department's main telephone number is (847) 543-2081. This number will provide access to police services for all campuses. In an emergency, 911 can always be called as part of our partnership with the Grayslake, Waukegan and Vernon Hills Police and Fire departments. Because most crimes are preventable, CLC Police encourages everyone to become involved in protecting themselves and their property, by the use of common sense and awareness. The following is a small list of proactive measures.

How to Contact the CLC Police

To report a crime at the Grayslake, Lakeshore or Southlake campus, call the CLC Police Department at (847) 543-2081. If using a campus phone call 2081. To report an emergency to the CLC Police, call 5555 from any campus phone.

Concealed Carry

All persons with a concealed carry license, once entering upon any College of Lake County property, must be cognizant of and fully comply with the Illinois Firearm Concealed Carry Act (430 ILCS 66/1 et. seq.). The college maintains a weapons and firearms-free campus, except as provided elsewhere in college policy or by Illinois state statute.

Grayslake Campus

General Crime Prevention

Trained Certified Police Officers are on campus seven days a week from 7 a.m. to 11 p.m. These uniformed officers provide visible foot and vehicle patrols. Trained Community Service Officers provide security services seven days a week from 11 p.m. to 7 a.m. Trained communication operators are on duty 24 hours a day. Escort services to and from the parking lots and out buildings are available 24 hours a day. In-house campus phones are located throughout the building and outlying buildings. 24 hour emergency call boxes are located in all student and staff parking lots. (Look for the blue light.)

Other Services

- Active patrols in marked police vehicles, along with traffic and parking enforcement.
- Assisting motorists with minor vehicle problems such as dead batteries, or locking their keys inside.
- Self-defense classes, Campus Watch program, and classroom safety presentations

Abandoned Newborn Infant Protection Act – Safe Haven

The College of Lake County (CLC) shall comply with the Abandoned Newborn Infant Protection Act and extended definitions of Acts ILCS 325/2.1-2.70 & ILCS 325 2/10). The act is intended to enable the parent(s) of a newborn to relinquish the infant to a safe environment, remain anonymous and avoid civil or criminal liability for relinquishing the infant.

In accordance with this act, the CLC Police will accept a relinquished newborn infant and provide all necessary emergency services and care at the Grayslake Campus only. The infant will be temporarily placed with a hospital or medical facility out of the custody of the infant's parent. The CLC Police will complete a police report and notify the Illinois Department of Children and Family Services within 12 hours of accepting a relinquished newborn infant.

A newborn infant is a child who a licensed physician reasonably believes is 30 days old or less and not abused or neglected at the time the child is relinquished. An infant is relinquished when brought to the CLC Police Department, and the person leaving the infant does not express intent to return for the infant. Procedures to implement this policy will be published through the CLC Police Department and available in that office and the college's website.

Lakeshore Campus

Crime Prevention

Trained certified Police Officers are on campus during operating hours (Monday through Thursday from 7 a.m. to 11 p.m.; Friday 7 a.m. to 6 p.m.; Saturday 7 a.m. to 3 p.m.). These uniformed officers maintain a branch office and provide visible foot patrols inside and out. All police services provided for at the Grayslake Campus are also available at the Lakeshore Campus.

Parking

Parking for students, staff and visitors is available in the multi-level parking garage located at 30 N. Sheridan Rd. just east of the South Building. Four hundred plus spaces are available for the college's use. Only vehicles displaying a valid CLC permit will be authorized to park in these spaces. Parking permits are available at the South Building reception desk or in the Police Department. For the convenience of students, staff and visitors with temporary physical challenges that restrict their mobility, a motorized scooter is available by request at the South Building reception desk.

Southlake Campus

Crime Prevention

Trained certified Police Officers are on campus during operating hours (Monday through Thursday from 7:30 a.m. to 10 p.m.; Friday 7:30 a.m. to 4:30 p.m.; Saturday 8 a.m. to 2 p.m.). These uniformed officers maintain a branch office and provide visible foot patrols inside and out. All services provided for at the Grayslake Campus also are available at the Southlake Campus.

Services for Students

Career and Job Placement Center

The Career and Job Placement Center (CJPC) office, located in the C Wing, provides opportunities to get first-hand knowledge regarding careers. We offer internship and job search assistance to all CLC students and alumni who are seeking employment opportunities. We can assist students and alumni with job shadowing a seasoned professional, connect students and alumni with a career mentor or place students in a cooperative education or internship experience. Participation can assist students with deciding if a career is right for them and even provide valuable resume building experience. Services include individual and group assistance in areas such as career exploration, job search techniques, resume writing and interviewing. If individuals wish to explore these topics at their own pace, they may also utilize the many print and multimedia resources available in the center. Hours of operation are Monday through Thursday from 8 a.m. to 6 p.m., and Friday from 8 a.m. to 4:30 p.m. Employment opportunities received by the Career and Job Placement Center office are entered into the College Central network database. Students may visit LancerJobLink powered by College Central Network at www.collegecentral.com/clcillinois to register and view internship and employment opportunities available. For more information, call (847) 543-2059.

The Career and Job Placement Center offers the following ongoing programs:

Cooperative Education/Internships

The Cooperative Education program (CO-OP) offers students the opportunity to earn possible college credit for new learning in a work situation and integrates classroom theory with practical work experience. A new position or your current job may qualify as Cooperative Education/Internship work position if it is related to your field of study and provides a new learning experience.

The Cooperative Education Educational Work Experience Work Component is a program that integrates classroom theory with practical experience learned on the job. As a requirement of the Work Component of EWE, a student

must also enroll in EWE 220 Cooperative Work Experience I. This 1-credit course involves attending a series of seminars on work related topics including the following:

- Resume writing
- Interviewing skills
- Job search techniques and issues
- Stress and time management
- Re-careering
- Contemporary Issues in the workplace
- Taking charge and moving up

Prerequisites for CO-OP

- At least 9 credit hours earned (if CIT student, 12 credits must be earned in your Specialty Option)
- 2.25 GPA
- Approval to enroll from CLC faculty sponsor

For more information, call (847) 543-2059.

Internship and Job Fairs

The Career and Job Placement Center offers several types of job fairs. Mini job/internship fairs offer students the opportunity to talk with area employers who share information about their organization, job opportunities and typical career paths within their business. The Jobapalooza Job Expo is held in the spring for students and community young adults between the ages of 16-21. The fair includes employers, resources and training opportunities. The JobMarketPlace Job Fair is held between the spring and summer academic semesters and includes an employer panel workshop the day of the fair. For more information, call (847) 543-2059.

Student Employment/Work Study

The Student Employment Program is administered by Career and Job Placement Center. The college's Financial Aid Office notifies students who are eligible for Federal Work Study with a Financial Aid Notification. Once a student has been notified and accepts his/her award, the Career and Job Placement Center assumes the primary role of administering the program and handles all aspects of the employment process for students. For more information, call (847) 543-2059.

Student Use of Information Technology

In pursuit of its teaching and learning mission, the college provides access to Information Technology (IT) facilities and resources for students, faculty, staff and other authorized users according to institutional priorities and financial capabilities.

This access is a privilege granted by the college and is governed by such factors as relevant laws and contractual obligations, the nature and need of the information sought by the user and the risk of damage or loss to the college. Special training and the signing of a statement of responsibility may be required before access to IT facilities is allowed.

The **myLogin** account is the student's electronic identity at the College of Lake County. This identity is a combination of username and password, and allows online access to services including myStudentCenter, email, and Blackboard. Usernames are based on first and last name. If another user has a similar name, alternates are provided when the account is created. Once a username is created it cannot be changed unless documented evidence of a legal name change is provided.

The college reserves the right to limit, restrict, extend or deny computing privileges and access to its IT resources. The college may allow individuals other than college students, faculty or staff members access to information so long as such access does not violate any license or contractual agreement, college policy or any federal, state, county or local law or ordinance.

Information Technology Services provides important means of communication, both public and private. Authorized users and system administrators will respect the privacy of person-to-person communications in all forms, including voice (telephone), text (electronic mail, file transfer, fax) and image (graphics, television, video conferencing and satellite systems). The college reserves the right to monitor and record the usage of all Information Technology facilities and resources.

All members of the college community who use IT facilities and resources must act responsibly in their use of the resources. All users of the college's IT facilities and resources must respect the rights of other users, respect the integrity of the physical facilities, comply with all pertinent licenses, contractual agreements and operating procedures and uphold the highest standard of ethics. Information Technology shall only be used for the purposes of teaching and learning, administration, economic development or research.

Unacceptable Use of Information Technology

1. It is not acceptable to use the college's equipment or facilities for any purposes that violate federal or state laws.
2. It is not acceptable to use the college's facilities in such a way as to interfere with or disrupt network users, services or equipment. Such interference or disruption includes, but is not limited to, the following: conducting profit-making activities or distributing unsolicited advertising unrelated to the College of Lake County; transmitting threatening, obscene or harassing materials or otherwise unwelcome email; propagating computer viruses; playing computer games; doing intentional damage or otherwise interfering with other individuals' use of the Internet, computer files or programs; copying college-owned software for personal use or using the network to make unauthorized entry to other computing, information or communications devices or resources.

Enforcement

Intentional or negligent corruption or misuse of IT facilities and resources is a direct violation of the college's standards for conduct. Alleged violations of this policy will be processed in accordance with the processes outlined in the college's Policy Manual, collective bargaining agreements and the statement of Student Rights and Responsibilities. Access and use violations of Information Technology facilities and resources will be treated seriously. The college will pursue criminal and civil prosecution of violators as it deems necessary.

Tape Recording Guidelines

The use of tape recording or other recording devices by a College of Lake County student is dependent upon the particular course, program and the permission of the instructor. CLC students acknowledge that their classroom discussions and participation may be recorded. CLC students further acknowledge that any authorized recording of a class or program is for their use only and may not be accessed or utilized by any other individual. Use of any course or program recordings shall be used for educational purposes only and no replication or reproduction of the recording shall be made without the express written consent of the instructor and College of Lake County. Any student determined to have violated this procedure/rule shall be subject to discipline under the College's Student Rights and Responsibilities Policy and Procedures.

Students requesting to record a class pursuant to the Americans with Disabilities Act shall contact the Office for Students with Disabilities at (847) 543-2055.

Policies Governing Student Life

In order to ensure that all students are treated fairly, the College of Lake County has developed policies governing student life.

Student Rights and Responsibilities

Preamble

It is the responsibility of the College of Lake County to provide equal access to its educational opportunities and to prevent interference with those educational opportunities by maintaining an orderly, civil, and safe educational environment.

When students choose to attend CLC they accept the Student Rights and Responsibilities Policy as members in the college's academic and social community. Each person has the right and ability to make personal decisions about his or her own conduct. Just as importantly, each person has the responsibility to live with the consequence(s) of his or her decision making.

The Student Rights and Responsibilities Procedures are designed to implement this policy and can be found at: <http://dept.clcillinois.edu/ssd/StudentRightsBrochure.pdf>. The Procedures describes student rights and responsibilities, as well as examples of misconduct inconsistent with the academic environment at CLC. Types of misconduct can range from acts of dishonesty (cheating, plagiarism, forgery, etc.) to speech and related behavior that is disruptive or likely to be substantially disruptive to others or to the college environment (conduct that is likely to provoke a violent reaction, constitutes harassment/abuse, is aggressive, disorderly, lewd or indecent, attempted or actual theft, etc.). Included are responses to such behaviors, and possible sanctions that are intended to educate and safeguard members of the college.

If You See Something, Say Something! Reporting Concerns, Grievances and Complaints

The College of Lake County is invested in maintaining the well-being of the campus environment. It is important that students, staff, and faculty have an equal share, interest and responsibility in ensuring a safe and respectful campus. If you have experienced something that causes you concern, or simply doesn't seem right, please report it.

Examples may include aggressive behavior of a classmate, an electronic threat made on social media, experiencing or knowledge of harassment or discrimination, witnessing suspicious activity or overhearing a conversation about violence.

For an immediate threat to the safety of yourself or others, call 911 or the CLC police department at extension 5555 (from an on-campus phone) or (847) 543-2081.

If you have a concern regarding:

- Safety, such as aggressive conduct that threatens or endangers the health or safety of any person; and/or
- Discrimination or harassment related to race, color, religion, sex, national origin, age, marital status, sexual orientation, or disability

Then, complete the online CLC Cares Form located inside your Student Center in the MyCLC portal. Look for the CLC Cares icon on the left side of the page.

Note: If your concern is related to sex or gender based discrimination or harassment, you can complete the CLC Cares form or contact college's Title IX coordinator (more information on Page 35).

If you have an academic concern, see page 34 for procedures for addressing students' academic concerns.

If you have a complaint regarding a service at the college or other concerns you would like to bring to the college's attention, please contact the appropriate office or department directly. See page 376 for a directory of offices and departments.

If you have a question about how to report any concern, grievance or complaint, contact the Student Development Office for assistance. You may also submit a report in person to Student Development. The office is located on the Grayslake campus in Room C208, (847) 543-2048.

Notification of Rights under FERPA For Postsecondary Institutions

The Family Educational Rights and Privacy Act (FERPA) gives students certain rights with respect to their education records. They are:

1. The right to inspect and review one's educational records within 45 days of the day the College of Lake County receives a request for access. Students should submit to the registrar, academic dean or other appropriate college official, a written request that identifies the record(s) they wish to inspect.
2. The right to request the amendment of one's educational records that one believes are inaccurate or misleading. Students must write to the CLC official responsible for the record, clearly identifying the part of the record they want changed and specifying why it is inaccurate or misleading. If the College of Lake County decides not to amend the record as requested by the student, the college will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment.

3. The right to consent to disclosures of personally identifiable information contained in one's educational records, except to the extent that FERPA authorizes disclosure without consent. Examples in which disclosure without consent is permitted include that of disclosure to school officials with legitimate educational interests and to appropriate parties in order to protect the health and safety of students or other individuals. A school official is a person employed by the College of Lake County in an administrative, supervisory, academic, research or support staff capacity (including law enforcement personnel and health staff), a person or company with whom the College of Lake County has contracted (such as an attorney, auditor or collection agent); a person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks. CLC is responsible for taking appropriate measures to permit only those school officials with legitimate educational interests to access individual records. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility. Upon request, the College of Lake County discloses education records without consent to officials of another school at which a student applies or intends to enroll.
4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by the College of Lake County to comply with the requirements of FERPA. The office that administers FERPA is:
 Family Policy Compliance Office
 U.S. Department of Education
 600 Independence Ave., SW
 Washington, DC 20202-4605

At the College of Lake County, directory information consists of a student's name, address, email, student username, telephone number, major field of study, participation in recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards achieved and most previous education agency or institution attended by the student. As directory information, the college may use this data internally, as well as release it at the college's discretion without prior consent.

Any student objecting to the release of all or any portion of such information must notify the Records Office in writing. The restriction will remain in effect until revoked by the student in writing.

Student Right-to-Know

In compliance with student right-to-know legislation signed into law on November 8, 1990 and amended by PL 102-26 in 1991, information on completion rates for students at the College of Lake County is available by contacting the Office of Institutional Effectiveness, Planning and Research, Room T332, Grayslake Campus, (847) 543-2096.

Addressing Students' Academic Concerns

Students shall have a procedure by which they can address their academic concerns. The evaluation shall be conducted in accordance with written procedures, which shall be distributed to all faculty.

1. Within six months from the time the action occurred that caused the student a concern, the student discusses the concern and if possible resolves the matter with his or her instructor. If the concern is not immediately resolved and the student wishes to bring his/her concern to the appropriate dean, the student will provide the dean with a written statement of the concern and his/her position.
2. At the student's request, the dean will meet with the instructor and the student. After meeting with the student and instructor, the dean reviews the concern, which may involve consulting with other staff members appropriate to the situation, such as the Associate Vice President for Student Development, counselors, the student's other instructors, the Learning Assistance Center staff or other deans. The dean also has the instructor write a statement of his/her position, including supporting rationale. Within 15 days of meeting with the student, the dean renders a decision, which includes his/her rationale for the decision. The dean will send his/her final decision to the student in writing with a copy to the Provost.
3. If the student wishes to appeal the dean's decision, a formalized process is instituted by the student submitting a written statement indicating his/her concern, the desired outcome and the rationale and supporting documentation to the Provost. Upon receipt of the student's concern, the Provost will collect necessary documentation including instructor's statement from the appropriate dean. The Provost will analyze the supporting documentation and develop his/her final decision. The Provost will have 15 days to review the concern and respond to the student in writing.

Discrimination and Harassment Complaint Procedures

Non-Discrimination and Harassment Policy

In accordance with the statutory provisions included in Title VII of the Civil Rights Act, Title IX of the 1972 Education Amendments, Section 504 of the 1973 Rehabilitation Act and all other applicable federal and state laws, it is the policy of the College of Lake County not to discriminate on the basis of a person's race, color, religion, sex, national origin, age, marital status or disability in any of its education programs, activities or employment policies.

The college, through its commitment to equal rights, will ensure that students work, learn and study in an environment free of illegal harassment. Harassment infringes upon equal respect in work and academic relationships, causes serious harm to the operation and to the future careers and success of students.

The college seeks to prevent harassment from occurring. College policies and procedures afford the investigation and resolution of complaints. Findings of harassment may result in discipline, suspension or dismissal.

Prohibited Harassment

The college prohibits harassment and discrimination on the basis of age, disability, national origin, ancestry, race, color, religion, creed, sex or marital status or retaliation for having engaged in a prior discrimination or harassment complaint.

Harassment pursuant to this procedure is unwanted behavior directed toward an individual based on one or more of the foregoing designated characteristics. Harassing conduct may include, but is not limited to, verbal acts, name-calling, graphic written statements through the use of cell phones or the Internet or other conduct that may be physically threatening, harmful or humiliating.

Unwelcome conduct of a sexual nature, including sexual advances, sexual violence, requests for sexual favors and other verbal, nonverbal or physical conduct of a sexual nature. Sexual violence is defined as physical sexual acts perpetrated against a person's will or where a person is incapable of giving consent due to the victim's use of drugs or alcohol or intellectual or other disability. Sexual violence can include rape, sexual assault, sexual battery and sexual coercion.

Gender-based harassment is defined as acts of verbal, nonverbal or physical aggression, intimidation, or hostility based on sex or sex-stereotyping, even if those acts do not involve conduct of a sexual nature, such as stalking.

Discrimination and Harassment Complaint Procedure

Any student who believes that he or she has been discriminated against or harassed may follow either an informal or formal procedure without fear of recrimination. A prompt and confidential investigation will be provided to the degree possible.

Step 1 - Any student believing he or she has been a victim of discrimination/harassment may discuss their concerns with the Associate Vice President for Student Development. The Associate Vice President, Dean, Director or a specifically designated person may make an effort to resolve the concern informally. The student will receive a written response within thirty (30) days of receipt of the informal complaint. The timeframe may be extended for justifiable reasons or by mutual consent.

Complainants alleging harassment, other than sexual assault (see separate procedure below), based upon sex or gender will be notified of their right to end the informal process at any time and begin the formal stage of the complaint process at Step 2.

All complaints of sexual assault will not be handled informally and will proceed immediately to Step 2. Mediation will not be used to resolve sexual assault complaints.

Step 2 - If the matter cannot be satisfactorily resolved at step 1, or if it is a matter involving sexual assault, the student must file a formal complaint with the Associate Vice President for Student Development. For the purpose of mailing written complaints, the mailing address is: Associate Vice President of Student Development, College of Lake County, 19351 West Washington Street, Grayslake, IL 60030.

The written complaint must be filed within sixty (60) days of the alleged incident of discrimination/harassment. In addition, the written complaint must be signed, and to the extent possible, should state in detail, the time, place, pertinent facts and circumstances of the alleged discrimination/harassment along with any witnesses. The Associate Vice President for Student Development will notify the accused of the complaint and will conduct a thorough investigation of the complaint within thirty (30) days of its receipt. The time period may be extended for justifiable reasons or by mutual consent. The complainant and accused shall be informed of any extensions.

Step 3 - Upon completion of the investigation, the Associate Vice President for Student Development shall make a written finding stating the final outcome of the investigation. If a violation is indicated, the Associate Vice President for Student Development may recommend any reasonable and appropriate remedy for the complaining party if there is a preponderance of the evidence that discrimination/harassment did occur.

Employee discrimination against students will be subject to discipline under appropriate College of Lake County employment policies and, as applicable, collective bargaining agreements. Depending on the severity of the incident, disciplinary action against an offending employee may include discharge. Student discrimination against other students will be subject to discipline under the Students Rights and Responsibilities Policy. The college may take additional corrective actions to remedy any instances where discrimination is determined to have occurred.

Step 4 - If the complainant or the accused is not satisfied with the outcome of the investigation conducted by the Associate Vice President for Student Development, he/she may request, in writing, that the matter be reviewed by a President's panel. The complainant must make this written request within 10 days of the findings in step 3.

The college President shall appoint an impartial panel consisting of:

- One college administrator
- An Associate Vice President
- One faculty member

The complainant(s) and appealing party shall select one of three possible college administrators offered by the President.

The complainant(s) and appealing party shall select one of three possible faculty members offered by the President.

The President's panel shall arrange to meet with the appealing party as well as other principals associated with the complaint. Both the complaining party and the accused will have an opportunity to present witnesses and relevant evidence at the meeting. Following such meeting (or meetings), the President's panel shall present its findings in writing to the President for final action. The procedures in this step shall be accomplished within thirty (30) working days of the date the written appeal is received by the President. Time limits may be extended by mutual consent. All parties will be notified of the outcome of the appeal.

Inquiries Concerning the Application of Title IX

The College of Lake County ("CLC") complies with the requirements of Title IX of the Education Amendments of 1972, which prohibits discrimination on the basis of sex in all programs and activities receiving federal financial assistance. It is also the policy of CLC to prohibit discrimination and harassment on the basis of race, color, national origin, ancestry, religion, sex, sexual orientation including gender identity, marital status, civil union status, age, physical or mental disability, military status, or unfavorable discharge from military status in regard to the administration of educational programs, admission of students, employment actions, athletics or other sponsored activities.

To ensure compliance with Title IX, CLC has designated Title IX coordinators who are responsible for developing, adopting and making this policy available to the college community.

The Title IX coordinators will also facilitate CLC's Title IX compliance and response to inquiries, and Title IX compliance requirements with the Athletic Department and other college departments, as appropriate.

Any individual who believes he/she has been discriminated against or harassed because of their gender, who has been subjected to sexual harassment, sexual assault, sexual misconduct, or relationship violence in violation of college policy, or who has witnessed such activity against another, may file a complaint or obtain information and assistance from the college's Title IX coordinators and their respected offices. CLC's Sexual Misconduct and Title IX Procedures designed to implement this policy may be found at: www.clcillinois.edu/TitleIX.

Student Development / Counseling and Advising

Any individual with questions regarding the application of Title IX may also contact the Office for Civil Rights, U.S. Department of Education, 500 W. Madison St., Chicago, IL 60601, (312) 730-1560 or (800) 421-3481, email OCR.Chicago@ed.gov.

Any inquiries concerning the application of Title IX at the College of Lake County may be referred to the Title IX Coordinator,
Teresa G. Aguinaldo, Dean, Student Life
College of Lake County
19351 W. Washington St., Grayslake, IL 60030
Room B131, (847) 543-2288
com401@clcillinois.edu

General Provisions

Because of their sensitive nature, complaints of sexual harassment will be handled with the utmost discretion and confidentiality to the fullest extent possible.

Retaliation against individuals who invoke the procedures set forth herein is strictly prohibited.

Clean Air Smoke-Free Policy

To promote a healthy atmosphere for the College of Lake County, support environmental sustainability efforts, decrease maintenance costs and to comply with the Smoke-Free Campus Act and the Smoke-Free Illinois Act, the college hereby prohibits smoking and the use of any tobacco products on campus. The prohibitions on smoking do not apply to instances in which an individual, in a vehicle not owned by the college, travels through or parks on campus.

Student Life/Student Services

Children's Learning Centers

CLC offers affordable child care for students and the community at its nationally accredited Children's Learning Centers on both the Grayslake and Lakeshore campuses. A highly qualified staff provides child care for 2-6 year olds year-round with school-age care provided for children up to age 12 during the summer session. Children are enrolled in advance for limited times based on their parents' class, study and work schedules. For more information on fees, times and registration, call the Grayslake center at (847) 543-2053 or the Lakeshore Campus center at (847) 543-2190.

Health Center

The Health Center provides primary nursing care for urgent and minor illnesses and injuries, making referrals when necessary, and providing over-the-counter medications for related symptoms. Student/staff immunizations and lab services are available by appointment for a greatly reduced cost. Confidential care is assured.

Screening services are offered in cooperation with other college departments and community agencies. Informational brochures on many health-related topics are available in the Health Center. Medical parking for temporary disabilities is authorized through the Health Center.

The Health Center is located in Room A149, across from the CLC Police office on the Grayslake Campus. Hours are Monday, Thursday and Friday from 8 a.m. to 4:30 p.m. and Tuesday and Wednesday from 8 a.m. to 7 p.m. when classes are in session. The Health Center is closed on Saturday and Sunday. For appointments, call (847) 543-2064.

Intercollegiate Athletics and Physical Activities

Intercollegiate athletics and physical activities are an important part of student life. CLC teams compete in 12 intercollegiate sports. Women's sports include basketball, cross country, soccer, softball, tennis and volleyball. Men's sports include baseball, basketball, cross country, golf, soccer and tennis. CLC is a member of the National Junior College Athletic Association and the Illinois Skyway Intercollegiate Conference. The college is noted for its excellence and integrity in athletics. The CLC physical activities programs provide a variety of fitness and wellness activities for students, faculty and staff. All CLC students enrolled in a credit class may use the CLC Fitness Center for free. For more information, contact the Office of Athletics and Physical Activities at (847) 543-2046.

LGBTQ Resource Center

The LGBTQ Resource Center provides a place where LGBTQ individuals and allies are able to experience a sense of community and learn about LGBTQ identity and culture. Its goal is to build an inclusive campus community by offering support services, educational programs, mentoring to the local high school's straight and gay alliance programs, and by advocating for leadership development. The Resource Center promotes the health and well-being of persons of all sexual orientations and gender expressions, their families and their friends. For more information call (847) 543-2529 or email lgbtq@clcillinois.edu.

Multicultural Student Center

The Multicultural Student Center provides programs and services to encourage educational, individual, social and cultural growth among CLC's diverse student population. The MSC promotes diversity and multicultural awareness, houses 11 multicultural clubs and assists in coordinating activities that represent different cultures, provides peer mentors, works to retain underrepresented students and students of color, and helps with overall college retention and success. For more information, visit the Multicultural Student Center on the Grayslake Campus or call (847) 543-2045.

Student Activities

Student activities provide educational, social, cultural and recreational opportunities for students, staff and members of the community. Involvement in student activities is recognized by many employers as an asset, and they encourage students to develop skills by participating in campus clubs and organizations.

The Student Activities Office gives students the opportunity to become involved in campus life, to help bring about positive change and to meet new people and make new friends. The quality of a student's college experience can be related to the level of involvement in various college activities, such as Student Government Association, Program Board, Chronicle student newspaper, and Lancer Radio. There are also 40-50 special interest clubs.

Student Activities feature co-curricular activities through the Illinois Skyway Collegiate Conference. Students get the opportunity to compete in the fields of: art, jazz, STEM (Science, Technology, Engineering and Math) and Writing with seven neighboring college participants.

Students also get an opportunity to participate in Campus Leaders for Community Service (CLCS), where they gain leadership skills through community service hours on and off campus and earn a co-curricular transcript for transfer and job-seeking.

Student organizations can serve as a laboratory where a student can spend as much time as desired planning, organizing and implementing programs and services for students and the community. For information, stop by the Student Activities office at the Grayslake Campus or call (847) 543-2280.

Phi Theta Kappa

An international honor society exclusively for community college students who have a 3.5 cumulative GPA or higher and have accumulated a minimum of 12 credit hours. Membership is by invitation only. For more information, please call (847) 543-2756 or visit the Student Activities Office on the Grayslake Campus.

Student Government

The College of Lake County Student Government Association (SGA) is the official representative organization of CLC students. Student senators and executive officers are here to be your voice — sharing your ideas, concerns and feedback with other organizations, offices and departments at the college. To get involved with SGA or to learn more what SGA can do for you, contact studentp@clcillinois.edu or call (847) 543-2295.

Veterans Services

Veterans Services provides a variety of services including assisting veterans, military personnel and dependents in getting started at CLC. Information in obtaining and using Veterans Administration (VA) and state educational benefits is provided, as well as veteran-specific services including veteran new student orientation and Servicemember Opportunity College (SOC) agreements. For more information, visit Veterans Services in B Wing or call (847) 543-2293.

Women's Center

The Women's Center serves the unique needs of the college's female students, staff and community members by providing a safe physical location and a variety of services. The center supports special populations of students and focuses on services geared toward the CLC female population, although its doors are open both to women and men. Emergency financial services and the Smart Choices workshop series are offered to CLC students only. For information visit the Women's Center on the Grayslake Campus or call (847) 543-2771.

Academic Computing

The academic computing facilities at CLC include a wide variety of labs and equipment designed to meet the needs of the student population. Many divisions within the college maintain independent lab facilities specifically suited to the issues encountered in each academic discipline. In addition, there are a number of labs located at the Grayslake, Lakeshore and Southlake campuses that are available for use by the general student population. In addition to the various software resources provided by the academic divisions, students also have access to the Internet in many of the labs. The number of labs in each division is as follows:

- Biological and Health Sciences - 4
- Business and Social Sciences - 14
- Communication Arts, Humanities and Fine Arts - 6
- Engineering, Math and Physical Sciences - 9
- Library - 4
- Lakeshore Campus - 5
- Southlake Campus - 5

Aside from these labs, there are a number of individual instructional support workstations located in many areas throughout the college. Such diverse disciplines as Health Information Technology, Biology, Phlebotomy, Chemistry, Physics, Refrigeration and Air Conditioning, Computerized Numerical Control and Automotive Technology use these facilities to provide enhanced instruction to CLC students.

The college's computing facilities are heavily used both for class sessions and by individuals for instruction, homework or personal computing needs. These computing facilities encompass a wide range of leading-edge hardware and operating systems, including Windows and Mac. Instructors will assist students in determining hardware and software requirements for their particular course.

All academic computing facilities are operated under a set of guidelines that are designed to improve the students' working environment while maintaining the integrity of the entire computing system. For specific information regarding equipment location and use, call the ITS User Services Department. Students may also call the Help Desk at (847) 543-HELP (4357) for assistance. For additional information including hours of operation and self-service resources, please visit www.clcillinois.edu/helpdesk.

Academic Honors

Semester Honors

Semester honors are compiled and published at the end of the fall and spring semesters. Students who have earned a grade point average of 3.0 (B) or higher while enrolled in at least 6 semester hours of transfer or career courses during a semester are recognized by placement on the **College Honor List** for that semester. Students placed on the Honor List are notified by the Educational Affairs Office approximately one month after the semester ends.

Commencement Honors

Students who have earned at least 30 semester hours at CLC by the end of the fall semester immediately preceding the commencement ceremony will be recognized as receiving the following honors based upon cumulative GPA:

Honors	3.00 - 3.49
High Honors	3.50 - 3.74
Highest Honors	3.75 - 4.00

The Records Office compiles the Commencement Honors list as part of the commencement program.

Academic Standards

To help guide and measure students' academic success, the college has developed Academic Standards.

Academic standards are measured by two criteria: the **Course Completion Standard** and the **Grade Point Average Standard**. Students must meet these standards to be in good standing. The effective date that begins to measure academic standards is the last date to drop a class with no record of the class on the academic transcript, and with a full refund of tuition and fees. This date is specific to each class, and is a point when 15 percent of the class length has passed. Excluded from these standards are courses in Adult Basic Education (ABE), English as a Second Language (ESL), General Education Development (GED), Vocational Skills Technology, Contract Training, Continuing Education and General Studies.

Course Completion Standard

The course completion standard calculation includes baccalaureate/transfer courses, career courses and developmental courses. The following table shows the minimum number of courses that a student must complete to remain in good standing.

Courses Attempted	Minimum Courses To Be Completed
2	1
3 or 4	2
5 or 6	3
7 or 8	4
9 or more	5

NOTE: The course completion standard is for each individual term. It is not intended to be a cumulative standard.

Grade Point Average Standard

The grade point average calculation includes only baccalaureate/transfer courses and career courses; developmental courses are not included. Students who have attempted 15 or more semester hours at CLC must maintain the minimum grade point average listed below to remain in good standing:

Hours Attempted	GPA
15-44	2.0 either cumulatively or for the semester
45 or more	2.0 cumulative

NOTE: The GPA standard is not applied to students who have cumulative attempted hours less than 15.

Students In Good Standing

Students who meet the Course Completion Standard and the Grade Point Average Standard are designated to be in good standing.

Students Not In Good Standing

Students are not in good standing if, due to their academic record, they are placed in one of the following categories:

Academic Caution

Students previously in good standing who do not meet either the Course Completion Standard or the Grade Point Average Standard will be placed on academic caution.

Students on caution are recommended to limit their enrollment to the number of semester hours successfully completed during the previous term, or to only one course for credit, depending on whichever option yields the most semester hours. It is recommended that students on caution meet with a counselor.

Academic Restriction

Students on academic caution who do not meet the Course Completion Standard and/or Grade Point Average Standard will be placed on academic restriction.

Students on academic restriction are required to meet with a counselor and receive approval to register for courses. In their next semester at the college, students placed on academic restriction may only enroll in the number of semester hours successfully completed during the previous semester, or enroll in only one course for credit, depending on whichever yields the most semester hours.

Academic Suspension

1. Students who fail to meet the Grade Point Average Standard for three successive semesters are prohibited from taking courses the following fall or spring semester (summer excluded), except for Adult Education, Continuing Education and Workforce and Professional Development Institute courses.
2. If a student on academic suspension is enrolled for the following semester their enrollment will be dropped.
3. Students have the right to appeal their suspension to the Dean of Counseling, Advising and Transfer Center.

Students Returning From Academic Suspension

Students who have completed the one-semester suspension (summer excluded) are required to meet with a counselor and receive approval to register for courses. Students are limited in the initial semester of their return to enrolling for no more than 13 semester hours.

Students Who Were on Academic Suspension, Returned to CLC and Again Fail to Meet Academic Standards

1. Students are placed in academic suspension again and prohibited from taking courses the following fall or spring semester (summer excluded).
2. Students who have completed the one-semester suspension again are required to meet with a counselor and receive approval to register for courses.

Academic Information and Regulations

Academic Standards Appeal Procedure

1. Purpose

Students who have been suspended for failing to meet the Grade Point Average Standard requirement may appeal their suspension to the Dean of Counseling, Advising and Transfer Center.

2. Appeal Procedures

- a. Within five (5) working days of the receipt of a suspension notification letter, the student must obtain a copy of the appeal procedures from the Counseling Office and meet with a counselor.
- b. Within five (5) working days, the student must complete an Academic Suspension Appeal Form and return it to the counselor.
- c. The Academic Suspension Appeal Form will be forwarded by the counselor to the Dean of the Counseling, Advising and Transfer Center. A decision will be made within five (5) working days of the receipt of the appeal form. The student may be asked to meet with the dean if it is deemed necessary.
- d. The decision of the dean may be appealed to the Associate Vice President for Student Development within five (5) working days of the dean's decision. The Associate Vice President for Student Development will review the request for appeal, meet with the appropriate parties and render a final decision regarding the appeal.

Reinstatement of Good Standing

Students placed on academic caution, restriction or suspension, who satisfy both the Course Completion Standard and Grade Point Average Standards during their next semester or summer term at CLC, will be considered to be in good standing.

Inactive Status

Students who have not enrolled in any course listed in the CLC class schedule for at least two years are considered inactive.

Inactive students who decide to re-enroll for courses will be governed by the college catalog covering the semester in which they register for courses.

Forgiveness Option

Under extenuating circumstances, students may petition for a **one-time** forgiveness of up to 15 hours of prior D, F or FW grades in accordance with the following guidelines:

- At least two years have passed since the end of the term of the grades to be forgiven.
- Fifteen consecutive credit hours have been completed with no grades lower than a C.*

- Forgiven grades remain on the student's record but are not computed in the student's grade point average.
- Forgiven grades cannot be used to meet graduation requirements.
- Students lose any existing educational guarantees for the forgiven courses.
- The college accepts no responsibility for the ways in which a transfer college or university or an employer might interpret a student's use of the forgiveness option.
- In consultation with a counselor, the student has signed a declaration of understanding.

Students who would like to use the Forgiveness Option should meet with a counselor.

* This calculation includes baccalaureate/transfer courses, career courses and developmental courses.

Declaring or Changing Program of Study

Students may declare or change their program of study by contacting the Welcome and One-Stop Center, B Wing, on the Grayslake campus. Any changes to the program of study should be planned with an academic advisor or counselor. The deadlines for changing a program of study are: Fall - December 1; Spring - May 1; Summer - July 15. Any change request received after the deadline will take effect beginning with the start of the next academic term. Changes to the program of study may affect a student's eligibility for financial aid. See page 23 for information on programs that are ineligible for financial aid.

Academic Support

Academic support is provided to CLC students with individual needs through testing, student support services, academic coaching, tutoring and modular instruction. These services are available at the Grayslake, Lakeshore and Southlake campuses.

Testing Center

The Testing Center provides a single location on each campus where students can take a variety of exams to meet different academic needs: Academic Proficiency Test (APT) for CLC course placement; GED, CLEP, DSST, CLC classroom make-up exams, exams for CLC Online Courses; exams for Distance Learning and Online courses from other colleges; surveys and interest inventories for academic and career counseling, and many more. Please call for further information:

Grayslake Campus, Grayslake: (847) 543-2076
Lakeshore Campus, Waukegan: (847) 543-2120
Southlake Campus, Vernon Hills: (847) 543-6544

Student Support Services (SSS)

Student Support Services, a TRiO program, which is funded by the Department of Education, is an interactive program designed to assist students in the completion of a certificate, associate degree or transfer program. One of the key benefits to participating in SSS is that students will be able to meet one-on-one with the SSS staff throughout their academic career, and the staff will help students develop an Individualized Academic Plan to ensure success at the college. Student Support Services offers academic coaching, study skills assessment and mentoring, Financial Aid workshops, career counseling, access to technology/computers, exposure to Student Activities, field trips and visits to four-year colleges, and cultural events. The staff works closely and effectively with other departments within the college to create a holistic success plan for each student. Program participants leave the program with an increased level of knowledge regarding finding scholarships, financing their education and overall economic literacy as they prepare for life after college. The office is located in Room L033 at the Grayslake Campus at (847) 543-2755.

Coaching for Academic Success (CAS)

CAS uses proactive outreach and an early alert system to connect English and math students to an academic coach. Coaches provide intrusive academic support, connect students directly to resources and track academic progress. Students enrolled in courses designed to develop the skills needed for college-level courses are assigned to an academic coach. For more information, contact the CAS office at (847) 543-2072 or stop by L123 on the Grayslake Campus.

Modular Instruction

Students wishing to improve basic skills in writing or mathematics can do so by enrolling in a module. These individualized, structured programs of study permit students to work at their own pace. Modules are available at the Grayslake, Lakeshore and Southlake campuses.

ENG 104 Individualized Topics in Writing and Reading

MTH 101 Elementary Concepts of Mathematics

Contact any tutoring center for more information.

Tutoring

Tutoring services are available to CLC students at all three campuses. The cost for tutoring is covered by the comprehensive fee. Services include coaching in writing, as well as tutoring in mathematics, science, accounting, computer skills and some foreign languages. Students can work with writing coaches on written assignments from any class and at any stage of the writing process—from brainstorming to proofreading a near final draft.

Students are welcome to drop in for tutoring on a first-come, first-served basis. Appointments may be made for help with writing and computer skills. Hours, tutor availability and subject areas tutored vary by campus. For more information, visit www.clcillinois.edu/tutoring or contact the Grayslake Math Center at (847) 543-2449, the Grayslake Writing Center at (847) 543-2452, the Southlake (Vernon Hills) Tutoring Center at (847) 543-6542 or the Lakeshore (Waukegan) Tutoring Center at (847) 543-2179.

Students with Disabilities

The Office for Students with Disabilities, located in the Learning Resource Center of the Grayslake campus, provides reasonable accommodations for students with disabilities. All requests require appropriate documentation of disability. For more information call (847) 543-2474, (847) 543-2473 or (847) 223-0134 (TTY). More detailed information can be found on page 29 of this catalog.

Auditing

Students are permitted to audit courses. For audited courses, students receive a grade of X, which carries no grade points or semester hours of credit. Audited courses do not serve as prerequisites for subsequent coursework. The fee for auditing is the same as enrolling for credit.

A student who wishes to audit a course is expected to attend regularly. The completion of assignments, exams and projects is at the discretion of the student. Some types of courses may be deemed inappropriate for auditing because they require a high level of student involvement.

Students can request to audit a course by submitting the Course Audit Request from after enrolling in the course. Contact the Welcome and One-Stop Center, B Wing, on the Grayslake Campus for more information. Changes in a student's enrollment status (audit to credit or credit to audit) must follow the time frames as listed for refunds in the withdrawal/refund schedule (Policy 421). See pages 18-20 for more information.

Credit-by-Exam

CLC provides opportunities to earn credit for prior learning by scoring well on selected exams. A student may opt for credit-by-exam for a number of reasons, including college credit, employment, or professional advancement. **Students intending to transfer credits to another college are advised to check with the transfer school to determine its policy toward credit-by-exam.**

CLC board policy states that credit-by-exam is:

- Not to exceed a total of 30 semester hours required toward completion of an associate degree
- Not to exceed one-half of the semester hours required toward completion of a certificate
- Not to count toward the fulfillment of the 15 semester hours general residency requirement for the associate degree.

There are four types of credit-by-exam available to students enrolled at CLC: Advanced Placement (AP), College Level Examination Program (CLEP), DSST and Challenge Exams. For some courses there may be more than one type of exam available for receiving credit. For information about specific credit, passing scores and examination requirements, consult with one of the following offices:

- Office of Admissions, B Wing, (847) 543-2061
- Counseling Center, C Wing, (847) 543-2060
- Testing Center, first floor of the the main Library, (847) 543-2076
- Biological and Health Sciences division, Room B210, (847) 543-2042
- Communication Arts, Humanities and Fine Arts division, Room B210, (847) 543-2040
- Engineering, Mathematics and Physical Sciences division, Room T302, (847) 543-2044
- Learning Assistance Center at Lakeshore Campus, Room N203, (847) 543-2120
- Testing Center at Southlake Campus, Room V212, (847) 543-6544
- Business and Social Sciences division, Room T302, (847) 543-2047
- Cooperative Education Office, (847) 543-2058

Students who plan to earn CLC course credit through AP, CLEP and/or DSST must request an official transcript of their exam scores from the appropriate testing agency, and ask the agency to send the transcript directly to CLC Records Office.

Credit earned via credit-by-exam has no effect on a student's grade point average.

Advanced Placement (AP)

The college recognizes AP test scores for the purposes of placement into advanced level courses and/or for college credit. High school students can arrange for AP tests, administered by the College Board, through their local high schools. AP test scores determine specific placement and/or college credit. Students may find more information about AP exams through the College Board's website at <http://apcentral.collegeboard.com>.

College Level Examination Program (CLEP)

CLEP (College Level Examination Program) is a national program sponsored by the College Board. Each individual college determines which CLEP tests it will accept for credit and the amount of credit it will award.

CLEP exams cover material taught in five subject areas: English Composition and Literature; Science and Mathematics; Social Sciences and History; Foreign Languages; and Business. Students can find detailed information about CLEP exams, along with study guides on the College Board's website: www.collegeboard.org – choose links for “Students” and “CLEP.”

The College of Lake County grants CLEP credit only to students enrolled at CLC. Results of CLEP exams may also be sent to another school at which a student is enrolled for the purposes of credit recognition.

CLEP exams are offered by appointment at all three CLC Testing Centers. The exam fee is \$80 per exam, and there is a separate \$20 exam administration fee (\$100 total per exam). Fees are subject to change. Please call the Testing Center of your choice for testing schedules, registration procedures, and other CLEP-related information:

Grayslake Campus, Grayslake: (847) 543-2076
Lakeshore Campus, Waukegan: (847) 543-2120
Southlake Campus, Vernon Hills: (847) 543-6544

College of Lake County is a military-friendly test center. Members of the U.S. Armed Forces do not have to pay any test fee or test administration fee if taking CLEP and DSST exams at the Great Lakes Center because the exams are funded by Defense Activity for Non-Traditional Education Support (DANTES). However, members of the U.S. Armed Forces taking CLEP and DSST exams at the Grayslake, Lakeshore and Southlake Campuses must pay the \$20 test administration only. Appropriate military identification is required for testing.

DSST

DSST (formerly known as DANTES Subject Standardized Tests) program is a national credit-by-exam program offered by Prometric. Each individual college determines which DSST tests it will accept for credit and the amount of credit it will award.

DSST exams cover material taught in six subject areas: Business, Sciences, Humanities, Mathematics, Social Sciences and Education. Students can find more information about DSST at www.getcollegetcredit.com.

CLC grants DSST credit only to students enrolled at CLC. Results of DSST exams may also be sent to another school at which a student is enrolled for the purposes of credit recognition.

DSST exams are offered by appointment at several CLC locations. The exam fee is \$80 per exam, and there is a separate \$20 exam administration fee (\$100 total per exam). Fees are subject to change. Please call the CLC location of your choice for testing schedules, registration procedures, and other DSST-related information:

Grayslake Campus, Grayslake: (847) 543-2076
 Lakeshore Campus, Waukegan: (847) 543-2120
 Southlake Campus, Vernon Hills: (847) 543-6544
 Great Lakes Center (for active-duty military personnel)
 (847) 543-2120

Credit for High School Career and Technical Education Courses

This articulation program provides students who have completed high school career and technical education programs the opportunity to receive college credit. The curriculum in the secondary program has been compared to introductory courses in some of the career programs. Articulation agreements are for students who have completed various programs taught at Lake County High Schools Technology Campus and several high schools in Lake County. Copies of the specific program agreements are on file in the Assistant Vice President for Educational Affairs office, Room C216, (847) 543-2409.

Challenge Exams (CH)

Challenge exams are available for students who possess prior knowledge of a subject area in a specific course. Challenge exams are not available for all courses and are offered at the discretion of the discipline/program faculty. Students may not take a challenge exam for a course in which they were previously enrolled and received a grade inclusive of I, W or X. Students may only attempt a challenge exam one time for any particular course and may not take a challenge exam after the first week of a course for which they are currently enrolled.

The fee for each challenge exam is \$12 per credit hour with a minimum fee of \$36 per course. Students interested in the challenge exam process should contact the appropriate division office below:

- Biological and Health Sciences division, Room B210, (847) 543-2042
- Business and Social Sciences division, Room T302, (847) 543-2047
- Communication Arts, Humanities and Fine Arts division, Room B210, (847) 543-2040
- Engineering, Mathematics and Physical Sciences division, Room T302, (847) 543-2044

Course Load

The course load for a full-time student ranges from 12 to 18 credit hours during the fall and spring semesters and from 6 to 10 hours during the summer session. Special permission from a counselor must be obtained for more than 18 credit hours during the fall and spring semesters or for more than 10 credit hours during the summer session. Intersession is part of the summer session and only one intersession course is recommended because intersession courses are very accelerated.

An employed student should vary his or her course load according to the number of hours he or she works. A good rule of thumb is to plan for three hours per week for each credit hour taken; one hour for the formal class meeting and two hours for outside study and homework.

The number of credit hours that a student may take is limited for those on academic restriction.

Final Examination

A final examination is generally required in all courses. Examinations will be administered at regularly scheduled times in accordance with an officially published examination schedule.

Except under emergency circumstances, a student may not be excused from these examinations. If a student is unable to appear, it is his or her responsibility to inform the instructor prior to the scheduled examination.

Grades and Grade Points

Final letter grades are earned for each class, issued at the end of each semester, and recorded on the student's permanent academic record according to the following schedule:

	Grade	Significance	
Calculated in Grade Point Average	A	Excellent	4 Grade Points
	B	Good	3 Grade Points
	C	Average	2 Grade Points
	D	Below Average	1 Grade Point
	F	Failure	0 Grade Points
	FW	Withdrawn by Institution, Failing	0 Grade Points
Not Calculated in Grade Point Average	I	Incomplete*	
	N	Requirements Not Fulfilled	
	O	No Grade Received	
	P	Satisfactory	
	R	Repeated	
	W	Withdrew	
	WN	Withdrawn by Institution, Never Attended	
	WS	Withdrawn by Institution, Stopped Attending	
X	Audit		

* See right for more information on Incompletes.

The college offers a number of developmental and academic ESL courses that are graded A through F, but not computed in the student's grade point average. These courses appear on the student's academic transcript with a grade, but no grade points. (Developmental courses include ENG 108, 109; MTH 101, 102, 104, 105, 106, 107, 108; academic ESL courses such as ELI 103, 104, 105, 106, 107, 108 and 109.)

Grades of P and N are used for non-academic ESL courses such as ESL 30 through 83.

Note: Although CLC does not compute the grades of basic skills or academic ESL courses into the grade point average, some colleges and universities to which a student transfers may include these course grades when recalculating the grade point average to meet their standards.

Incompletes

An I (Incomplete) may be given to a student who finds it impossible to complete the work by the end of the semester because of a justifiable reason such as illness. If an I grade is assigned, the instructor shall notify the student and the dean. The specific I grade procedure will be set forth in the appropriate section of the college catalog. A student receiving an I grade has 120 days to complete coursework and receive a final grade. The final grade shall be A, B, C, D, or F. An I becomes an F on the 121st calendar day after the end of the term if no grade change is signed by the instructor. Exceptions may be granted by an instructor only in unusual circumstances and with the approval of the appropriate dean.

Veterans and military personnel who are deployed (including training at U.S. or overseas locations) or called to active duty and receive an I Incomplete grade will be given up to one year after the end of the term, or before the date of graduation (whichever comes first) to complete the requirements. A final grade will be recorded within 365 calendar days after the end of the term. The final grade shall be A, B, C, D, or F. An I becomes an F on the 366th calendar day after the end of the term if no grade change is signed by the instructor. This procedure also applies to the spouses of veterans and military personnel. Exceptions may be granted by an instructor under special circumstances and with the approval of the appropriate dean.

Independent Study

Students may pursue courses offered by the college on an independent study basis under the following conditions:

1. Lack of enrollment in a course appropriate for the student's program of study precludes its being offered as a regularly scheduled class.
2. Documented, extenuating personal circumstances preclude an individual's enrollment in a scheduled class appropriate for his or her program of study.

Approval is granted upon the concurrence of a faculty member who agrees to guide the independent study and upon the authorization of the academic dean.

Joint Agreements

In-district students who wish to pursue programs of study (certificates and Associate in Applied Science degrees) not available at the College of Lake County may do so by exploring joint agreements. CLC has joint agreements with neighboring community colleges for a number of programs (certificates and Associate in Applied Science degrees). Through joint agreements, CLC students may attend another community college at the other school's in-district rates. A joint agreement is valid for one academic year and will need to be renewed upon the start of each academic year. All joint agreements are listed beginning on page 209 of this catalog.

Tuition Chargebacks

Another option for students wishing to pursue programs not available at CLC is by obtaining a chargeback. Through the chargeback process, an individual applies for approval to register at another Illinois community college 30 days before the beginning of the semester. If approved, the student pays the in-district tuition rate for the college he or she is attending and the College of Lake County pays the difference between the in-district and out-of-district rate to the other institution.

Chargebacks and joint agreements are available only for programs resulting in an Associate in Applied Science degree or certificate and not for individual courses. Students who wish to apply for a joint agreement or a chargeback may do so by contacting the Office for Educational Affairs at (847) 543-2310.

Tuition Chargebacks for Out-of-District Residents

Partial student support is available to some Illinois residents who are not residents of the CLC district. Contact your local community college for the proper forms and information. If you do not live in a community college district, contact your local high school.

Other Educational Options

Education Abroad

As a means of promoting international education among its students, CLC offers both short term and long term education abroad programs. These programs provide students an opportunity to enhance their understanding of other cultures, as well as their own, and gain an invaluable global perspective.

Short term education abroad programs are typically two to three weeks in duration and take place during Intersession (mid to late May) or winter break (December-January). Destinations vary each year. Programs are led by experienced CLC faculty and provide students the chance to earn 3-6 CLC credits.

Students interested in residing and studying in another country for a longer period of time may participate in a semester abroad program offered through the CLC or the Illinois Consortium for International Studies and Programs (ICISP). Students may choose from a program in Xi'an, China; Canterbury, England; Salzburg, Austria; Carlow, Ireland; Seville, Spain; Hyderabad, India; Dijon, France or San Jose, Costa Rica. The curriculum for these programs emphasizes courses in art, foreign language, history, humanities, literature and music. All courses may be used to fulfill graduation requirements or as electives in transfer degree programs.

Financial aid for qualified persons may be applied toward the cost of education abroad programs at CLC.

For more information about education abroad programs offered at CLC, through ICISP or other study abroad organizations, contact the Center for International Education at cie@clcillinois.edu or (847) 543-2147.

Field Experiences

In addition to providing education in the classroom, lecture hall and laboratory, CLC faculty members also teach courses "in the field." Faculty lead field study and travel courses for a variety of art, biology, geology, history and humanities courses to locations such as Door County or the Rocky Mountains. See the current class schedule for more information about which field study courses are being offered in a given semester.

Academic Information and Regulations

Honors Program

The Honors Program is dedicated to providing students with opportunities to enrich their academic and community experiences and to reflect the diversity of the college community as a whole.

Honors work emphasizes independence and critical thinking skills. Students can anticipate challenging types of assignments, research with primary sources, increased group activity and opportunities to take on leadership roles inside and outside of the classroom. The following criteria are used to determine acceptance into the Honors Program:

- Completion of Honors application form
- Unofficial high school and/or college transcripts

In addition, students must meet either of the following criteria to be admitted into the Honors Program.

Required:

- A high school GPA of 3.5/4.0 **or**
- A college GPA of 3.5/4.0 (with a minimum of 12 academic credit hours)

For questions about honors coursework or program requirements, please contact Nick Schevera at (847) 543-2959 or nschevera@clcollinois.edu.

Blended Courses

Blended courses (previously referred to as hybrid courses) offer instruction that is partially taught online and partially taught on-campus. **Not all blended courses are configured the same.** Some courses will have mostly online content with a few face-to-face classes; some will meet on campus on alternate weeks; some may meet on campus weekly but include an online component for part of the class; some may have varying online and on campus schedules. A blended course is indicated in the schedule as a -600 section class.

The benefits of blended courses are that they offer the flexibility of an online class, but still allow for face-to-face interaction with your instructor and peers. However, many of the same tips for success for online courses still apply. Blended courses are being offered by all the academic divisions.

Online Courses

The college allows students to take courses from the convenience of their own homes using the Internet. Students may take courses towards the A.A., A.S., A.A.S. and A.G.S. degrees and certificates online via the Blackboard course management system.

Please keep in mind that online courses are not for everyone; there are technical requirements as well as the need for self-motivation, time management skills and the ability to work independently in some cases. However, for many students online courses have proven to be effective alternatives to on-campus courses. For more information, visit the CLC online webpage, clconline.clcollinois.edu.

To learn more about online options, please contact Kris Dahl in the Counseling Center at (847) 543-2353 or kdahl@clcollinois.edu.

Open Educational Resources

Open education resources (OER) are teaching, learning and research resources that are designed by CLC faculty, copyright-free or have been released under a copyright license that permits others to reuse, revise, remix, and redistribute. Courses designated as OER will either have no additional cost to the student beyond regular tuition and fees, or have required course materials costing up to \$25. The goal of the OER Initiative is to radically decrease student costs by offering low-cost or no-cost options for course materials. This initiative was made possible by funding and support provided by the College of Lake County Foundation. Courses using OER materials can be easily identified by the OER star or notation in MyStudentCenter.

Physical Education Credit

Any student who is eligible for the G.I. Bill or who has had two years of active duty in the armed services may be given 2 semester hours of credit for physical education.

Repeating a Course/ Re-Enrolling in a Course

Students may repeat courses that are identified in the course description as being repeatable. Repeatable courses are those that teach a skill that may be improved through continued practice or those whose subject matter changes from semester to semester. The number of times these courses may be repeated is identified in the course description. In some cases students may be stopped from enrolling if they have exceeded the maximum allowable attempts at a course (i.e. PED 121 for 4 credits).

Student may also re-enroll in a course in an attempt to improve their grade or for other reasons. When a student re-enrolls in a course, the highest grade earned, or the most recent grade if all the grades are the same, should be the only grade computed in the student's grade point average. Grades that are not computed in a student's grade point average based on the repeat rules will be noted on the transcript.

Mathematics Department Initiative for Course Repeaters

A student may take a mathematics course three times without penalty. Each semester the Office of Admissions and Mathematics department will send a series of communications to all students enrolled in mathematics classes. These communications will inform students about support resources at the college and behaviors necessary for success. These communications will also alert students to the consequences of repeating courses. Students will be advised that the college incurs an extra financial burden due to repetition and will be informed of the issues related to an unsuccessful third attempt of a mathematics class.

A student who does not successfully complete a given course (grade of C or better) on the third attempt or beyond will have a "Hold for Course Repetition" placed on his or her record which may prevent the student from registering for that particular mathematics course. A grade of W is considered an unsuccessful course attempt.

Should the student wish to enroll in the course again he or she may be required to:

1. Meet with a math advisor or counselor to discuss a potential fourth or beyond enrollment and strategies that will help the student succeed in the course.
2. Take on additional financial obligation for delivery of the course by paying, in addition to the standard per credit hour cost, a non-refundable repeat fee of \$25 per credit hour.

Transfer of Credit

A student who has previously attended another college and who intends to earn a degree or certificate from the College of Lake County must have an official transcript from each college sent directly to the Office of Admissions and submit a "Request for Evaluation of Transfer Credit" form.

Transfer evaluations are based on the student's program of study at CLC. Credit will be granted for acceptable work completed at other approved colleges and universities for courses in which a student has earned a grade of C or better. Credit will also be awarded for courses in which a D has been earned provided a student's over all average is C or better for the credits transferred. Transfer credits accepted from other collegiate institutions will be entered on the student's permanent record at the College of Lake County, but the grades earned in these courses will not be used to compute the student's cumulative grade point average.

International transcripts will not be evaluated; you must contact a NACES approved evaluator for evaluation for foreign coursework, and have the official evaluation sent to Registrar and Records. The evaluation must be a Catalog Match evaluation in order to be considered for transfer credit. Contact a counselor or advisor for a list of approved companies that provide Catalog Match services.

Associate Degree Transfer Programs

CLC's associate degree transfer programs allow students to transfer to schools throughout Illinois and across the United States.

In general, reports from state universities indicate that CLC transfer students generally perform as well as, or better than, students who begin their studies at four-year schools. Moreover, a five-year longitudinal study of students transferring from two-year colleges to four-year colleges and universities in Illinois revealed that students who transferred with an Associate in Arts or Associate in Science degree earn higher grade point averages and have higher completion rates than students who transfer without a degree. Almost 70 percent of the A.A./A.S. degree students had graduated or were still enrolled at the end of the study with an average GPA of 2.81.

The College of Lake County successfully prepares students for higher level college courses. Students enjoy their programs at CLC and successfully transfer credits to four-year schools. This is especially true for students who earn an associate transfer degree. CLC offers an Associate in Arts, Associate in Arts in Teaching, Associate in Science, Associate in Engineering Science and Associate in Fine Arts degrees to individuals interested in pursuing a baccalaureate degree at a senior college or university. The degree a student chooses to pursue at CLC should be based on the student's proposed major at the intended transfer institution. To ensure full transferability of coursework, students should work with an advising professional who will assist with verifying degree requirements for the specific senior college or university of the student's choice.

Transfer Resources and Transferability of CLC Courses

The Illinois Articulation Initiative — IAI

This initiative is limited to students who are first time college students since 1998.

The College of Lake County is a participant in the **Illinois Articulation Initiative (IAI)**, a statewide transfer agreement which is transferable among more than 100 participating colleges or universities in Illinois. The IAI establishes a "package" of lower-division general education coursework accepted at all participating schools. This package is known as the Illinois Articulation Initiative General Education Core Curriculum (IAI GECC).

- Completion of the IAI GECC assures transferring students that lower-division general education requirements for a bachelor's degree have been satisfied at any participating institution. Note: Students may have to meet institution-wide, mission-related, or particular major general education requirements after transfer.

- Students who do not complete the IAI GECC before transfer and have less than 30 transferable semester credits need to complete the general education requirements of the transfer institution; completed CLC courses will be evaluated on a course by course basis.
- Students who do not complete the IAI GECC and have at least 30 transferable semester credits and who transfer to an IAI participating institution have the option of completing either the IAI GECC at the transfer institution or the institution's lower-division general education requirements, which may differ from the IAI GECC.
- A list of IAI participating colleges and universities can be found on the iTransfer website: www.iTransfer.org.

The IAI GECC consists of 12 to 13 courses (37–41 semester credits) chosen from the following five categories: Communications, Social/Behavioral Sciences, Physical/Life Sciences, Mathematics, and Humanities/Fine Arts. Specifically, the GECC requires:

- **Communications:** 3 courses (9 credit hours); must include a two-course sequence in writing completed with grades of C or better and one course in oral communication.
- **Social and Behavioral Science:** 3 courses (9 credit hours); a maximum of two courses from one discipline; at least one course must come from a second discipline.
- **Physical and Life Science:** 2 courses (7 credit hours); one course must be selected from Physical Science and one course from Life Science; at least one course must be a laboratory science course.
- **Mathematics:** 1 course (3 credit hours)
- **Humanities and Fine Arts:** 3 courses (9 credit hours); one course must be from Humanities, one course must be from Fine Arts, and one course from either discipline.

Please note: Every IAI course has a designated IAI number. There are several CLC courses that share an IAI number; however, IAI numbers may only be used one time each in the general education core. Students may use another course with the same IAI number as an elective only. The following is a list of courses that share IAI numbers:

C1 901R: ENG 122, ENG 126
F2 908: HUM 123, HUM 222
H1 900: ARA 222; CHI 222; FRN 222, 223, 224;
GER 222, 224; ITL 222, 223, 224; JPN 222;
RUS 222; SPA 222, 223, 224
H3 911D: ENG 129, ENG 247
H4 906: HUM 127, PHI 122
HF 904N: HUM 129, HUM 141
L1900L: BIO 123, BIO 141
P1902L: CHM 120, CHM 121
P1905: ESC 123, ESC 124, ESC 128, ESC 129
P1905L: ESC 120, ESC 127
S4900N: GEG 122, GEG 123
S7904D: GXS 229, SOC 229

See a complete list of IAI courses offered by the College of Lake County on pages 217-219.

The Associate in Arts and the Associate in Arts in Teaching Secondary Mathematics degrees contain the IAI GECC.

- Students who complete the IAI GECC and the CLC A.A. or A.A.T.-Math will be considered having achieved junior status upon transfer to a participating four year college or university.
- The IAI also includes major recommendations for the first two years of college. IAI major recommendations work best for students who have chosen their majors but are undecided on the college or university they plan to transfer to. Courses should be selected in consultation with a CLC advising professional.

In order for a student's transcript to indicate the completion of the IAI GECC, students must submit an Illinois Articulation Initiative (IAI) Audit Request form to the Registrar and Records department to audit their transcript. Once completion of the IAI GECC is verified, it will be noted on the transcript. Students should contact an advising professional in the Counseling, Advising and Transfer Center to review their records and complete the form.

Note: Effective beginning the 2016-2017 academic year, the Illinois Community College Board approved changes to the Associate in Science (A.S.) degree model which reduces the number of required credits in the general education core curriculum. As such, the A.S. degree no longer includes the IAI GECC package: A.S. degree completers may complete the IAI GECC upon transfer to an IAI participating institution or may select appropriate elective coursework within the A.S. to complete the IAI GECC at CLC. Guidance from a CLC advising professional is strongly recommended.

Transfer Credit Guarantee

The College of Lake County guarantees to its transfer students that course credits from the A.A., A.S., A.E.S. and A.F.A. degrees will transfer to the Illinois public colleges and universities that participate in the Illinois Articulation Initiative.

The guarantee of transfer credit is limited by the following conditions:

1. The student must complete the A.A., A.S., A.E.S., or A.F.A. degree at the College of Lake County within three years of his or her initial enrollment at the College of Lake County.
2. This guarantee applies only to courses taken at the College of Lake County.
3. The student must have earned a grade of C or better in the course in question.
4. The guarantee applies only to courses included in a written transfer/articulation plan, which must be on file with the Transfer Coordinator.
5. A request for additional course work must be received by the College of Lake County no later than two years after the student has graduated.
6. The student must invoke the terms of the guarantee of transfer within 60 days of any notification that the course

credit has been declined or refused by the transfer institution. Requests should be directed to the transfer coordinator and must contain documentation that one or more of the courses included in the written transfer/articulation plan did not transfer. The request must specify the name, position, address and telephone number of the person or office denying the transfer of credit, the date that the denial was received and the reasons, if any, for the denial.

7. CLC is not responsible for books, additional course fees tools, activity fees or any other course-related expenses.

Transfer Partnerships: Guaranteed Admission, Dual Admission and Articulation Agreements

The College of Lake County has guaranteed admission agreements that allow eligible CLC students guaranteed admission to transfer colleges and universities. Agreements offer a direct pathway from CLC to select transfer institutions upon completion of a CLC Associate in Arts or Associate in Science degree.

Dual admission is a partnership between CLC and a transfer institution that offers special benefits to participants, such as dual advising, and may include tuition discounts and scholarship opportunities.

Articulation agreements represent formal agreements that allow a student to apply credits earned in a specific program at CLC toward advanced standing, equal transfer, guaranteed admission and/or direct entry into a specific program at the four-year institution.

For more information about guaranteed admission, dual admission, and articulation agreements contact the Counseling, Advising and Transfer Center at (847) 543-2060. To view partner colleges and universities visit www.clcilinois.edu/transferinfo.

Transfer Guides

Transfer Guides are created and maintained in partnership with transfer institutions to provide information about general and major-specific transfer courses. Transfer guides offer course recommendations and outline how CLC courses will transfer into specific transfer institutions. Many four year institutions also maintain course equivalency tables that show how CLC courses articulate into their program. To view transfer guides by major and by college, and links to equivalency tables at various colleges and universities, please visit www.clcilinois.edu/transferinfo.

Associate Degree Transfer Programs

Transferology and MyCreditsTransfer

MyCreditsTransfer is a statewide initiative designed to facilitate transfer within Illinois using the nationally available web-based tool, Transferology. Within Transferology students can find out how courses transfer between institutions and how courses satisfy degree requirements at participating Transferology institutions across the nation. For more information about Transferology, contact the Counseling, Advising and Transfer Center or visit: www.itransfer.org/mycreditstransfer.

Illinois Transfer Compact Agreement: Transfer of Completed Associate Degrees

The Illinois Board of Higher Education view the public community colleges of Illinois as partners with senior colleges and universities in the delivery of the first two years of education beyond high school in this state. A transfer student in good standing, who has completed an associate degree based on baccalaureate-oriented sequences will be considered (a) to have attained junior standing and (b) to have met lower division general education requirements of senior institutions. Students may have to meet institution-wide, mission-related, or particular major general education requirements after transfer. The following Illinois public universities honor the agreement:

- Chicago State University
- Eastern Illinois University
- Governors State University
- Illinois State University
- Northeastern Illinois University
- Northern Illinois University
- Southern Illinois University
- University of Illinois at Springfield
- Western Illinois University

College Requirements for Associate Degrees that Transfer

Students must meet the following general requirements for Associate degrees that transfer:

- A. Satisfactory completion of the maximum number of credit hours for the respective degree (A.A.; A.S.; A.E.S.; A.A.T. in Secondary Math and A.F.A. in Art or Music);
- B. Completion of at least 15 credit hours at CLC. This does not include credit earned through proficiency examinations. Service members and their spouses enrolled in the Service Member's Opportunity College Program may meet the graduation requirements regarding credit hours at the college by completion of a minimum of 15 credit hours if his/her active duty assignment takes him/her to a base precluding his/her attendance in CLC courses.
- C. Minimum grade point average of 2.00 (C) for all work completed at CLC;

- D. A grade of C or better is required for all English course requirements;
- E. Satisfactory completion of the General Education Requirements for the appropriate degree.

Special Notations for Associate Degree Requirements

- A. General Education Requirements must be filled with courses having a 2, 4 or 6 as a middle digit, (e.g. ENG 121). These middle digits represent transfer courses at CLC. An exception of up to six hours of courses with an odd middle-digit (1, 3, 5, 7 or 9) may be used as general electives in the degree; however, students should select these courses only after they have verified their transferability with an advisor or their transfer institution. EDU 999 does not count toward this six-hour limit.
- B. The course taken to fulfill the International/Multicultural Education requirement is not an additional course requirement; it will count toward the Humanities and Fine Arts or the Social & Behavioral Science general education elective.
- C. Except for the International/Multicultural Education requirement, no course may be used to satisfy more than one general education requirement.
- D. Specific electives and total hours vary by degree and program.
- E. Only a limited number of MUS and PED courses may be used towards a degree. Please see course descriptions for courses within these areas for more information.
- F. The following courses cannot be used to satisfy degree requirements and do not count in the grade point average:
 1. Courses with a middle digit of 0: (e.g. ENG 108, ENG 109 and MTH 101);
 2. Adult Education courses with a department prefix of ABE, ADE, ESL, GED or VST;
 3. General Studies courses.

CLC Courses that Share IAI numbers

There are several CLC courses that share an IAI number; however, IAI numbers may only be used one time each in the core. Students may use another course with the same IAI number as an elective only. See the list beginning on page 217.

International/Multicultural Education Requirement (I/M)

The College of Lake County requires students to complete an International/Multicultural Education requirement (I/M). One course used to fulfill a Social Science, Humanities, Fine Arts, or Elective must be selected from the list on the next page.

Note: not all I/M courses are Illinois Articulation Initiative (IAI) approved. Not all I/M courses fulfill diversity requirements at transfer schools.

Philosophy

The goal of the International/Multicultural Education requirement is to help prepare students to

- 1) Foster awareness and mutual respect by seeking to understand our own and other people's cultures, characteristics, histories, conditions, social realities, issues and contributions;
- 2) Live effectively in an increasingly connected global community;
- 3) Bring informed multiple perspectives to the work force.

Reflected through this requirement is the recognition that "diversity is an essential and defining characteristic of our nation – of the world – and the conviction that this diversity can enrich all of us if we respect, value, and cultivate it."

— Janice R. Welsch (1999), *Preface Cultural Diversity: Curriculum, Classroom, and Climate*.

Requirement

Students pursuing transfer degrees (A.A./A.S./A.E.S./A.A.T./A.F.A.) are required to pass an I/M course that focuses primarily on the underrepresented groups within the United States or on the culture of a society outside the United States. Courses may fulfill a core General Education requirement or elective requirement while at the same time satisfying the international/multicultural emphasis. Students should meet with a counselor/advisor or consult the catalog for appropriate courses.

I/M Course Criteria

Courses may be in any discipline and will seek to promote a more reasoned understanding of human diversity within the United States or within a society outside the United States. See the lists below for courses that meet the I/M Education requirement criteria.

Expected Learning Outcomes

Approved I/M courses must demonstrate all of the following learning outcomes. Upon successful completion of an I/M course, students will be able to:

- 1) Describe the significant conditions and contributions of
 - (a) traditionally underrepresented groups within the United States or
 - (b) of world societies;
- 2) Develop an informed perspective on (a) traditionally underrepresented groups in the United States or (b) world societies;
- 3) Explore and utilize the information and ideas generated in class to compare and contrast their own background, beliefs, and values with that of others.

International/Multicultural Education Courses IAI APPROVED

Humanities and Fine Arts

ARA 222	HUM 121, 122, 128, 129, 140, 141, 221, 226
ART 240, 241, 261	ITL 222
CHI 222	JPN 222
DNC 240	PHI 125, 126, 221
ENG 129, 228, 244, 246, 247	RUS 222
FRN 222	SPA 222, 223, 224
GER 222	THE 123

Social Sciences

ANT 121, 221, 228	PSC 221, 222
GXS 121, 229	SOC 225, 229
HST 126, 127, 245, 246	

International/Multicultural Education Courses NOT IAI APPROVED

Humanities and Fine Arts

CMM 127	LAT 121
ENG 263, 264	PHI 128, 129
HUS 153	

Personal Development

PDS 123

Social Sciences

ECO 225	HST 128, 269
EDU 224	PSY 229
GXS 221, 299	SSI 121

Multiple Transfer Degrees

A College of Lake County student may petition for multiple transfer degrees when applying to graduate. The following requirements must be met:

1. All degree requirements for each degree being sought must be met, and
 2. Twelve additional hours of semester credit must be earned at the College of Lake County outside of credits earned toward the first degree. The additional 12 hours of credit may not be applied toward the first degree earned.
- Contact a counselor or advisor for more information.

Petition to Graduate

All students who intend to receive a degree or career certificate must complete a Petition for Graduation form available at www.clcillinois.edu/petition or in the Welcome and One-Stop Center, B Wing, on the Grayslake Campus. The deadline for fall graduation is October 1, spring graduation is February 15, and summer graduation is July 1.

Math Placement and Prerequisites for Math Courses

Depending on a student's program of study and level of skill in mathematics, he or she will take different math courses. Once a student has determined what math course(s) is/are required for the program of study, the student will need to determine if he or she meets the prerequisite or if additional coursework is required. The flow chart on the next page may help in planning. Where a student starts in the sequence will depend upon the prerequisites he or she meets and/or how he or she scores on the CLC Math Placement Test. Students should see an advisor early in their program to help plan their coursework.

The important thing to remember about placement and prerequisites is that the prerequisite for each course has been developed with the sole purpose of ensuring that students have the skills they need to be successful in the courses they select.

CLC has two types of requirements that affect enrollment in math courses.

- 1) **Basic Algebra Readiness:** Incoming students will need to demonstrate Basic Algebra Readiness before enrolling in certain courses at CLC. These courses may be in math or other science or technology-related fields. In the past, Basic Algebra Readiness was called Math Proficiency. Both terms mean that a student possesses a certain level of competency in arithmetic, which includes problem solving involving integers, fractions, ratios, decimals and percents. See page 374 for a list of the different ways that a student may demonstrate Basic Algebra Readiness.
- 2) **Prerequisites:** Students must also demonstrate that they meet the mathematics prerequisite for the specific course they wish to take.

The best way to identify the prerequisite for a specific math course is read the course description. Course descriptions for math courses begin on page 318. Each course description includes the prerequisite requirements that apply.

In general, keep these guidelines in mind:

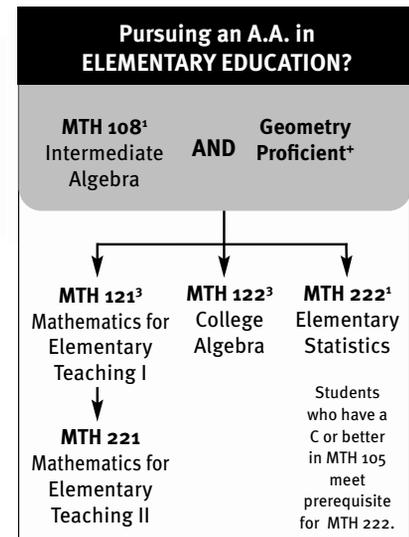
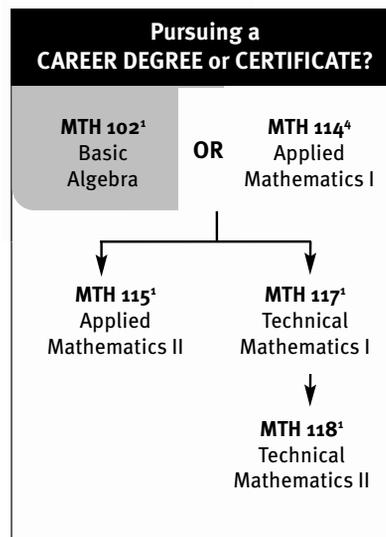
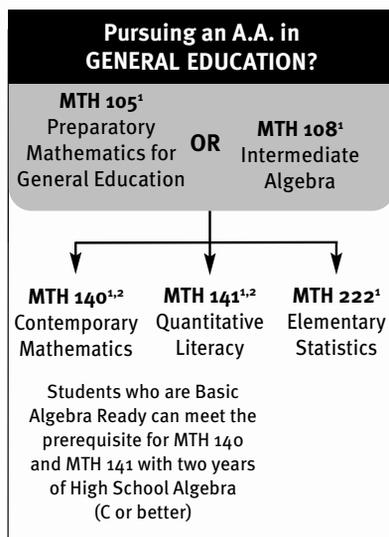
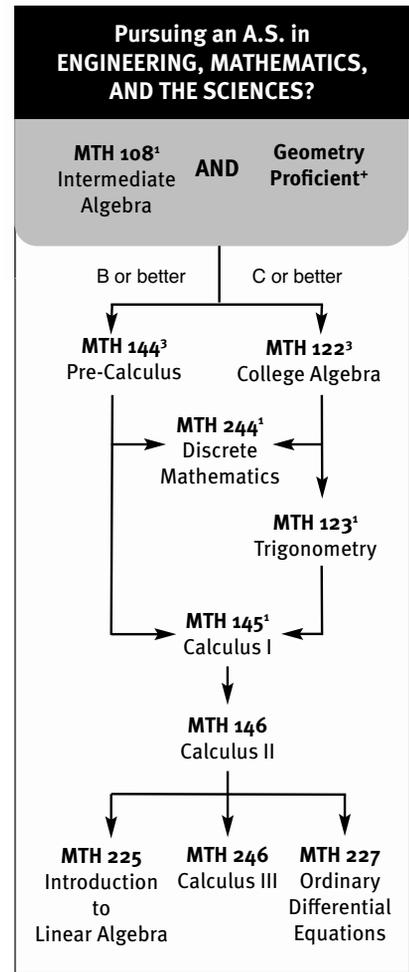
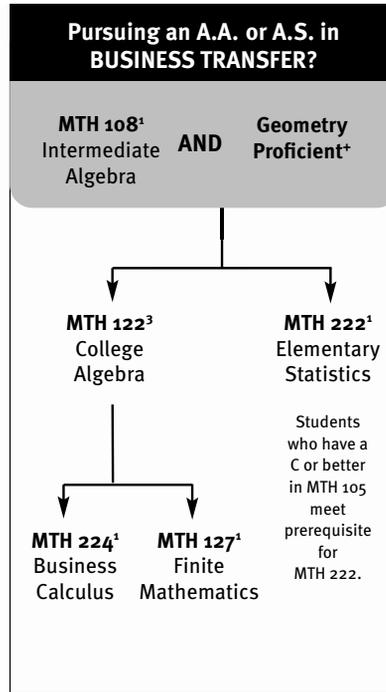
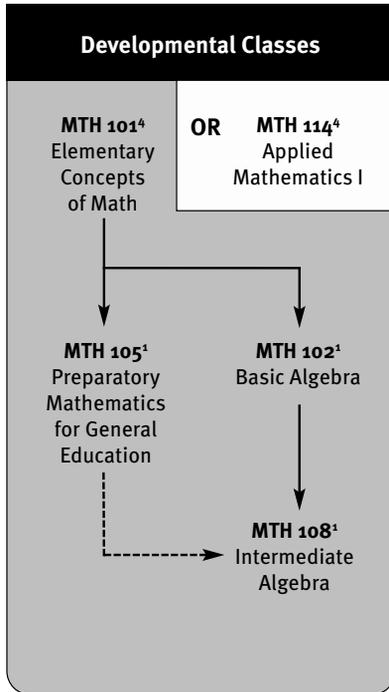
- For many math courses, the prerequisite may be met all or in part by achieving an acceptable score on the math portion of the ACT test.
- For many math courses, the prerequisite may be met by achieving an acceptable score on CLC's Math Placement Test.
- College-level math courses require **Geometry Proficiency**. Geometry Proficiency may be demonstrated by submitting a high school transcript showing a C or better in one year of high school geometry or by earning a C or better in MTH 104 (Geometry).
- The prerequisites for Contemporary Mathematics (MTH 140) and Quantitative Literacy (MTH 141) may also be met by an evaluation of a high school transcript. The prerequisites may be met by submitting a high school transcript showing completion of two years of high school algebra (Algebra I and Algebra II) and one year of high school geometry with a grade of C or better all six semesters.
- Previous college coursework may also fulfill prerequisites.

Please see math chart on next page.

Math Course Sequence by Program of Study

The sequence of math courses you take depends on your program of study, and your level of skill in mathematics. The following charts can help you determine the sequence of math courses you take as well as the prerequisites required. Where you start in the sequence will be based upon prerequisites and/or your score on the CLC Math Placement Test.

NOTE: The courses within the gray boxes are DEVELOPMENTAL CLASSES and do not apply toward any associate degree or career certificate program.



- 1 Prerequisite for this course can be met with CLC Math Placement Test or specific ACT/SAT scores.
 - 2 Prerequisite for this course can be met with two years of High School Algebra (C or better) – AND – Basic Algebra Readiness.
 - 3 Prerequisite for this course can be met with either a specific ACT/SAT, CLC Math Placement Test score, or MTH 108 (C or better) provided a student is geometry proficient*.
 - 4 See an advisor/counselor for information on meeting the prerequisite for this course.
- + Geometry Proficiency may be demonstrated by submitting a high school transcript showing a “C” or better in one year of high school geometry, by earning a “C” or better in MTH 104 (Geometry) or MTH 105 (Preparatory Mathematics for General Education), or a Math ACT of 22 or higher.

Associate Degree Transfer Programs

Associate in Arts (13AB)

**Program Modification effective Spring 2017. See addendum for details.*

Students may obtain an Associate in Arts degree from the College of Lake County by successfully meeting college requirements and the course requirements outlined below.

The College of Lake County is a participant in the Illinois Articulation Initiative (IAI), a major statewide cooperative agreement that eases the transfer process of the completed Illinois General Education Core Curriculum among participating institutions.

The IAI course numbers are in bold. Courses that share an IAI number are identified with an asterisk (*) next to the course number. Each IAI number may only be used once for a general education requirement. Students may use a course with the same IAI number as an elective only.

Communication - 9 credit hours

A grade of C or better is required for both ENG courses.

- CMM 121 Fundamentals of Speech (3) **C2 900**
- ENG 121 English Composition I (3) **C1 900**
- ENG 122* English Composition II (3) **C1 901 R or**
- ENG 126* Advanced Composition: Scientific and Technical Communications (3) **C1 901 R**

Social and Behavioral Science - 9 credit hours

Select courses from at least two different disciplines i.e. different prefixes.

- ANT 121+ Introduction to Anthropology (3) **S1 900N**
- ANT 221+ Cultural Anthropology (3) **S1 901N**
- ANT 222 Introduction to Physical Anthropology (3) **S1 902**
- ANT 224 Introduction to Archaeology (3) **S1 903**
- ANT 228+ Cross-Cultural Relationships (3) **S1 904D**
- ECO 221 Principles of Macroeconomics (3) **S3 901**
- ECO 222 Principles of Microeconomics (3) **S3 902**
- GEG 122* Cultural Geography (3) **S4 900N**
- GEG 123* World Regional Geography (3) **S4 900N**
- GXS 121+ Introduction to Gender Studies (3) **S9 900**
- GXS 229*+ Sex, Gender, and Power (3) **S7 904D**
- HST 121 History of Western Civilization I (3) **S2 902**
- HST 122 History of Western Civilization II (3) **S2 903**
- HST 126+ History of Contemp. Non-Western Civilization (3) **S2 905N**
- HST 127+ History of Chinese Culture and Society (3) **S2 914N**
- HST 221 United States History to 1876 (3) **S2 900**
- HST 222 United States History 1876 to Present (3) **S2 901**
- HST 245+ History of Latin America to 1825 (3) **S2 910N**
- HST 246+ History of Latin America from 1825 (3) **S2 911N**
- PSC 121 American National Politics (3) **S5 900**
- PSC 122 State and Local Politics (3) **S5 902**
- PSC 221+ Comparative Political Systems (3) **S5 905**
- PSC 222+ International Relations (3) **S5 904N**
- PSY 121 Introduction to Psychology (3) **S6 900**
- PSY 220 Lifespan Development (3) **S6 902**
- PSY 222 Child Growth and Development (3) **S6 903**
- PSY 225 Social Psychology (3) **S8 900**
- PSY 226 Adolescent Psychology (3) **S6 904**

- SOC 121 Introduction to Sociology (3) **S7 900**
- SOC 222 Social Problems (3) **S7 901**
- SOC 224 Sociology of the Family (3) **S7 902**
- SOC 225+ Class, Race, and Gender (3) **S7 903D**
- SOC 229*+ Sex, Gender, and Power (3) **S7 904D**

Physical and Life Sciences - 7 credit hours

One course must be selected from Physical Science and one course from Life Science. At least one course must be a laboratory science course (L).

Physical Science

- CHM 120L* (LAB) Chemical Concepts (4) **P1 902L**
- CHM 121L* (LAB) General Chemistry I (5) **P1 902L**
- CHM 140 Chemistry for a Changing World (3) **P1 903**
- CHM 142L (LAB) Chemistry for a Changing World (4) **P1 903L**
- ESC 120L* (LAB) Earth Science (4) **P1 905L**
- ESC 121L (LAB) Physical Geology (4) **P1 907L**
- ESC 123* Introduction to Meteorology (3) **P1 905**
- ESC 124* Oceanography (3) **P1 905**
- ESC 125 Geology of National Parks (3) **P1 907**
- ESC 127L* (LAB) Introduction to Meteorology (4) **P1 905L**
- ESC 128* Great Mysteries of the Earth (3) **P1 905**
- ESC 129* Severe and Hazardous Weather (3) **P1 905**
- ESC 140L (LAB) Introduction to Astronomy (4) **P1 906L**
- ESC 141 Introduction to Astronomy (3) **P1 906**
- ESC 224 Environmental Geology (3) **P1 908**
- GEG 120L (LAB) Physical Geography (4) **P1 909L**
- GEG 121 Physical Geography (3) **P1 909**
- PHY 120L (LAB) Practical Aspects of Physics (4) **P1 901L**
- PHY 121L (LAB) General Physics I (5) **P1 900L**
- PHY 123L (LAB) Physics for Science and Engineering I (5) **P2 900L**

Life Science

- BIO 120L (LAB) Environmental Biology (4) **L1 905L**
- BIO 123L* (LAB) Principles of Biology (4) **L1 900L**
- BIO 127 Introduction to Evolution (3) **L1 907**
- BIO 140 Environmental Biology without Lab (3) **L1 905**
- BIO 141L* (LAB) Concepts of Biology (4) **L1 900L**
- BIO 149 Genetics and Society (3) **L1 906**
- BIO 161L (LAB) General Biology I (4) **L1 910L**

Mathematics - 3 credit hours

- MTH 127 Finite Mathematics I (3) **M1 906**
- MTH 140 Contemporary Mathematics (3) **M1 904**
- MTH 141 Quantitative Literacy (3) **M1 901**
- MTH 145 Calculus and Analytic Geometry I (5) **M1 900-1**
- MTH 146 Calculus and Analytic Geometry II (4) **M1 900-2**
- MTH 221 Mathematics for Elementary Teaching II (3) **M1 903**
- MTH 222 Elementary Statistics (4) **M1 902**
- MTH 224 Calculus for Business and Social Science (4) **M1 900-B**
- MTH 244 Discrete Mathematics (3) **M1 905**
- MTH 246 Calculus and Analytic Geometry III (4) **M1 900-3**

Humanities and Fine Arts - 9 credit hours

At least one course must be selected from the Humanities section and one course from the Fine Arts section.

Humanities

- ARA 222*+ Intermediate Modern Standard Arabic II (4) **H1 900**
- CHI 222*+ Intermediate Chinese II (4) **H1 900**
- ENG 129*+ Women in Literature (3) **H3 911D**
- ENG 223 Early American Literature (3) **H3 914**
- ENG 225 Survey of British Literature I (3) **H3 912**
- ENG 226 Survey of British Literature II (3) **H3 913**
- ENG 227 Introduction to Shakespeare (3) **H3 905**
- ENG 228+ World Literature (3) **H3 906**
- ENG 229 20th Century American Literature (3) **H3 915**
- ENG 241 Introduction to Poetry (3) **H3 903**
- ENG 243 Introduction to Fiction (3) **H3 901**
- ENG 244+ Mythology and Fairy Tales (3) **H9 901**
- ENG 246+ Latin American Writers (3) **H3 908N**
- ENG 247*+ International Women Writers (3) **H3 911D**
- ENG 249 Children's Literature (3) **H3 918**
- FRN 222*+ Intermediate French II (4) **H1 900**
- FRN 223* French Civilization I (3) **H1 900**
- FRN 224* French Civilization II (3) **H1 900**
- GER 222*+ Intermediate German II (4) **H1 900**
- GER 224* German Civilization II (3) **H1 900**
- HUM 121+ Humanities: Ancient Times to the Middle Ages (3) **HF 902**
- HUM 122+ Humanities: Renaissance to the Present (3) **HF 903**
- HUM 127 * Critical Thinking (3) **H4 906**
- HUM 128+ Introduction to Middle-Eastern Civilizations (3) **H2 903 N**
- HUM 129*+ Introduction to East Asian Civilization (3) **HF 904 N**
- HUM 141*+ World Humanities 20/21 Century (3) **HF 904 N**
- HUM 221+ American Decades (3) **HF 906D**
- HUM 226+ Women and the Arts (3) **HF 907D**
- ITL 222*+ Intermediate Italian II (4) **H1 900**
- ITL 223* Italian Civilization I (3) **H1 900**
- JPN 222*+ Intermediate Japanese II (4) **H1 900**
- PHI 121 Introduction to Philosophy (3) **H4 900**
- PHI 122* Logic (3) **H4 906**
- PHI 123 Philosophy of Religion (3) **H4 905**
- PHI 125+ Introduction to Ethics (3) **H4 904**
- PHI 126+ World Religions (3) **H5 904N**
- PHI 221+ Asian Philosophy (3) **H4 903N**
- RUS 222*+ Intermediate Russian II (4) **H1 900**
- SPA 222*+ Intermediate Spanish II (4) **H1 900**
- SPA 223*+ Spanish Civilization I (3) **H1 900**
- SPA 224*+ Spanish Civilization II (3) **H1 900**

Fine Arts

- ART 121 Introduction to Art (3) **F2 900**
- ART 240+ History of Art I (3) **F2 901**
- ART 241+ History of Art II (3) **F2 902**
- ART 260 History of Photography (3) **F2 904**
- ART 261+ Non-Western Art History (3) **F2 903N**
- DNC 240+ The Art of Dance (3) **F1 906**
- HUM 121+ Humanities: Ancient Times to the Middle Ages (3) **HF 902**
- HUM 122+ Humanities: Renaissance to the Present (3) **HF 903**
- HUM 123* Introduction to Film (3) **F2 908**
- HUM 126 Introduction to the Performing Arts (3) **F9 900**
- HUM 129*+ Introduction to East Asian Civilization (3) **HF 904 N**
- HUM 140+ Introduction to International Film (3) **F2 909**
- HUM 141*+ World Humanities 20/21 Century (3) **HF 904N**

- HUM 221+ American Decades (3) **HF 906D**
- HUM 222* Film and Society (3) **F2 908**
- HUM 226+ Women and the Arts (3) **HF 907D**
- MUS 124 Introduction to Music (3) **F1 900**
- MUS 224 Music Literature (3) **F1 902**
- THE 121 Introduction to Theatre I (3) **F1 907**
- THE 123+ Diversity in American Theatre (3) **F1 909D**

International/Multicultural Requirements

Include one course in International/Multicultural Education—Choose one course with a + following the course number OR one of the following: CMM 127, ECO 225, EDU 224, ENG 263, 264, GXS 221, 299, HST 128, LAT 121, PDS 123, PHI 128, 129, PSY 229, SSI 121. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts, or Elective requirement. A B.A. degree at many four year colleges may require college level foreign language.

Area of Concentration/Elective Requirements- 23 credit hours

- Choose elective courses with an even middle digit that relate to your intended major. Students should choose electives only after consulting with an Advising Professional.
- Exception:** Up to six hours of courses with an odd middle digit (1-3-5-7-9) may be used as general electives in the degree. All 199 courses are exempt from this rule. However, students should select these courses only after they have verified their transferability with their Advising Professional or the transfer institution. EDU 999 does not count toward this six-hour limit.
- Students may not receive credit towards degree for both CHM 140 and CHM 142, or both BIO 120 and BIO 140, or both ESC 123 and ESC 127.
- Students with credit for both MTH 122 and MTH 123 will not be given credit for MTH 144. Students may not receive credit towards degree for both (MTH 122 and MTH 144) or (MTH 123 and MTH 144).
- Please review lists of recommended courses for individual programs of study listed on pages 68-112 in this catalog.

- _____ _____
- _____ _____
- _____ _____
- _____ _____

Total A.A. Degree Requirements - 60 credit hours**Other Graduation Requirements**

- Cumulative CLC GPA of 2.00 or higher
- Completion of at least 15 credit hours at CLC
- Petition to Graduate:** The Petition to Graduate form must be submitted to the Welcome and One-Stop Center to have your degree processed. It can be found online at www.clcillinois.edu/petition. Contact Admissions for more information at (847) 543-2061.

Associate Degree Transfer Programs

Associate in Science (11AB)

**Program Modification effective Spring 2017. See addendum for details.*

The Associate in Science degree is designed to parallel the first two years of a science-related baccalaureate degree program. Students complete freshman and sophomore level courses for majors in such areas as biology, chemistry, physics and related professional fields. Since differences in course requirements exist at different universities and in different science disciplines within the same university, it is important that students work closely with a CLC Counselor and their transfer school to choose appropriate courses. Completion of the A.S. degree does not fulfill the requirements of the Illinois Articulation Initiative General Education Core Curriculum (IAI GECC). Many science majors are highly structured and require extensive sequential lower-division mathematics and science courses. In order to take courses required for the major in a similar pattern to those of the freshman and sophomore students at a university, some general education courses are postponed until after transfer. Students then either complete the general education requirements of the transfer institution or are given the opportunity to complete the IAI.

The IAI course numbers are in bold. Courses that share an IAI number are identified with an asterisk (*) next to the course number. Each IAI number may only be used once for a general education requirement. Students may use a course with the same IAI number as an elective only.

Communication - 9 credit hours

A grade of C or better is required for both ENG courses.

- CMM 121 Fundamentals of Speech (3) **C2 900**
- ENG 121 English Composition I (3) **C1 900**
- ENG 122* English Composition II (3) **C1 901 R or**
- ENG 126* Advanced Composition: Scientific and Technical Communications (3) **C1 901 R**

Social and Behavioral Science - 6 credit hours

Select courses from at least two different disciplines i.e. different prefixes.

- ANT 121+ Introduction to Anthropology (3) **S1 900N**
- ANT 221+ Cultural Anthropology (3) **S1 901N**
- ANT 222 Introduction to Physical Anthropology (3) **S1 902**
- ANT 224 Introduction to Archaeology (3) **S1 903**
- ANT 228+ Cross-Cultural Relationships (3) **S1 904D**
- ECO 221 Principles of Macroeconomics (3) **S3 901**
- ECO 222 Principles of Microeconomics (3) **S3 902**
- GEG 122* Cultural Geography (3) **S4 900N**
- GEG 123* World Regional Geography (3) **S4 900N**
- GXS 121+ Introduction to Gender Studies (3) **S9 900**
- GXS 229*+ Sex, Gender, and Power (3) **S7 904D**
- HST 121 History of Western Civilization I (3) **S2 902**
- HST 122 History of Western Civilization II (3) **S2 903**
- HST 126+ History of Contemp. Non-Western Civilization (3) **S2 905N**
- HST 127+ History of Chinese Culture & Society (3) **S2 914N**
- HST 221 United States History to 1876 (3) **S2 900**

- HST 222 United States History 1876 to Present (3) **S2 901**
- HST 245+ History of Latin America to 1825 (3) **S2 910N**
- HST 246+ History of Latin America from 1825 (3) **S2 911N**
- PSC 121 American National Politics (3) **S5 900**
- PSC 122 State and Local Politics (3) **S5 902**
- PSC 221+ Comparative Political Systems (3) **S5 905**
- PSC 222+ International Relations (3) **S5 904N**
- PSY 121 Introduction to Psychology (3) **S6 900**
- PSY 220 Lifespan Development (3) **S6 902**
- PSY 222 Child Growth and Development (3) **S6 903**
- PSY 225 Social Psychology (3) **S8 900**
- PSY 226 Adolescent Psychology (3) **S6 904**
- SOC 121 Introduction to Sociology (3) **S7 900**
- SOC 222 Social Problems (3) **S7 901**
- SOC 224 Sociology of the Family (3) **S7 902**
- SOC 225+ Class, Race, and Gender (3) **S7 903D**
- SOC 229*+ Sex, Gender, and Power (3) **S7 904D**

Physical and Life Sciences - 11 credit hours

One course must be selected from Physical Science and one course from Life Science. Both courses must be IAI and laboratory science courses (L). A third course should be selected from the Physical Science course list or the Life Science course list or the Additional Science course list.

Physical Science

- CHM 120L* (LAB) Chemical Concepts (4) **P1 902L**
- CHM 121L* (LAB) General Chemistry I (5) **P1 902L**
- CHM 142L (LAB) Chemistry for a Changing World (4) **P1 903L**
- ESC 120L* (LAB) Earth Science (4) **P1 905L**
- ESC 121L (LAB) Physical Geology (4) **P1 907L**
- ESC 127L* (LAB) Introduction to Meteorology (4) **P1 905L**
- ESC 140L (LAB) Introduction to Astronomy (4) **P1 906L**
- GEG 120L (LAB) Physical Geography (4) **P1 909L**
- PHY 120L (LAB) Practical Aspects of Physics (4) **P1 901L**
- PHY 121L (LAB) General Physics I (5) **P1 900L**
- PHY 123L (LAB) Physics for Science and Engineering I (5) **P2 900L**

Life Science

- BIO 120L (LAB) Environmental Biology (4) **L1 905L**
- BIO 123L* (LAB) Principles of Biology (4) **L1 900L**
- BIO 141L* (LAB) Concepts of Biology (4) **L1 900L**
- BIO 161L (LAB) General Biology I (4) **L1 910L**

Additional Science Course List

- Any BIO, CHM, ESC, GEG, HRT or PHY course with an even middle digit course number, excluding GEG 122 and 123.

Mathematics - 7 credit hours

One course MUST be selected from the courses with an IAI number (shown in bold) in order to meet CLC graduation requirements.

- MTH 121 Mathematics for Elementary Teaching (3)
- MTH 122 College Algebra (4)
- MTH 123 Trigonometry (3)
- MTH 127 Finite Mathematics I (3) **M1 906**
- MTH 144 Precalculus (5)
- MTH 145 Calculus and Analytic Geometry I (5) **M1 900-1**
- MTH 146 Calculus and Analytic Geometry II (4) **M1 900-2**
- MTH 221 Math for Elementary Teaching II (3) **M1 903**

- MTH 222 Elementary Statistics (4) **M1 902**
 MTH 224 Calculus for Business and Social Science (4) **M1 900B**
 MTH 227 Ordinary Differential Equations (4)
 MTH 244 Discrete Mathematics (3) **M1 905**
 MTH 246 Calculus and Analytic Geometry III (4) **M1 900-3**

Humanities and Fine Arts - 6 credit hours

At least one course must be selected from the Humanities section and one course from the Fine Arts section.

Humanities

- ARA 222*+ Intermediate Modern Standard Arabic II (4) **H1 900**
 CHI 222*+ Intermediate Chinese II (4) **H1 900**
 ENG 129*+ Women in Literature (3) **H3 911D**
 ENG 223 Early American Literature (3) **H3 914**
 ENG 225 Survey of British Literature I (3) **H3 912**
 ENG 226 Survey of British Literature II (3) **H3 913**
 ENG 227 Introduction to Shakespeare (3) **H3 905**
 ENG 228+ World Literature (3) **H3 906**
 ENG 229 20th Century American Literature (3) **H3 915**
 ENG 241 Introduction to Poetry (3) **H3 903**
 ENG 243 Introduction to Fiction (3) **H3 901**
 ENG 244+ Mythology and Fairy Tales (3) **H9 901**
 ENG 246+ Latin American Writers (3) **H3 908N**
 ENG 247*+ International Women Writers (3) **H3 911D**
 ENG 249 Children's Literature (3) **H3 918**
 FRN 222*+ Intermediate French II (4) **H1 900**
 FRN 223* French Civilization I (3) **H1 900**
 FRN 224* French Civilization II (3) **H1 900**
 GER 222*+ Intermediate German II (4) **H1 900**
 GER 224* German Civilization II (3) **H1 900**
 HUM 121+ Humanities: Ancient Times to the Middle Ages (3) **HF 902**
 HUM 122+ Humanities: Renaissance to the Present (3) **HF 903**
 HUM 127 * Critical Thinking (3) **H4 906**
 HUM 128+ Introduction to Middle-Eastern Civilizations (3) **H2 903 N**
 HUM 129*+ Introduction to East Asian Civilization (3) **HF 904N**
 HUM 141*+ World Humanities 20/21 Century (3) **HF 904 N**
 HUM 221+ American Decades (3) **HF 906D**
 HUM 226+ Women and the Arts (3) **HF 907D**
 ITL 222*+ Intermediate Italian II (4) **H1 900**
 ITL 223* Italian Civilization I (3) **H1 900**
 JPN 222*+ Intermediate Japanese II (4) **H1 900**
 PHI 121 Introduction to Philosophy (3) **H4 900**
 PHI 122* Logic (3) **H4 906**
 PHI 123 Philosophy of Religion (3) **H4 905**
 PHI 125+ Introduction to Ethics (3) **H4 904**
 PHI 126+ World Religions (3) **H5 904N**
 PHI 221+ Asian Philosophy (3) **H4 903N**
 RUS 222*+ Intermediate Russian II (4) **H1 900**
 SPA 222*+ Intermediate Spanish II (4) **H1 900**
 SPA 223*+ Spanish Civilization I (3) **H1 900**
 SPA 224*+ Spanish Civilization II (3) **H1 900**

Fine Arts

- ART 121 Introduction to Art (3) **F2 900**
 ART 240+ History of Art I (3) **F2 901**
 ART 241+ History of Art II (3) **F2 902**
 ART 260 History of Photography (3) **F2 904**
 ART 261+ Non-Western Art History (3) **F2 903N**
 DNC 240+ The Art of Dance (3) **F1 906**

- HUM 121+ Humanities: Ancient Times to the Middle Ages (3) **HF 902**
 HUM 122+ Humanities: Renaissance to the Present (3) **HF 903**
 HUM 123* Introduction to Film (3) **F2 908**
 HUM 126 Introduction to the Performing Arts (3) **F9 900**
 HUM 129*+ Introduction to East Asian Civilization (3) **HF 904N**
 HUM 140+ Introduction to International Film (3) **F2 909**
 HUM 141*+ World Humanities 20/21 Century (3) **HF 904N**
 HUM 221+ American Decades (3) **HF 906D**
 HUM 222* Film and Society (3) **F2 908**
 HUM 226+ Women and the Arts (3) **HF 907D**
 MUS 124 Introduction to Music (3) **F1 900**
 MUS 224 Music Literature (3) **F1 902**
 THE 121 Introduction to Theatre I (3) **F1 907**
 THE 123+ Diversity in American Theatre (3) **F1 909D**

International/Multicultural Requirement

Include one course in International/Multicultural Education which must be taken from the catalog. Refer to page 51. Courses with + fulfill this requirement.

Area of Concentration/Elective Requirements- 21 credit hours

- Choose elective courses with an even middle digit that relate to your intended major. Students should choose electives only after consulting with an Advising Professional.
- Exception:** Up to six hours of courses with an odd middle digit (1-3-5-7-9) may be used as general electives in the degree. All 199 courses are exempt from this rule. However, students should select these courses only after they have verified their transferability with their Advising Professional or the transfer institution. EDU 999 does not count toward this six-hour limit.
- Students may not receive credit towards degree for both CHM 140 and CHM 142, or both BIO 120 and BIO 140, or both ESC 123 and ESC 127.
- Students with credit for both MTH 122 and MTH 123 will not be given credit for MTH 144. Students may not receive credit towards degree for both (MTH 122 and MTH 144) or (MTH 123 and MTH 144).
- Please review lists of recommended courses for individual programs of study listed on pages 68-112 in this catalog.

- _____ _____
 _____ _____
 _____ _____

Total A.S. Degree Requirements - 60 credit hours

Other Graduation Requirements

- Cumulative CLC GPA of 2.00 or higher
 Completion of at least 15 credit hours at CLC
 Petition to Graduate: The Petition to Graduate form must be submitted to the Welcome and One-Stop Center to have your degree processed. It can be found online at www.clcillinois.edu/petition. Contact Admissions for more information at (847) 543-2061.

Associate in Engineering Science (12AB)

**Program Modification effective Spring 2017. See addendum for details.*

This program is recommended for students pursuing a **B.S. in Engineering**, including any of the various engineering disciplines (e.g. mechanical, electrical, civil, aeronautical, materials, agricultural, biomedical, chemical, and computer, etc.). The program parallels the first two years of engineering programs at most universities accredited by the Accrediting Board for Engineering and Technology (ABET). Four year schools offering a **B.S. in Engineering** include the University of Illinois at Chicago (UIC), Northern Illinois University (NIU), University of Illinois at Urbana-Champaign (UIUC), Illinois Tech (IIT), Bradley, Southern Illinois University (SIU), Northwestern University, Milwaukee School of Engineering (MSOE), Marquette, Purdue, and more. Upon completion of minimum transfer requirements (which vary by four-year school), CLC Engineering students can transfer to complete their B.S degree at a four-year college or university.

This program is also appropriate for students pursuing a **B.S. in Computer Science with an engineering focus**. Four-year schools offering a B.S. in Computer Science with an engineering focus include University of Illinois at Chicago (UIC), University of Illinois at Urbana-Champaign (UIUC College of Engineering), Illinois Tech (IIT), Southern Illinois University at Carbondale (SIUC) and Southern Illinois University at Edwardsville (SIUE). Students desiring a **B.A. or B.S. in Computer Science with a math or liberal arts focus** may want to pursue the program of study recommended under **Computer Science** (Associate in Science) on page 76.

Since minor differences in course requirements exist at different universities and in different engineering disciplines within the same university, students are strongly advised to meet with a faculty advisor from the Engineering Department or a CLC counselor, and consult the college catalog and an engineering advisor at their intended transfer institution.

Communication - 6 credit hours

A grade of C or better is required for both ENG courses.

- ENG 121 English Composition I (3) **C1 900**
- ENG 122* English Composition II (3) **C1 901 R or**
- ENG 126* Advanced Composition: Scientific and Technical Communications (3) **C1 901 R**

Social/Behavioral Sciences, Humanities and Fine Arts - 9 credit hours

Select courses from three different disciplines (i.e., different prefixes). At least one course must be selected from the Social and Behavioral Sciences section and one course from either the Humanities or Fine Arts section.

Students are recommended to choose courses in consultation with an advisor to meet 4-year engineering school transfer requirements.

Social and Behavioral Sciences

- ANT 121+ Introduction to Anthropology (3) **S1 900N**
- ANT 221+ Cultural Anthropology (3) **S1 901N**
- ANT 222 Introduction to Physical Anthropology (3) **S1 902**
- ANT 224 Introduction to Archaeology (3) **S1 903**
- ANT 228+ Cross-Cultural Relationships (3) **S1 904D**
- ECO 221 Principles of Macroeconomics (3) **S3 901**
- ECO 222 Principles of Microeconomics (3) **S3 902**
- GEG 122* Cultural Geography (3) **S4 900N**
- GEG 123* World Regional Geography (3) **S4 900N**
- GXS 121+ Introduction to Gender Studies (3) **S9 900**
- GXS 229*+ Sex, Gender, and Power (3) **S7 904D**
- HST 121 History of Western Civilization I (3) **S2 902**
- HST 122 History of Western Civilization II (3) **S2 903**
- HST 126+ History of Contemp. Non-Western Civilization (3) **S2 905N**
- HST 127+ History of Chinese Culture & Society (3) **S2 914N**
- HST 221 United States History to 1876 (3) **S2 900**
- HST 222 United States History 1876 to Present (3) **S2 901**
- HST 245+ History of Latin America to 1825 (3) **S2 910N**
- HST 246+ History of Latin America from 1825 (3) **S2 911N**
- PSC 121 American National Politics (3) **S5 900**
- PSC 122 State and Local Politics (3) **S5 902**
- PSC 221+ Comparative Political Systems (3) **S5 905**
- PSC 222+ International Relations (3) **S5 904N**
- PSY 121 Introduction to Psychology (3) **S6 900**
- PSY 220 Lifespan Development (3) **S6 902**
- PSY 222 Child Growth and Development (3) **S6 903**
- PSY 225 Social Psychology (3) **S8 900**
- PSY 226 Adolescent Psychology (3) **S6 904**
- SOC 121 Introduction to Sociology (3) **S7 900**
- SOC 222 Social Problems (3) **S7 901**
- SOC 224 Sociology of the Family (3) **S7 902**
- SOC 225+ Class, Race, and Gender (3) **S7 903D**
- SOC 229*+ Sex, Gender, and Power (3) **S7 904D**

Humanities

- ARA 222*+ Intermediate Modern Standard Arabic II (4) **H1 900**
- CHI 222*+ Intermediate Chinese II (4) **H1 900**
- ENG 129*+ Women in Literature (3) **H3 911D**
- ENG 223 Early American Literature (3) **H3 914**
- ENG 225 Survey of British Literature I (3) **H3 912**
- ENG 226 Survey of British Literature II (3) **H3 913**
- ENG 227 Introduction to Shakespeare (3) **H3 905**
- ENG 228+ World Literature (3) **H3 906**
- ENG 229 20th Century American Literature (3) **H3 915**
- ENG 241 Introduction to Poetry (3) **H3 903**
- ENG 243 Introduction to Fiction (3) **H3 901**
- ENG 244+ Mythology and Fairy Tales (3) **H9 901**
- ENG 246+ Latin American Writers (3) **H3 908N**
- ENG 247*+ International Women Writers (3) **H3 911D**
- FRN 222*+ Intermediate French II (4) **H1 900**
- FRN 223* French Civilization I (3) **H1 900**
- FRN 224* French Civilization II (3) **H1 900**
- GER 222*+ Intermediate German II (4) **H1 900**
- GER 223 German Civilization I (3) **H1 900**
- GER 224* German Civilization II (3) **H1 900**

- HUM 121+ Humanities: Ancient Times to the Middle Ages (3) **HF 902**
- HUM 122+ Humanities: Renaissance to the Present (3) **HF 903**
- HUM 127 * Critical Thinking (3) **H4 906**
- HUM 128+ Introduction to Middle-Eastern Civilizations (3) **H2 903 N**
- HUM 129*+ Introduction to East Asian Civilization (3) **HF 904 N**
- HUM 141*+ World Humanities 20/21 Century (3) **HF 904N**
- HUM 221+ American Decades (3) **HF 906D**
- HUM 226+ Women and the Arts (3) **HF 907D**
- ITL 222*+ Intermediate Italian II (4) **H1 900**
- ITL 223* Italian Civilization I (3) **H1 900**
- JPN 222*+ Intermediate Japanese II (4) **H1 900**
- PHI 121 Introduction to Philosophy (3) **H4 900**
- PHI 122* Logic (3) **H4 906**
- PHI 123 Philosophy of Religion (3) **H4 905**
- PHI 125+ Introduction to Ethics (3) **H4 904**

- PHI 126+ World Religions (3) **H5 904N**
- PHI 221+ Asian Philosophy (3) **H4 903N**

- RUS 222*+ Intermediate Russian II (4) **H1 900**
- SPA 222*+ Intermediate Spanish II (4) **H1 900**
- SPA 223*+ Spanish Civilization I (3) **H1 900**
- SPA 224*+ Spanish Civilization II (3) **H1 900**

Fine Arts

- ART 121 Introduction to Art (3) **F2 900**
- ART 240+ History of Art I (3) **F2 901**
- ART 241+ History of Art II (3) **F2 902**
- ART 260 History of Photography (3) **F2 904**
- DNC 240+ The Art of Dance (3) **F1 906**
- HUM 121+ Humanities: Ancient Times to the Middle Ages (3) **HF 902**
- HUM 122+ Humanities: Renaissance to the Present (3) **HF 903**
- HUM 123* Introduction to Film (3) **F2 908**
- HUM 126 Introduction to the Performing Arts (3) **F9 900**
- HUM 129*+ Introduction to East Asian Civilization (3) **HF 904 N**
- HUM 140+ Introduction to International Film (3) **F2 909**
- HUM 141*+ World Humanities 20/21 Century (3) **HF 904N**
- HUM 221+ American Decades (3) **HF 906D**
- HUM 222* Film and Society (3) **F2 908**
- HUM 226+ Women and the Arts (3) **HF 907D**
- MUS 124 Introduction to Music (3) **F1 900**
- MUS 224 Music Literature (3) **F1 902**
- THE 121 Introduction to Theatre I (3) **F1 907**
- THE 123+ Diversity in American Theatre (3) **F1 909D**

Physical and Life Sciences - 15 credit hours

Physical Science

- CHM 121L* (LAB) General Chemistry I (5) **P1 902L**
- PHY 123L (LAB) Physics for Science and Engineering I (5) **P2 900L**
- PHY 124L (LAB) Physics for Science and Engineering II (5)

Mathematics - 16 credit hours

- MTH 145 Calculus and Analytic Geometry I (5) **M1 900-1**
- MTH 146 Calculus and Analytic Geometry II (4) **M1 900-2**
- MTH 227 Ordinary Differential Equations (3) **MTH 912**
- MTH 246 Calculus and Analytic Geometry III (4) **M1 900-3**

Math Computer Science - 3 credit hours

- MCS 140 Computer Programming for Engineers and Scientists (3) **CS 911**

International/Multicultural Requirement

Include one course in International/Multicultural Education — Choose one course with a + following the course number. This course can fulfill both the I/M requirement and a Social Science, Humanities, or Fine Arts requirement.

Associate Degree Transfer Programs

Area of Concentration/Elective Requirements- 12 credit hours

Choose 12 credit hours from the following courses.
See **Recommended Area of Concentration/Technical
Electives for Specific Engineering Majors below.

EGR	120	Introduction to Engineering	1
EGR	121	Engineering Design Graphics EGR 941	3
EGR	125	Engineering Statics EGR 942	3
EGR	225	Engineering Dynamics EGR 943	3
EGR	221	Statics and Dynamics	5
EGR	260	Introduction to Circuit Analysis EGR 931L ..	4
EGR	222	Engineering Mech of Materials EGR 945	3
EET	223	Introduction to Digital Electronics.....	4
CHM	123	General Chemistry II CHM 912	5
CHM	222	Organic Chemistry I CHM 913	5
MCS	142	Computer Science II CS 912	3
MTH	225	Introduction to Linear Algebra MTH 911	3
MTH	244	Discrete Mathematics M1 905	3
PHY	221	Physics for Science & Egr III	4

** Recommended Area of Concentration/Technical Electives for Specific Engineering Majors:

These are recommended (not required) electives that students
can choose from when developing an academic plan of study.

These recommendations align with the IAI Engineering Panel
recommendations. Students are strongly recommended to
choose courses in consultation with an advisor to meet
4-year engineering school transfer requirements.

General or Undecided:

EGR 120, 121, 125, 225, 260

Chemical Engineering:

EGR 120, 121, CHM 123, 222

Civil Engineering:

EGR 120, 121, 125, 222, 225

Electrical/Computer Engineering:

EGR 120, 260, EET 223, MTH 225, 244

Computer Science:

EGR 120, MCS 141, 142, 240, MTH 244

Industrial Engineering:

EGR 120, 121, 125, 225, 222

Mechanical Engineering:

EGR 120, 121, 125, 225, 222, 260

Other: Consult with CLC advisor or four-year university
engineering advisor

Other Graduation Requirements

- Cumulative CLC GPA of 2.00 or higher
- Completion of at least 15 credit hours at CLC
- Petition to Graduate:** The Petition to Graduate form
must be submitted to the Welcome and One-Stop Center
to have your degree processed. It can be found online at
www.clcillinois.edu/petition. Contact Admissions for
more information at (847) 543-2061.

Total A.E.S. Degree Requirements - 61 credit hours

Associate in Fine Arts in Art (14AA)

**Program Modification effective Spring 2017. See addendum for details.*

Students may obtain an Associate in Fine Arts in Art degree from the College of Lake County by successfully meeting college requirements and the course requirements outlined below.

The College of Lake County is a participant in the Illinois Articulation Initiative (IAI), a major statewide cooperative agreement that eases the transfer process of the completed Illinois General Education Core.

Curriculum among participating institutions. The Associate in Fine Arts degree, however, is not automatically accepted in whole for transfer at all participating IAI four-year colleges and universities in Illinois; therefore students must work with the institutions in which they intend to transfer to ensure transferability of specific courses.

The IAI course numbers are in bold. Courses that share an IAI number are identified with an asterisk (*) next to the course number. Each IAI number may only be used once for a general education requirement. Students may use a course with the same IAI number as an elective only.

Communication - 9 credit hours

A grade of C or better is required for both ENG courses.

- CMM 121 Fundamentals of Speech (3) **C2 900**
- ENG 121 English Composition I (3) **C1 900**
- ENG 122* English Composition II (3) **C1 901 R or**
- ENG 126* Advanced Composition: Scientific and Technical Communications (3) **C1 901 R**

Social and Behavioral Science - 6 credit hours

Courses must be selected from at least two different disciplines i.e. different prefixes.

- ANT 121+ Introduction to Anthropology (3) **S1 900N**
- ANT 221+ Cultural Anthropology (3) **S1 901N**
- ANT 222 Introduction to Physical Anthropology (3) **S1 902**
- ANT 224 Introduction to Archaeology (3) **S1 903**
- ANT 228+ Cross-Cultural Relationships (3) **S1 904D**
- ECO 221 Principles of Macroeconomics (3) **S3 901**
- ECO 222 Principles of Microeconomics (3) **S3 902**
- GEG 122* Cultural Geography (3) **S4 900N**
- GEG 123* World Regional Geography (3) **S4 900N**
- GXS 121+ Introduction to Gender Studies (3) **S9 900**
- GXS 229*+ Sex, Gender, and Power (3) **S7 904D**
- HST 121 History of Western Civilization I (3) **S2 902**
- HST 122 History of Western Civilization II (3) **S2 903**
- HST 126+ History of Contemp. Non-Western Civilization (3) **S2 905N**
- HST 127+ History of Chinese Culture & Society (3) **S2 914N**
- HST 221 United States History to 1876 (3) **S2 900**
- HST 222 United States History 1876 to Present (3) **S2 901**
- HST 245+ History of Latin America to 1825 (3) **S2 910N**
- HST 246+ History of Latin America from 1825 (3) **S2 911N**
- PSC 121 American National Politics (3) **S5 900**
- PSC 122 State and Local Politics (3) **S5 902**
- PSC 221+ Comparative Political Systems (3) **S5 905**
- PSC 222+ International Relations (3) **S5 904N**

- PSY 121 Introduction to Psychology (3) **S6 900**
- PSY 220 Lifespan Development (3) **S6 902**
- PSY 222 Child Growth and Development (3) **S6 903**
- PSY 225 Social Psychology (3) **S8 900**
- PSY 226 Adolescent Psychology (3) **S6 904**
- SOC 121 Introduction to Sociology (3) **S7 900**
- SOC 222 Social Problems (3) **S7 901**
- SOC 224 Sociology of the Family (3) **S7 902**
- SOC 225+ Class, Race, and Gender (3) **S7 903D**
- SOC 229*+ Sex, Gender, and Power (3) **S7 904D**

Physical and Life Sciences - 7 credit hours

One course must be selected from Physical Science and one course from Life Sciences. At least one course must be a laboratory science class (L).

Physical Science

- CHM 120L* (LAB) Chemical Concepts (4) **P1 902L**
- CHM 121L* (LAB) General Chemistry I (5) **P1 902L**
- CHM 140 Chemistry for a Changing World (3) **P1 903**
- CHM 142L (LAB) Chemistry for a Changing World (4) **P1 903L**
- ESC 120L* (LAB) Earth Science (4) **P1 905L**
- ESC 121L (LAB) Physical Geology (4) **P1 907L**
- ESC 123* Introduction to Meteorology (3) **P1 905**
- ESC 124* Oceanography (3) **P1 905**
- ESC 125 Geology of National Parks (3) **P1 907**
- ESC 127L* (LAB) Introduction to Meteorology (4) **P1 905L**
- ESC 128* Great Mysteries of the Earth (3) **P1 905**
- ESC 129* Severe and Hazardous Weather (3) **P1 905**
- ESC 140L (LAB) Introduction to Astronomy (4) **P1 906L**
- ESC 141 Introduction to Astronomy (3) **P1 906**
- ESC 224 Environmental Geology (3) **P1 908**
- GEG 120L (LAB) Physical Geography (4) **P1 909L**
- GEG 121 Physical Geography (3) **P1 909**
- PHY 120L (LAB) Practical Aspects of Physics (4) **P1 901L**
- PHY 121L (LAB) General Physics I (5) **P1 900L**
- PHY 123L (LAB) Physics for Science and Engineering I (5) **P2 900L**

Life Science

- BIO 120L (LAB) Environmental Biology (4) **L1 905L**
- BIO 123L* (LAB) Principles of Biology (4) **L1 900L**
- BIO 127 Introduction to Evolution (3) **L1 907**
- BIO 140 Environmental Biology without Lab (3) **L1 905**
- BIO 141L* (LAB) Concepts of Biology (4) **L1 900L**
- BIO 149 Genetics and Society (3) **L1 906**
- BIO 161L (LAB) General Biology I (4) **L1 910L**

Mathematics - 3 credit hours

- MTH 127 Finite Mathematics I (3) **M1 906**
- MTH 140 Contemporary Mathematics (3) **M1 904**
- MTH 141 Quantitative Literacy (3) **M1 901**
- MTH 145 Calculus and Analytic Geometry I (5) **M1 900-1**
- MTH 146 Calculus and Analytic Geometry II (4) **M1 900-2**
- MTH 221 Mathematics for Elementary Teaching II (3) **M1 903**
- MTH 222 Elementary Statistics (4) **M1 902**
- MTH 224 Calculus for Business and Social Science (4) **M1 900-B**
- MTH 244 Discrete Mathematics (3) **M1 905**
- MTH 246 Calculus and Analytic Geometry III (4) **M1 900-3**

Continued on next page.

Associate Degree Transfer Programs

Humanities and Fine Arts - 6 credit hours

At least one course must be selected from the Humanities section and one course from the Fine Arts section.

Humanities

- ARA 222*+ Intermediate Modern Standard Arabic II (4) **H1 900**
- CHI 222*+ Intermediate Chinese II (4) **H1 900**
- ENG 129*+ Women in Literature (3) **H3 911D**
- ENG 223 Early American Literature (3) **H3 914**
- ENG 225 Survey of British Literature I (3) **H3 912**
- ENG 226 Survey of British Literature II (3) **H3 913**
- ENG 227 Introduction to Shakespeare (3) **H3 905**
- ENG 228+ World Literature (3) **H3 906**
- ENG 229 20th Century American Literature (3) **H3 915**
- ENG 241 Introduction to Poetry (3) **H3 903**
- ENG 243 Introduction to Fiction (3) **H3 901**
- ENG 244+ Mythology and Fairy Tales (3) **H9 901**
- ENG 246+ Latin American Writers (3) **H3 908N**
- ENG 247*+ International Women Writers (3) **H3 911D**
- ENG 249 Children's Literature (3) **H3 918**
- FRN 222*+ Intermediate French II (4) **H1 900**
- FRN 223* French Civilization I (3) **H1 900**
- FRN 224* French Civilization II (3) **H1 900**
- GER 222*+ Intermediate German II (4) **H1 900**
- GER 224* German Civilization II (3) **H1 900**
- HUM 121+ Humanities: Ancient Times to the Middle Ages (3) **HF 902**
- HUM 122+ Humanities: Renaissance to the Present (3) **HF 903**
- HUM 127 * Critical Thinking (3) **H4 906**
- HUM 128+ Introduction to Middle-Eastern Civilizations (3) **H2 903 N**
- HUM 129*+ Introduction to East Asian Civilization (3) **HF 904 N**
- HUM 141*+ World Humanities 20/21 Century (3) **HF 904 N**
- HUM 221+ American Decades (3) **HF 906D**
- HUM 226+ Women and the Arts (3) **HF 907D**
- ITL 222*+ Intermediate Italian II (4) **H1 900**
- ITL 223* Italian Civilization I (3) **H1 900**
- JPN 222*+ Intermediate Japanese II (4) **H1 900**
- PHI 121 Introduction to Philosophy (3) **H4 900**
- PHI 122* Logic (3) **H4 906**
- PHI 123 Philosophy of Religion (3) **H4 905**
- PHI 125+ Introduction to Ethics (3) **H4 904**
- PHI 126+ World Religions (3) **H5 904N**
- PHI 221+ Asian Philosophy (3) **H4 903N**
- RUS 222*+ Intermediate Russian II (4) **H1 900**
- SPA 222*+ Intermediate Spanish II (4) **H1 900**
- SPA 223*+ Spanish Civilization I (3) **H1 900**
- SPA 224*+ Spanish Civilization II (3) **H1 900**

Fine Arts

- DNC 240+ The Art of Dance (3) **F1 906**
- HUM 121+ Humanities: Ancient Times to the Middle Ages (3) **HF 902**
- HUM 122+ Humanities: Renaissance to the Present (3) **HF 903**
- HUM 123* Introduction to Film (3) **F2 908**
- HUM 126 Introduction to the Performing Arts (3) **F9 900**
- HUM 129*+ Introduction to East Asian Civilization (3) **HF 904 N**
- HUM 140+ Introduction to International Film (3) **F2 909**

- HUM 141*+ World Humanities 20/21 Century (3) **HF 904 N**
- HUM 221+ American Decades (3) **HF 906D**
- HUM 222* Film and Society (3) **F2 908**
- HUM 226+ Women and the Arts (3) **HF 907D**
- MUS 124 Introduction to Music (3) **F1 900**
- MUS 224 Music Literature (3) **F1 902**
- THE 121 Introduction to Theatre I (3) **F1 907**
- THE 123+ Diversity in American Theatre (3) **F1 909D**

Area of Concentration/Elective Requirements- 30 credit hours

Art Core - 21 credit hours

- ART 122 Two Dimensional Design (3)
- ART 124 Drawing I (3)
- ART 127 Drawing II (3)
- ART 221 Three Dimensional Design (3)
- ART 225 Figure Drawing (3)
- ART 240+ History of Art I (3) **F2 901**
- ART 241+ History of Art II (3) **F2 902**

Art Studio Electives- 9 credit hours

- ART 123 Color and Design Techniques (3)
- ART 129 Photography I (3)
- ART 149 Digital Photography I (3)
- ART 222 Computer Art I (3)
- ART 223 Sculpture I (3)
- ART 224 Painting I (3)
- ART 226 Ceramics I (3)
- ART 227 Painting II (3)
- ART 228 Sculpture II (3)
- ART 229 Photography II (3)
- ART 245 Jewelry I (3)
- ART 246 Ceramics II (3)
- ART 249 Digital Photography II (3)

International/Multicultural Requirement

Include one course in International/Multicultural Education—Choose one course with a + following the course number. This course can fulfill both the I/M requirement and a Social Science, Humanities, or Fine Arts requirement. A BA degree at many four-year colleges may require college-level foreign language.

Total A.F.A. in Art Degree Requirements - 61 credit hours

Other Graduation Requirements

- Cumulative CLC GPA of 2.00 or higher
- Completion of at least 15 credit hours at CLC
- Petition to Graduate:** The Petition to Graduate form must be submitted to the Welcome and One-Stop Center to have your degree processed. It can be found online at www.clcillinois.edu/petition. Contact Admissions for more information at (847) 543-2061.

Associate in Fine Arts in Music (16AB)

**Program Modification effective Spring 2017. See addendum for details.*

Students may obtain an Associate in Fine Arts in Music Performance degree from the College of Lake County by successfully meeting college requirements and the course requirements outlined below.

The College of Lake County is a participant in the Illinois Articulation Initiative (IAI), a major statewide cooperative agreement that eases the transfer process of the completed Illinois General Education Core Curriculum among participating institutions. The Associate in Fine Arts degree, however, is not automatically accepted in whole for transfer at all participating IAI four-year colleges and universities in Illinois; therefore students must work with the institutions in which they intend to transfer to ensure transferability of specific courses.

The IAI course numbers are in bold. Courses that share an IAI number are identified with an asterisk (*) next to the course number. Each IAI number may only be used once for a general education requirement. Students may use a course with the same IAI number as an elective only.

Communication - 9 credit hours

A grade of C or better is required for both ENG courses.

- CMM 121 Fundamentals of Speech (3) **C2 900**
- ENG 121 English Composition I (3) **C1 900**
- ENG 122* English Composition II (3) **C1 901 R or**
- ENG 126* Advanced Composition: Scientific and Technical Communications (3) **C1 901 R**

Social and Behavioral Science - 3 credit hours

- ANT 121+ Introduction to Anthropology (3) **S1 900N**
- ANT 221+ Cultural Anthropology (3) **S1 901N**
- ANT 222 Introduction to Physical Anthropology (3) **S1 902**
- ANT 224 Introduction to Archaeology (3) **S1 903**
- ANT 228+ Cross-Cultural Relationships (3) **S1 904D**
- ECO 221 Principles of Macroeconomics (3) **S3 901**
- ECO 222 Principles of Microeconomics (3) **S3 902**
- GEG 122* Cultural Geography (3) **S4 900N**
- GEG 123* World Regional Geography (3) **S4 900N**
- GXS 121+ Introduction to Gender Studies (3) **S9 900**
- GXS 229*+ Sex, Gender and Power (3) **S7 904D**
- HST 121 History of Western Civilization I (3) **S2 902**
- HST 122 History of Western Civilization II (3) **S2 903**
- HST 126+ History of Contemporary Non-Western Civilization (3) **S2 905N**
- HST 127+ History of Chinese Culture and Society (3) **S2 914N**
- HST 221 United States History to 1876 (3) **S2 900**
- HST 222 United States History 1876 to Present (3) **S2 901**
- HST 245+ History of Latin America to 1825 (3) **S2 910N**
- HST 246+ History of Latin America from 1825 (3) **S2 911N**
- PSC 121 American National Politics (3) **S5 900**
- PSC 122 State and Local Politics (3) **S5 902**
- PSC 221+ Comparative Political Systems (3) **S5 905**
- PSC 222+ International Relations (3) **S5 904N**
- PSY 121 Introduction to Psychology (3) **S6 900**
- PSY 220 Lifespan Development (3) **S6 902**
- PSY 222 Child Growth and Development (3) **S6 903**

- PSY 225 Social Psychology (3) **S8 900**
- PSY 226 Adolescent Psychology (3) **S6 904**
- SOC 121 Introduction to Sociology (3) **S7 900**
- SOC 222 Social Problems (3) **S7 901**
- SOC 224 Sociology of the Family (3) **S7 902**
- SOC 225+ Class, Race, and Gender (3) **S7 903D**
- SOC 229*+ Sex, Gender and Power (3) **S7 904D**

Physical and Life Sciences - 7 credit hours

One course must be selected from Physical Science and one course from Life Sciences. At least one course must be a laboratory science class (L).

Physical Science

- CHM 120L* (LAB) Chemical Concepts (4) **P1 902L**
- CHM 121L* (LAB) General Chemistry I (5) **P1 902L**
- CHM 140 Chemistry for a Changing World (3) **P1 903**
- CHM 142L (LAB) Chemistry for a Changing World (4) **P1 903L**
- ESC 120L* (LAB) Earth Science (4) **P1 905L**
- ESC 121L (LAB) Physical Geology (4) **P1 907L**
- ESC 123* Introduction to Meteorology (3) **P1 905**
- ESC 124* Oceanography (3) **P1 905**
- ESC 125 Geology of National Parks (3) **P1 907**
- ESC 127L* (LAB) Introduction to Meteorology (4) **P1 905L**
- ESC 128 Great Mysteries of the Earth (3) **P1 905**
- ESC 129* Severe and Hazardous Weather (3) **P1 905**
- ESC 140L (LAB) Introduction to Astronomy (4) **P1 906L**
- ESC 141 Introduction to Astronomy (3) **P1 906**
- ESC 224 Environmental Geology (3) **P1 908**
- GEG 120L (LAB) Physical Geography (4) **P1 909L**
- GEG 121 Physical Geography (3) **P1 909**
- PHY 120L (LAB) Practical Aspects of Physics (4) **P1 901L**
- PHY 121L (LAB) General Physics I (5) **P1 900L**
- PHY 123L (LAB) Physics for Science and Engineering I (5) **P2 900L**

Life Science

- BIO 120L (LAB) Environmental Biology (4) **L1 905L**
- BIO 123L* (LAB) Principles of Biology (4) **L1 900L**
- BIO 127 Introduction to Evolution (3) **L1 907**
- BIO 140 Environmental Biology without Lab (3) **L1 905**
- BIO 141L* (LAB) Concepts of Biology (4) **L1 900L**
- BIO 149 Genetics and Society (3) **L1 906**
- BIO 161L (LAB) General Biology I (4) **L1 910L**

Mathematics - 3 credit hours

- MTH 127 Finite Mathematics I (3) **M1 906**
- MTH 140 Contemporary Mathematics (3) **M1 904**
- MTH 141 Quantitative Literacy (3) **M1 901**
- MTH 145 Calculus and Analytic Geometry I (5) **M1 900-1**
- MTH 146 Calculus and Analytic Geometry II (4) **M1 900-2**
- MTH 221 Mathematics for Elementary Teaching II (3) **M1 903**
- MTH 222 Elementary Statistics (4) **M1 902**
- MTH 224 Calculus for Business and Social Science (4) **M1 900-B**
- MTH 244 Discrete Mathematics (3) **M1 905**
- MTH 246 Calculus and Analytic Geometry III (4) **M1 900-3**

Humanities and Fine Arts - 6 credit hours

One course must be selected from the Humanities section and one course from the Fine Arts section.

Continued on next page.

Associate Degree Transfer Programs

Humanities

- ARA 222*+ Intermediate Modern Standard Arabic II (4) **H1 900**
- CHI 222*+ Intermediate Chinese II (4) **H1 900**
- ENG 129*+ Women in Literature (3) **H3 911D**
- ENG 223 Early American Literature (3) **H3 914**
- ENG 225 Survey of British Literature I (3) **H3 912**
- ENG 226 Survey of British Literature II (3) **H3 913**
- ENG 227 Introduction to Shakespeare (3) **H3 905**
- ENG 228+ World Literature (3) **H3 906**
- ENG 229 20th Century American Literature (3) **H3 915**
- ENG 241 Introduction to Poetry (3) **H3 903**
- ENG 243 Introduction to Fiction (3) **H3 901**
- ENG 244+ Mythology and Fairy Tales (3) **H9 901**
- ENG 246+ Latin American Writers (3) **H3 908N**
- ENG 247*+ International Women Writers (3) **H3 911D**
- ENG 249 Children's Literature (3) **H3 918**
- FRN 222*+ Intermediate French II (4) **H1 900**
- FRN 223* French Civilization I (3) **H1 900**
- FRN 224* French Civilization II (3) **H1 900**
- GER 222*+ Intermediate German II (4) **H1 900**
- GER 224* German Civilization II (3) **H1 900**
- HUM 121+ Humanities: Ancient Times to the Middle Ages (3) **HF 902**
- HUM 122+ Humanities: Renaissance to the Present (3) **HF 903**
- HUM 127 * Critical Thinking (3) **H4 906**
- HUM 128+ Introduction to Middle-Eastern Civilizations (3) **H2 903 N**
- HUM 129*+ Introduction to East Asian Civilization (3) **HF 904 N**
- HUM 141*+ World Humanities 20/21 Century (3) **HF 904 N**
- HUM 221+ American Decades (3) **HF 906D**
- HUM 226+ Women and the Arts (3) **HF 907D**
- ITL 222*+ Intermediate Italian II (4) **H1 900**
- ITL 223* Italian Civilization I (3) **H1 900**
- JPN 222*+ Intermediate Japanese II (4) **H1 900**
- PHI 121 Introduction to Philosophy (3) **H4 900**
- PHI 122* Logic (3) **H4 906**
- PHI 123 Philosophy of Religion (3) **H4 905**
- PHI 125+ Introduction to Ethics (3) **H4 904**
- PHI 126+ World Religions (3) **H5 904N**
- PHI 221+ Asian Philosophy (3) **H4 903N**
- RUS 222*+ Intermediate Russian II (4) **H1 900**
- SPA 222*+ Intermediate Spanish II (4) **H1 900**
- SPA 223*+ Spanish Civilization I (3) **H1 900**
- SPA 224*+ Spanish Civilization II (3) **H1 900**

Fine Arts

- ART 121 Introduction to Art (3) **F2 900**
- ART 240+ History of Art I (3) **F2 901**
- ART 241+ History of Art II (3) **F2 902**
- ART 260 History of Photography (3) **F2 904**
- ART 261+ Non-Western Art History (3) **F2 903N**
- DNC 240+ The Art of Dance (3) **F1 906**
- HUM 121+ Humanities: Ancient Times to the Middle Ages (3) **HF 902**
- HUM 122+ Humanities: Renaissance to the Present (3) **HF 903**
- HUM 123* Introduction to Film (3) **F2 908**
- HUM 126 Introduction to the Performing Arts (3) **F9 900**
- HUM 129*+ Introduction to East Asian Civilization (3) **HF 904 N**
- HUM 140+ Introduction to International Film (3) **F2 909**
- HUM 141*+ World Humanities 20/21 Century (3) **HF 904 N**
- HUM 221+ American Decades (3) **HF 906D**
- HUM 222* Film and Society (3) **F2 908**

- HUM 226+ Women and the Arts (3) **HF 907D**
- THE 121 Introduction to Theatre I (3) **F1 907**
- THE 123+ Diversity in American Theatre (3) **F1 909D**

Area of Concentration/Elective Requirements-37 credit hours

Music Core - 21 credit hours

- MUS 128 Theory of Music I (4)
- MUS 129 Theory of Music II (4)
- MUS 142 Ear-training and Sight-singing I (1)
- MUS 149 Ear-training and Sight-singing II (1)
- MUS 224 Music Literature (3) **F1 902**
- MUS 228 Theory of Music III (4)
- MUS 229 Theory of Music IV (4)

Music Electives - 16 credit hours

Choose 4 credit hours from below—Keyboard Skills

- MUS 143^ Applied Music - Piano I (1-2)
- MUS 144^ Applied Music - Jazz Piano I (1-2)
- MUS 145 Piano Class I (1)
- MUS 146 Piano Class II (1)
- MUS 245 Piano Class III (1)
- MUS 246 Piano Class IV (1)

Choose 4 credit hours from below

- MUS 120^ Vocal Ensembles (1)
- MUS 123^ Wind Ensemble (1)
- MUS 223^ Jazz Ensemble (1)

Choose 4 credit hours from the same 100 level course and 4 credit hours from the same 200 level course. All 8 credit hours must be taken in voice or in one major instrument.

- MUS 141^ Applied Music Voice I (1-2) *and*
- MUS 241^ Applied Music Voice II (1-2) *or*
- MUS 143^ Applied Music Piano I (1-2) *and*
- MUS 243^ Applied Music Piano II (1-2) *or*
- MUS 144^ Applied Music Jazz Piano I (1-2) *and*
- MUS 244^ Applied Music Jazz Piano II (1-2) *or*
- MUS 160-188^ Applied Music Instrument I (1-2) *and*
- MUS 260-288^ Applied Music Instrument II (1-2)

^ Repeatable up to four credit hours

International/Multicultural Requirement

Include one course in International/Multicultural Education—Choose one course with a + following the course number. This course can fulfill both the I/M requirement and a Social Science, Humanities, or Fine Arts requirement.

Total A.F.A. in Music Degree

Requirements - 65 credit hours

Other Graduation Requirements

- Cumulative CLC GPA of 2.00 or higher
- Completion of at least 15 credit hours at CLC
- Petition to Graduate:** The Petition to Graduate form must be submitted to the Welcome and One-Stop Center to have your degree processed. It can be found online at www.clcillinois.edu/petition. Contact Admissions for more information at (847) 543-2061.

Associate in Teaching Secondary Mathematics (17AB)

**Program Modification effective Spring 2017. See addendum for details.*

Students may obtain an Associate in Arts in Teaching Secondary Mathematics degree from the College of Lake County by successfully meeting college requirements and the course requirements outlined below.

The College of Lake County is a participant in the Illinois Articulation Initiative (IAI), a major statewide cooperative agreement that eases the transfer process of the completed Illinois General Education Core Curriculum among participating institutions. The Associate in Arts in Teaching Secondary Mathematics degree, however, is not automatically accepted in whole for transfer at all participating IAI four-year colleges and universities in Illinois; therefore students must work with their intended transfer institutions to ensure transferability of specific courses. Students should also check with their intended transfer school regarding specific constitution examination requirements.

Students must pass the Illinois Test of Academic Proficiency in order to be awarded the A.A.T. degree.

The IAI course numbers are in bold. Courses that share an IAI number are identified with an asterisk (*) next to the course number. Each IAI number may only be used once for a general education requirement. Students may use a course with the same IAI number as an elective only.

Communication - 9 credit hours

A grade of C or better is required for both ENG courses.

- CMM 121 Fundamentals of Speech (3) **C2 900**
- ENG 121 English Composition I (3) **C1 900**
- ENG 122* English Composition II (3) **C1 901 R or**
- ENG 126* Advanced Composition: Scientific and Technical Communications (3) **C1 901 R**

Social and Behavioral Science - 9 credit hours

- PSY 121 Introduction to Psychology (3) **S6 900**
- PSY 226 Adolescent Development (3) **S6 904**

One other course from the list below:

- ANT 121+ Introduction to Anthropology (3) **S1 900N**
- ANT 221+ Cultural Anthropology (3) **S1 901N**
- ANT 222 Introduction to Physical Anthropology (3) **S1 902**
- ANT 224 Introduction to Archaeology (3) **S1 903**
- ANT 228+ Cross-Cultural Relationships (3) **S1 904D**
- ECO 221 Principles of Macroeconomics (3) **S3 901**
- ECO 222 Principles of Microeconomics (3) **S3 902**
- GEG 122* Cultural Geography (3) **S4 900N**
- GEG 123* World Regional Geography (3) **S4 900N**
- HST 121 History of Western Civilization I (3) **S2 902**
- HST 122 History of Western Civilization II (3) **S2 903**

- HST 126+ History of Contemporary Non-Western Civilization (3) **S2 905N**
- HST 127+ History of Chinese Culture and Society (3) **S2 914N**
- HST 221 United States History to 1876 (3) **S2 900**
- HST 222 United States History 1876 to Present (3) **S2 901**
- HST 245+ History of Latin America to 1825 (3) **S2 910N**
- HST 246+ History of Latin America from 1825 (3) **S2 911N**
- PSC 121 American National Politics (3) **S5 900**
- PSC 122 State and Local Politics (3) **S5 902**
- PSC 221+ Comparative Political Systems (3) **S5 905**
- PSC 222+ International Relations (3) **S5 904N**

Physical and Life Sciences - 9 credit hours

- BIO 161L (LAB) General Biology I (4) **L1 910L**
- PHY 123 (LAB) Physics for Science and Engineering I (5) **P2 900L**

Mathematics - 5 credit hours

- MTH 145 Calculus and Analytic Geometry I (5) **M1 900-1**

Humanities and Fine Arts - 9 credit hours

- PHI 122* Logic (3) **H4 906**

- Two other courses from the following lists must be completed.
- One course must be selected from the Humanities section and one course from the Fine Arts section.

Humanities - 3 credit hours minimum

- ARA 222*+ Intermediate Modern Standard Arabic II (4) **H1 900**
- CHI 222*+ Intermediate Chinese II (4) **H1 900**
- ENG 129*+ Women in Literature (3) **H3 911D**
- ENG 223 Early American Literature (3) **H3 914**
- ENG 225 Survey of British Literature I (3) **H3 912**
- ENG 226 Survey of British Literature II (3) **H3 913**
- ENG 227 Introduction to Shakespeare (3) **H3 905**
- ENG 228+ World Literature (3) **H3 906**
- ENG 229 20th Century American Literature (3) **H3 915**
- ENG 241 Introduction to Poetry (3) **H3 903**
- ENG 243 Introduction to Fiction (3) **H3 901**
- ENG 244+ Mythology and Fairy Tales (3) **H9 901**
- ENG 246+ Latin American Writers (3) **H3 908N**
- ENG 247*+ International Women Writers (3) **H3 911D**
- ENG 249 Children's Literature (3) **H3 918**
- FRN 222*+ Intermediate French II (4) **H1 900**
- FRN 223* French Civilization I (3) **H1 900**
- FRN 224* French Civilization II (3) **H1 900**
- GER 222*+ Intermediate German II (4) **H1 900**
- GER 224* German Civilization II (3) **H1 900**
- HUM 121+ Humanities: Ancient Times to the Middle Ages (3) **HF 902**
- HUM 122+ Humanities: Renaissance to the Present (3) **HF 903**
- HUM 127* Critical Thinking (3) **H4 906**
- HUM 128+ Introduction to Middle-Eastern Civilizations (3) **H2 903 N**

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Associate Degree Transfer Programs

- HUM 129*+ Introduction to East Asian Civilization (3) **HF 904 N**
- HUM 141*+ World Humanities 20/21 Century (3) **HF 904 N**
- HUM 221+ American Decades (3) **HF 906D**
- HUM 226+ Women and the Arts (3) **HF 907D**
- ITL 222*+ Intermediate Italian II (4) **H1 900**
- ITL 223* Italian Civilization I (3) **H1 900**
- JPN 222*+ Intermediate Japanese II (4) **H1 900**
- PHI 121 Introduction to Philosophy (3) **H4 900**
- PHI 122* Logic (3) **H4 906**
- PHI 123 Philosophy of Religion (3) **H4 905**
- PHI 125+ Introduction to Ethics (3) **H4 904**
- PHI 126+ World Religions (3) **H5 904N**
- PHI 221+ Asian Philosophy (3) **H4 903N**
- RUS 222*+ Intermediate Russian II (4) **H1 900**
- SPA 222*+ Intermediate Spanish II (4) **H1 900**
- SPA 223*+ Spanish Civilization I (3) **H1 900**
- SPA 224*+ Spanish Civilization II (3) **H1 900**

Fine Arts—3 credit hours minimum

- ART 121 Introduction to Art (3) **F2 900**
- ART 240+ History of Art I (3) **F2 901**
- ART 241+ History of Art II (3) **F2 902**
- ART 260 History of Photography (3) **F2 904**
- ART 261+ Non-Western Art History (3) **F2 903N**
- DNC 240+ The Art of Dance (3) **F1 906**
- HUM 121+ Humanities: Ancient Times to the Middle Ages (3) **HF 902**
- HUM 122+ Humanities: Renaissance to the Present (3) **HF 903**
- HUM 123* Introduction to Film (3) **F2 908**
- HUM 126 Introduction to the Performing Arts (3) **F9 900**
- HUM 129*+ Introduction to East Asian Civilization (3) **HF 904 N**
- HUM 140+ Introduction to International Film (3) **F2 909**
- HUM 141*+ World Humanities 20/21 Century (3) **HF 904 N**
- HUM 221+ American Decades (3) **HF 906D**
- HUM 222* Film and Society (3) **F2 908**
- HUM 226+ Women and the Arts (3) **HF 907D**
- MUS 124 Introduction to Music (3) **F1 900**
- MUS 224 Music Literature (3) **F1 902**
- THE 121 Introduction to Theatre I (3) **F1 907**
- THE 123+ Diversity in American Theatre (3) **F1 909D**

Area of Concentration – 21 credit hours

Education:

- EDU 121 Introduction to Teaching (3)
- EDU 222 The Exceptional Child (3)
- EDU 242 Observational/Clinical Experience in Education (1)

Mathematics:

- MTH 146 Calculus and Analytic Geometry II (4) **M1 900-2**
- MTH 225 Linear Algebra (3)
- MTH 246 Calculus and Analytic Geometry III (4) **M1 900-3**

Math Comp/Sci:

- MCS 140 Computer Programming for Engineers and Scientists (3) **CS 911**

International/Multicultural Requirement

Include one course in International/Multicultural Education—Choose one course with a + following the course number. This course can fulfill both the I/M requirement and a Social Science, Humanities, or Fine Arts requirement.

Total A.A.T. in Secondary Mathematics Degree Requirements - 62 credit hours

Other Requirements for Awarding the A.A.T. in Secondary Mathematics

- Successfully pass the ICTS Test of Academic Proficiency (TAP).

Other Graduation Requirements

- Cumulative CLC GPA of 2.00 or higher
- Completion of at least 15 credit hours at CLC
- Petition to Graduate:** The Petition to Graduate form must be submitted to the Welcome and One-Stop Center to have your degree processed. It can be found online at www.clcillinois.edu/petition. Contact Admissions for more information at (847) 543-2061.

Note: For students wishing to obtain a teaching credential in the State of Illinois, a grade of C or above is compulsory for all coursework required for the teaching credential. This includes courses in the major, all education courses, and required general electives. This is effective for those applying for teacher certification as of 2012 (Illinois State Board of Education).

Pathways for Transfer Students

Pathways are intended for transfer students who have selected a general area of study, but have not yet determined a specific program within the area of study, and maybe used as a starting guide for the first two semesters. Please schedule an appointment with an academic advisor/counselor to finalize your academic field of study and desired transfer institution prior to selecting your third semester courses. Students who have decided on a specific intended major should refer to the recommended Transfer Degree Areas of Study below.

The following pathways are currently available:

- | | | |
|---------------------------|--------------------------------|-------------------------|
| Business: | Social Sciences: | • International Studies |
| • Accounting | • Anthropology | • Political Science |
| • Business Administration | • Gender and Sexuality Studies | • Psychology |
| • Economics | • History | • Sociology |

Transfer Degree Areas of Study

The following list of Areas of Study help students plan their individual transfer program. Course lists are patterned after the degree requirements in the previous section. Different programs can be developed to meet the requirements of either the A.A. or A.S. degree that will successfully transfer to a four-year school. Students should use the guidelines as a starting point and work together with a counselors and transfer institution to build a transfer degree program appropriate for them. Transfer degree areas of study are included for the following divisions. **On the following pages, areas of study are listed in alphabetical order.**

Biological and Health Sciences Division

Room C140, (847) 543-2042

- Biological Sciences (A.S.)
- Chemistry (A.S.)
- Ecology (A.S.) (*see Biological Sciences*)
- Microbiology (A.S.) (*see Biological Sciences*)
- Physical Education (A.A.)
- Pre-Dentistry (A.A.)
- Pre-Medicine (A.A.)
- Pre-Occupational Therapy (A.S.)
- Pre-Pharmacy (A.A.)
- Pre-Physical Therapy (A.S.)
- Pre-Veterinary Medicine (A.A.)
- Recreation (A.A.)
- Wildlife Management (A.S.) (*see Biological Sciences*)
- Zoology (A.S.) (*see Biological Sciences*)

Business and Social Sciences Division

Room A244, (847) 543-2047

- Accounting (A.A.)
- Anthropology (A.A.)
- Business Administration (A.A.)
- Computer Information Technology (A.S.)
- Criminal Justice (A.A.)
- Early Childhood Education (A.A.)
- Economics (A.A.)
- Elementary Education (A.A.)
- Gender and Sexuality Studies (A.A.)
- History (A.A.)
- International Studies (A.A.)
- Political Science (A.A.)
- Psychology (A.A.)
- Secondary Education (A.A.)
- Social Work (A.A.)
- Sociology (A.A.)
- Special Education (A.A.)

Communication Arts, Humanities and Fine Arts Division

Room B210, (847) 543-2040

- Art (A.A.)
- Communication (A.A.)
- Dance (A.A.)
- English (A.A.)
- French (A.A.)
- Humanities (A.A.)
- Latin-American Studies (A.A.)
- Music (A.A.)
- Philosophy (A.A.)
- Spanish (A.A.)
- Theatre Performance (A.A.)
- Theatre Technical (A.A.)

Engineering, Math and Physical Science Division

Room T102, (847) 543-2044

- Computer Science (A.S.)
- Earth Science (A.S.)
- Engineering (A.E.S.)
- Geography (A.A.)
- Mathematics (A.S.)
- Physics (A.S.)
- Surveying/Geomatics (A.S.)
- Sustainability (A.A.)(A.S.)
- Teaching in Secondary Mathematics (A.A.T)

Business Pathway

Associate in Arts

Plan 13AB

**Business and Social Sciences Division,
Room T302, (847) 543-2047**

This pathway is for students who intend to transfer and major in the business area but have not selected a specific field such as Accounting, Business Administration, or Economics. Students who have decided on a specific intended major in these areas should refer to the recommended course of study on pages 70-112.

First Semester	15-19
BUS 121 Introduction to Business	3
MTH Math Requirement ¹	3-5
ENG 121 English Composition I	3
Physical Science	3-5
PSY 121 Introduction to Psychology	3
Second Semester	15-18
ENG 122 English Composition II	3
* MTH Math Elective ¹	3-5
ECO 221 Principles of Macroeconomics	3
Life Science ²	3-4
HUM 121 Humanities: Ancient Times to the Middle Ages <i>or</i>	
HUM 122 Humanities: Renaissance to the Present	3
Summer—if needed	3-5
MTH Math Elective ¹	3-5
Third Semester	13-15
ACC 121 Financial Accounting	4
BUS Business Elective ³	3
ECO 222 Principles of Microeconomics	3
* MTH Math Elective ¹	3-5
Fourth Semester	16-17
ACC 122 Managerial Accounting	4
CMM 121 Fundamentals of Speech	3
BUS Business Elective ³	3
Humanities or Fine Arts Electives	6
Total Hours for AA Degree	60 - 68

*If needed, depending on entering math level and four-year school requirements; not included in Total Hours for A.A. Degree.

¹ A student should consult an academic advisor/counselor to determine the correct progression of math courses. The math course progression for this degree will vary depending on the student's choice of 4-year institution in which to transfer and math competency prior to enrolling at CLC. This schedule assumes a student will enroll in four semesters of math. Depending on a student's transfer goals or math competency, a student may need to enroll in additional math courses or may be able to substitute one of the math slots for an elective course in the second or third semester of these schedules.

Transfer Institution: While each transfer institution differs in its math requirements, most require a combination of MTH 224 (Business Calculus), MTH 127 (Finite Mathematics) and/or MTH 222 (Elementary Statistics). In order to qualify for these courses, students must generally also take MTH 122 (College Algebra). **Math Competency:** If a student does not meet the prerequisite to enroll in MTH 122, enrollment in developmental courses of MTH 102 and/or MTH 108 may be required. These courses do not apply toward the requirements of the associate degree.

² The Associate in Arts degree requires a student to complete a physical science course and a life science course for at least 7 credits altogether. At least one of these science courses must be a laboratory course.

³ A student should consult an academic advisor/counselor to determine the most appropriate elective course. Four-year transfer institutions generally differ in their desired elective course. Please select your desired transfer institution and work with an academic advisor to align your elective course with its admittance requirements. Common elective courses may include: BUS 221, BUS 122, BUS 223, BUS 132, CIT 120 or an additional math course

For more information on recommended courses or program specific advising, contact the Business and Social Sciences Division at (847) 543-2047.

Courses listed are **recommended** for students who have not decided upon a specific four-year college or university in which to transfer. Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.

^ See page 50 for College Requirements / © A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Social Sciences Pathway

Associate in Arts

Plan 13AB

**Business and Social Sciences Division,
Room T302, (847) 543-2047**

This pathway is for students who intend to transfer and major in the social sciences but have not selected a specific field such as Anthropology, Gender and Sexuality Studies, History, International Studies, Political Science, Psychology, and Sociology. Students who have decided on a specific intended major in these areas should refer to the recommended Course of Study on pages 70-112.

First Semester	15-16
ENG 121 English Composition I.....	3
PSY 121 Introduction to Psychology	3
SOC 121 Introduction to Sociology	3
Recommended Fine Arts Course.....	3
(Choose One)	
ART 121 Introduction to Art	
HUM 121 Introduction to Humanities	
HUM 222 Film and Society	
Recommended Elective Course ¹	2-3
Second Semester	16
ENG 122 English Composition II	3
Recommended Math Course	3-4
(Choose One)	
MTH 141 Quantitative Literacy	
MTH 222 Elementary Statistics	
ANT 121 Introduction to Anthropology	3
Recommended Elective Course ¹	3
Recommended Elective Course ¹	3
Third Semester	15
CMM 121 Fundamentals of Speech	3
Recommended Physical Science Course	3-4
(Choose One)	
CHM 140 Chemistry for a Changing World	
ESC 128 Great Mysteries of the Earth	
GEG 121 Physical Geography	
Recommended Humanities Course	3
(Choose One)	
ENG 129 Women in Literature	
ENG 228 World Literature	
ENG 246 Latin American Writers	
ENG 247 International Women Writers	
Recommended Elective Course ¹	3
Recommended Elective Course ¹	3

Prior to selecting your third semester courses, please schedule an appointment with your academic advisor/counselor to finalize your academic field of study and desired transfer institution. These decisions will impact which elective courses you should select during your second year.

Fourth Semester	15
Recommended Life Science Course	4-5
(Choose One)	
BIO 120L Environmental Biology	
BIO123L Principles of Biology	
BIO 161L General Biology ²	
Recommended Humanities/Fine Arts Course	3
(Choose One)	
HUM 127 Critical Thinking	
HUM 221 American Decades	
PHI 122 Logic	
PHI 125 Introduction to Ethics	
Recommended Elective Course ¹	3
Recommended Elective Course ¹	3
Recommended Elective Course ¹	3
Total Hours for AA Degree	60-64

¹ The Courses listed below are recommended for students considering a major in the social sciences.

Highly Recommended:

HST 122	History of Western Civilization from 1500
PHI 121	Introduction to Philosophy
PSC 121	American National Politics
PSY 225	Social Psychology
SOC 222	Social Problems

Also Recommended:

ANT 221	Cultural Anthropology
ENG 128	Linguistics and Society
GEG 122	Cultural Geography
GEG 123	World Regional Geography
GXS 229	(also SOC 229) Sex, Gender, and Power
HST 223	American Popular Culture
HST 225	American Labor History
PDS 120	Becoming a Successful College Student (2credits)
PDS 122	Career Exploration (1 credit)
PDS 124	Transition to College (1 credit)

² Students who intend to transfer and major in psychology should take BIO 161L.

For more information on recommended courses or program specific advising, contact the Business and Social Sciences Division at (847) 543-2047.

Courses listed are **recommended** for students who have not decided upon a specific four-year college or university in which to transfer. Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.
[^] See page 50 for College Requirements / [@] A grade of C or better is required for all English course requirements. / ^{*} See pages 54-66 for Course Selections

Accounting

Associate in Arts

Plan 13AB

**Business and Social Sciences Division,
Room T302, (847) 543-2047**

The following courses are **recommended** for students who have not decided upon a specific four-year college or university. Once a transfer school is selected, students should meet with a counselor or advisor to determine courses at CLC which will also meet the transfer requirements. If a specific course is not recommended, please select from the appropriate category outlined in the general education requirements for the Associate in Arts degree on pages 54-55.

First Semester (Fall)	15-17
BUS 121 Introduction to Business	3
MTH ¹ Elective	3-5
ENG 121 English Composition I.....	3
CIT 120 Introduction to Computers.....	3
PSY 121 Introduction to Psychology	3
Second Semester (Spring)	15-19
ENG 122 English Composition II	3
MTH ¹ Elective	3-5
ECO 221 Principles of Macroeconomics	3
Physical Science ²	3-5
PHI 122 Logic	3
Summer	3-5
MTH ¹ Elective	3-5
Third Semester (Fall)	16-18
ACC 121 Financial Accounting.....	4
BUS 221 Business Law I	3
ECO 222 Principles of Microeconomics.....	3
MTH ¹ Elective	3-5
Elective ³	3
Fourth Semester (Spring)	16-17
ACC 122 Managerial Accounting	4
CMM 121 Fundamentals of Speech	3
Life Science ²	3-4
HUM 121 Humanities: Ancient Times to the Middle Ages.....	3
Humanities or Fine Arts Elective (I/M)	3

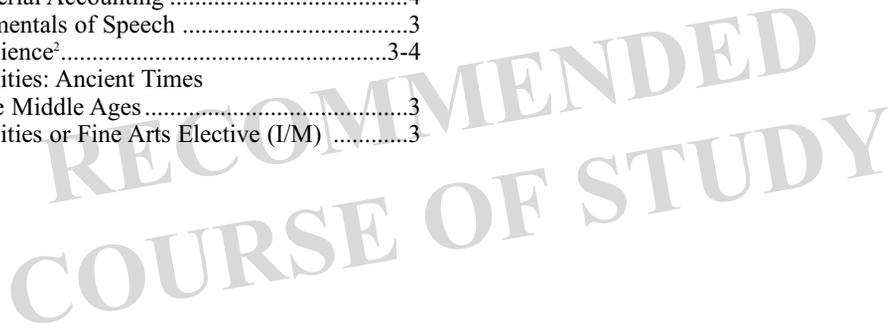
Notes: Students who qualify for MTH 224, MTH 127 and MTH 222 can complete this degree in 60 credits.

¹ A student should consult an academic advisor to determine the correct progression of math courses. The math course progression for this degree will vary depending on the student's 1) choice of 4-year institution to which to transfer and 2) math competency prior to enrolling at CLC. This schedule assumes a student will enroll in four semesters of math. Depending on a student's transfer goals or math competency, a student may need to enroll in additional math courses or may be able to substitute one of the math slots for an elective course in the second or third semester of these schedules. Transfer Institution: While each local 4-year transfer institution differs in its math requirements, most require a combination of MTH 224 (Business Calculus), MTH 127 (Finite Mathematics) and/or MTH 222 (Elementary Statistics). In order to qualify for these courses, students must generally also take MTH 122 (College Algebra). Math Competency: If a student does not meet the prerequisite to enroll in MTH 122, enrollment in developmental courses of MTH 102 and/or MTH 108 may be required. These courses do not apply toward the requirements of the associate degree.

² A student should consult an academic advisor to determine the most appropriate elective course. Four-year transfer institutions generally differ in their desired elective course. Please select your desired transfer institution and work with an academic advisor to align your elective course with its admittance requirements. Common elective courses may include: BUS 122, BUS 223, BUS 132, BUS 237 or an additional math course.

For more information on recommended courses or program specific advising, contact the following faculty or the Business and Social Sciences Division at (847) 543-2047.

Jay Chittal / Patrick Stegman / Jeffrey Varblow / Mary Zenner



Courses listed are **recommended** for students who have not decided upon a specific four-year college or university in which to transfer. Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements. ^ See page 50 for College Requirements / © A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections # Most Illinois universities and colleges require MTH 222 and MTH 145 or MTH 224. In addition, some require completion of MTH 127. (MTH 122 is a prerequisite for MTH 224.) Please see a counselor in the Counseling, Advising and Transfer Center for more information on math course selection for transfer.

Anthropology

**Associate in Arts
Plan 13AB
Business and Social Sciences Division,
Room T302, (847) 543-2047**

The following courses are **recommended** for students who have not decided upon a specific four-year college or university. Once a transfer school is selected, students should meet with a counselor or advisor to determine courses at CLC which will also meet the transfer requirements. If a specific course is not recommended, please select from the appropriate category outlined in the general education requirements for the Associate in Arts degree on pages 54-55.

First Semester	15-16
ENG 121 English Composition I.....	3
MTH 222 Elementary Statistics <i>or</i>	
MTH 127 Finite Math.....	3-4
ANT 121 Introduction to Anthropology (elective)	3
ECO 221 Principles of Macroeconomics	3
ART 240 History of Art I <i>or</i>	
ART 241 History of Art II.....	3
Second Semester	16
ENG 122 English Composition II	3
GEG 120 Principles of Physical Geography	4
HST 126 History of Contemporary Non-Western Civilization.....	3
Concentration/Elective	3
Concentration/Elective	3
Third Semester	15-16
CMM 121 Fundamentals of Speech	3
Life Science Elective	3-4
PHI 126 World Religions.....	3
Concentration/Elective	3
Concentration/Elective	3
Fourth Semester	15
ENG 228 World Literature	3
PSC 221 Comparative Political Systems	3
Concentration/Elective	3
Concentration/Elective	3
Concentration/Elective	3

Concentration/Electives	
ANT 121 Introduction to Anthropology	3
ANT 221 Cultural Anthropology.....	3
ANT 222 Introduction to Physical Anthropology	3
ANT 224 Introduction to Archeology	3
ANT 226 Field Methods	3
ANT 228 Introduction to Cross-Cultural Communication	3
Foreign Language	4

+ Math requirements vary at four-year institutions

For more information on recommended courses or program specific advising, contact the following faculty or the Business and Social Sciences Division at (847) 543-2047.

Wendy Brown / Scott Palumbo

RECOMMENDED
COURSE OF STUDY

Courses listed are **recommended** for students who have not decided upon a specific four-year college or university in which to transfer. Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements. ^ See page 50 for College Requirements / © A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections # Most Illinois universities and colleges require MTH 222 and MTH 145 or MTH 224. In addition, some require completion of MTH 127. (MTH 122 is a prerequisite for MTH 224.) Please see a counselor in the Counseling, Advising and Transfer Center for more information on math course selection for transfer.

Art

Associate in Arts

Plan 13AB

Communication Arts, Humanities and Fine Arts Division

Room B210, (847) 543-2040

I. College Requirements[^]

II. General Education Requirements	37
A. Communication Arts	9
CMM 121 Fundamentals of Speech	3
⊗ ENG 121 English Composition I	3
⊗ ENG 122 English Composition II	3
B. Social Sciences	9
Social Science Electives*	9
C. Physical and Life Sciences	7
Physical or Life Science with Lab Elective*	4
Physical or Life Science without Lab Elective*	3
D. Mathematics	3
MTH Elective*	3
E. Humanities and Fine Arts	9
Select at least one course from Humanities, one course from Fine Arts, and one course from either area.	
Recommended Courses:	
ART 240 History of Art I	3
ART 241 History of Art II	3
Humanities Elective*	3

III. International/Multicultural Requirement (I/M)

Select one course from the I/M list on page 51. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts or Elective requirement. A B.A. degree at many four-year colleges may require college-level foreign language. Note: DNC 240 meets the I/M designation and Fine Arts requirement.

IV. Area of Concentration/Elective Requirements

See page 228 for ART course selections.

For more information on recommended courses or program specific advising, contact the following faculty or the Communication Arts, Humanities and Fine Arts Division at (847) 543-2040.

David Bolton / Terry Dixon / Hans Habeger
Robert Lossmann / Roland Miller

Biological Sciences

Associate in Science

(Biology, Botany, Cellular and Molecular Biology, Ecology, Microbiology, and Zoology) Plan 11AB

Biological and Health Sciences Division, Room B210,
(847) 543-2042

I. College Requirements[^]

II. General Education Requirements	41
A. Communication Arts	9
CMM 121 Fundamentals of Speech	3
⊗ ENG 121 English Composition I	3
⊗ ENG 122 English Composition II <i>or</i>	
⊗ ENG 126 Advanced Composition: Scientific and Technical Communications	3
B. Social Sciences	6
Social Science Electives*	6
C. Physical and Life Sciences	11
Recommended Courses:	
# BIO 161 General Biology I	4
# BIO 162 General Biology II	4
# CHM 121 General Chemistry I	5
D. Mathematics	9
Recommended Courses:	
MTH 222 Elementary Stastics.....	4
MTH 145 Calculus and Analytic Geometry I	5
E. Humanities and Fine Arts	6
Fine Arts Elective*	3
Humanities Elective*	3

III. International/Multicultural Requirement (I/M)

Select one course from the I/M list on page 51. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts or Elective requirement. A B.A. degree at many four-year colleges may require college-level foreign language.

IV. Area of Concentration/Elective Requirements

Recommended Courses:	
BIO 221 General Zoology	4
BIO 222 General Botany	4
# CHM 123 General Chemistry II	5
# CHM 222 Organic Chemistry I	5
# CHM 223 Organic Chemistry II	5

For more information on recommended courses or program specific advising, contact the following faculty members or the Biological and Health Sciences Division at (847) 543-2042.

Kelly Cartwright / Jason Cashmore / Mark Coykendall
Kristi Dameron / Lakshmi Gollapudi / Marsha Hay / Branko Jablanovic / Shane Jones / Elisabeth Martin / Liz O'Grady
Bob Remedi / Jaenine Seitz-Partridge / Cynthia Trombino
Carol Wismer

Courses listed are **recommended** for students who have not decided upon a specific four-year college or university in which to transfer. Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.
[^] See page 50 for College Requirements / ⊗ A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Business Administration

Associate in Arts

Plan 13AB

**Business and Social Sciences Division,
Room T302, (847) 543-2047**

The following courses are **recommended** for students who have not decided upon a specific four-year college or university. Once a transfer school is selected, students should meet with a counselor or advisor to determine courses at CLC which will also meet the transfer requirements. If a specific course is not recommended, please select from the appropriate category outlined in the general education requirements for the Associate in Arts degree on pages 54-55.

First Semester	15-17
BUS 121 Introduction to Business	3
MTH ¹ Elective	3-5
ENG 121 English Composition I.....	3
CIT 120 Introduction to Computers.....	3
PSY 121 Introduction to Psychology	3
Second Semester	15-19
ENG 122 English Composition II	3
MTH ¹ Elective	3-5
ECO 221 Principles of Macroeconomics	3
Physical Science.....	3-5
PHI 122 Logic	3
Summer	3-5
MTH ¹ Elective	3-5
Third Semester	16-18
ACC 121 Financial Accounting.....	4
BUS 221 Business Law I	3
ECO 222 Principles of Microeconomics.....	3
MTH ¹ Elective.....	3-5
Elective ²	3
Fourth Semester	16-17
ACC 122 Managerial Accounting	4
CMM 121 Fundamentals of Speech	3
Life Science	3-4
HUM 121 Humanities: Ancient Times to the Middle Ages	3
Humanities or Fine Arts Elective	3

Notes: Students who qualify for MTH 224, MTH 127 and MTH 222 can complete this degree in 60 credits.

¹ A student should consult an academic advisor to determine the correct progression of math courses. The math course progression for this degree will vary depending on the student's 1) choice of 4-year institution to which to transfer and 2) math competency prior to enrolling at CLC. This schedule assumes a student will enroll in four semesters of math. Depending on a student's transfer goals or math competency, a student may need to enroll in additional math courses or may be able to substitute one of the math slots for an elective course in the second or third semester of these schedules. Transfer Institution: While each local 4-year transfer institution differs in its math requirements, most require a combination of MTH 224 (Business Calculus), MTH 127 (Finite Mathematics) and/or MTH 222 (Elementary Statistics). In order to qualify for these courses, students must generally also take MTH 122 (College Algebra). Math Competency: If a student does not meet the prerequisite to enroll in MTH 122, enrollment in developmental courses of MTH 102 and/or MTH 108 may be required. These courses do not apply toward the requirements of the associate degree.

² A student should consult an academic advisor to determine the most appropriate elective course. Four-year transfer institutions generally differ in their desired elective course. Please select your desired transfer institution and work with an academic advisor to align your elective course with its admittance requirements. Common elective courses may include: BUS 122, BUS 223, BUS 132, BUS 237 or an additional math course.

For more information on recommended courses or program specific advising, contact the following faculty or the Business and Social Sciences Division at (847) 543-2047.

Patty Clark / Robert Dodd / Kent Donewald
Venkat Krishnamurthy / Lori Oriatti

RECOMMENDED
COURSE OF STUDY

Courses listed are **recommended** for students who have not decided upon a specific four-year college or university in which to transfer. Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.
^ See page 50 for College Requirements / © A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Chemistry

Associate in Science

Plan 11AB

Biological and Health Sciences Division, Room B210,
(847) 543-2042

I. College Requirements[^]

II. General Education Requirements	41
A. Communication Arts	9
CMM 121 Fundamentals of Speech.....	3
⊗ ENG 121 English Composition I.....	3
⊗ ENG 122 English Composition II <i>or</i>	
⊗ ENG 126 Advanced Composition: Scientific and Technical Communications.....	3
B. Social Sciences	6
Social Science Electives*.....	6
C. Physical and Life Sciences	11
Recommended Courses:	
# BIO 161 General Biology I.....	4
## CHM 121 General Chemistry I.....	5
## CHM 123 General Chemistry II.....	5
D. Mathematics	9
Recommended Course:	
MTH 145 Calculus and Analytic Geometry I.....	5
MTH 146 Calculus and Analytic Geometry II.....	4
E. Humanities and Fine Arts	6
Fine Arts Elective*.....	3
Humanities Elective*.....	3

III. International/Multicultural Requirement (I/M)

Select one course from the I/M list on page 51. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts or Elective requirement. A B.A. degree at many four-year colleges may require college-level foreign language.

IV. Area of Concentration/Elective Requirements.....19

Recommended Courses:	
## CHM 222 Organic Chemistry I.....	5
## CHM 223 Organic Chemistry II.....	5
## PHY 121 General Physics I.....	5
## PHY 122 General Physics II.....	5

For more information on recommended courses or program specific advising, contact the following faculty members or the Biological and Health Sciences Division at (847) 543-2042.

Ahmad Audi / Bruce Moy / Tara Simmons / Jeanne Simonsen
Mary Urban / Beth Wilson

Communication

Associate in Arts

Plan 13AB

Communication Arts, Humanities and Fine Arts Division
Room B210, (847) 543-2040

I. College Requirements[^]

II. General Education Requirements	37
A. Communication Arts	9
CMM 121 Fundamentals of Speech.....	3
⊗ ENG 121 English Composition I.....	3
⊗ ENG 122 English Composition II.....	3
B. Social Sciences	9
Social Science Electives*.....	9
C. Physical and Life Sciences	7
Physical or Life Science with Lab Elective*.....	4
Physical or Life Science without Lab Elective*.....	3
D. Mathematics	3
MTH Elective*.....	3
E. Humanities and Fine Arts	9
Recommended Course:	
PHI 121 Introduction to Philosophy.....	3
Fine Arts Elective*.....	3
Humanities or Fine Arts Elective*.....	3

III. International/Multicultural Requirement (I/M)

Select one course from the I/M list on page 51. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts or Elective requirement. A B.A. degree at many four-year colleges may require college-level foreign language.

IV. Area of Concentration/Elective Requirements.....23

Recommended Courses:	
CMM 122 Business & Professional Speaking.....	3
CMM 123 Dynamics/Small Group Discussion.....	3
CMM 124 Oral Interpretation <i>or</i>	
CMM 128 Interviewing Strategies.....	3
CMM 125 Communication and Gender.....	3
CMM 127 Intercultural Communication.....	3
ENG 123 Mass Communication.....	3
ENG 128 Linguistics and Society.....	3
ENG 244 Mythology and Fairy Tales.....	3

For more information on recommended courses or program specific advising, contact the following faculty or the Communication Arts, Humanities and Fine Arts Division at (847) 543-2040.

Nedra Adams-Soller / Joel Chmara / Fred Gifford
Lynne Harper / Kari Proft / Rick Soller

Courses listed are **recommended** for students who have not decided upon a specific four-year college or university in which to transfer. Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.
[^] See page 50 for College Requirements / ⊗ A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections
Some transfer institutions may accept sequential courses (I and II) only if **both** courses are taken. Check with transfer institution.

Computer Information Technology

Associate in Science

Plan 11AB

**Business and Social Sciences Division,
Room T302, (847) 543-2047**

The following courses are **recommended** for students who have not decided upon a specific four-year college or university. Once a transfer school is selected, students should meet with a counselor or advisor to determine courses at CLC which will also meet the transfer requirements. If a specific course is not recommended, please select from the appropriate category outlined in the general education requirements for the Associate in Science degree on pages 56-57.

First Semester	.....15-16
CIT 120	Introduction to Computers.....3
CIT 134	Introduction to Programming Concepts .....3
ENG 121	English Composition I.....3
	Mathematics Elective ¹ .....3-4
	Humanities Elective .....3
Second Semester	.....14
CIT 141	Programming in C++.....4
CMM 121	Fundamentals of Speech .....3
ENG 122	English Composition II <i>or</i>
ENG 126	Advanced Composition: Scientific and Technical Communication .....3
	Life Science with Lab Elective .....4
Third Semester	.....17-18
ACC 121	Financial Accounting.....4
CIT 241	Advanced C++ *3
ECO 221	Principles of Macroeconomics <i>or</i>
ECO 222	Principles of Microeconomics.....3
	Mathematics Elective ¹ .....3-4
	Physical Science with Lab Elective .....4
Fourth Semester	.....13
ACC 122	Managerial Accounting .....4
	Fine Arts Elective .....3
	Physical or Life Science (non-lab) .....3
	Social Science Elective (not Economics) .....3

* Certain classes are only offered specific semesters. Check the course scheduling guide.

¹ A student should consult an academic advisor to determine the correct selection of math courses (7 credit hour minimum). The math course selection for this degree will vary depending on the student's 1) choice of 4-year institution to which to transfer and 2) math competency prior to enrolling at CLC. Depending on a student's transfer goals or math competency, a student may need to enroll in additional math courses. Math Competency: If a student does not meet the prerequisite to enroll in MTH 145, lower level math courses may be required. Students should begin taking math courses in the first semester. MTH 102 and MTH 108 do not apply toward the requirements of the associate degree. Students who qualify for MTH 145 can complete this degree in 61 credit hours.

For more information on recommended courses or program specific advising, contact the following faculty or the Business and Social Sciences Division at (847) 543-2047.

Changyi Chen / Dan Dainton / Sanjay Kumar
John North / Bob Scherbaum

RECOMMENDED
COURSE OF STUDY

Courses listed are **recommended** for students who have not decided upon a specific four-year college or university in which to transfer. Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.
^ See page 50 for College Requirements / © A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Computer Science

Associate in Science

Plan 11AB

Engineering, Math and Physical Sciences Division

Room T302, (847) 543-2044

This program is **recommended** for students pursuing a B.S. or B.A. in Computer Science with a math or liberal arts focus. The following courses are recommended for students who have not decided on a specific four year college or university. Once a transfer school is selected, students should meet with a counselor or advisor to determine which CLC courses will also meet transfer requirements. Four year schools offering a B.S. or B.A. in Computer Science with a math or liberal arts focus include Loyola, DePaul, Elmhurst, University of Illinois at Urbana-Champaign (UIUC College of Liberal Arts and Sciences) Northern Illinois University (NIU), University of Wisconsin Parkside and Northeastern Illinois University.

To complete any transfer degree, students should select from the general education requirements outlined on page 50. All course prerequisites should be met. Additionally, students are required to select one course from the International/Multicultural list on page 51 to meet graduation requirements.

Students desiring a B.S. in Computer Science with an engineering focus may want to pursue the program of study recommended under Engineering and Computer Science (Associates of Engineering Science) on page 84.

First Semester15

MCS	141	Computer Science I	4
MTH	144	Precalculus	5
ENG	121	English Composition I	3
HUM	127	Critical Thinking <i>or</i>	
PHI	122	Logic	3

Second Semester14

MCS	142	Computer Science II	3
MTH	145	Calculus and Analytic Geometry I	5
ENG	122	English Composition II <i>or</i>	
ENG	126	Advanced Composition: Scientific and Technical Communications	3
		Social & Behavioral Sciences Elective	3

Third Semester15

MCS	240	Computer Organization and Architecture	3
MTH	146	Calculus and Analytic Geometry II	4
PHY	123	Physics for Science and Engineering I	5
CMM	121	Fundamentals of Speech	3

Fourth Semester16

BIO	120	Environmental Biology <i>or</i>	
BIO	141	Concepts in Biology <i>or</i>	
BIO	161	General Biology I	4
MTH	244	Discrete Mathematics	3
		Fine Arts Elective	3
		Humanities or Fine Arts Elective	3
		Social & Behavioral Sciences Elective	3

For more information on recommended courses or program specific advising, contact the following faculty or the Engineering, Math and Physical Science Division at (847) 543-2044.

Shyam Kurup / Scott Reed / John Sprague

RECOMMENDED
COURSE OF STUDY

Courses listed are **recommended** for students who have not decided upon a specific four-year college or university in which to transfer. Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements. ^ See page 50 for College Requirements / @ A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Criminal Justice

Associate in Arts

Plan 13AB

**Business and Social Sciences Division,
Room T302, (847) 543-2047**

The following courses are recommended for students who have not decided upon a specific four-year college or university. Once a transfer school is selected, students should meet with a counselor or advisor to determine courses at CLC which will also meet the transfer requirements. If a specific course is not recommended, please select from the appropriate category outlined in the general education requirements for the Associate in Arts degree on pages 54-55.

First Semester	16
ENG 121 English Composition I.....	3
MTH 222 Statistics.....	4
PSY 121 Introduction to Psychology	3
CRJ 121 Introduction to Criminal Justice (elective)	3
HUM 127 Critical Thinking	3
Second Semester	15
ENG 122 English Composition II	3
GEG 121 Physical Geography.....	3
SOC 121 Introduction to Sociology	3
Concentration/Elective	3
Concentration/Elective	3
Third Semester	16
CMM 121 Fundamentals of Speech	3
BIO 120 Environmental Biology	4
Fine Arts Elective	3
Concentration/Elective	3
Concentration/Elective	3

Fourth Semester	15
PSC 121 American National Politics	3
Humanities or Fine Arts Elective (I/M)	3
Concentration/Elective	3
Concentration/Elective	3
Concentration/Elective	3

Concentration/Electives	
CRJ 121 Introduction to Criminal Justice	3
CRJ 122 Introduction to Policing.....	3
CRJ 123 Introduction to Criminology	3
CRJ 124 Penology and Corrections	3
CRJ 221 Criminal Law.....	3
CRJ 222 Criminal Procedural Law	3
CRJ 223 Ethics in Criminal Justice	3
CRJ 224 Institutional Corrections	3
CRJ 227 Community Based Corrections	3
CRJ 229 Juvenile Delinquency	3
CRJ 248 Psychology of the Criminal Mind.....	3
(cross-listed as PSY 248)	

+ Math requirements vary at four-year institutions

For more information on recommended courses or program specific advising, contact the following faculty or the Business and Social Sciences Division at (847) 543-2047.

Javier Alonso / Chris Utecht / Jennifer Hulvat

RECOMMENDED
COURSE OF STUDY

Courses listed are **recommended** for students who have not decided upon a specific four-year college or university in which to transfer. Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.
^ See page 50 for College Requirements / © A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Dance

Associate in Arts

Plan 13AB

Communication Arts, Humanities and Fine Arts Division

Room B210, (847) 543-2040

I. College Requirements[^]

II. General Education Requirements.....37

A. Communication Arts.....9

CMM 121 Fundamentals of Speech.....3

⊗ ENG 121 English Composition I3

⊗ ENG 122 English Composition II.....3

B. Social Sciences9

Social Science Electives*9

C. Physical and Life Sciences7

Physical or Life Science with Lab Elective*4

Physical or Life Science without Lab Elective*3

D. Mathematics3

MTH Elective*3

E. Humanities and Fine Arts9

Recommended Courses:

Select at least one course from Humanities, one course from Fine Arts, and one course from either area.

DNC 240 The Art of Dance3

MUS 124 Introduction to Music3

THE 121 Introduction to Theatre3

III. International/Multicultural Requirement (I/M)

Select one course from the I/M list on page 51. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts or Elective requirement. A B.A. degree at many four-year colleges may require college-level foreign language. Note: DNC 240 meets the I/M designation and the fine arts requirement.

IV. Area of Concentration/Elective Requirements24

DNC 121 Intro to Ballet I3

DNC 122 Modern Dance Technique I3

DNC 123 Jazz Dance Technique I3

DNC 124 Beginning Yoga.....3

DNC 125 Elements of Dance Composition3

DNC 221 Intermediate Ballet Technique3

Dance Technique.....3

DNC 126 Dance Forms3

For more information on recommended courses or program specific advising, contact the following faculty or the Communication Arts, Humanities and Fine Arts Division at (847) 543-2040.

Valerie Alpert / Therese Crews

RECOMMENDED
COURSE OF STUDY

Courses listed are **recommended** for students who have not decided upon a specific four-year college or university in which to transfer.

Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.

[^] See page 50 for College Requirements / ⊗ A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Early Childhood Education

Associate in Arts

Plan 13AB

**Business and Social Sciences Division,
Room T302, (847) 543-2047**

The following courses are **recommended** for students who have not decided upon a specific four-year college or university. Once a transfer school is selected, students should meet with a counselor or advisor to determine courses at CLC which will also meet the transfer requirements. If a specific course is not recommended, please select from the appropriate category outlined in the general education requirements for the Associate in Arts degree on pages 54-55.

First Semester	15
ENG 121 English Composition I.....	3
MTH 121 Math for Elementary Teaching I (elective).....	3
PSY 121 Introduction to Psychology	3
ART 121 Introduction to Art <i>or</i>	
ART 240+ History of Art I <i>or</i>	
ART 241+ History of Art II <i>or</i>	
ART 261 History of Photography	3
ECE 121 Introduction to Early Childhood Ed*** (elective).....	3
Second Semester	16
ENG 122 English Composition II	3
MTH 221 Math for Elementary Teaching II	3
BIO 120 Environmental Biology <i>or</i>	
BIO 141 Concepts in Biology	4
PHI 125+ Introduction to Ethics <i>or</i>	
HUM 221+ American Decades.....	3
ECE 124 Child Development for Educators (elective).....	3
Third Semester	16
CMM 121 Fundamentals of Speech	3
CHM 142 Chemistry for a Changing World <i>or</i>	
PHY 120 Practical Aspects of Physics	4
PSC 121 American National Politics +++	3
MUS 124 Introduction to Music	3
Concentration/Elective	3
Fourth Semester	15
HST 221 US History to 1876 <i>or</i>	
HST 222 US History 1876 to present.....	3
Concentration/Elective	3
Concentration/Electives	
ECE 141 Health, Safety and Nutrition	3
* ECE 121 Introduction to Early Childhood Education	3
ECE 124 Child Development for Educators.....	3
ECE 215 Music Activities for Young Children	3
ECE 223 Child, Family & Community	3

ECE 229 Language Development and Early Literacy	3
ECE 232 Math and Science for Young Children	3
ECE 233 Young Children with Special Needs	3
EDU 999 Preparing for the TAP or ACT+ Writing.....	3
EDU 121 Introduction to Teaching	3
***ECE 220 Observation and Assessment.....	3
EDU 222 The Exceptional Child.....	3
EDU 223 Technology in the Classroom	3
EDU 224+ Diversity in Schools and Society	3
** EDU 242 Observation/Clinical Experience in Education	1

- + Choose from these courses to fulfill the I/M requirement.
EDU 224 is strongly recommended for this program of study.
- ++ Math requirements vary at four-year institutions.
- +++ PSC 121 is required by most 4-year institutions
- ~ Prerequisite is MTH 121 (3)
- * Requires 10 hours of observation and fieldwork
- ** Requires 30 hours of observation and field experience in a school setting
- *** Requires 15 hours of observation and field experience in a school setting

A passing score on the Illinois Test of Academic Proficiency (formerly the Illinois Test of Basic Skills) or a current ACT plus Writing test with a score of 22 or higher is required for admission to a four-year college or university school of education. One of these tests should be taken by recent high school graduates after completing 15-30 credit hours of college work. Older students should take the test after completing 40-45 college credit hours. It is recommended that you take ENG 121 and MTH 121 before taking either of these tests. There is a 3-credit test preparation course, EDU 999, offered by the CLC Education department which will help you review for either test. It is strongly recommended that you complete this preparation course.

This plan benefits students interested in transferring to a four-year college or university to obtain an Illinois State Board of Education teaching license. CLC recommends that students take the TAP or ACT+ Writing exam upon completion of 45 credit hours. Students who successfully complete this sequence of courses meet teacher qualifications outlined by the Illinois Department of Children and Family Services at a child care center or pre-school.

For students wishing to obtain a teaching license in the State of Illinois, a grade of C or above is compulsory for all coursework required for the teaching license. This includes courses in the major, all education courses, and required general electives. This is effective for those applying for teacher licensure as of 2012, Illinois State Board of Education.

For more information on recommended courses or program specific advising, contact faculty member Diane Wolter or Kathleen Johnston in the Business and Social Sciences Division at (847) 543-2047.

Courses listed are **recommended** for students who have not decided upon a specific four-year college or university in which to transfer. Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.
^ See page 50 for College Requirements / © A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Earth Science

Associate in Science

Plan 11AB

Engineering, Math and Physical Sciences Division

Room T302, (847) 543-2044

I. College Requirements[^]

II. General Education Requirements.....39

A. Communication Arts.....9

- CMM 121 Fundamentals of Speech.....3
- ⊗ ENG 121 English Composition I3
- ⊗ ENG 122 English Composition II *or*
- ⊗ ENG 126 Advanced Composition: Scientific and Technical Communications3

B. Social Sciences6

Social Science Electives*6

C. Physical and Life Sciences11

ESC 120 Earth Science4

BIO 120 Environmental Biology.....4

D. Mathematics7

Recommended Course:

MTH 145 Calculus and Analytic Geometry I5

E. Humanities and Fine Arts6

Humanities or Fine Arts Elective*6

III. International/Multicultural Requirement (I/M)

Select one course from the I/M list on page 51. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts or Elective requirement. A B.A. degree at many four-year colleges may require college-level foreign language.

IV. Area of Concentration/Elective Requirements21

Recommended Courses:

- ESC 121 Physical Geology4
- ESC 122 Historical Geology4
- ESC 123 Introduction to Meteorology *or*
- ESC 127 Introduction to Meteorology with Lab3-4
- ESC 124 Oceanography3
- ESC 125 Geology of the National Parks3
- ESC 128 Great Mysteries of the Earth.....3
- ESC 129 Severe and Hazardous Weather3
- ESC 140 Introduction to Astronomy with Lab *or*
- ESC 141 Introduction to Astronomy3-4
- ESC 224 Environmental Geology3
- ESC 226 Field Geology3

Contact the EMPS division for additional elective options from the Mathematics, Physics and Chemistry areas.

For more information on recommended courses or program specific advising, contact the following faculty or the Engineering, Math and Physical Science Division at (847) 543-2044.

Ryan Cumpston / Eric Priest / Xiaoming Zhai

RECOMMENDED
COURSE OF STUDY

Courses listed are **recommended** for students who have not decided upon a specific four-year college or university in which to transfer. Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.

[^] See page 50 for College Requirements / ⊗ A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Economics

Associate in Arts

Plan 13AB

**Business and Social Sciences Division,
Room T302, (847) 543-2047**

The following courses are **recommended** for students who have not decided upon a specific four-year college or university. Once a transfer school is selected, students should meet with a counselor or advisor to determine courses at CLC which will also meet the transfer requirements. If a specific course is not recommended, please select from the appropriate category outlined in the general education requirements for the Associate in Arts degree on pages 54-55.

First Semester16-17

ENG 121	English Composition I.....	3
MTH 145	Calculus and Analytic Geometry I <i>or</i>	
MTH 224	Calculus for Business and Social Science	4-5
HST 122	History of Western Civilization from 1500.....	3
PHI 121	Introduction to Philosophy	3
	Concentration/Elective	3

Second Semester16

ENG 122	English Composition II	3
GEG 120	Principles of Physical Geography	4
PSC 121	American National Politics	3
	Concentration/Elective	3
	Concentration/Elective	3

Third Semester15

CMM 121	Fundamentals of Speech	3
	Humanities or Fine Arts Elective	3
	Concentration/Elective	3
	Concentration/Elective	3
	Concentration/Elective	3

Fourth Semester.....15-16

	Fine Arts Elective	3
SOC 121	Introduction to Sociology	3
	Life Science Elective	3-4
	Concentration/Elective	3
	Concentration/Elective	3

Concentration/Electives

ECO 221	Principles of Macroeconomics	3
ECO 222	Principles of Microeconomics.....	3
ECO 223	Money and Banking	3
ECO 224	Public Finance.....	3
MTH 222	Elementary Statistics	4
PSC 222	International Relations	3
	Additional Electives as Needed.....	7

+ Math requirements vary at four-year institutions

For more information on recommended courses or program specific advising, contact the following faculty or the Business and Social Sciences Division at (847) 543-2047.

Chandrea Hopkins / Stefan Mullinax / Tonitta White

RECOMMENDED
COURSE OF STUDY

Courses listed are **recommended** for students who have not decided upon a specific four-year college or university in which to transfer. Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements. ^ See page 50 for College Requirements / © A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Elementary Education

Associate in Arts

Plan 13AB

**Business and Social Sciences Division,
Room T302, (847) 543-2047**

The following courses are recommended for students who have not decided upon a specific four-year college or university. Once a transfer school is selected, students should meet with a counselor or advisor to determine courses at CLC which will also meet the transfer requirements. If a specific course is not recommended, please select from the appropriate category outlined in the general education requirements for the Associate in Arts degree on pages 54-55.

First Semester	15
ENG 121 English Composition I.....	3
MTH 121 Math for Elementary Teaching I (elective).....	3
PSY 121 Introduction to Psychology	3
MUS 124 Introduction to Music <i>or</i>	
MUS 224 Music Literature	3
EDU 121 Introduction to Teaching (elective)	3

Second Semester	16
ENG 122 English Composition II	3
BIO 120 Environmental Biology <i>or</i>	
BIO 141 Concepts in Biology	4
MTH 221 Math for Elementary Teaching II	3
HST 221 U.S. History to 1876 <i>or</i>	3
HST 222 U.S. History 1876 to Present	
EDU 124 Child Development for Educators (elective).....	3

Third Semester	16
CMM 121 Fundamentals of Speech	3
PHY 120 Practical Aspects of Physics	4
ENG 223 Early American Literature <i>or</i>	
ENG 225 Survey of British Literature I <i>or</i>	
ENG 226 Survey of British Literature II <i>or</i>	
ENG 227 Introduction to Shakespeare <i>or</i>	
ENG 228 World Literature <i>or</i>	
ENG 229 American Literature: 20th Century to Present <i>or</i>	
ENG 241 Introduction to Poetry <i>or</i>	
ENG 243 Introduction to Fiction <i>or</i>	
ENG 246 Latin American Writers <i>or</i>	
ENG 247 International Women Writers <i>or</i>	
ENG 249 Children's Literature	3
Concentration/Elective	3
Concentration/Elective	3

Fourth Semester	15
PSC 121 American National Politics <i>or</i>	
PSC 122 State and Local Politics	3
ART 240+ History of Art I <i>or</i>	
ART 241+ History of Art II <i>or</i>	
ART 260 History of Photography	3
Concentration/Elective	3
Concentration/Elective	3
Concentration/Elective	3

Concentration/Electives	
EDU 121 Introduction to Teaching	3
EDU 124 Child Development for Educators.....	3
EDU 222 The Exceptional Child.....	3
EDU 223 Technology in the Classroom	3
EDU 224 +Diversity in Schools and Society	3
EDU 225 Educational Psychology	3
** EDU 242 Observation/Clinical Experience in Education	3
EDU 299 Special Topics in Education.....	1-3
EDU 999 Preparing for the TAP or ACT+Writing	3
GXS 121+ Introduction to Gender Studies	3
MTH 121 Mathematics for Elementary Teachers I	3
(if used as a prerequisite for MTH 221)	

A B.A. degree at many four-year colleges may also require the following courses or coursework from the following areas of concentration:

ESC 120 Earth Science	4
ENG 246 Latin American Writers.....	3
HST 221 U.S. History to 1876 <i>or</i>	
HST 222 U.S. History since 1876	3
HWP 240 Contemporary Health Issues.....	3
PED 220 Physical Education in the Elementary School	3

Areas of Concentration: Art, English, Foreign Language, Language Arts, Social Studies, Math, Music, or Science. Additional coursework from these areas should be selected in consultation with an EDU advisor.

+ Choose from these courses to fulfill the I/M requirement.

EDU 224 is strongly recommended for this program of study.

** Requires 30 hours of observation and field study in a school setting.

In addition to MTH 121 and 221, some transfer school requirements generally include MTH 122 and MTH 222, and may require completion of these courses prior to transfer. Therefore it is highly recommended that students consult an advisor at their prospective transfer school in addition to meeting with a CLC advisor or counselor as early as possible

Continued on next page.

Courses listed are **recommended** for students who have not decided upon a specific four-year college or university in which to transfer. Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.

^ See page 50 for College Requirements / © A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

In order to transfer to a four-year College of Education, teacher candidates must earn a passing score on the Illinois Test of Academic Proficiency (formerly known as the Illinois Basic Skills Test) or a current ACT plus Writing test with a score of 22 or higher. One of these tests should be taken by recent high school graduates after completing 15-30 credit hours of college work. Non-traditional teacher candidates should take the test after completing 40-45 college credit hours. It is recommended that teacher candidates take ENG 121 and MTH 121 before taking either of these tests in order to better prepare themselves for success.

This plan benefits students interested in transferring to a four-year college or university to obtain a Illinois State Board of Education license. This plan may also benefit individuals who are interested in education and schooling but not in the context of the classroom. Regardless, due to recent legislative changes that take effect in 2017, each four-year institution has made changes in its program regarding transfer classes. This recommended plan is meant to be a guide and is contingent on the education program teacher candidates wish to obtain their bachelors/license through after transfer.

Teacher candidates who wish to teach in grades 6-8 or 9-12 should meet with both the CLC advisors and faculty in the education department to better formulate a specific academic plan. In the meantime, those teacher candidates should select electives from a content area in which they want to teach. Concentration areas include Art, English, Foreign Language, Language Arts, Social Studies, Math, Music, Science and Theatre. Again, it is imperative that teacher candidates work concurrently with CLC advisors and education faculty early in their program of study to ensure successful transfer to a four-year institution.

For teacher candidates in all grade levels and content areas wishing to earn a teaching license in the State of Illinois, a grade of a C or above is compulsory for all coursework required for teaching credential. This includes courses in the major, all education courses, and required general electives (2012, Illinois State Board of Education).

For more information on recommended courses, education policy changes or program specific advising, contact the following faculty members or the Business and Social Sciences Division at (847) 543-2047.

Kathleen Johnston / Michelle Proctor

RECOMMENDED
COURSE OF STUDY

Courses listed are **recommended** for students who have not decided upon a specific four-year college or university in which to transfer. Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements. ^ See page 50 for College Requirements / ⊗ A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Engineering and Computer Science

Associate in Engineering Science

Plan 12AB

Engineering, Math and Physical Sciences Division

Room T302, (847) 543-2044

This program is **recommended** for students pursuing a **B.S. in Engineering**, including any of the various engineering disciplines (e.g. mechanical, electrical, civil, aeronautical, materials, agricultural, biomedical, chemical, and computer, etc.). The program parallels the first two years of engineering programs at most universities accredited by the Accrediting Board for Engineering and Technology (ABET). Four year schools offering a **B.S. in Engineering** include the University of Illinois at Chicago (UIC), Northern Illinois University (NIU), University of Illinois at Urbana-Champaign (UIUC), Illinois Tech (IIT), Bradley, Southern Illinois University (SIU), Northwestern University, Milwaukee School of Engineering (MSOE), Marquette, Purdue, and more. Upon completion of minimum transfer requirements (which vary by four year school), CLC Engineering students can transfer to complete their B.S degree at a four year college or university.

This program is also appropriate for students pursuing a **B.S. in Computer Science with an engineering focus**. Four year schools offering a B.S. in Computer Science with an engineering focus include University of Illinois at Chicago (UIC), University of Illinois at Urbana-Champaign (UIUC College of Engineering), Illinois Tech (IIT), Southern Illinois University at Carbondale (SIUC) and Southern Illinois University at Edwardsville (SIUE). Students desiring a **B.A. or B.S. in Computer Science with a math or liberal arts focus** may want to pursue the program of study recommended under **Computer Science** (Associate in Science) on page 76.

Since minor differences in course requirements exist at different universities and in different engineering disciplines within the same university, students are strongly advised to meet with a faculty advisor from the Engineering Department or a CLC counselor, and consult the college catalog and an engineering advisor at their intended transfer institution.

First Semester	17
MTH 145 Calculus and Analytic Geometry I	5
CHM 121 General Chemistry I	5
EGR 120 Introduction to Engineering# <i>or</i>	
Technical Elective	1
EGR 121 Engineering Graphics#	3
ENG 121 English Composition I	3

Second Semester	15
MTH 146 Calculus and Analytic Geometry II.....	4
ENG 122 English Composition II <i>or</i>	
ENG 126 Advanced Composition: Scientific	
and Technical Communications	3
PHY 123 Physics for Science and Engineering I	5
Humanities/Fine Arts <i>or</i>	
Social Science Elective*	3

Third Semester	15
PHY 124 Physics for Science and Engineering II ..	5
EGR 125 Engineering Statics# <i>or</i>	
Technical Elective	3
MTH 246 Calculus and Analytical Geometry III	4
Humanities/Fine Arts <i>or</i>	
Social Science Elective*	3

Fourth Semester	15-16
MCS 140 Computer Programming I	3
MTH 227 Differential Equations	3
EGR 225 Engineering Dynamics# <i>or</i>	
Technical Elective	3
EGR 260 Introduction to Circuit Analysis# <i>or</i>	
Technical Elective.....	3-4
Humanities/Fine Arts <i>or</i>	
Social Science Elective*	3

Optional Summer Recommendations

(based on the institution you intend to transfer to)	
CHM 123 General Chemistry II.....	5
EGR 222 Engineering Mechanics of Materials#	3
PHY 221 Physics for Science	
and Engineering III	4

Select a minimum of 12 credit hours from the technical elective courses. Courses may include those recommended in the semester schedule above or substitute in a different course from the list below.

Continued on next page.

RECOMMENDED COURSE OF STUDY

Courses listed are **recommended** for students who have not decided upon a specific four-year college or university in which to transfer. Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.
 ^ See page 50 for College Requirements / ⊗ A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Technical Electives for Specific Engineering Majors below

EGR 120	Introduction to Engineering	1
EGR 121	Engineering Graphics	3
EGR 125	Engineering Statics	3
EGR 225	Engineering Dynamics	3
EGR 260	Introduction to Circuit Analysis	4
EGR 222	Engineering Mech of Materials.....	3
CHM 123	General Chemistry II.....	5
CHM 222	Organic Chemistry I	5
MCS 142	Computer Science II	3
MTH 225	Introduction to Linear Algebra	3
MTH 244	Discrete Mathematics	3
PHY 221	Physics for Science & Engineering III	4
EET 223	Introduction to Digital Electronics	4

Courses Offered in Selected Semesters Only

Course	Fall		Spring		Summer	
	Day	Night	Day	Night	Day	Night
MTH 225			X			
MTH 227		X	X		X	
MTH 244				X		
MCS 142			X			
PHY 123	X	X	X			
PHY 124	X		X	X		
PHY 221			X			X
EET 223	X					
EGR 222			X			X
EGR 260			X			

* Select courses from three different disciplines (i.e. different prefixes). At least one course must be selected from the Social and Behavioral Sciences section and one course from either the Humanities or Fine Arts section. See page 58 for specific course list. Include one course in International/Multicultural Education. There will be a + following the course number. This course can fulfill both the I/M requirement and a Social Science, Humanities, or Fine Arts requirement.

These are recommended (not required) electives that students can choose from when developing an academic plan of study. These recommendations align with the IAI Engineering Panel recommendations. Students are strongly recommended to choose courses in consultation with an advisor to meet 4-year Engineering school transfer requirements.

General or Undecided:

EGR 120, 121, 125, 225, 260

Chemical Engineering:

EGR 120, 121, CHM 123, 222

Civil Engineering:

EGR 120, 121, 125, 222, 225

Computer Science:

EGR 120, MCS 141, 142, 240, MTH 244

Electrical/Computer Engineering:

EET 223, EGR 120, 260, MTH 225, 244

Industrial Engineering:

EGR 120, 121, 125, 225, 222

Mechanical Engineering:

EGR 120, 121, 125, 225, 222, 260

Night classes begin no earlier than 4 p.m. Above schedule assumes sufficient enrollment. For more information about this course of study, students should contact the division office.



Courses listed are **recommended** for students who have not decided upon a specific four-year college or university in which to transfer. Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements. ^ See page 50 for College Requirements / © A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

English

Associate in Arts

Plan 13AB

Communication Arts, Humanities and Fine Arts Division

Room B210, (847) 543-2040

First Semester	16
ENG 121 English Composition I	3
Humanities & Fine Arts Elective (non-English)	3
Social & Behavioral Sciences Elective	3
Mathematics Elective	3
Foreign Language	4
Second Semester	16
ENG 122 English Composition II	3
ENG Any ENG literature course*	3
CMM 121 Fundamentals of Speech	3
Social and Behavioral Sciences Elective	3
Foreign Language	4
Third Semester	16
ENG Any ENG literature course*	3
Humanities and Fine Arts Elective (non-English)	3
Physical and Life Sciences Elective (non-lab) ..	4
Social and Behavioral Sciences Elective	3
General Elective	3
Fourth Semester	16
ENG Any ENG literature course*	3
ENG Any ENG writing course**	3
Physical & Life Sciences Elective (lab)	4
Humanities & Fine Arts Elective	3
General Elective	3

Potential Foreign Language requirement

The Bachelor of Arts degree at many four-year institutions may require foreign language at the college level. Students who are planning to transfer should meet with a counselor or speak with the admissions office of the transfer school to identify the foreign language requirement for the intended major.

ENG Literature Courses

ENG 129	Women in Literature (I/M)
ENG 199	Topics in Literature
ENG 223	Early American Literature
ENG 225	Survey of British Literature I
ENG 226	Survey of British Literature II
ENG 227	Introduction to Shakespeare
ENG 228	World Literature (I/M)
ENG 229	American Literature: 20th Century to Present
ENG 241	Introduction to Poetry
ENG 243	Introduction to Fiction
ENG 244	Mythology & Fairy Tales (I/M)*
ENG 246	Latin American Writers (I/M)
ENG 249	Children's Literature

ENG Writing Courses

ENG 124	Newsriting
ENG 220	Introduction to Scripts for the Screen
ENG 222	Creative Writing
ENG 224	Creative Writing II (fiction, creative non-fiction, poetry)

Please Note: The above Literature and Writing courses can be taken in any order once the ENG 121 prerequisite is completed.

* I/M indicates a course that meets CLC's International/Multicultural education requirement.

For more information on recommended courses or program specific advising, contact the following faculty or the Communication Arts, Humanities and Fine Arts Division at (847) 543-2040.

Nathan Breen / Katie Dublis

RECOMMENDED
COURSE OF STUDY

Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.

^ See page 50 for College Requirements / © A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

French

Associate in Arts

Plan 13AB

Communication Arts, Humanities and Fine Arts Division
Room B210, (847) 543-2040

I. College Requirements[^]

II. General Education Requirements37

A. Communication Arts9

- CMM 121 Fundamentals of Speech3
- ⊗ ENG 121 English Composition I3
- ⊗ ENG 122 English Composition II *or*
- ⊗ ENG 126 Advanced Composition: Scientific
and Technical Communications3

B. Social Sciences.....9

Recommended Courses:

- ANT 221 Cultural Anthropology3
- ANT 228 Cross Cultural Relationships.....3
- GEG 122 Cultural Geography *or*
- GEG 123 World Regional Geography.....3
- PSY 121 Introduction to Psychology3
- PSY 225 Social Psychology3
- SOC 121 Introduction to Sociology3
- SOC 225 Class, Race and Gender3

C. Physical and Life Sciences7

Recommended Courses:

- BIO 120 Environmental Biology4
- Physical Science without Lab Elective*3

D. Mathematics3

- MTH Elective*3

E. Humanities and Fine Arts9

Recommended Courses:

- ART 240 History of Art I3
- ART 241 History of Art II *or*
- HUM 121 Humanities: Ancient Times
to the Middle Ages.....3
- HUM 122 Humanities: Renaissance
to the Present3
- HUM 140 Introduction to International Film.....3

III. International/Multicultural Requirement (I/M)

Select one course from the I/M list on page 51. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts or Elective requirement. A B.A. degree at many four-year colleges may require college-level foreign language. Recommended Courses: French: FRN 121, 122, 221, 222, 223, 224

IV. Area of Concentration/Elective Requirements23

Recommended Courses:

- FRN 121 Beginning Conversational French I
- FRN 122 Beginning Conversational French II4
- FRN 221 Intermediate French I4
- FRN 222 Intermediate French II.....4
- FRN 223 French Civilization I3
- FRN 224 French Civilization II3
- Additional Electives as Needed5

For more information on recommended courses or program specific advising, contact the following faculty or the Communication Arts, Humanities and Fine Arts Division at (847) 543-2040.

Maria Manterola / Theresa Ruiz-Velasco / Rai Salazar
Olivia Yanez

RECOMMENDED
COURSE OF STUDY

Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.

[^] See page 50 for College Requirements / ⊗ A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Gender and Sexuality Studies

Associate in Arts

Plan 13AB

**Business and Social Sciences Division,
Room T302, (847) 543-2047**

The following courses are **recommended** for students who have not decided upon a specific four-year college or university. Once a transfer school is selected, students should meet with a counselor or advisor to determine courses at CLC which will also meet the transfer requirements. If a specific course is not recommended, please select from the appropriate category outlined in the general education requirements for the Associate in Arts degree on pages 54-55.

First Semester15-16

ENG 121	English Composition I.....	3
MTH 141	Quantitative Literacy <i>or</i>	
MTH 222	Elementary Statistics	3-4
GXS 121	Introduction to Gender Studies	3
PHI 125	Introduction to Ethics	3
	Concentration/Elective	3

Second Semester15-16

ENG 122	English Composition II	3
BIO 120	Environmental Biology <i>or</i>	
BIO 141	Concepts in Biology.....	3-4
PSY 121	Introduction to Psychology	3
	Concentration/Elective	3
	Concentration/Elective	3

Third Semester15

CMM 121	Fundamentals of Speech	3
GXS 229	Sex, Gender, and Power	3
HUM 226	Women and the Arts	3
	Concentration/Elective	3
	Concentration/Elective	3

Fourth Semester15

ENG 129	Women in Literature	3
	Physical Science Elective	3
	Concentration/Elective	3
	Concentration/Elective	3
	Concentration/Elective	3

Concentration/Electives

ANT 221	Cultural Anthropology.....	3
ANT 228	Cross Cultural Anthropology	3
CMM 125	Communication and Gender	3
CMM 127	Intercultural Communication	3
ENG 247	International Women Writers	3
EWE 121#	Introduction to Volunteerism.....	1
GXS 221	Theories of Feminism	3
GXS 299	Special Topics in Gender and Sex.....	3
HST 129	History of Women	3
PHI 128	Introduction to Social and Political Philosophy.....	3
PHI 129	Philosophy of Gender	3
PSY 229	Psychology of Women.....	3
SOC 121	Introduction to Sociology	3
SOC 222	Social Problems.....	3
SOC 224	Sociology of the Family	3
SOC 225	Class, Race, and Gender	3
SWK 121	Introduction to Social Work	3
SWK 228	Human Sexuality (cross-listed as PSY 228)	3

Students will volunteer in the CLC Women's Center.

+ Math requirements vary at four-year institutions.

For more information on recommended courses or program specific advising, contact the following faculty member or the Business and Social Sciences Division at (847) 543-2047.

Suzanne Pryga / Fred Hutchinson / Sonia Olivia / John Tenuto

**RECOMMENDED
COURSE OF STUDY**

Courses listed are **recommended** for students who have not decided upon a specific four-year college or university in which to transfer. Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements. ^ See page 50 for College Requirements / © A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Geography

Associate in Arts
 Plan 13AB
 Engineering, Math and Physical Sciences Division
 Room T302, (847) 543-2044

I. College Requirements[^]

II. General Education Requirements	37
A. Communication Arts	9
CMM 121 Fundamentals of Speech	3
⊗ ENG 121 English Composition I	3
⊗ ENG 122 English Composition II	3
B. Social Sciences.....	9
Recommended Courses:	
ANT 121 Introduction to Anthropology	3
ECO 221 Principles of Macroeconomics	3
HST 121 History of Western Civ to 1500	3
C. Physical and Life Sciences	7
Recommended Course:	
GEG 120 Principles of Physical Geography	4
Life Science Elective*	3
D. Mathematics	3
Recommended Course+:	
MTH 141 Quantitative Literacy <i>or</i>	
MTH 222 Elementary Statistics	3-4
E. Humanities and Fine Arts	9
Fine Arts Elective*	3
Humanities Elective*	3
Humanities or Fine Arts Elective*	3

III. International/Multicultural Requirement (I/M)
 Select one course from the I/M list on page 51. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts or Elective requirement. A B.A. degree at many four-year colleges may require college-level foreign language.

IV. Area of Concentration/Elective Requirements	23
Recommended Courses:	
GEG 122 Cultural Geography	3
GEG 123 World Regional Geography.....	3
HST 122 History of Western Civ from 1500	3
Additional Electives as Needed	14

+ Math requirements vary at four-year institutions.

For more information on recommended courses or program specific advising, contact faculty member Ty Liles or the EMPS Division at (847) 543-2044.

History

Associate in Arts
 Plan 13AB
 Business and Social Sciences Division,
 Room T302, (847) 543-2047

The following courses are **recommended** for students who have not decided upon a specific four-year college or university. Once a transfer school is selected, students should meet with a counselor or advisor to determine courses at CLC which will also meet the transfer requirements. If a specific course is not recommended, please select from the appropriate category outlined in the general education requirements for the Associate in Arts degree on pages 54-55.

First Semester	15
ENG 121 English Composition I.....	3
MTH 141 Quantitative Literacy	3
ANT 221 Cultural Anthropology.....	3
Humanities or Fine Arts Elective	3
Concentration/Elective	3

Second Semester	16
ENG 122 English Composition II	3
BIO 120 Environmental Biology <i>or</i>	
BIO 141 Concepts in Biology	4
PHI 121 Introduction to Philosophy	3
Concentration/Elective	3
Concentration/Elective	3

Third Semester	15
CMM 121 Fundamentals of Speech	3
PSC 121 American National Politics	3
Humanities or Fine Arts Elective	3
Concentration/Elective	3
Concentration/Elective	3

Fourth Semester	15
GEG 121 Physical Geography	3
ECO 221 Principles of Macroeconomics	3
Concentration/Elective	3
Concentration/Elective	3
Concentration/Elective	3

Concentration/Electives	
GEG 122 Cultural Geography	3
HST 121 History of Western Civilization to 1500	3
HST 122 History of Western Civilization from 1500.....	3
HST 221 U.S. History to 1876	3
HST 222 U.S. History 1876 to present	3
Additional Electives as Needed	

For more information on recommended courses or program specific advising, contact the following faculty members or the Business and Social Sciences Division at (847) 543-2047.

Josephine Faulk / Gregory Gordon / David Groeninger
 Phyllis Soybel

Courses listed are **recommended** for students who have not decided upon a specific four-year college or university in which to transfer. Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.

[^] See page 50 for College Requirements / * See pages 54-66 for Course Selections

Humanities

Associate in Arts

Plan 13AB

Communication Arts, Humanities and Fine Arts Division

Room B210, (847) 543-2040

I. College Requirements[^]

II. General Education Requirements37

A. Communication Arts9

CMM 121 Fundamentals of Speech3

⊗ ENG 121 English Composition I3

⊗ ENG 122 English Composition II3

B. Social Sciences.....9

Recommended Courses:

ANT 221 Cultural Anthropology3

HST 121 History of Western Civilizations

to 1500.....3

Social Science Elective*3

C. Physical and Life Sciences7

Physical or Life Science with Lab Elective*4

Physical or Life Science without Lab Elective*3

D. Mathematics3

MTH Elective*3

E. Humanities and Fine Arts9

Recommended Courses:

Fine Arts Elective*3

Humanities Elective*3

Humanities or Fine Arts Elective*3

III. International/Multicultural Requirement (I/M)

Select one course from the I/M list on page 51. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts or Elective requirement. A B.A. degree at many four-year colleges may require college-level foreign language.

IV. Area of Concentration/Elective Requirements23

See page 309 for HUM course selections.

For more information on recommended courses or program specific advising, contact the following faculty or the Communication Arts, Humanities and Fine Arts Division at (847) 543-2040.

Benjamin Almassi / Christopher Cooling / Patrick Gonder
 Leslie Hopkins / John Kupetz / George Liu
 Robert Lossmann / Sean Murphy / Nick Schevera
 Rebecca Thall / Jackie Trimier

RECOMMENDED
 COURSE OF STUDY

Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.

[^] See page 50 for College Requirements / * See pages 54-66 for Course Selections

International Studies

Associate in Arts

Plan 13AB

**Business and Social Sciences Division,
Room T302, (847) 543-2047**

The following courses are **recommended** for students who have not decided upon a specific four-year college or university. Once a transfer school is selected, students should meet with a counselor or advisor to determine courses at CLC which will also meet the transfer requirements. If a specific course is not recommended, please select from the appropriate category outlined in the general education requirements for the Associate in Arts degree on pages 54-55.

First Semester	16
ENG 121 English Composition I.....	3
MTH 141 Quantitative Literacy <i>or</i>	
MTH 222 Elementary Statistics	4
SSI 121 Introduction to Global Studies <i>or</i>	
SOC 121 Introduction to Sociology	3
HUM 121 Humanities: Ancient Times to the Middle Ages <i>or</i>	
HUM 122 Humanities: Renaissance to the Present	3
Concentration/Elective	3
Second Semester	16
ENG 122 English Composition II	3
BIO 120 Environmental Biology	4
ECO 221 Principles of Macroeconomics	3
Concentration/Elective	3
Concentration/Elective	3
Third Semester	15-16
CMM 121 Fundamentals of Speech	3
PSC 221 Comparative Political Systems	3
HUM 140 Introduction to International Films <i>or</i> Foreign Language Level 222 or higher	3-4
Concentration/Elective	3
Concentration/Elective	3
Fourth Semester	15
GEG 121 Physical Geography <i>or</i> Physical Science Non-Lab Elective	3
HUM 141 World Humanities of 20/21 Century	3
Concentration/Elective	3
Concentration/Elective	3
Concentration/Elective	3

A study abroad program for a short term (2-3 weeks) or for a long term (one semester) is highly recommended for students who are seeking for A.A. degree in International Studies. College of Lake County offers a variety of study abroad programs to several countries in the world every academic year.

Concentration/Electives

Choose from Recommended Courses:

ANT 121 Introduction to Anthropology	3
ANT 221 Cultural Anthropology	3
ANT 228 Cross-Cultural Relationships	3
ARA 222 Intermediate Modern Standard Arabic II	4
ART 240 History of Art I	3
ART 241 History of Art II	3
BUS 121 Introduction to Business	3
CHM 142 Chemistry for a Changing World-Lab	4
CHI 222 Intermediate Chinese II.....	4
CMM 127 Intercultural Communication	3
ESC 224 Environmental Geology	3
ECO 225 Comparative Economic Systems	3
EDU 224 Diversity in Schools and Society	3
ENG 244 Mythology and Fairy Tales	3
ENG 246 Latin American Writers.....	3
ENG 247 International Women Writers	3
ENG 271 Teaching English to Speakers of Other Language Practicum	3
FRN 222 Intermediate French II	4
FRN 223 French Civilization I	3
FRN 224 French Civilization II	3
GXS 229 Sex, Gender, and Power	3
GEG 122 Cultural Geography	3
GEG 123 World Regional Geography.....	3
GEG 223 Geography of Latin America.....	3
GER 222 Intermediate German II.....	4
GER 224 German Civilization II	3
HST 123 Modern Europe I	3
HST 124 Modern Europe II	3
HST 126 History of Contemporary Non-Western Civilization	3
HST 127 History of Chinese Culture and Society ..	3
HST 245 History of Latin America to 1825	3
HST 246 History of Latin America from 1825	3
HUM 128 Introduction to Middle Eastern Civilization	3
HUM 129 Introduction to East Asian Civilization....	3
ITL 222 Intermediate Italian II	4
ITL 223 Italian Civilization I	3
JPN 222 Intermediate Japanese II	4
PHI 126 World Religions.....	3
PHI 221 Asian Philosophy	3
PSC 222 International Relations	3
RUS 222 Intermediate Russian II	4
SPA 222 Intermediate Spanish II	4
SPA 223 Spanish Civilization I	3
SPA 224 Spanish Civilization II	3

For more information on recommended courses or program specific advising, contact the Business and Social Sciences Division at (847) 543-2047.

Courses listed are **recommended** for students who have not decided upon a specific four-year college or university in which to transfer. Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.
^ See page 50 for College Requirements / © A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Latin-American Studies

Associate in Arts

Plan 13AB

Communication Arts, Humanities and Fine Arts Division

Room B210, (847) 543-2040

I. College Requirements[^]

II. General Education Requirements37

A. Communication Arts9

- CMM 121 Fundamentals of Speech3
- ⊗ ENG 121 English Composition I3
- ⊗ ENG 122 English Composition II *or*
- ⊗ ENG 126 Advanced Composition: Scientific and Technical Communications3

B. Social Sciences.....9

Recommended Courses: Choose 9 credits from at least two different disciplines.

- ANT 221 Cultural Anthropology3
- ANT 228 Cross Cultural Relationships.....3
- GEG 122 Cultural Geography **3
- GEG 123 World Regional Geography**3
- PSY 121 Introduction to Psychology3
- PSY 225 Social Psychology3
- SOC 121 Introduction to Sociology3
- SOC 225 Class, Race and Gender3

C. Physical and Life Sciences7

Recommended Courses:

- BIO 120 Environmental Biology4
- Physical Science without Lab Elective*3

D. Mathematics3

- MTH Elective*3

E. Humanities and Fine Arts9

Recommended Courses: Choose 9 credits

- ART 240 History of Art I3
- ART 241 History of Art I3
- HUM 121 Humanities: Ancient Times to the Middle Ages.....3
- HUM 122 Humanities: Renaissance to the Present3
- HUM 140 Introduction to International Film.....3

III. International/Multicultural Requirement (I/M)

Select one course from the I/M list on page 51. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts or Elective requirement. A B.A. degree at many four-year colleges may require college-level foreign language. Recommended Courses: Spanish: SPA 121, 122, 221, 222, 223, 224

IV. Area of Concentration/Elective Requirements23

Strongly Recommended:

- LAT 121 Introduction to Latin American Studies ..3

Recommended Courses:

- ANT 121 Introduction to Anthropology3
- ANT 226 Field Methods – Latin America3
- ENG 246 Latin American Writers.....3
- GEG 223 Geography of Latin America.....3
- HST 245 History of Latin America to 18253
- HST 246 History of Latin America from 18253
- SPA 121 Beginning Conversational Spanish I.....4
- SPA 122 Beginning Conversational Spanish II4
- SPA 221 Intermediate Spanish I4
- SPA 222 Intermediate Spanish II4
- SPA 223 Spanish Civilization I3
- SPA 224 Spanish Civilization II3
- *** Special Topics3

Additional Electives as Needed1

** GEG 122 and GEG 123 share an IAI number. Only one of these courses will count toward meeting the general education core curriculum requirement. If both are taken, one will count as an elective.

*** Courses offered in different areas centered in Latin America if available

For more information on recommended courses or program specific advising, contact the Communication Arts, Humanities and Fine Arts Division at (847) 543-2040.

Courses listed are **recommended** for students who have not decided upon a specific four-year college or university in which to transfer. Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements. [^] See page 50 for College Requirements / * See pages 54-66 for Course Selections

Mathematics

Associate in Science

Plan 11AB

Engineering, Math and Physical Sciences Division

Room T302, (847) 543-2044

The following courses are **recommended** for students who have not decided upon a specific four-year college or university. Once a transfer school is selected, students should meet with a counselor or advisor to determine courses at CLC which will also meet the transfer requirements.

To complete any transfer degree, students should select from the general education requirements outlined on page 50. All course prerequisites must be met. Additionally, students are required to select one course from the International/Multicultural list on page 51 to meet graduation requirements.

First Semester Coursework.....14-16

- ENG 121 English Composition I3
- MTH 145 Calculus and Analytic Geometry I5
- PHI 122 Logic3
- Physical and Life Science Elective (not Physics)....3-5

Second Semester Coursework.....16-17

- MTH 146 Calculus and Analytic Geometry II.....4
- MCS 140 Computer Programming I *or*3-4
- MCS 141 Computer Science I3-4
- ENG 122 English Composition II *or*
- ENG 126 Advance Composition: Scientific and Technical Communication3
- Social and Behavioral Sciences Elective3
- Humanities and Fine Arts Elective.....3

Third Semester Coursework.....15

- MTH 246 Calculus and Analytic Geometry III4
- MTH 227 Ordinary Differential Equations3
- PHY 123 Physics for Science & Engineering I5
- Social and Behavioral Sciences Elective3

Fourth Semester Coursework15-17

- CMM 121 Fundamentals of Speech3
- MCS 142 Computer Programming II3
- MTH 225 Linear Algebra *or*3
- MTH 244 Discrete Mathematics3
- Humanities and Fine Arts Elective.....3
- Physical and Life Science Elective.....3-5

Note: Some students may require pre-calculus course work. As a result “Recommended First Semester Coursework” in this program may not correspond to a student’s first semester in college. Discussing your particular situation with a mathematics advisor is the best way to plan an appropriate program.

For more information on recommended courses or program specific advising, contact the following faculty or the EMPS Division at (847) 543-2044.

- Jeffrey Andrews / Mark Beintema / Kimberly Boyke
- Donna Carlson / Natalia Casper / Amy Curry / Anni Gossman
- Jason Hasbrouck / Kim Hasbrouck / Laura Hobart
- Tracey Hoy / Byron Hunter / Saehan Hwang / Shyam Kurup
- Jeffrey Mudrock / Annette Nehring / Scott Reed
- William Rolli / Mark Smith / Jon Sprague / John Thomas
- Stewart Thornburgh / Christopher Wyniawskij

RECOMMENDED
COURSE OF STUDY

Courses listed are **recommended** for students who have not decided upon a specific four-year college or university in which to transfer. Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.

^ See page 50 for College Requirements / © A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Music



Associate in Arts

Plan 13AB

Communication Arts, Humanities and Fine Arts Division

Room B210, (847) 543-2040

I. College Requirements^

II. General Education Requirements37

A. Communication Arts9

CMM 121 Fundamentals of Speech3

⊗ ENG 121 English Composition I3

⊗ ENG 122 English Composition II *or*

⊗ ENG 126 Advanced Composition: Scientific and Technical Communications3

B. Social Sciences.....9

Social Science Electives*9

C. Physical and Life Sciences7

Physical or Life Science with Lab Elective*4

Physical or Life Science without Lab Elective*3

D. Mathematics3

MTH Elective*3

E. Humanities and Fine Arts9

Recommended Course:

MUS 224 Music Literature3

Humanities Elective*3

Humanities or Fine Arts Elective*3

III. International/Multicultural Requirement (I/M)

Select one course from the I/M list on page 51. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts or Elective requirement. A B.A. degree at many four-year colleges may require college-level foreign language.

IV. Area of Concentration/Elective Requirements23

Recommended Courses:

MUS 120 Vocal Ensembles1

MUS 123 Wind Ensemble1

MUS 127 Fundamentals of Music>2

MUS 128 Theory of Music I4

MUS 129 Theory of Music II4

MUS 141 Applied Music – Voice1-2

MUS 142 Ear-training and Sight-singing I1

MUS 143 Applied Music – Piano I1-2

MUS 144 Applied Music – Jazz Piano1

MUS 145 Piano Class1

MUS 149 Ear-training and Sight-singing II1

MUS 160-188 Applied Music I (various instru)1-2

MUS 223 Jazz Ensemble1

MUS 228 Theory of Music III.....4

MUS 241 Applied Music – Voice II1-2

MUS 243 Applied Music – Piano II.....1-2

MUS 244 Applied Music – Jazz Piano II.....1-2

MUS 260-288 Applied Music II (various instru) ..1-2

>Students unfamiliar with keys, scales, intervals and basic rhythms should take MUS 127 prior to MUS 128. Students familiar with these elements may be waived from MUS 127.

For more information on recommended courses or program specific advising, contact the following faculty member or the Communication Arts, Humanities and Fine Arts Division at (847) 543-2040.

For information on the Associate in Fine Arts in Music, see page 63.

Michael Flack

RECOMMENDED
COURSE OF STUDY

Courses listed are **recommended** for students who have not decided upon a specific four-year college or university in which to transfer. Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.

^ See page 50 for College Requirements / ⊗ A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Philosophy

Associate in Arts
 Plan 13AB
 Communication Arts, Humanities and Fine Arts Division
 Room B210, (847) 543-2040

I. College Requirements[^]

II. General Education Requirements	37
A. Communication Arts	9
CMM 121 Fundamentals of Speech	3
⊗ ENG 121 English Composition I	3
⊗ ENG 122 English Composition II	3
B. Social Sciences.....	9
Recommended Courses:	
ANT 121 Introduction to Anthropology	3
ANT 221 Cultural Anthropology	3
PSY 121 Introduction to Psychology	3
C. Physical and Life Sciences	7
Physical or Life Science with Lab Elective*	4
Physical or Life Science without Lab Elective*	3
D. Mathematics	3
MTH Elective*	3
E. Humanities and Fine Arts	9
Fine Arts Elective*	3
Humanities Elective*	3
Humanities or Fine Arts Elective*	3

III. International/Multicultural Requirement (I/M)

Select one course from the I/M list on page 51. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts or Elective requirement. A B.A. degree at many four-year colleges may require college-level foreign language.

IV. Area of Concentration/Elective Requirements

See page 334 for PHI course selections.

For more information on recommended courses or program specific advising, contact the following faculty or the Communication Arts, Humanities and Fine Arts Division at (847) 543-2040.

Edwin George / Leslie Hopkins / Rebecca Thall
 Jackie Trimier

Physical Education

Associate in Arts
 Plan 13AB
 Biological and Health Sciences Division, Room B210,
 (847) 543-2042

I. College Requirements[^]

II. General Education Requirements	37
A. Communication Arts	9
CMM 121 Fundamentals of Speech	3
⊗ ENG 121 English Composition I	3
⊗ ENG 122 English Composition II <i>or</i>	
⊗ ENG 126 Advanced Composition: Scientific and Technical Communications	3
B. Social Sciences.....	9
Recommended Course:	
PSY 121 Introduction to Psychology	3
Social Science Electives*	6
C. Physical and Life Sciences	7
Physical or Life Science Elective with Lab	4
Physical or Life Science Elective without Lab*	3
D. Mathematics	3
MTH 141 Quantitative Literacy.....	3
E. Humanities and Fine Arts	9
Humanities Elective*	3
Fine Arts Elective*	3
Humanities or Fine Arts Elective*	3

III. International/Multicultural Requirement (I/M)

Select one course from the I/M list on page 51. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts or Elective requirement. A B.A. degree at many four-year colleges may require college-level foreign language.

IV. Area of Concentration/Elective Requirements

Recommended Courses:	
HWP 240 Contemporary Health Issues	3
HWP 260 Sport and Exercise Nutrition.....	3
HWP 299 Special Topics	1-3
PED 128 Introduction to Recreation	3
PED 149 Leisure Sports and Activities	2
PED 220 Physical Education in the Elementary School.....	3
PED 221 Introduction to Physical Education.....	3
PED 228 First Aid/CPR	2
PED 242 Philosophy of Coaching	3
PED 243 Theory and Practice of Fitness	2

For more information on recommended courses or program specific advising, contact faculty member Frank Ardito or the Biological and Health Sciences Division at (847) 543-2042.

Courses listed are **recommended** for students who have not decided upon a specific four-year college or university in which to transfer. Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.
[^] See page 50 for College Requirements / ⊗ A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Physics

Associate in Science

Plan 11AB

Engineering, Math and Physical Sciences Division
Room T302, (847) 543-2044

I. College Requirements[^]

II. General Education Requirements	39
A. Communication Arts	9
CMM 121 Fundamentals of Speech	3
⊗ ENG 121 English Composition I	3
⊗ ENG 122 English Composition II <i>or</i>	
⊗ ENG 126 Advanced Composition: Scientific and Technical Communications	3
B. Social Sciences	6
Social Science Electives*	6
C. Physical and Life Sciences	11
Recommended Courses:	
PHY 123 Physics for Science and Engineering	5
Life Science Elective*	3
D. Mathematics	7
Recommended Course:	
MTH 145 Calculus and Analytic Geometry I	5
E. Humanities and Fine Arts	6
Humanities or Fine Arts Elective	6

III. International/Multicultural Requirement (I/M)

Select one course from the I/M list on page 51. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts or Elective requirement. A B.A. degree at many four-year colleges may require college-level foreign language.

IV. Area of Concentration/Elective Requirements	21
Recommended Courses:	
CHM 121 General Chemistry I	5
CHM 123 General Chemistry II	5
MCS 140 Computer Programming for Engineers and Scientists	3
MTH 146 Calculus and Analytic Geometry II	4
MTH 227 Ordinary Differential Equations	3
MTH 246 Calculus and Analytic Geometry III.....	4
PHY 124 Physics for Science and Engineering II	5
PHY 221 Physics for Science and Engineering III	4

For more information on recommended courses or program specific advising, contact the following faculty or the EMPS Division at (847) 543-2044.

David Boyke / Ana Mazilu

Political Science

Associate in Arts

Plan 13AB

Business and Social Sciences Division,
Room T302, (847) 543-2047

The following courses are **recommended** for students who have not decided upon a specific four-year college or university. Once a transfer school is selected, students should meet with a counselor or advisor to determine courses at CLC which will also meet the transfer requirements. If a specific course is not recommended, please select from the appropriate category outlined in the general education requirements for the Associate in Arts degree on pages 54-55.

First Semester	15-16
ENG 121 English Composition II	3
MTH 141 Quantitative Literacy <i>or</i>	
MTH 222 Elementary Statistics	3-4
SOC 121 Introduction to Sociology	3
Humanities or Fine Arts Elective	3
Concentration/Elective	3

Second Semester	16
ENG 122 English Composition II	3
GEG 120 Principles of Physical Geography	4
ECO 221 Principles of Macroeconomics	3
Concentration/Elective	3
Concentration/Elective	3

Third Semester	15-16
CMM 121 Fundamentals of Speech	3
Life Science Elective	3-4
PHI 121 Introduction to Philosophy	3
Concentration/Elective	3
Concentration/Elective	3

Fourth Semester	15
HST 121 History of Western Civilization to 1500	3
Humanities or Fine Arts Elective	3
Concentration/Elective	3
Concentration/Elective	3
Concentration/Elective	3

Concentration/Electives	
GEG 122 Cultural Geography	3
HST 122 History of Western Civilization from 1500.....	3
PSC 121 American National Politics	3
PSC 122 State and Local Politics	3
PSC 221 Comparative Political Systems	3
PSC 222 International Relations	3
Additional Electives as Needed	

+ Math requirements vary at four-year institutions.

For more information on recommended courses or program specific advising, contact the following faculty members or the Business and Social Sciences Division at (847) 543-2047.

Tim Murphy

Courses listed are **recommended** for students who have not decided upon a specific four-year college or university in which to transfer. Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.
[^] See page 50 for College Requirements / ⊗ A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Pre-Dentistry

Associate in Arts

Plan 13AB

Biological and Health Sciences Division, Room B210,
(847) 543-2042

I. College Requirements[^]

II. General Education Requirements	37
A. Communication Arts	9
CMM 121 Fundamentals of Speech	3
⊗ ENG 121 English Composition I	3
⊗ ENG 122 English Composition II	3
B. Social Sciences	9
Recommended Courses:	
PSY 121 Introduction to Psychology	3
Social Science Electives*	6
C. Physical and Life Sciences	7
Recommended Courses:	
# BIO 161 General Biology I	4
# CHM 121 General Chemistry I	5
D. Mathematics	3
Recommended Course:	
MTH 145 Calculus I <i>or</i>	
MTH 222 Elementary Statistics	4-5
E. Humanities and Fine Arts	9
Fine Arts Elective*	3
Humanities Elective*	3
Humanities or Fine Arts Elective*	3

III. International/Multicultural Requirement (I/M)

Select one course from the I/M list on page 51. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts or Elective requirement. A B.A. degree at many four-year colleges may require college-level foreign language.

IV. Area of Concentration/Elective Requirements

Recommended Courses:	
# BIO 162 General Biology II	4
# CHM 123 General Chemistry II.....	5
# CHM 222 Organic Chemistry I	5
# CHM 223 Organic Chemistry II.....	5
# PHY 121 General Physics I	5
# PHY 122 General Physics II.....	5

For more information on recommended courses or program specific advising, contact faculty member Cynthia Trombino at (847) 543-2882 or the Biological and Health Sciences Division at (847) 543-2042.

Pre-Medicine

Associate in Arts

Plan 13AB

Biological and Health Sciences Division, Room B210,
(847) 543-2042

I. College Requirements[^]

II. General Education Requirements	37
A. Communication Arts	9
CMM 121 Fundamentals of Speech	3
⊗ ENG 121 English Composition I	3
⊗ ENG 122 English Composition II <i>or</i>	
⊗ ENG 126 Advanced Composition: Scientific	
and Technical Communications	3
B. Social Sciences	9
Recommended Course:	
PSY 121 Introduction to Psychology	3
Social Science Electives*	6
C. Physical and Life Sciences	7
Recommended Courses:	
# BIO 161 General Biology I	4
# CHM 121 General Chemistry I	5
D. Mathematics	3
Recommended Courses:	
MTH 145 Calculus I <i>or</i>	
MTH 222 Elementary Statistics	4-5
E. Humanities and Fine Arts	9
Fine Arts Elective*	3
Humanities Elective*	3
Humanities or Fine Arts Elective*	3

III. International/Multicultural Requirement (I/M)

Select one course from the I/M list on page 51. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts or Elective requirement. A B.A. degree at many four-year colleges may require college-level foreign language.

IV. Area of Concentration/Elective Requirements

Recommended Courses:	
# BIO 162 General Biology II	4
# CHM 123 General Chemistry II.....	5
# CHM 222 Organic Chemistry I	5
# CHM 223 Organic Chemistry II.....	5
# PHY 121 General Physics I	5
# PHY 122 General Physics II	5

For more information on recommended courses or program specific advising, contact faculty member Lakshmi Gollapudi at (847) 543-2324 or the Biological and Health Sciences Division at (847) 543-2042.

Courses listed are **recommended** for students who have not decided upon a specific four-year college or university in which to transfer. Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements. [^] See page 50 for College Requirements / ⊗ A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections ## Some transfer institutions may accept sequential courses (I and II) only if **both** courses are taken. Check with transfer institution.

Pre-Occupational Therapy and Pre-Physical Therapy

Associate in Science

Plan 11AB

Biological and Health Sciences Division, Room B210,
(847) 543-2042

Students who intend to complete an AS degree at the College of Lake County and transfer to a pre-professional program at a four-year college or university should become familiar with the requirements of the institution to which they plan to transfer very early in their studies.

To complete either of these transfer degrees, students should complete the requirements for the associate in science degree outlined on pages 56-57 and choose area of concentration electives only after consulting with a department chair. All course prerequisites must be met.

For more information on either of these courses of study, please contact the faculty members listed below or the Biological and Health Sciences Division at (847) 543-2042.

Pre-Occupational Therapy

Elisabeth Martin (847) 543-2884

Pre-Physical Therapy

Kristi Dameron (847) 543-2335

Pre-Pharmacy

Associate in Arts

Plan 13AB

Biological and Health Sciences Division, Room B210,
(847) 543-2042

I. College Requirements[^]

II. General Education Requirements37

A. Communication Arts9

CMM 121 Fundamentals of Speech3

⊗ ENG 121 English Composition I3

⊗ ENG 122 English Composition II3

B. Social Sciences.....9

Recommended Courses:

ECO 221 Principles of Macroeconomics3

PSY 121 Introduction to Psychology3

Social Science Elective3

C. Physical and Life Sciences7

Recommended Courses:

BIO 161 General Biology I4

CHM 121 General Chemistry I5

D. Mathematics3

Recommended Course:

MTH 145 Calculus5

E. Humanities and Fine Arts9

Fine Arts Elective*3

Humanities Elective*3

Humanities or Fine Arts Elective*3

III. International/Multicultural Requirement (I/M)

Select one course from the I/M list on page 51. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts or Elective requirement.

A B.A. degree at many four-year colleges may require college-level foreign language.

IV. Area of Concentration/Elective Requirements23

Recommended Courses:

BIO 244 Anatomy and Physiology I4

BIO 245 Anatomy and Physiology II4

BIO 162 General Biology II4

CHM 123 General Chemistry II5

CHM 222 Organic Chemistry I5

CHM 223 Organic Chemistry II5

PHY 121 General Physics I5

PHY 122 General Physics II5

For more information on recommended courses or program specific advising, contact the following faculty or the Biological and Health Sciences Division at (847) 543-2042.

Tara Simmons / Jeanne Simonsen

Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.

[^] See page 50 for College Requirements / * See pages 54-66 for Course Selections / # Some transfer institutions may accept sequential courses (I and II) only if **both** courses are taken. Check with transfer institution.

Pre-Veterinary Medicine

Associate in Arts

Plan 13AB

Biological and Health Sciences Division, Room B210,
(847) 543-2042

I. College Requirements[^]

II. General Education Requirements37

A. Communication Arts9

CMM 121 Fundamentals of Speech3

⊗ ENG 121 English Composition I3

⊗ ENG 122 English Composition II *or*

⊗ ENG 126 Advanced Composition: Scientific
and Technical Communications3

B. Social Sciences.....9

Social Science Electives*9

C. Physical and Life Sciences7

Recommended Courses:

BIO 161 General Biology I4

CHM 121 General Chemistry I5

D. Mathematics3

Recommended Course:

MTH 222 Elementary Statistics4

E. Humanities and Fine Arts9

Fine Arts Elective*3

Humanities Elective*3

Humanities or Fine Arts Elective*¹3

III. International/Multicultural Requirement (I/M)

Select one course from the I/M list on page 51. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts or Elective requirement. A B.A. degree at many four-year colleges may require college-level foreign language.

IV. Area of Concentration/Elective Requirements23

Recommended Courses:

BIO 162 General Biology II4

BIO 221 General Zoology²4

CHM 123 General Chemistry II5

CHM 125 Elementary Organic Chemistry³5

CHM 222 Organic Chemistry I³5

CHM 223 Organic Chemistry II³5

PHY 121 General Physics I5

PHY 122 General Physics II5

¹ Meets CLC AA requirements but is not required by U of I College of Veterinary Medicine.

² Strongly recommended. Required by University of Wisconsin School of Veterinary Medicine. Not required by U of I College of Veterinary Medicine.

³ For application to a Veterinary Program without completing a Bachelor of Science degree, students should complete either CHM 222 and CHM 223 or CHM 125 and a biochemistry course (not offered at CLC).

For more information on recommended courses or program specific advising, contact faculty member Branko Jablanovic at (847) 543-2883 or the Biological and Health Sciences Division at (847) 543-2042.

RECOMMENDED
COURSE OF STUDY

Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.

[^] See page 50 for College Requirements / ⊗ A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Some transfer institutions may accept sequential courses (I and II) only if **both** courses are taken. Check with transfer institution.

Associate Degree Transfer Programs

Psychology

Associate in Arts

Plan 13AB

**Business and Social Sciences Division,
Room T302, (847) 543-2047**

The following courses are **recommended** for students who have not decided upon a specific four-year college or university. Once a transfer school is selected, students should meet with a counselor or advisor to determine courses at CLC which will also meet the transfer requirements. If a specific course is not recommended, please select from the appropriate category outlined in the general education requirements for the Associate in Arts degree on pages 54-55.

First Semester	16
ENG 121 English Composition I.....	3
MTH 141 Quantitative Literacy <i>or</i>	
MTH 222 Elementary Statistics	4
PSY 121 Introduction to Psychology (elective)	3
ANT 221 Cultural Anthropology.....	3
Fine Arts Elective.....	3
Second Semester	16
ENG 122 English Composition II	3
BIO 161 General Biology I	4
Humanities Elective	3
Concentration/Elective	3
Concentration/Elective	3
Third Semester	15-16
CMM 121 Fundamentals of Speech	3
Physical Science Elective.....	3-4
PSC 121 American National Politics	3
Concentration/Elective	3
Concentration/Elective	3

Fourth Semester	15
Humanities or Fine Arts Elective (with I/M designation, if needed)	3
HST 121 History of Western Civilization to 1500	3
Concentration/Elective	3
Concentration/Elective	3
Concentration/Elective	3

Concentration/Electives

Recommended Courses:

PSY 121 Introduction to Psychology.....	3
PSY 220 Lifespan Development	3
PSY 222 Child Growth and Development.....	3
PSY 223 Abnormal Psychology.....	3
PSY 224 Theories of Personality	3
PSY 225 Social Psychology.....	3
PSY 226 Adolescent Psychology.....	3
PSY 228 Human Sexuality.....	3
PSY 229 Psychology of Women	3
PSY 240 Brain and Behavior	3
PSY 248 Psychology of the Criminal Mind	3

For more information on recommended courses or program specific advising, contact the following faculty members or the Business and Social Sciences Division at (847) 543-2047.

Nora Benjamin / Shari Brueske / Evan Finer
Kenneth Kikuchi / Martha Lally / Matthew Rasmussen
Eric Rogers / Suzanne Valentine-French

**RECOMMENDED
COURSE OF STUDY**

Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.
^ See page 50 for College Requirements / ⊗ A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Recreation

Associate in Arts

Plan 13AB

Biological and Health Sciences Division, Room B210,
(847) 543-2042

I. College Requirements[^]

II. General Education Requirements37

A. Communication Arts9

CMM 121 Fundamentals of Speech3

⊗ ENG 121 English Composition I3

⊗ ENG 122 English Composition II *or*

⊗ ENG 126 Advanced Composition: Scientific
and Technical Communications3

B. Social Sciences.....9

Recommended Course:

PSY 121 Introduction to Psychology3

Social Science Electives*6

C. Physical and Life Sciences7

Physical or Life Science Elective with Lab4

Physical or Life Science Elective without Lab*3

D. Mathematics3

MTH 141 Quantitative Literacy.....3

E. Humanities and Fine Arts9

Humanities Elective*3

Fine Arts Elective*3

Humanities or Fine Arts Elective*3

III. International/Multicultural Requirement (I/M)

Select one course from the I/M list on page 51. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts or Elective requirement. A B.A. degree at many four-year colleges may require college-level foreign language.

IV. Area of Concentration/Elective Requirements23

Recommended Courses:

HWP 240 Contemporary Health Issues3

HWP 299 Special Topics1-3

PED 128 Introduction to Recreation3

PED 149 Leisure Sports and Activities2

PED 129 Fundamentals of Youth Programming4

PED 228 First Aid/CPR3

PED 229 Experience in the Out-Of-Doors1

PED 242 Philosophy of Coaching3

PED 248 Fieldwork in Recreation4

For more information on recommended courses or program specific advising, contact faculty member Frank Arditto or the Biological and Health Sciences Division at (847) 543-2042.

RECOMMENDED
COURSE OF STUDY

Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.

[^] See page 50 for College Requirements / ⊗ A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Secondary Education

**Program Modification effective Spring 2017. See addendum for details.*

Associate in Arts

Plan 13AB

**Business and Social Sciences Division,
Room T302, (847) 543-2047**

The following courses are **recommended** for students who have not decided upon a specific four-year college or university. Once a transfer school is selected, students should meet with a counselor or advisor to determine courses at CLC which will also meet the transfer requirements. If a specific course is not recommended, please select from the appropriate category outlined in the general education requirements for the Associate in Arts degree on pages 54-55.

First Semester	16
ENG 121 English Composition I.....	3
MTH 122 College Algebra <i>or</i>	
MTH 222 Elementary Statistics	4
PSY 121 Introduction to Psychology	3
ART 121 Introduction to Art <i>or</i>	
MUS 124 Introduction to Music	3
EDU 121 Introduction to Teaching (elective)	3
Second Semester	16
ENG 122 English Composition II	3
EDU 124 Child Development for Educators (elective).....	3
BIO 123 Principles of Biology.....	4
Humanities Elective	3
Concentration/Elective	3
Third Semester	15
CMM 121 Fundamentals of Speech	3
ESC 123 Introduction to Meteorology <i>or</i>	
GEG 121 Physical Geography.....	3
HST 221 U.S. History to 1876 <i>or</i>	
HST 222 U.S. History 1876 to Present.....	3
(Note: Some transfer schools require both HST 221 and HST 222. Check with your transfer school)	
Concentration/ Elective	3
Concentration/ Elective	3
Fourth Semester	15
PSC 121 American National Politics	3
Humanities or Fine Arts Elective (with I/M designation*, if needed)	3
Concentration/Elective	3
Concentration/Elective	3
Concentration/Elective	3

Concentration/Electives

A secondary teaching credential requires a major at a 4 year college or university. Examples include but are not limited to: English, Math, Biology, Chemistry, Physics, History, a Foreign

Language, and Business.) Students planning to transfer should verify 4 year college requirements as they differ from college to college. Students interested in Music Education or the Associate in Arts in Teaching Math should consult the respective department at CLC.

Recommended Education Courses	12
EDU 121 Introduction to Teaching	3
EDU 124 Child Development for Educators.....	3
EDU 222 Exceptional Children.....	
EDU 223 Technology In The Classroom	3
EDU 224 Diversity in the Schools I/M.....	3
EDU 225 Educational Psychology	3
EDU 242 Observation/Clinical Experience.....	1
EDU 299 Special Topics in Education	1
EDU 999 Preparing for the TAP or ACT+ Writing.....	1-3

*EDU 224—Diversity in the Schools is recommended for the Secondary Education Concentration/Elective to satisfy the I/M requirement.

**Many four year colleges require a foreign language. To fulfill the humanities requirement, a student must take a foreign language with a course number of 222. (This is an intermediate level foreign language class requiring several semesters of beginning level foreign language courses before the intermediate course can be taken.)

Any additional electives should be taken in a particular subject area that meets requirements for a secondary teaching credential and will transfer to a four year college of your choice. Consult the four year institution requirements for different majors that lead to a credential in secondary education.

A passing score on the Illinois Test of Academic Proficiency (formerly the Illinois Test of Basic Skills) or a current ACT plus Writing test with a score of 22 or higher is required for admission to a four-year college or university school of education. One of these tests should be taken by recent high school graduates after completing 15-30 credit hours of college work. Older students should take the test after completing 40-45 college credit hours. It is recommended that you take ENG 121 and MTH 121 before taking either of these tests. There is a 3-credit test preparation course, EDU 999, offered by the CLC Education department which will help you review for either test. It is strongly recommended that you complete this preparation course.

For all those students wishing to obtain a teaching credential in the state of Illinois, a grade of C or above is compulsory for all coursework that is required for the teaching credential. This would include courses in your major, all education courses, and required general electives. (Effective 2012, Illinois State Board of Education)

For more information on recommended courses or program specific advising, contact the following faculty members or the Business and Social Sciences Division at (847) 543-2047.

Kathy Johnston / Michelle Proctor

Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.

^ See page 50 for College Requirements / © A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Social Work

Associate in Arts

Plan 13AB

**Business and Social Sciences Division,
Room T302, (847) 543-2047**

The following courses are recommended for students who have not decided upon a specific four-year college or university. Once a transfer school is selected, students should meet with a counselor or advisor to determine courses at CLC which will also meet the transfer requirements. If a specific course is not recommended, please select from the appropriate category outlined in the general education requirements for the Associate in Arts degree on pages 54-55.

First Semester	16
ENG 121 English Composition I.....	3
MTH 222 Elementary Statistics	4
PSY 121 Introduction to Psychology	3
PHI 125 Introduction to Ethics (I/M)	3
PSC 121 American National Politics	3
Second Semester	15
ENG 122 English Composition II	3
GEG 121 Physical Geography <i>or</i>	
CHM 140 Chemistry for a Changing World	3
SWK 121 Introduction to Social Work (Elective)	3
Concentration Elective	3
Concentration Elective	3
Third Semester	15-16
CMM 121 Fundamentals of Speech	3
BIO 141 Concepts in Biology.....	3-4
Fine Arts Elective	3
Concentration Elective	3
Concentration Elective	3

Fourth Semester	15
ANT 221 Cultural Anthropology.....	3
PHI 121 Introduction to Philosophy	3
Concentration Elective	3
Concentration Elective	3
Concentration Elective	3

Concentration/Electives

Recommended Courses:

GXS 229 Sex, Gender and Power	3
HUS 128 Introduction to Counseling Skills.....	3
HUS 140 Drugs and Society.....	3
HUS 234 Child Maltreatment.....	3
PSY 223 Abnormal Psychology.....	3
PSY 229 Psychology of Women	3
SOC 121 Introduction to Sociology	3
SOC 224 Sociology of the Family	3
SOC 225 Race, Class, & Gender	3
SWK 121 Introduction to Social Work	3
SWK 228 Human Sexuality.....	3

+ Math requirements vary at four-year institutions.

For more information on recommended courses or program specific advising, contact the following faculty members or the Business and Social Sciences Division at (847) 543-2047.

Mick Cullen / Janet Mason

RECOMMENDED
COURSE OF STUDY

Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.
^ See page 50 for College Requirements / © A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Associate Degree Transfer Programs

Sociology

Associate in Arts

Plan 13AB

**Business and Social Sciences Division,
Room T302, (847) 543-2047**

The following courses are recommended for students who have not decided upon a specific four-year college or university. Once a transfer school is selected, students should meet with a counselor or advisor to determine courses at CLC which will also meet the transfer requirements. If a specific course is not recommended, please select from the appropriate category outlined in the general education requirements for the Associate in Arts degree on pages 54-55.

First Semester15-16

ENG 121	English Composition I.....	3
MTH 141	Quantitative Literacy <i>or</i>	
MTH 222	Elementary Statistics	3-4
PHI 125	Introduction to Ethics (I/M)	3
	Concentration/Elective	3
	Concentration/Elective	3

Second Semester16

ENG 122	English Composition II	3
BIO 120	Environmental Biology <i>or</i>	
BIO 141	Concepts in Biology	4
ANT 221	Cultural Anthropology.....	3
	Concentration/Elective	3
	Concentration/Elective	3

Third Semester15

CMM 121	Fundamentals of Speech	3
PSC 121	American National Politics	3
	Humanities or Fine Arts Elective	3
	Concentration/Elective	3
	Concentration/Elective	3

Fourth Semester15

HST 222	U.S. History 1876 to Present.....	3
HUM 221	American Decades.....	3
	Physical Science Elective	3
	Concentration/Elective	3
	Concentration/Elective	3

Concentration/Electives

GEG 122	Cultural Geography	3
GXS 121	Introduction to Gender Studies	3
PHI 128	Social and Political Philosophy.....	3
PSY 121	Introduction to Psychology	3
PSY 225	Social Psychology	3
SOC 121	Introduction to Sociology	3
SOC 222	Social Problems.....	3
SOC 223	Deviance	3
SOC 224	Sociology of the Family	3
SOC 225	Class, Race, and Gender	3
SOC 229	Sex, Gender, and Power	3
SOC 299	Special Topics in Sociology	3

For more information on recommended courses or program specific advising, contact the following faculty members or the Business and Social Sciences Division at (847) 543-2047.

Frederic Hutchinson / Sonia Oliva / Suzanne Pryga
John Tenuto

**RECOMMENDED
COURSE OF STUDY**

Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.

^ See page 50 for College Requirements / © A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Spanish

Associate in Arts

Plan 13AB

Communication Arts, Humanities and Fine Arts Division
Room B210, (847) 543-2040

I. College Requirements[^]

II. General Education Requirements37

A. Communication Arts9

- CMM 121 Fundamentals of Speech3
- ⊗ ENG 121 English Composition I3
- ⊗ ENG 122 English Composition II *or*
- ⊗ ENG 126 Advanced Composition: Scientific
and Technical Communications3

B. Social Sciences.....9

Recommended Courses:

- ANT 221 Cultural Anthropology3
- ANT 228 Cross Cultural Relationships.....3
- GEG 122 Cultural Geography *or*
- GEG 123 World Regional Geography.....3
- PSY 121 Introduction to Psychology3
- PSY 225 Social Psychology3
- SOC 121 Introduction to Sociology3
- SOC 225 Class, Race and Gender3

C. Physical and Life Sciences7

Recommended Courses:

- BIO 120 Environmental Biology4
- Physical Science without Lab Elective*3

D. Mathematics3

- MTH Elective*3

E. Humanities and Fine Arts9

Recommended Courses:

- ART 240 History of Art I3
- ART 241 History of Art II *or*
- HUM 121 Humanities: Ancient Times
to the Middle Ages3
- HUM 122 Humanities: Renaissance
to the Present3
- HUM 140 Introduction to International Film3

III. International/Multicultural Requirement (I/M)

Select one course from the I/M list on page 51. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts or Elective requirement. A B.A. degree at many four-year colleges may require college-level foreign language. Recommended Courses: Spanish: SPA 121, 122, 221, 222, 223, 224

IV. Area of Concentration/Elective Requirements23

Recommended Courses:

- SPA 121 Beginning Conversational Spanish I.....4
- SPA 122 Beginning Conversational Spanish II4
- SPA 221 Intermediate Spanish I4
- SPA 222 Intermediate Spanish II4
- SPA 223 Spanish Civilization I3
- SPA 224 Spanish Civilization II3
- Additional Electives as Needed1

For more information on recommended courses or program specific advising, contact the following faculty or the Communication Arts, Humanities and Fine Arts Division at (847) 543-2040.

Maria Manterola / Theresa Ruiz-Velasco / Rai Salazar
Olivia Yanez

RECOMMENDED
COURSE OF STUDY

Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.

[^] See page 50 for College Requirements / ⊗ A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Special Education

Associate in Arts

Plan 13AB

**Business and Social Sciences Division,
Room T302, (847) 543-2047**

The following courses are recommended for students who have not decided upon a specific four-year college or university. Once a transfer school is selected, students should meet with a counselor or advisor to determine courses at CLC which will also meet the transfer requirements. If a specific course is not recommended, please select from the appropriate category outlined in the general education requirements for the Associate in Arts degree on pages 54-55.

First Semester	15
ENG 121 English Composition I.....	3
MTH 121 Math for Elementary Teaching I (elective)	3
PSY 121 Introduction to Psychology	3
MUS 124 Introduction to Music <i>or</i>	
MUS 224 Music Literature	3
EDU 121 Introduction to Teaching (elective)	3
Second Semester	16
ENG 122 English Composition II	3
BIO 120 Environmental Biology <i>or</i>	
BIO 141 Concepts in Biology	4
MTH 221 Math for Elementary Teaching II	3
GEG 122 Cultural Geography <i>or</i>	
HST 221 U.S. History to 1876 <i>or</i>	
HST 222 U.S. History 1876 to Present.....	3
EDU 124 Child Development for Educators (elective).....	3
Third Semester	16
CMM 121 Fundamentals of Speech	3
PHY 120 Practical Aspects of Physics	4
HUM 128+ Introduction to Middle Eastern Civilizations <i>or</i>	
PHI 123+ Philosophy of Religion <i>or</i>	
PHI 125+ Ethics <i>or</i>	
PHI 126+ World Religions.....	3
Concentration/Elective	3
Concentration/Elective	3
Fourth Semester	15
PSC 121 American National Politics <i>or</i>	
ART 240+ History of Art I <i>or</i>	
ART 241+ History of Art II <i>or</i>	
ART 260 History of Photography.....	3
Concentration/Elective	3
Concentration/Elective	3
Concentration/Elective	3

Concentration/Electives

Recommended Courses:

EDU 121 Introduction to Teaching	3
EDU 124 Child Development for Educators.....	3
EDU 222 The Exceptional Child	3
EDU 223 Technology in the Classroom	3

+ EDU 224 Diversity in the Classroom	3
EDU 225 Educational Psychology	3
EDU 226 Foundations of Reading	3
** EDU 242 Observation and Clinical Experience	1
++MTH 121 Math for Elementary Teachers I	3

+ Choose from these courses to fulfill the I/M requirement.
EDU 224 is strongly recommended for this program of study.
++ MTH 121 is a prerequisite for MTH 221 and may be used as an elective requirement.

** Requires 30 hours of observation and field study in a school setting.

A B.A. degree at many four-year colleges may also require the following:

PED 140 Contemporary Health Issues	2
PED 220 Phys. Ed in the Elem School.....	3
Any Earth Science Lab Class.....	4

A passing score on the Illinois Test of Academic Proficiency (formerly the Illinois Test of Basic Skills) or a current ACT plus Writing test with a score of 22 or higher is required for admission to a four-year college or university school of education. One of these tests should be taken by recent high school graduates after completing 15-30 credit hours of college work. Older students should take the test after completing 40-45 college credit hours. It is recommended that you take ENG 121 and MTH 121 before taking either of these tests. There is a 3-credit test preparation course, EDU 999, offered by the CLC Education department which will help you review for either test. It is strongly recommended that you complete this preparation course.

Check with your four-year institution for specific transfer requirement.

¹ This plan benefits students interested in transferring to a four-year college or university to obtain Illinois State Board of Education K-9 certification. Students who wish to obtain certification for grades 6-12 should select electives from an area of concentration in which they want to teach. Concentration areas include Art, English, Foreign Language, Language Arts, Social Studies, Math, Music, Science and Theatre. Students should meet with a CLC Education advisor or counselor as early as possible.

For students wishing to obtain a teaching credential in the State of Illinois, a grade of C or above is compulsory for all coursework required for the teaching credential. This includes courses in the major, all education courses, and required general electives. This is effective for those applying for teacher certification as of 2012, Illinois State Board of Education.

For more information on recommended courses or for program specific advising, students may contact the following faculty members or the Business and Social Sciences Division at (847) 543-2047.

Kathleen Johnston / Michelle Proctor

Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.

^ See page 50 for College Requirements / © A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Surveying / Geomatics

**Associate in Science
Plan 11AB
Engineering, Math and Physical Sciences Division
Room T302, (847) 543-2044**

I. College Requirements[^]

II. General Education Requirements39

A. Communication Arts9

- CMM 121 Fundamentals of Speech3
- ⊗ ENG 121 English Composition I3
- ⊗ ENG 122 English Composition II *or*
- ⊗ ENG 126 Advanced Composition: Scientific
and Technical Communications3

B. Social Sciences.....6

- Recommended Courses:
- GEG 123 World Regional Geography.....3
 - Social Science Elective*6

C. Physical and Life Sciences11

- Recommended Courses:
- BIO 120 Environmental Biology *or*
 - BIO 141 Concepts in Biology4
 - PHY 121 General Physics I *or*
 - PHY 123 Physics for Science and Engineering I5

D. Mathematics7

- Recommended Courses:
- MTH 224 Calculus for Business
and Social Science *or*
 - MTH 145 Calculus and Analytic Geometry I.....4-5
 - MTH Elective*3-4

E. Humanities and Fine Arts6

- Humanities or Fine Arts Elective6

III. International/Multicultural Requirement (I/M)

Select one course from the I/M list on page 51. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts or Elective requirement. A B.A. degree at many four-year colleges may require college-level foreign language.

IV. Area of Concentration/Elective Requirements21

- Choose from the following:
- CIV 111 Basic Surveying4
 - ESC 121 Physical Geology4
 - ESC 127 Introduction to Meteorology with lab.....4
 - GEG120 Physical Geography4
 - PHY 122 General Physics II.....5

This area of concentration is for students who wish to transfer for a B.S. in Geography with a focus in Surveying or Geomatics (Surveying, Geographic Information Systems (GIS), or Remote Sensing). In particular, students desiring to meet the Surveyor in Training (S.I.T.) requirements may use this to prepare for transfer. Students can pursue S.I.T. eligibility by completing Northern Illinois University’s (N.I.U.) B.S. in Geography after completing CLC’s A.S. in Surveying/Geomatics. Other 4-year university transfer programs in Surveying are available as well for interested students. This program is not yet approved by the Illinois Department of Professional Regulation for S.I.T. eligibility. Students are strongly urged to seek advising with faculty advisors in the Surveying program.

For more information on recommended courses or program specific advising, contact Engineering faculty member Rob Twardock at (847) 543-2903, rtwardock@clcollinois.edu or the EMPS Division at (847) 543-2044.

RECOMMENDED
COURSE OF STUDY

Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.
[^] See page 50 for College Requirements / ⊗ A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Sustainability (Policy and Social Aspects)

Associate in Arts

Plan 13AB

Engineering, Math and Physical Sciences Division

Room T302, (847) 543-2044

I. College Requirements[^]

II. General Education Requirements37

A. Communication Arts9

CMM 121 Fundamentals of Speech3

⊗ ENG 121 English Composition I3

⊗ ENG 122 English Composition II *or*

⊗ ENG 126 Advanced Composition: Scientific
and Technical Communications3

B. Social Sciences.....9

Recommended Courses:

ANT 222 Introduction to Physical Anthropology3

PSY 121 Introduction to Psychology3

SOC 222 Social Problems.....3

C. Physical and Life Sciences7

Recommended Courses (one course must have a lab):

BIO 120 Environmental Biology
with Lab *or*

BIO 140 Environmental Biology
without Lab3-4

CHM 140 Chemistry for a Changing World
with Lab *or*

CHM 142 Chemistry for a Changing World
without Lab3-4

D. Mathematics.....3-5

Recommended Courses:

MTH 127 Finite Mathematics4

MTH 140 Contemporary Mathematics3

MTH 141 Quantitative Literacy.....3

MTH 145 Calculus and Analytical Geometry I.....5

MTH 146 Calculus and Analytic Geometry II.....4

MTH 222 Elementary Statistics4

MTH 224 Calculus for Business
and Social Science4

MTH 244 Discrete Mathematics3

MTH 246 Calculus and Analytic Geometry III4

E. Humanities and Fine Arts9

Recommended Courses:

PHI 125 Introduction to Ethics3

Fine Arts Elective*3

Humanities or Fine Arts Elective3

III. International/Multicultural Requirement (I/M)

Select one course from the I/M list on page 51. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts or Elective requirement.

IV. Area of Concentration/Elective Requirements23

Strongly Recommended:

ECO 222 Principles of Microeconomics3

Recommended Courses:

BUS 121 Introduction to Business3

ESC 121 Physical Geology4

ESC 123 Introduction to Meteorology *or*

ESC 127 Introduction to Meteorology with lab ..3-4

ESC 224 Environmental Geology3

GEG 120 Principles of Physical Geography4

PSC 121 American National Politics3

** ARC 219 Introduction to Environmental Design3

** CIV 131 GIS/GPS Applications for Civil
and Surveying Technology3

** EET 130 Introduction to Renewable
Energy Sources4

** HRT 286 Natural Areas Management.....4

** WWV 112 Fundamentals of Wastewater
Treatment3

** no more than 6 hours of courses with an odd middle digit can count toward an AA degree.

For more information on recommended courses or program specific advising, contact Engineering faculty member Ryan Cumpston or the EMPS Division at (847) 543-2044.

Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.

[^] See page 50 for College Requirements / ⊗ A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Sustainability (Science and Technical Aspects)

Associate in Science

Plan 11AB

Engineering, Math and Physical Sciences Division

Room T302, (847) 543-2044

I. College Requirements[^]

II. General Education Requirements39

A. Communication Arts9

CMM 121 Fundamentals of Speech3

⊗ ENG 121 English Composition I3

⊗ ENG 122 English Composition II *or*

⊗ ENG 126 Advanced Composition: Scientific
and Technical Communications3

B. Social Sciences.....6

Recommended Courses:

ANT 222 Introduction to Physical Anthropology3

PSY 121 Introduction to Psychology3

SOC 222 Social Problems.....3

C. Physical and Life Sciences11

Recommended Courses:

BIO 161 General Biology I4

CHM 121 General Chemistry I5

D. Mathematics7

Recommended Courses:

MTH 127 Finite Mathematics4

MTH 145 Calculus and Analytical Geometry I.....5

MTH 146 Calculus and Analytic Geometry II.....4

MTH 224 Calculus for Business
and Social Science4

MTH 227 Ordinary Differential Equations3

MTH 244 Discrete Mathematics3

MTH 246 Calculus and Analytic Geometry III4

E. Humanities and Fine Arts6

Recommended Courses:

HUM 127 Critical Thinking3

PHI 125 Introduction to Ethics3

III. International/Multicultural Requirement (I/M)

Select one course from the I/M list on page 51. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts or Elective requirement.

IV. Area of Concentration/Elective Requirements26

Strongly Recommended:

BIO 162 General Biology II4

CHM 123 General Chemistry II.....5

Recommended Courses:

ESC 121 Physical Geology4

ESC 224 Environmental Geology3

GEG 120 Principles of Physical Geography4

PHY 121 General Physics I5

** ARC 219 Introduction to Environmental Design3

** CIV 131 GIS/GPS Applications for Civil
and Surveying Technology3

** EET 130 Introduction to Renewable
Energy Sources4

** HRT 286 Natural Areas Management.....4

** WWV 112 Fundamentals of Wastewater
Treatment3

** no more than 6 hours of courses with an odd middle digit can count toward an AA degree.

For more information on recommended courses or program specific advising, contact Engineering faculty member Ryan Cumpston or the EMPS Division at (847) 543-2044.

RECOMMENDED
COURSE OF STUDY

Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.

[^] See page 50 for College Requirements / ⊗ A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Teaching in Secondary Mathematics

Associate in Arts in Teaching

Plan 17AB

Engineering, Math and Physical Sciences Division

Room T302, (847) 543-2044

I. College Requirements[^]

II. General Education Requirements41

A. Communication Arts9

- CMM 121 Fundamentals of Speech3
- ⊗ ENG 121 English Composition I3
- ⊗ ENG 122 English Composition II *or*
- ⊗ ENG 126 Advanced Composition: Scientific and Technical Communications3

B. Social Sciences.....9

- PSY 121 Introduction to Psychology3
- PSY 226 Adolescent Development3
- Social Science Elective* (non-PSY)3

C. Physical and Life Sciences9

- BIO 161 General Biology I4
- PHY 123 Physics for Science and Engineering5

D. Mathematics5

- MTH 145 Calculus and Analytic Geometry I5

E. Humanities and Fine Arts9

- PHI 122 Logic3
- Fine Arts Elective*3
- Humanities or Fine Arts Elective*3

III. International/Multicultural Requirement (I/M)

Select one course from the I/M list on page 51. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts or Elective requirement. A B.A. degree at many four-year colleges may require college-level foreign language.

IV. Area of Concentration Requirements21

Education

- EDU 121 Introduction to Teaching3
- ** EDU 242 Observational/Clinical Experience in Education1
- EDU 222 The Exceptional Child3

Mathematics

- MTH 146 Calculus and Analytic Geometry II.....4
- MTH 225 Linear Algebra.....3
- MTH 246 Calculus and Analytic Geometry III4

Computer Science

- MCS 140 Computer Programming for Engineers and Scientists3

The Associate in Arts in Teaching Secondary Mathematics degree is not automatically accepted in whole for transfer at all participating IAI four-year colleges and universities in Illinois; therefore students must work with the institutions in which they intend to transfer to ensure transferability of specific courses.

Students must pass the ICTS Test of Academic Proficiency (TAP) in order to be awarded the AAT degree.

** Requires 30 hours of observation and field experience in a school setting.

For students wishing to obtain a teaching credential in the State of Illinois, a grade of C or above is compulsory for all coursework required for the teaching credential. This includes courses in the major, all education courses, and required general electives. This is effective for those applying for teacher certification as of 2012, Illinois State Board of Education.

For more information on recommended courses or program specific advising, contact the following faculty or the EMPS Division at (847) 543-2044.

Amy Curry / Tracey Hoy

RECOMMENDED
COURSE OF STUDY

Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.

[^] See page 50 for College Requirements / ⊗ A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Theatre - Performance (Acting / Directing)

Associate in Arts

Plan 13AB

Communication Arts, Humanities and Fine Arts Division
Room B210, (847) 543-2040

I. College Requirements[^]

II. General Education Requirements	37
A. Communication Arts	9
CMM 121 Fundamentals of Speech.....	3
⊗ ENG 121 English Composition I.....	3
⊗ ENG 122 English Composition II.....	3
B. Social Sciences	9
Social Science Electives*.....	9
C. Physical and Life Sciences	7
Physical or Life Science with Lab Elective*.....	4
Physical or Life Science without Lab Elective*.....	3
D. Mathematics	3
MTH Elective*.....	3
E. Humanities and Fine Arts	9
Recommended Courses:	
THE 121 Introduction to Theatre.....	3
ENG 227 Introduction to Shakespeare.....	3
THE 123 Diversity in American Theatre <i>or</i>	
DNC 240 The Art of Dance.....	3

III. International/Multicultural Requirement (I/M)

Select one course from the I/M list on page 51. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts or Elective requirement. A B.A. degree at many four-year colleges may require college-level foreign language.

IV. Area of Concentration/Elective Requirements	23
Recommended Courses#:	
THE 125 Principles of Acting I.....	3
THE 126 Stagecraft.....	3
THE 129 Theatre Practicum.....	3
THE 223 Play Analysis for Production.....	3
THE 225 Acting II.....	3
THE 228 Directing I.....	3
THE 229 Stage Make Up.....	3
THE 299 Special Topics in Theatre.....	1-3

See an advisor or faculty member for course sequencing of recommended courses.

For more information on recommended courses or program specific advising, contact faculty member Craig Rich or the Communication Arts, Humanities and Fine Arts Division at (847) 543-2040.

Theatre - Technical (Design / Stage Management)

Associate in Arts

Plan 13AB

Communication Arts, Humanities and Fine Arts Division
Room B210, (847) 543-2040

I. College Requirements[^]

II. General Education Requirements	37
A. Communication Arts	9
CMM 121 Fundamentals of Speech.....	3
⊗ ENG 121 English Composition I.....	3
⊗ ENG 122 English Composition II.....	3
B. Social Sciences	9
Social Science Electives*.....	9
C. Physical and Life Sciences	7
Physical or Life Science with Lab Elective*.....	4
Physical or Life Science without Lab Elective*.....	3
D. Mathematics	3
MTH Elective*.....	3
E. Humanities and Fine Arts	9
Recommended Courses:	
THE 121 Introduction to Theatre.....	3
ENG 227 Introduction to Shakespeare.....	3
THE 123 Diversity in American Theatre <i>or</i>	
ART 121 Introduction to Art.....	3

III. International/Multicultural Requirement (I/M)

Select one course from the I/M list on page 51. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts or Elective requirement. A B.A. degree at many four-year colleges may require college-level foreign language.

IV. Area of Concentration/Elective Requirements	23
Recommended Courses:	
THE 125 Principles of Acting I.....	3
THE 126 Stagecraft.....	3
THE 127 Theatre Practicum II.....	1-3
THE 129 Theatre Practicum.....	3
THE 223 Play Analysis for Production.....	3
THE 226 Lighting for Stage and Studio.....	3
THE 228 Directing I.....	3
THE 229 Stage Make Up.....	3
THE 299 Special Topics in Theatre.....	1-3

See an advisor or faculty member for course sequencing of recommended courses.

For more information on recommended courses or program specific advising, contact faculty member Tom Mitchell or the Communication Arts, Humanities and Fine Arts Division at (847) 543-2040.

Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.

[^] See page 50 for College Requirements / ⊗ A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Associate Degree Transfer Programs

Associate in General Studies

**Program Modification effective Spring 2017. See addendum for details.*

Associate in General Studies

Plan 10AC

**Counseling, Advising, and Transfer Center
Room C110, (847) 543-2060**

The Associate in General Studies (A.G.S.) is a highly individualized degree that combines both liberal arts and sciences and occupational education coursework. It is an alternative degree for students who are undecided about future education or career goals or who need a 60 credit hour degree comprising 21 credit hours in general education coursework and 39 credit hours in program electives.

Because of the individualized nature of this degree, students are required to meet with a counselor for assistance in choosing courses that will satisfy their academic goals.

The A.G.S. is not designed for transfer to a four-year college or university. The general education requirements for the A.G.S. do not fulfill the IAI (Illinois Articulation Initiative) General Education Core Curriculum guidelines. Students can use some credits earned toward their A.G.S. degree to transfer, but should be aware that transfer options for the degree as a whole are limited.

Students must meet with a counselor to determine the appropriateness of the A.G.S. degree option and must complete a detailed Plan of Study before their decision to pursue the A.G.S. degree is formalized.

Communication - 6 credit hours

Two courses including one course in Communication and one in English. A grade of C or better is required for the English course.

Social and Behavioral Sciences - 6 credit hours

Science or Mathematics - 6 credit hours

Humanities and Fine Arts - 3 credit hours

Area of Concentration/Elective

Requirements - 39 credit hours:

Because of the individualized nature of this degree, students are required to meet with a counselor for assistance in choosing mutually agreed upon courses that will satisfy their academic goals.

Students with previous academic, career, and life experiences are encouraged to investigate the options of proficiency credit to substitute their acquired knowledge for prerequisites, course and/or degree requirements.

Total A.G.S. Degree.....60

Students must meet with a counselor for assistance in choosing courses that will satisfy their academic goals.

Career Programs

Career education programs are designed for students seeking specialized training in preparation for employment after leaving CLC. Both the A.A.S. and career certificates are offered in many technical areas. Although these programs are not primarily designed to transfer to four-year colleges and universities, CLC has established articulation agreements with a number of colleges and universities, and many of the A.A.S. degrees may transfer. See a counselor at CLC for more information.

Guarantee for Job Competency

As part of the College Graduate Guarantee, the College of Lake County makes certain guarantees to students who earn an Associate in Applied Science Degree or a Career Certificate. A graduate who has been judged by his or her employer to be lacking in the technical job skills that have been identified as exit competencies for the specific degree or certificate program that the student completed will be provided with up to 15 tuition-free hours of additional and appropriate skill training by CLC under the following conditions:

1. The individual must have earned the A.A.S. degree or guaranteed certificate after May 1994 in a career program identified in the CLC catalog.
2. The individual must have completed all the skill-based courses at CLC within a four year period.
3. The individual must be employed full-time in an area directly related to the area of his or her program concentration as certified by the Assistant Vice President for Educational Affairs.
4. Employment must commence within 12 months of graduation.
5. The employer must certify in writing that the employee is lacking entry-level skills identified by CLC as the employee's program competencies and must do so within 90 days of the individual's initial employment.
6. The individual, with the employer, the appropriate academic dean, and a counselor, will develop a written education plan that will fulfill the student's skills requirements.
7. Retraining will be limited to 15 credit hours in courses that directly provide the skills required to attain competency on the job. These classes will be regularly scheduled CLC classes. All retraining must be completed within one year.
8. CLC is not responsible for books, additional course fees, tools, activity fees, or any other course-related expenses.
9. The completion of the additional course work does not guarantee that the graduate will achieve the required competencies or that the individual will pass any licensing or qualifying examination for a particular career.
10. The sole remedy given to an individual by CLC and its employees for skill deficiencies shall be the 15 tuition-free credit hours provided under the conditions described above.
11. The individual must complete the formal application for the tuition-free credit hours by contacting the Assistant Vice President for Educational Affairs at (847) 543-2982.

College Requirements for the Associate in Applied Science Degree

Students must meet the following general requirements for an Associate in Applied Science degree:

- A. Satisfactory completion of the maximum number of credit hours for the respective program (see pages 118-208).
- B. Completion of at least 15 credit hours of program specific coursework at CLC (i.e., not general education coursework). This does not include credit earned through proficiency examinations. Service members and their spouses enrolled in the Service Member's Opportunity College Program may meet the graduation requirements regarding credit hours at the college by completion of a minimum of 15 credit hours if his/her active duty assignment takes him/her to a base precluding his/her attendance in CLC courses.
- C. Minimum grade point average of 2.00 (C) for all work completed at CLC;
- D. Satisfactory completion of the General Education Requirements (minimum of 15.0 semester hours) for the appropriate degree.

Petition to Graduate

All students who intend to receive a degree or career certificate must complete a Petition for Graduation available in the Welcome and One-Stop Center, B Wing, on the Grayslake Campus.

Active/Inactive Student Status

Students who maintain continuous enrollment are deemed active. Students who have not enrolled in any course listed in the CLC class schedule for at least two years will be designated as inactive. Inactive students who register for courses will be governed by the college catalog corresponding with the semester in which they re-enroll.

Associate in Applied Science Degree

Students may obtain an Associate in Applied Science degree from the College of Lake County by successfully completing the required general education requirements outlined below, as well as the required courses for the particular program area selected from pages 118-208. Students must also meet graduation requirements listed on page 113.

Required General Education Coursework15

A. Communication Arts6

Select one English course and one Communication Arts course:

CMM 111, 121, 122, 123, or 128 (check program requirements for specific course)
ENG 120 or ENG 121

B. Social Sciences3

Select one course from the following selections:

Anthropology, Economics, Education, Gender and Sexuality Studies, Geography (except GEG 120 or GEG 121), History, Political Science, Psychology, Sociology

C. Science or Mathematics3

Select one course from the following selections:

Biology, Business Mathematics (AOS 122), Earth Science, Electronic Information Technology (EIT 110), Chemistry, Geography (GEG 120 or GEG 121), Mathematics, Physics

D. Humanities or Fine Arts3

Select one course from the following selections:

Architecture (ARC 228), Art, Humanities, Music, Theatre, Chinese, English (except ENG 120, 121, 122, 123, 124 and 126), Dance, Arabic, French, German, Italian, Japanese, Philosophy, Russian, Sign Language, Spanish

Required Program Coursework45-57

Select coursework from programs listed in pages 118-208.

Total Hours for Associate in Applied Science degree60-72

Graduation Requirements

- A. Cumulative CLC grade point average of 2.0 or higher;
- B. Completion of at least 15 credit hours of program specific coursework at CLC;
- C. Completed Petition to Graduate (available Welcome and One-Stop Center, B Wing, on the Grayslake Campus).

Certificates

The College of Lake County awards three types of certificates.

Career Certificates

Certificates in career areas are programs which require less than two years of full-time study. A certificate program is generally distinguished from a degree program by having fewer general education requirements. In order to determine the specific requirement of a certificate program, check the list of certificate programs that is included with the Career Program Descriptions which begin on page 116 in this catalog. Candidates for certificates must submit a completed Petition for Graduation available in the Welcome and One-Stop Center, B Wing, on the Grayslake Campus.

All students must meet the following general graduation requirements to earn a career certificate from the college:

1. Satisfactory completion of the hours and courses required for the certificate.
2. For certificates of 30 credit hours or less, students must complete at least one half of the credit hours required by the certificate at the College of Lake County. For certificates in excess of 30 credit hours, students must complete at least 15 credit hours required by the certificate at the College of Lake County. This does not include credit earned through proficiency examinations.
3. Maintenance of a C (2.0) average for all work at CLC used to compute the grade point average.

Class Certificates

A class certificate may be awarded upon completion of a course which fulfills a special educational objective within the Adult Basic Education area. Courses for which certificates are awarded may or may not carry academic credit.

Special Notations for Associate Degree Requirements

- A. No course may be used to satisfy more than one general education requirement.
- B. Specific electives and total hours vary by degree and program.
- C. Only a limited number of MUS and PED courses may be used towards a degree. Please see course descriptions for courses within these areas for more information.
- D. The following courses cannot be used to satisfy degree requirements and do not count in the grade point average:
 - 1. Courses with a middle digit of 0: (e.g. ENG 108, ENG 109 and MTH 101);
 - 2. Adult Education courses with a department prefix of ABE, ADE, ESL, GED or VST;
 - 3. General Studies courses.

Occupational Program Descriptors

The College of Lake County offers the Associate in Applied Science degree and career certificates for students who wish to pursue employment in a specialized field. Requirements for each occupational program offered at the college are described in the following sections. These programs are designed as career education and are not intended to transfer. Specific requirements for each degree or certificate are listed on the following pages:

Accounting

- Accounting A.A.S.
- Accounting Clerk Certificate
- Professional Accounting Certificate

Administrative Office Systems

- Administrative Professional A.A.S.
- Administrative Assistant Certificate
- Administrative Leadership Certificate
- General Office Certificate
- Office Professional Certificate

Architectural Technology

- Architectural Technology A.A.S. and Certificate

Automotive Collision Repair

- Automotive Collision Repair A.A.S. and Certificate
- Automotive Collision Repair Assistant Certificate
- Automotive Damage Analysis Certificate
- Automotive Refinishing Technician Certificate
- Automotive Structural Repair Technician Certificate

Automotive Technology

- Under Hood Technician A.A.S. and Certificate
- Under the Car Technician A.A.S. and Certificate
- Transmission Technician Certificate
- Automotive Air Conditioning and Heating Specialist Certificate
- Automotive Electrical Specialist Certificate
- Automotive Fuel Systems Specialist Certificate
- Automotive Service Specialist Certificate
- Automotive Brakes and Suspension Specialist Certificate
- Automotive Oil Change Specialist Certificate
- Automotive Transmission Specialist Certificate

Business Administration

- Business Administration A.A.S.
- Entrepreneurship/ Small Business Management A.A.S. and Certificate
- Management A.A.S.
- Marketing A.A.S. and Certificate
- Supervision Certificate

CAD Drafting Technology

- Architectural/Civil A.A.S.
- Mechanical A.A.S.
- Graphics, Animation and Presentation A.A.S. and Certificate
- Architectural Certificate
- Civil Certificate
- Creo Certificate
- 3D Parametric Certificate
- AutoCAD Certificate
- SolidWorks Certificate
- Autodesk Inventor Certificate

Civil and Environmental Technology

- Pre-Civil Engineer Technician Certificate

Computer Information Technology

- C++ Programming Certificate
- Cisco Networking Certificate
- Computer Forensics A.A.S.
- Computer Forensics Analyst Certificate
- Desktop Support Technician Certificate (also listed under EET)
- Game Development Certificate
- .NET Programming A.A.S. and Certificate
- Network Administration and Security A.A.S. and Certificate
- Office Application Specialist A.A.S. and Certificate
- Security Administration Certificate
- Web Programming A.A.S. and Certificate

CNC Programming

- CNC Programming A.A.S.
- CNC Programming/Operations Certificate
- CNC Operations Certificate
- NIMS Level 1 CNC Operations Certificate

Construction Management Technology

- Construction Management Technology A.A.S. and Certificate

Criminal Justice

- Criminal Justice A.A.S. and Certificate

Dental Hygiene

- Dental Hygiene A.A.S.

Digital Media and Design

- Digital Media and Design A.A.S.
- Digital A/V Production and Editing A.A.S.
- Multimedia Communications Certificate
- Multimedia Presentations Certificate

Early Childhood Education

- Early Childhood Education A.A.S.
- Administration and Leadership in ECE Certificate
- Home Based Childcare Certificate
- Infant-Toddler Specialist Certificate
- School-Aged Child Care Certificate

Electrician Apprenticeship

- Electrician Apprenticeship A.A.S.

Electrical Engineering Technology

- Electrical Engineering Technology A.A.S.
- Electronics Technology Certificate
- Electrical/Electronics Maintenance Certificate
- Fiber Optics Technician Certificate
- Wireless Networking Security Certificate

Emergency and Disaster Management

- Emergency and Disaster Management Certificate

Emergency Medical Technology

- Emergency Medical Technology A.A.S.
- Emergency Medical Technician Basic Certificate
- Emergency Medical Technician Paramedic Certificate

Fire Science Technology

Firefighter Basic Operations A.A.S.
Fire Science Technology A.A.S.

Health and Wellness Promotion

Health and Wellness Promotion A.A.S.
Personal Training Certificate
Wellness Coaching Certificate

Health Information Technology

Health Information Technology A.A.S.
Medical Billing Specialist Certificate

Heating and Air Conditioning (HVAC)

Engineering Technology

HVAC/R Engineering Technology A.A.S.
Commercial Refrigeration Technician Certificate
Electrical Troubleshooting Technician Certificate
Residential Air Conditioning Technician Certificate
Residential Heating Technician Certificate
Residential Weatherizing Certificate
Residential Energy Auditing Certificate
HVAC/R Installation Technician Certificate

Horticulture

Horticulture Production A.A.S.
Landscape Design A.A.S. and Certificate
Landscape Construction and Maintenance A.A.S.
Natural Areas Management A.A.S. and Certificate
Arboriculture Certificate
Floral Design Certificate
Landscape Maintenance Certificate
Sustainable Agriculture A.A.S. and Certificate

Hospitality and Culinary Management

Hospitality and Culinary Management A.A.S.
Baking and Pastry Arts A.A.S.
Baking and Pastry Assistant Certificate
Hospitality Manager Certificate
Hospitality Supervisor Certificate
Pastry Chef Assistant Certificate
Professional Chef Certificate
Professional Cook Certificate

Human Services Program

Adult Services A.A.S.
Addiction Counseling and Treatment
A.A.S. and Certificate
Children and Adolescents A.A.S.
Correctional Counseling A.A.S. and Certificate
General Human Services Program Certificate
Trauma Interventions and Prevention
A.A.S. and Certificate

Library Technical Assistant

Children's Services A.A.S.
Library Management A.A.S.
Library Technical Assistant A.A.S. and Certificate
Library Technology A.A.S.
Marketing and Public Relations A.A.S.
Public Services A.A.S.

Laser/Photonics/Optics

Optics and Photonics Technology A.A.S.
Applied Lasers Certificate
Biophotonics Certificate
Laser/Photonics/Optics Certificate

Machine Tool Trades

Machine Tool Trades A.A.S. and Certificate
Basic Machining Certificate
Tool and Mold Maker Certificate

Massage Therapy

Massage Therapy Certificate

Mechanical Engineering Technology

Mechanical Engineering Technology A.A.S.
Mechanical Engineering Technology Design Certificates
MET I: Toolbox Certificate
MET II: Nuts and Bolts Certificate
MET III: Mechatronics Certificate
MET IV: Design and Innovation Certificate
Mechanical Service Technician I and II Certificates

Mechatronics Technology

Mechatronics Technology Certificate

Medical Assisting

Medical Assisting A.A.S. and Certificate
Healthcare Office Assistant Certificate

Medical Imaging

Medical Imaging A.A.S.
Magnetic Resonance Imaging Certificate
Computed Tomography Certificate

Nursing

Nursing A.A.S.
Certified Nurse Assisting Certificate

Paralegal Studies

Paralegal Studies A.A.S. and Certificate

Phlebotomy Technician

Phlebotomy Technician Certificate

Surgical Technology

Surgical Technology A.A.S. and Certificate

Sustainable Programs

Alternative Energy Technologies Certificate

Teaching English to Speakers of Other Languages

TESOL Certificate
TEL Certificate

Technical Communication

Technical Communication A.A.S. and Certificate
Professional Technical Communication Certificate

Welding

Gas Tungsten Arc Welding Specialty Certificate
Gas Metal Arc Welding Specialty Certificate
Shielded Metal Arc Welding Specialty Certificate
Welding Certificate

Accounting

**Business and Social Sciences Division,
Room T302, (847) 543-2047**

Accounting (Associate in Applied Science) Plan 22AA

Accounting programs prepare students to compile and analyze business records and prepare financial reports such as income statements, balance sheets, costs studies, tax returns, and other internal reports.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met.

First Semester (Fall)15-17

ACC 121*	Financial Accounting (Track 1) <i>or</i>	
ACC 112	Accounting Procedures I (Track 2)	3-4
BUS 121	Introduction to Business	3
CIT 120*	Introduction to Computers <i>or</i>	
CIT 119	Introduction to Office Software	3
ENG 121	English Composition I	3
MTH 122	College Algebra <i>or</i>	
MTH 127	Finite Mathematics I <i>or</i>	
MTH 222	Elementary Statistics <i>or</i>	
MTH 224	Calculus for Business and Social Science <i>or</i>	
AOS 122	Business Mathematics	3-4

Second Semester (Spring)15-16

ACC 122*	Managerial Accounting (Track 1) <i>or</i>	
ACC 113	Accounting Procedures II (Track 2)	3-4
BUS 221	Business Law I	3
CIT 111	Comprehensive Spreadsheets	3
ENG 126	Advanced Composition: Scientific and Technical Communications <i>or</i>	
AOS 111	Business Communication	3
	Humanities or Fine Arts Elective* (HUM 127 or PHI 122 recommended)	3

Summer Session4

ACC 122*	Managerial Accounting (Track 2)	4
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Third Semester (Fall)14-17

ACC 221	Intermediate Accounting I	4
ACC 212	Federal Tax Accounting I	3
ECO 221	Principles of Macroeconomics <i>and</i>	
ECO 222	Principles of Microeconomics+ <i>or</i>	
ECO 110	Economics for Business and Industry+	3-6
	Elective (select from list)+	4

Fourth Semester (Spring).....14

ACC 222	Intermediate Accounting II	4
ACC 214	Cost Accounting	3
	Elective (select from list)+	4
CMM 121	Fundamentals of Speech <i>or</i>	
CMM 128	Interviewing Practices <i>or</i>	
CMM 111	Communication Skills	3

Total Hours for AAS Degree.....60-66

+ Students taking ECO 221 and ECO 222 are required to complete only five hours of business electives.

Electives

Select eight hours from the list below:

ACC 114	Payroll Accounting	2
ACC 171	Introduction to QuickBooks	2
ACC 172	Capstone Experience	1
ACC 213	Federal Tax Accounting II	3
ACC 270	Advanced Accounting	4
ACC 271	Auditing	3
	AOS Electives	1-4
	BUS Electives	1-6
	CIT Electives	1-7
EWE 220	Cooperative Work Experience I	1-3
MTH 122	College Algebra <i>or</i>	
MTH 127	Finite Mathematics I <i>or</i>	
MTH 222	Elementary Statistics <i>or</i>	
MTH 224	Calculus for Business and Social Science	3-4
PSY 121	Introduction to Psychology <i>or</i>	
PSY 122	Industrial/Organizational Psychology	3

*Preferred courses for students planning to transfer to a 4 year institution.

¹There are prerequisites for MTH 122. If you do not meet those prerequisites, begin taking those classes this semester – use summer for the additional math class if needed. Certain courses are only offered certain semesters. Please check the course scheduling guide listed on the web.

**Accounting Clerk
(Certificate) Plan 22AI**

This program prepares individuals for positions as accounting or financial services support personnel. Accounting clerk positions require excellent mathematical aptitude, computer skills, good communication skills, and basic accounting knowledge. Most positions require a minimum keyboarding speed and software application skills.

ACC 112	Accounting Procedures I	3
ACC 113	Accounting Procedures II.....	3
ACC 114	Payroll Accounting	2
ACC 171	Introduction to Quickbooks	2
ACC 172	Capstone Experience - Accounting Clerk Certificate	1
AOS 111	Business Communication	3
AOS 122	Business Mathematics	3
CIT 111	Comprehensive Spreadsheets	3
CIT 119	Introduction to Office Software	3

Total Hours for Certificate23

**Professional Accounting Certificate
(Certificate) Plan 22AB**

This certificate is designed for individuals who have earned a bachelor's degree, in any field, and would like to continue their education to qualify to sit for the Certified Public Accountant (CPA) exam.

Required Accounting Coursework.....30

ACC 121	Financial Accounting	4
ACC 122	Managerial Accounting	4
ACC 212	Federal Tax Accounting I	3
ACC 213	Federal Tax Accounting II	3
ACC 221	Intermediate Accounting I	4
ACC 222	Intermediate Accounting II.....	4
ACC 271	Auditing	3
ACC 251	Financial Accounting Research	1
ACC 252	Research Topics in Taxation.....	1
ACC	Electives	3

Required Business Coursework9

BUS 132	Business Ethics.....	3
BUS 221	Business Law I.....	3
BUS 237	Managerial Communication.....	3

Accounting Electives

Select 3 hours of electives from the following courses:

ACC 214	Cost Accounting	3
ACC 270	Advanced Accounting	4

Total Hours for Certificate39

The accounting electives, Cost Accounting and Advanced Accounting, are strongly recommended for students preparing to sit for the CPA exam.

Students transferring in the equivalent of ACC 121 and/or ACC 122, for less than eight hours, will need to take additional Accounting electives to meet the required 30 hours in accounting courses.

For students preparing to sit for the CPA exam, the following additional courses are recommended to meet the 24 hour requirement in Business - BUS 111, BUS 121, BUS 222, BUS 223, ECO 221, ECO 222.

Complete CPA Requirements at CLC

To qualify to take the CPA exam in Illinois, a candidate must have:

1. A bachelor's degree, in any field;
2. 150 semester hours of college credit;
3. 30 semester hours of Accounting credit (included in 150 above), to include courses in Financial, Managerial, Taxation, Auditing and 2 semester hours of Research and Analysis in Accounting; and
4. 24 semester hours in Business, to include Business Ethics (BUS 132) and Managerial Communication (BUS 237). Please note that although BUS 237 is a 3 credit course, only 2 hours of BUS 237 will count toward the 24 semester Business credit requirement.

Additional information and requirements for the CPA exam for those with graduate degrees in business or accounting is available on the Illinois CPA Society web page, www.icpas.org. Exam information may also be found at the Illinois Board of Examiner's site, www.ilboa.org.

All students are encouraged to meet with an accounting faculty member to discuss their plan of study for the CPA exam. Call the Business and Social Sciences Division at (847) 543-2047 for faculty contact information.

Jay Chittal / Patrick Stegman / Jeffrey Varblow / Mary Zenner

Administrative Office Systems

**Business and Social Sciences Division,
Room T302, (847) 543-2047**

Administrative Professional (Associate in Applied Science) Plan 22SM

The Administrative Professional degree provides a blend of office automation skills including word processing and related computer applications leading to administrative professional positions in an office environment. In addition, students establish skills in business communication and general business skills and practices.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from the requirements listed on page 114. All course prerequisites must be met.

First Semester	15
AOS 112 Computer Basics/Software Applications.....	3
AOS 122 Business Mathematics	3
AOS 172 Business English	3
AOS 178 Intermediate Keyboarding.....	3
BUS 121 Introduction to Business	3
Second Semester	15-16
AOS 111 Business Communication	3
AOS 113 Comprehensive Word Processing	3
ACC 112 Accounting Procedures I <i>or</i>	
ACC 121 Financial Accounting	3-4
CIT 111 Comprehensive Spreadsheets	3
ENG 121 English Composition I.....	3
Third Semester	15
AOS 118 Advanced Word Processing/ Desktop Publishing	3
AOS 214 Administrative Office Procedures	3
AOS 215 Presentation Software	3
CMM 121 Fundamentals of Speech <i>or</i>	
CMM 128 Interviewing Practices	3
AOS Elective (see AOS Electives List)	3
Fourth Semester	15
AOS 237 Managerial Communication	3
AOS 216 Integrated Office Projects	3
PSY 121 Introduction to Psychology <i>or</i>	
PSY 122 Industrial/Organizational Psychology	3
Humanities or Fine Arts Elective*	3
AOS Elective (see AOS Electives List)	3
Total Hours for AAS Degree	60-61

Administrative Professional Degree Electives

ACC Elective.....	3
AOS Electives (except AOS 170 or AOS 171).....	1-6
BUS Electives	1-3
CIT Electives (except CIT 119 or CIT 120) ..	1-3
EWE 220 Cooperative Work Experience I.....	1-3
HIT 111 Medical Terminology	3
PLS Electives	3

Other electives may be chosen with consent of an AOS faculty advisor.

General Office (Certificate) Plan 22SP

The General Office certificate prepares individuals for office positions such as general office clerk, general office assistant, and clerk-typist. This certificate emphasizes skills needed for entry-level positions and career advancement.

First Semester	7
AOS 111 Business Communication <i>or</i>	
AOS 172 Business English.....	3
AOS 170 Computer Keyboarding I	2
AOS 171 Computer Keyboarding II	2
Second Semester	9
AOS 112 Computer Basics/Software Applications	3
AOS 113 Comprehensive Word Processing	3
AOS 178 Intermediate Keyboarding	3
Total Hours for Certificate	16

Office Professional (Certificate) Plan 22SN

The Office Professional certificate prepares individuals for positions using current industry software. Students complete word processing, presentation, software, spreadsheet and information management courses.

First Semester	7
AOS 113 Comprehensive Word Processing	3
AOS 114 Outlook	1
CIT 111 Comprehensive Spreadsheets	3
Second Semester	6
AOS 118 Advanced Word Processing/ Desktop Publishing	3
AOS 215 Presentation Software	3
Total Hours for Certificate	13

**Administrative Assistant
(Certificate) Plan 22SO**

The Administrative Assistant certificate prepares individuals to perform a variety of advanced tasks and assume responsibility in the general office environment in positions with titles such as general office assistant and word processor. This certificate emphasizes word processing and related office skills for both entry-level positions and career advancement.

First Semester12
 AOS 112 Computer Basics/Software Applications3
 AOS 113 Comprehensive Word Processing.....3
 AOS 172 Business English.....3
 AOS 178 Intermediate Keyboarding3

Second Semester9
 AOS 111 Business Communication3
 AOS 118 Advanced Word Processing/Desktop Pub3
 AOS 215 Presentation Software.....3

Third Semester.....9
 AOS 214 Administrative Office Procedures3
 CIT 111 Comprehensive Spreadsheets3
 AOS Elective (see list below)3

Total Hours for Certificate30

Administrative Assistant Certificate Electives

Select 3 hours of electives. Other electives may be chosen with consent of an AOS faculty advisor.
 AOS Elective (except AOS 170 or AOS 171)1-3
 EWE 220 Cooperative Work Experience I1-3

**Administrative Leadership
(Certificate) Plan 22SQ**

The Administrative Leadership certificate provides individuals an opportunity to improve skills needed in their present positions and gain competencies necessary for advancement and growth. This certificate concentrates on communication, managerial, and leadership skills for self-development and improved career opportunities.

First Semester6
 AOS 214 Administrative Office Procedures3
 AOS 237 Managerial Communication3

Second Semester6
 AOS 233 Management Skills3
 AOS 253 Leadership3

Total Hours for Certificate.....12

For more information on recommended courses or program specific advising, contact the following faculty members or the Business and Social Sciences Division at (847) 543-2047:

Joe Gehrke

Architectural Technology

**Engineering, Math and Physical Sciences Division
Room T302, (847) 543-2044**

**Architectural Technology
(Associate in Applied Science) Plan 24CB**

This program prepares graduates to assume a variety of duties in the architectural profession including drawing construction working drawings, design development drawings, renderings, cost estimating, specification writing, structural design and detailing, construction supervision, sales of materials and equipment, facilities engineering, building inspection and other building and zoning work. Graduates may be employed with architects, engineers, contractors, government agencies or others in the industry.

For students interested in **Sustainable Programs**, please see page 205 for options, or contact the identified department chair for more information.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met.

Required General Education Coursework15
 ARC 228 History of Architecture3
 CMM 122 Business and Professional Speaking3
 ECO 110 Economics for Business and Industry *or*
 PSY 122 Industrial/Organizational Psychology3
 ENG 120 Technical Composition I3
 MTH 117 Technical Mathematics I3

Required ARC Coursework14
 ARC 121 Architectural Graphics3
 ARC 171 Architectural Working Drawings3
 ARC 215 Architectural Project Planning4
 ARC 251 Architectural Analysis3
 ARC 275 Portfolio and Professional Development1

Required CAD/CMT Coursework16
 CAD 117 Introduction to AutoCAD.....3
 CAD 178 Introduction to Revit3
 CMT 110 Intro to the Built Environment1
 CMT 113 Construction Materials3
 CMT 118 Mechanical and Electrical Equipment3
 CMT 119 Specifications and Building Codes3

Continued on next page.

Associate in Applied Science and Career Certificates

Additional Required Coursework	18
EGR 115 Applied Statics for Technology	3
EGR 215 Mechanics of Materials for Technology.....	3
EWE 220 Cooperative Work Experience I	3
MTH 118 Technical Mathematics II	4
PHY 121 General Physics I	5
Total Hours for A.A.S. Degree	63

Architectural Technology (Certificate) Plan 24CF

Students may earn a certificate in Architectural Technology by completing thirty-four hours of coursework selected from the list below. Other subjects may be taken as part of the program with advisor approval

Required Coursework

ARC 121 Architectural Graphics	3
ARC 170 Architectural Design <i>or</i>	
ARC 251 Architectural Analysis	3
ARC 171 Architectural Working Drawings	3
ARC 215 Architectural Project Planning	4
ARC 228 History of Architecture.....	3
ARC 275 Portfolio and Professional Development	1
CAD 117 Introduction to AutoCAD.....	3
CAD 178 Introduction to Revit	3
MTH 117 Technical Mathematics I	3
Elective from list below	8

Electives

(See advisor to choose appropriate coursework depending on specialization)

ARC 216 Architectural Illustration	3
ARC 299 Special Topics: Architecture Technology.....	1-4
CAD 177 Civil Drafting	3
CAD 217 AutoCAD II	3
CMT 110 Introduction to the Built Environment.....	1
CMT 113 Construction Materials	3
CMT 117 Construction Methods	3
CMT 118 Mechanical and Electrical Equipment	3
CMT 119 Specifications and Building Codes	3
CMT 214 Construction Estimating.....	3

Total Hours for Certificate**34**

For more information on recommended courses or program specific advising, contact faculty member David Petrusis or the Engineering, Math and Physical Sciences division at (847) 543-2044.

Automotive Collision Repair

**Engineering, Math and Physical Sciences Division
Room T302, (847) 543-2044**

The Automotive Collision Repair program offers an Associate in Applied Science degree and four certificates. These programs will provide students with the entry-level skills needed to enter the collision repair industry. The certificates allow students to specialize in one or more areas of collision repair and prepare students for employment in the automotive body repair and painting industry. The courses use the I-Car curriculum and students have the opportunity to earn I-Car course credit. The program is certified in all four areas by NATEF (National Automotive Technicians Education Foundation, Inc.). This is the highest level of certification that NATEF awards. NATEF was founded in 1983 as an independent, non-profit organization with a single mission: to evaluate technician training programs against standards developed by the automotive industry and recommend qualifying programs for certification (accreditation) by the National Institute for Automotive Service Excellence (ASE).

ACR Courses require basic hand tools and personal safety equipment.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met.

Automotive Collision Repair (Associate in Applied Science) Plan 24AN

Non-Structural Repair Technician Specialty Track

First Semester	14
ACR 110 Introduction to Automotive Collision Repair	3
ACR 112 Non-Structural Repair I	5
ACR 131 Automotive Refinishing I.....	3
MTH 114 Applied Mathematics I <i>or</i> MTH Elective (higher than MTH 114)	3
Second Semester	14
ACR 115 Automotive Welding	5
ACR 119 Paintless Dent Removal	3
ACR 215 Automotive Detailing	3
ENG 120 Technical Composition <i>or</i>	
ENG 121 English Composition I	3

Third Semester.....16
 ACR 138 Automotive Electrical Systems5
 ACR 212 Non-Structural Repair II.....5
 ACR 235 Damage Analysis/Shop Procedures3
 Humanities or Fine Arts Elective*3

Fourth Semester.....16
 ACR 137 Mechanical Systems5
 ACR 230 Structural Repair.....5
 CMM 111 Communication Skills *or*
 CMM 121 Fundamentals of Speech.....3
 Social Sciences Elective.....3

Total Hours for A.A.S. Degree60

Refinishing Technician Specialty Track

First Semester14
 ACR 110 Introduction to Automotive
 Collision Repair3
 ACR 112 Non-Structural Repair I5
 ACR 131 Automotive Refinishing I.....3
 MTH 114 Applied Mathematics I *or*
 MTH Elective (higher than MTH 114)3

Second Semester16
 ACR 132 Refinishing II5
 ACR 138 Automotive Electrical Systems5
 ACR 215 Automotive Detailing3
 ENG 120 Technical Composition *or*
 ENG 121 English Composition I3

Third Semester.....18
 ACR 115 Automotive Welding5
 ACR 137 Mechanical Systems5
 ACR 233 Refinishing III5
 Humanities or Fine Arts Elective*3

Fourth Semester.....12
 ACR 234 Refinishing IV3
 ACR 235 Damage Analysis3
 CMM 111 Communication Skills *or*
 CMM 121 Fundamentals of Speech.....3
 Social Sciences Elective.....3

Total Hours for A.A.S. Degree60

**Automotive Collision Repair
 (Certificate) Plan 24AE**

The automotive collision repair certificate prepares students for employment as an entry level automotive collision technician. Coursework places a strong emphasis on the understanding of panel replacement, dent repair, plastic repair, and automotive welding. Students learn foundational repair theories and develop skills in panel replacement and alignment, dent repair, plastic repair, vehicle glass, and

automotive welding. Upon completion of coursework students have the opportunity to earn I-CAR program certification.

ACR 110 Introduction to Automotive
 Collision Repair3
 ACR 112 Non-Structural Repair I5
 ACR 115 Automotive Welding.....5
 ACR 138 Automotive Electrical Systems5
 ACR 212 Non-Structural Repair II5

Total Hours for Certificate23

**Automotive Damage Analysis
 (Certificate) Plan 24AK**

The damage analysis certificate prepares students for employment as automotive damage estimator assistants. Coursework places a strong emphasis on the understanding of automotive collision repair damage analysis, damage estimates preparation, shop management and operations. Students learn to use various estimating software and to develop both written and computer generated damage analysis reports. Upon completion of coursework students have the opportunity to earn I-CAR program certification.

ACR 110 Introduction to Automotive
 Collision Repair3
 ACR 112 Non-Structural Repair I5
 ACR 131 Automotive Refinishing I.....3
 ACR 235 Damage Analysis/Shop Procedures3

Total Hours for Certificate14

**Automotive Structural Repair Technician
 (Certificate) Plan 24AL**

The automotive structural repair certificate prepares students for employment as automotive structural technician assistants. Coursework places a strong emphasis on the understanding of automotive structural repair theories, reinforced while developing hands-on skills, needed to enter the collision repair industry. Students learn to disassemble and assemble vehicles exterior components, remove and install both stationary and movable glass, sheet metal dent repair including sectioning of vehicle panels, automotive welding, various vehicle measuring systems, and a working knowledge of vehicle mechanical systems. Upon completion of coursework students have the opportunity to earn I-CAR program certification.

ACR 110 Introduction to Automotive
 Collision Repair3
 ACR 112 Non-Structural Repair I5
 ACR 115 Automotive Welding.....5
 ACR 137 Automotive Mechanical Systems.....5
 ACR 230 Structural Repair I5

Total Hours for Certificate23

**Automotive Refinishing Technician
(Certificate) Plan 24AM**

The automotive refinishing technician certificate prepares students for entry level employment as an automotive refinishing technician. Coursework places a strong emphasis on the understanding of automotive finishes, application techniques, and final surface preparation. Students will acquire the knowledge and skills necessary to prepare vehicles for the finishing process, the application of undercoat, topcoat, and tri-coat finishes, and repairs to vehicle finishes. Upon completion of coursework students have the opportunity to earn I-CAR program certification.

ACR 110	Introduction to Automotive Collision Repair	3
ACR 131	Automotive Refinishing I.....	3
ACR 132	Automotive Refinishing II	5
ACR 215	Automotive Detailing	3
ACR 233	Automotive Refinishing III	5
ACR 234	Refinishing IV - Custom Painting	3

Total Hours for Certificate22

**Automotive Collision Repair Assistant
(Certificate) Plan 24AO**

This certificate prepares students for employment as an automotive collision repair assistant. Coursework places a strong emphasis on the understanding on shop safety, removal and installation of bolted vehicle panels, automotive detailing, and damage estimating. Students will learn foundational collision repair theories while developing skills in the areas of dent repair, plastic repair, movable glass, panel removal and installation, preparation of vehicle for refinishing, and reading of damage estimates. Upon completion of coursework students have the opportunity to earn I-CAR program certification.

ACR 110	Introduction to Automotive Collision Repair	3
ACR 112	Non-Structural Repair I	5
ACR 119	Paintless Dent Removal	3
ACR 131	Automotive Refinishing I.....	3
ACR 215	Automotive Detailing	3

Total Hours for Certificate17

For more information on recommended courses or program specific advising, contact faculty member Octavio Cavazos or the Engineering, Math and Physical Sciences division at (847) 543-2044.

Automotive Technology

**Engineering, Math and Physical Sciences Division
Room T302, (847) 543-2044**

The Automotive Technology programs offer courses leading to two Associate in Applied Science degrees: Under Hood Technician and Under the Car Technician. These programs will provide students with a solid foundation and a variety of skills to enter the automotive industry, or to pursue further undergraduate study. The program is Master Certified by the National Automotive Technician Education Foundation, Inc. (NATEF). This is the highest level of certification that NATEF awards. NATEF was founded in 1983 as an independent, non-profit organization with a single mission: to evaluate technician training programs against standards developed by the automotive industry and recommend qualifying programs for certification (accreditation) by the National Institute for Automotive Service Excellence (ASE).

Upon successful completion of the program, students will be prepared to take the ASE technician certification exams. Students who pass the ASE certification exams and have completed the work experience required by ASE will be awarded certification by ASE.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met.

**Under Hood Technician
(Associate in Applied Science) Plan 24AH**

Completion of this program prepares students for employment in the areas of automotive repair. Fifteen hours of required General Education coursework is built into the program.

Phase I.....	20	
AUT 110	Introduction to Automotive Technology	4
AUT 111	Engine Rebuilding	5
AUT 131	Auto Electrical I	5
ENG 120	Technical Composition <i>or</i>	
ENG 121	English Composition I	3
MTH 114	Applied Mathematics I <i>or</i>	
	Elective (higher than MTH 114)	3

Phase II	16
AUT 151 Powertrain Systems	5
AUT 215 Automotive Management <i>or</i>	
AUT 217 Automotive Service Consulting	3
AUT 231 Auto Electrical II	5
CMM 111 Communication Skills <i>or</i>	
CMM 121 Fundamentals of Speech.....	3
Phase III	31
AUT 232 Automatic Transmissions and Trans Axles ..	5
AUT 251 Powertrain Controls	5
AUT 252 Powertrain Management.....	5
AUT 275 Air Conditioning and Heating	5
AUT 290 Advanced Specialization	5
Humanities or Fine Arts Elective*	3
Social Science Electives*	3
Total Hours for A.A.S. Degree	67

Under the Car Technician
(Associate in Applied Science) Plan 24AJ

These programs prepare students for employment in diagnosing, testing, and repairing brakes, suspension and alignment, and driveline systems. General Education coursework is built into the program.

Phase I	20
AUT 110 Introduction to Automotive Technology	4
AUT 111 Engine Rebuilding	5
AUT 131 Auto Electrical I	5
ENG 120 Technical Composition <i>or</i>	
ENG 121 English Composition I	3
MTH 114 Applied Mathematics I <i>or</i>	
MTH Elective (higher than MTH 114)	3
Phase II	16
AUT 112 Braking Systems.....	5
AUT 113 Suspension and Alignment	5
AUT 215 Automotive Management <i>or</i>	
AUT 217 Automotive Service Consulting	3
CMM 111 Communication Skills <i>or</i>	
CMM 121 Fundamentals of Speech.....	3
Phase III	25
AUT 132 Manual Drive Train and Axles.....	5
AUT 232 Automatic Transmissions and Trans Axles ..	5
AUT 233 Advanced Driveline Systems	4
AUT 290 Advanced Specialization	5
Humanities or Fine Arts Elective*	3
Social Science Electives*	3
Total Hours for A.A.S. degree	61

Under Hood Technician
(Certificate) Plan 24AV

Completion of this program prepares students for employment in the areas of automotive repair.

AUT 110 Introduction to Automotive Technology	4
AUT 111 Engine Rebuilding	5
AUT 131 Auto Electrical I	5
AUT 151 Engine Performance I.....	5
AUT 215 Automotive Management <i>or</i>	
AUT 217 Automotive Service Consulting	3
AUT 231 Auto Electrical II	5
AUT 251 Powertrain Controls	5
AUT 252 Powertrain Management.....	5
AUT 275 Air Conditioning and Heating	5
AUT 290 Advanced Specialization	5
MTH 114 Applied Mathematics I <i>or</i>	
Elective (higher than MTH 114)	3
Total Hours for Certificate	50

Transmission Technician
(Certificate) Plan 24AX

AUT 110 Introduction to Automotive Technology	4
AUT 111 Engine Rebuilding	5
AUT 131 Auto Electrical I	5
AUT 132 Manual Drive Train and Axles	5
AUT 215 Automotive Management <i>or</i>	
AUT 217 Automotive Service Consulting	3
AUT 232 Automatic Transmissions and Trans Axles ..	5
AUT 290 Advanced Specialization	5
MTH 114 Applied Mathematics I <i>or</i>	
Elective (higher than MTH 114)	3
Total Hours for Certificate	35

Under the Car Technician
(Certificate) Plan 24AY

AUT 110 Introduction to Automotive Technology	4
AUT 112 Braking Systems.....	5
AUT 113 Suspension and Alignment	5
AUT 132 Manual Drive Train and Axles	5
AUT 215 Automotive Management <i>or</i>	
AUT 217 Automotive Service Consulting	3
AUT 290 Advanced Specialization	5
MTH 114 Applied Mathematics I <i>or</i>	
Elective (higher than MTH 114)	3
Total Hours for Certificate	30

Associate in Applied Science and Career Certificates

Automotive Air Conditioning and Heating Specialist (Certificate) Plan 24UG

This Certificate prepares students for initial employment diagnosing and repairing automotive heating and air conditioning systems.

AUT 110	Introduction to Automotive Technology	.....4
AUT 131	Auto Electrical I	.....5
AUT 275	Air Conditioning and Heating	.....5

Total Hours for Certificate14

Automotive Electrical Specialist (Certificate) Plan 24UH

This Certificate prepares students for employment diagnosing and repairing chassis and body electrical and electronic circuits.

AUT 110	Introduction to Automotive Technology	.....4
AUT 131	Auto Electrical I	.....5
AUT 231	Auto Electrical II	.....5

Total Hours for Certificate14

Automotive Fuel Systems Specialist (Certificate) Plan 24UI

This Certificate prepares students for initial employment diagnosing and repairing automotive engine fuel system problems.

AUT 110	Introduction to Automotive Technology	.....4
AUT 151	Powertrain Systems	.....5
AUT 251	Powertrain Controls	.....5

Total Hours for Certificate14

Automotive Service Specialist (Certificate) Plan 24UJ

This Certificate prepares students for initial employment in the automotive service industry.

AUT 110	Introduction to Automotive Technology	.....4
AUT 111	Engine Rebuilding	.....5
AUT 131	Auto Electrical I	.....5

Total Hours for Certificate14

Automotive Brakes and Suspension Specialist (Certificate) Plan 24UK

This Certificate prepares students for initial employment diagnosing and repairing automotive braking, suspension and alignment problems.

AUT 110	Introduction to Automotive Technology	.....4
AUT 112	Braking Systems	.....5
AUT 113	Suspension and Alignment	.....5

Total Hours for Certificate14

Automotive Oil Change Specialist (Certificate) Plan 24UL

This Certificate prepares students for employment in the oil change business.

AUT 110	Introduction to Automotive Technology	.....4
AUT 111	Engine Rebuilding	.....5
AUT 112	Braking Systems	.....5

Total Hours for Certificate14

Automotive Transmission Specialist (Certificate) Plan 24UM

This Certificate prepares students for initial employment diagnosing and repairing manual transmission, automatic transmission and driveline problems.

AUT 110	Introduction to Automotive Technology	.....4
AUT 132	Manual Drive Train and Axles	.....5
AUT 232	Automatic Transmissions and Trans Axles	..5

Total Hours for Certificate14

For more information on recommended courses or program specific advising, contact the following faculty members or the Engineering, Math and Physical Sciences division at (847) 543-2044:

Lance David / Derrek Keesling / Ted Wells

Business Administration

**Business and Social Sciences Division,
Room T302, (847) 543-2047**

The Business Administration Associate in Applied Science degree programs are designed to prepare students for entry-level positions in various fields of business. Four A.A.S. programs are offered, each focusing on a different specialization: Marketing, Management, Entrepreneurship/Small Business Management or general Business Administration. The first two-thirds of all the degree programs are the same. All students take the same General Education and Business Administration coursework and then choose an area of concentration for the final 21 credits. Three short-term certificates are offered in Marketing, Supervision and Entrepreneurship/Small Business Management. These certificates provide students with concentrated coursework to develop skills needed for career advancement.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met.

Marketing (Associate in Applied Science) Plan 22BC

First Semester (Fall)	15-17
BUS 121 Introduction to Business	3
CIT 120* Introduction to Computers <i>or</i>	
CIT 119 Introduction to Office Software	3
CMM 121 Fundamentals of Speech	3
ENG 121 English Composition I.....	3
MTH 122* College Algebra ¹ <i>or</i>	
MTH* Elective	
(higher number than MTH 122) <i>or</i>	
AOS 122 Business Mathematics	3-5
Second Semester (Spring)	15-16
ACC 121* Financial Accounting <i>or</i>	
ACC 112 Accounting Procedures I	3-4
BUS 122 Principles of Marketing	3
BUS 221 Business Law I	3
BUS 239 Social Media/Networking	
in Business (Spring only).....	3
ENG 126* Advanced Composition: Scientific and	
Technical Communications <i>or</i>	
AOS 111 Business Communication	3

Third Semester (Fall)	15-16
ACC 122* Managerial Accounting <i>or</i>	
BUS 111 Fundamentals of Finance (Fall only).....	3-4
BUS 212 Business to Business Marketing (Fall only)	3
BUS 223 Principles of Management.....	3
ECO 222 Principles of Microeconomics.....	3
HUM 127 Critical Thinking <i>or</i>	
PHI 125 Introduction to Ethics	3

Fourth Semester (Spring)	15
BUS 213 Principles of Professional	
Selling (Spring only)	3
BUS 214 Advertising (Spring only)	3
BUS 237 Managerial Communication	3
BUS 238 Project Management	3
ECO 221 Principles of Macroeconomics	3

Total Hours for AAS Degree.....60-64

*Preferred courses for students planning to transfer to a 4 year institution.

¹There are prerequisites for MTH 122. If you do not meet those prerequisites, begin taking those classes this semester – use summer for the additional math class if needed.

Certain courses are only offered certain semesters. Please check the course scheduling guide listed on the web.

Management (Associate in Applied Science) Plan 22BD

First Semester (Fall)	15-17
BUS 121 Introduction to Business	3
CIT 120* Introduction to Computers <i>or</i>	
CIT 119 Introduction to Office Software	3
CMM 121 Fundamentals of Speech	3
ENG 121 English Composition I.....	3
MTH 122* College Algebra ¹ <i>or</i>	
MTH* Elective (higher number	
than MTH 122)* <i>or</i>	
AOS 122 Business Mathematics	3-5
Second Semester (Spring)	15-16
ACC 121* Financial Accounting <i>or</i>	
ACC 112 Accounting Procedures I	3-4
BUS 223 Principles of Management.....	3
ECO 221 Principles of Macroeconomics	3
ENG 126* Advanced Composition: Scientific	
and Technical Communications <i>or</i>	
AOS 111 Business Communication	3
HUM 127 Critical Thinking <i>or</i>	
PHI 125 Introduction to Ethics	3

Associate in Applied Science and Career Certificates

Third Semester (Fall)15-16

ACC 122*	Managerial Accounting	<i>or</i>	
BUS 111	Fundamentals of Finance (Fall only)		3-4
BUS 221	Business Law I		3
BUS 238	Project Management		3
BUS 253	Leadership (Fall only)		3
ECO 222	Principles of Microeconomics		3

Fourth Semester (Spring).....15

BUS 113	Human Resources Management (Spring only)		3
BUS 215	Operations Management (Spring only)		3
BUS 233	Management Skills (Spring only)		3
BUS 237	Managerial Communication		3
	BUS Elective (select from any BUS course not already applied toward this degree)		3

Total Hours for AAS Degree.....60-64

*Preferred courses for students planning to transfer to a 4 year institution.

¹There are prerequisites for MTH 122. If you do not meet those prerequisites, begin taking those classes this semester – use summer for the additional math class if needed.

Certain courses are only offered certain semesters. Please check the course scheduling guide listed on the web.

Business Administration (Associate in Applied Science) Plan 22BN

First Semester (Fall)15-17

BUS 121	Introduction to Business		3
CIT 120*	Introduction to Computers	<i>or</i>	
CIT 119	Introduction to Office Software		3
CMM 121	Fundamentals of Speech		3
ENG 121	English Composition I		3
MTH 122*	College Algebra1	<i>or</i>	
	MTH* Elective (higher number than MTH 122)	<i>or</i>	
AOS 122	Business Mathematics		3-5

Second Semester (Spring)15-16

ACC 121*	Financial Accounting	<i>or</i>	
ACC 112	Accounting Procedures I		3-4
BUS 221	Business Law I		3
ECO 221	Principles of Macroeconomics		3
ENG 126*	Advanced Composition: Scientific and Technical Communications	<i>or</i>	
AOS 111	Business Communication		3
HUM 127	Critical Thinking	<i>or</i>	
PHI 125	Introduction to Ethics		3

Third Semester (Fall)15-16

ACC 122*	Managerial Accounting	<i>or</i>	
BUS 111	Fundamentals of Finance (Fall only)		3-4
BUS 122	Principles of Marketing		3
BUS 223	Principles of Management		3
	BUS or ACC Electives (select from any BUS or ACC course not already applied toward this degree)		6

Fourth Semester (Spring).....15

BUS 237	Managerial Communication		3
BUS 238	Project Management		3
ECO 222	Principles of Microeconomics		3
	BUS or ACC Electives (select from any BUS or ACC course not already applied toward this degree)		6

Total Hours for AAS Degree.....60-64

*Preferred courses for students planning to transfer to a 4 year institution.

¹There are prerequisites for MTH 122. If you do not meet those prerequisites, begin taking those classes this semester – use summer for the additional math class if needed.

Certain courses are only offered certain semesters. Please check the course scheduling guide listed on the web.

Entrepreneurship/Small Business Management (Associate in Applied Science) Plan 22BL

First Semester (Fall)15-17

BUS 121	Introduction to Business		3
CIT 120*	Introduction to Computers	<i>or</i>	
CIT 119	Introduction to Office Software		3
CMM 121	Fundamentals of Speech		3
ENG 121	English Composition I		3
MTH 122*	College Algebra1	<i>or</i>	
	MTH* Elective (higher number than MTH 122)	<i>or</i>	
AOS 122	Business Mathematics		3-5

Second Semester (Spring)15-16

ACC 121*	Financial Accounting	<i>or</i>	
ACC 112	Accounting Procedures I		3-4
BUS 131	Entrepreneurship (Spring only)		3
BUS 221	Business Law I		3
ECO 221	Principles of Macroeconomics		3
ENG 126*	Advanced Composition: Scientific and Technical Communications	<i>or</i>	
AOS 111	Business Communication		3

Third Semester (Fall)15-16

ACC 122*	Managerial Accounting <i>or</i>	
BUS 111	Fundamentals of Finance (Fall only).....	3-4
BUS 290	Business Plan Development (Fall only)	3
ECO 222	Principles of Microeconomics.....	3
HUM 127	Critical Thinking <i>or</i>	
PHI 125	Introduction to Ethics	3
	BUS Elective (select from any BUS course not already applied toward this degree).....	3

Fourth Semester (Spring).....15

BUS 122	Principles of Marketing.....	3
BUS 219	Small Business Management.....	3
BUS 223	Principles of Management.....	3
BUS 238	Project Management	3
	BUS Elective (select from any BUS course not already applied toward this degree).....	3

Total Hours for AAS Degree.....60-64

*Preferred courses for students planning to transfer to a 4 year institution.

¹There are prerequisites for MTH 122. If you do not meet those prerequisites, begin taking those classes this semester – use summer for the additional math class if needed.

Certain courses are only offered certain semesters. Please check the course scheduling guide listed on the web.

Three Business Administration certificates are offered which provide concentrated course work in areas of Supervision, Marketing and Entrepreneurship/Small Business Management. These certificates emphasize skills needed in entry level areas for career advancement.

**Marketing
(Certificate) Plan 22BG**

AOS 111	Business Communication	3
BUS 121	Introduction to Business.....	3
BUS 122	Principles of Marketing	3
BUS 212	Business to Business Marketing <i>or</i>	
BUS 239	Social Media/Networking in Business	3
BUS 213	Principles of Professional Selling	3
BUS 214	Advertising	3
BUS 223	Principles of Management	3
BUS 237	Managerial Communication	3
BUS 238	Project Management.....	3

Total Hours for Certificate27

**Supervision
(Certificate) Plan 22BK**

AOS 111	Business Communication <i>or</i>	
CMM 111	Communication Skills	3
BUS 113	Human Resource Management	3
BUS 115	Elements of Supervision.....	3
BUS 121	Introduction to Business.....	3
BUS 223	Principles of Management	3
BUS 237	Managerial Communication	3
BUS 238	Project Management.....	3
	Electives (see list below)	6

Total Hours for Certificate27

Electives

BUS 215	Operations Management.....	3
BUS 233	Management Skills.....	3
CMM 123	Dynamics of Small Group Discussion.....	3
PSY 225	Social Psychology	3

**Entrepreneurship/Small Business Management
(Certificate) Plan 22BE**

ACC 112	Accounting Procedures I <i>or</i>	
ACC 121	Financial Accounting	3-4
BUS 121	Introduction to Business.....	3
BUS 122	Principles of Marketing	3
BUS 131	Entrepreneurship.....	3
BUS 219	Small Business Management	3
BUS 290	Business Plan Development.....	3
	Electives (see list below)	9-10

Total Hours for Certificate27-29

Electives

Select a minimum of nine hours from the list below:

BUS 113	Human Resource Management	3
BUS 115	Elements of Supervision.....	3
BUS 119	Personal Finance.....	3
BUS 213	Principles of Professional Selling	3
BUS 214	Advertising	3
BUS 221	Business Law I.....	3
BUS 222	Business Law II/ Corporate & Securities Law	3
BUS 223	Principles of Management	3
BUS 233	Management Skills.....	3
BUS 237	Managerial Communication	3
BUS 238	Project Management.....	3
BUS 253	Leadership	3
	Any ACC Course.....	3-4

For more information on recommended courses or program specific advising, contact the following faculty members or the Business and Social Sciences Division at (847) 543-2047:

Patty Clark / Kent Donewald / Robert Dodd
Venkat Krishnamurthy / Lori Oriatti

CAD Drafting Technology

Engineering, Math and Physical Sciences Division
Room T302, (847) 543-2044

This program prepares students for employment and advancement in Computer Aided Design (CAD). CAD Drafters work under the supervision of an engineer or designer creating drawings. With additional education and experience the graduate may advance to designer, checker, or supervisor. Drawings are produced using a variety of CAD/CAM software. Students may select a program from the following options: Architectural/Civil, Mechanical, and Graphics Animation and Presentation. See Architectural, Civil, and Multimedia programs for related fields of study.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met.

CAD Drafting Technology - Mechanical (Associate in Applied Science) Plan 24DC

Required General Education Coursework	15
CMM 111 Communication Skills <i>or</i>	
CMM 121 Fundamentals of Speech <i>or</i>	
CMM 122 Business and Professional Speaking <i>or</i>	
CMM 123 Dynamics of Small Group Discussion <i>or</i>	
CMM 128 Interviewing Practices	3
ECO 110 Economics for Business and Industry <i>or</i>	
ECO 221 Principles of Macroeconomics <i>or</i>	
PSC 122 State and Local Politics <i>or</i>	
Social Sciences Elective.....	3
ENG 120 Technical Composition I <i>or</i>	
ENG 121 English Composition I	3
MTH 115 Applied Mathematics II	3
ART 124 Drawing I <i>or</i>	
Humanities or Fine Arts Elective*	3
Required CAD Coursework	34
CAD 110 CAD/CAM Concepts	3
CAD 111 CAD Drafting Applications I	4
CAD 117 Introduction to AutoCAD.....	3
CAD 170 Introduction to SolidWorks	3
CAD 171 Introduction to Inventor	3
CAD 176 Introduction to Creo	3
CAD 211 Mechanical Detailing with GD and T	3
CAD 217 AutoCAD II	3
CAD 270 SolidWorks II	3
CAD 271 Inventor II.....	3
CAD 276 Creo II <i>or</i>	
Technical Elective	
(see Technical Electives list).....	3

Required Mechanical Coursework	12
CNC 218 Introduction to Master CAM	3
MET 111 Manufacturing Processes	3
MET 214 Mechanical Design and Drafting	3
MTT 112 Machining Principles	3
Total Hours for A.A.S. Degree	61

CAD Drafting Technology – Graphics, Animation and Presentation (Associate in Applied Science) Plan 24DJ

Required General Education Coursework	15
ARC 228 History of Architecture <i>or</i>	
ART 124 Drawing I <i>or</i>	
Humanities or Fine Arts Elective*	3
CMM 111 Communication Skills <i>or</i>	
CMM 121 Fundamentals of Speech <i>or</i>	
CMM 122 Business and Professional Speaking <i>or</i>	
CMM 123 Dynamics of Small Group Discussion <i>or</i>	
CMM 128 Interviewing Practices	3
ENG 120 Technical Composition I <i>or</i>	
ENG 121 English Composition I	3
MTH 115 Applied Mathematics II	3
Social Science Elective*	3
Required CAD Coursework	31
CAD 110 CAD/CAM Concepts	3
CAD 111 CAD Drafting Applications I	4
CAD 117 Introduction to AutoCAD.....	3
CAD 171 Introduction to Inventor	3
CAD 170 Introduction to SolidWorks <i>or</i>	
CAD 176 Introduction to Creo	3
CAD 179 Introduction to Autodesk 3ds Max.....	3
CAD 178 Introduction to Revit	3
CAD 273 CAD Specialization <i>or</i>	
EWE 220 Cooperative Work Experience I	3
CAD 279 Design Visualization Using 3ds Max <i>or</i>	
ARC 216 Architectural Illustration	3
Technical Elective	
(see Technical Electives list).....	3

Required Graphics, Animation and Presentation Coursework	15
ARC 121 Architectural Graphics	3
CAD 217 AutoCAD II	3
ART 222 Introduction to Computer Art.....	3
ART 263 2D Computer Animation	3
DMD 111 Introduction to Digital Media.....	3
Total Hours for A.A.S. Degree	61

**CAD Drafting Technology – Architectural/Civil
(Associate in Applied Science) Plan 24DR**

Required General Education Coursework15

ARC 228	History of Architecture <i>or</i>	
ART 124	Drawing I <i>or</i>	
	Humanities or Fine Arts Elective*	3
CMM 111	Communication Skills <i>or</i>	
CMM 121	Fundamentals of Speech <i>or</i>	
CMM 122	Business and Professional Speaking <i>or</i>	
CMM 123	Dynamics of Small Group Discussion <i>or</i>	
CMM 128	Interviewing Practices	3
ECO 110	Economics for Business and Industry <i>or</i>	
ECO 221	Principles of Macroeconomics <i>or</i>	
PSC 122	State and Local Politics <i>or</i>	
	Social Sciences Elective*	3
ENG 120	Technical Composition I <i>or</i>	
ENG 121	English Composition I	3
MTH 115	Applied Mathematics II	3

Required CAD Coursework27

CAD 110	CAD/CAM Concepts	3
CAD 117	Introduction to AutoCAD	3
CAD 177	Civil Drafting	3
CAD 178	Introduction to Revit	3
CAD 179	Introduction to Autodesk 3ds Max	3
CAD 217	AutoCad II	3
CAD 273	CAD Specialization <i>or</i>	
CAD 278	Revit II	3
EWE 220	Cooperative Work Experience I	3
CAD 279	Design Visualization Using 3ds Max <i>or</i>	
ARC 216	Architectural Illustration	3

Required Architectural Coursework24-25

ARC 121	Architectural Graphics	3
ARC 170	Architectural Design	3
ARC 171	Architectural Working Drawings	3
ARC 271	Commercial Working Drawings	3
CMT 111	Construction Layout <i>or</i>	
CIV 111	Basic Surveying	3-4
CMT 113	Construction Materials	3
CMT 117	Construction Methods	3
CIV 213	Subdivision Planning and Design	3

Total Hours for A.A.S. Degree66-67

**CAD Drafting Technology – Graphics,
Animation and Presentation
(Certificate) Plan 24DK**

This advanced certificate is designed for the individual who possesses education or experience in computer aided design (CAD) or graphic arts. The certificate fills the gap between CAD and computer-generated art and provides the graduate with the skills to create sophisticated computer enhanced presentations for use in a variety of applications.

ARC 121	Architectural Graphics	3
ART 222	Computer Art I	3
ART 263	2D Computer Animation	3
CAD 110	CAD/CAM Concepts	3
CAD 117	Introduction to AutoCAD <i>or</i>	
CAD 111	CAD Drafting Applications I	3-4
CAD 179	Introduction to Autodesk 3ds Max	3
CAD 279	Design Visualization Using 3ds Max	3
DMD 111	Introduction to Digital Media	3

Total Hours for Certificate24-25

**CAD Drafting Technology – Architectural
(Certificate) Plan 24DN**

ARC 121	Architectural Graphics	3
CAD 110	CAD-CAM Concepts	3
CAD 117	Introduction to AutoCAD	3
CAD 178	Introduction to Revit	3
CAD 179	Introduction to Autodesk 3ds Max	3
CAD 217	AutoCAD II	3
CAD 278	Revit II	3
CAD 279	Design Visualization Using 3ds Max	3

Total Hours for Certificate24

**CAD Drafting Technology – Civil
(Certificate) Plan 24DO**

ARC 121	Architectural Graphics	3
CAD 110	CAD/CAM Concepts	3
CAD 117	Introduction to AutoCAD	3
CAD 177	Civil Drafting	3
CAD 217	AutoCAD II	3
CIV 111	Basic Surveying <i>or</i>	
CIV 213	Site Planning and Design	3-4
CMT 111	Construction Layout	3

Total Hours for Certificate21-22

**CAD Drafting Technology – 3D Parametric
(Certificate) Plan 24DP**

CAD 170	Introduction to SolidWorks	3
CAD 171	Introduction to Inventor	3
CAD 176	Introduction to Creo	3
CAD 211	Mechanical Detailing with GD and T	3
CAD 270	SolidWorks II	3
CAD 271	Inventor II	3
CAD 276	Creo II	3

Total Hours for Certificate21

Associate in Applied Science and Career Certificates

CAD Drafting Technology – Autocad (Certificate) Plan 24DQ

CAD 110	CAD/CAM Concepts	3
CAD 117	Introduction to AutoCAD.....	3
CAD 217	AutoCAD II	3
CAD 111	CAD Drafting Applications I	4

Total Hours for Certificate13

CAD Drafting Technology – Solidworks (Certificate) Plan 24DS

CAD 170	Introduction to SolidWorks	3
CAD 270	SolidWorks II	3
CAD 211	Mechanical Detailing with GD and T	3

Total Hours for Certificate9

CAD Drafting Technology – Creo (Certificate) Plan 24DT

CAD 176	Introduction to Creo	3
CAD 211	Mechanical Detailing with GD and T	3
CAD 276	Creo II.....	3

Total Hours for Certificate9

CAD Drafting Technology – Autodesk Inventor (Certificate) Plan 24DU

CAD 171	Introduction to Inventor	3
CAD 211	Mechanical Detailing with GD and T	3
CAD 271	Inventor II.....	3

Total Hours for Certificate9

Technical Electives:

A broad choice of technical electives is available. See an advisor in the CAD department for approval of electives.

ARC 121	Architectural Graphics	3
CAD 110	CAD-CAM Concepts	3
CAD 111	CAD Drafting Applications I	4
CAD 117	Introduction to AutoCAD.....	3
CAD 170	Introduction to SolidWorks	3
CAD 171	Introduction to Inventor	3
CAD 176	Introduction to Creo	3
CAD 177	Civil Drafting	3
CAD 178	Introduction to Revit	3
CAD 179	Introduction to Autodesk 3ds Max.....	3
CAD 211	Mechanical Detailing with GD and T	3
CAD 217	AutoCAD II	3
CAD 270	SolidWorks II	3
CAD 271	Inventor II.....	3
CAD 273	Advanced CAD Specialization	1-3

CAD 276	Creo II.....	3
CAD 278	Revit II	3
CAD 279	Design Visualization Using 3ds Max.....	3
CNC 218	Introduction to MasterCam	3
ELT 111	Electronic Drafting	2
EWE 220	Cooperative Work Experience I.....	2-4
MET 111	Manufacturing Processes	3
MET 112	Basic Metallurgy I	3
MET 214	Mechanical Design and Drafting	3
MTH 115	Applied Mathematics II	3
MTT 111	Machine Shop I	3
MTT 112	Machining Principles	3

For more information on recommended courses or program specific advising, contact the following faculty members or the Engineering, Math and Physical Sciences division at (847) 543-2044:

Steve Dulmes / Tina Ye

Cisco Networking

See Computer Information Technology.

Civil and Environmental Technology

Engineering, Math and Physical Sciences Division
Room T302, (847) 543-2044

Pre-Civil Engineer Technician (Certificate) Plan 24VI

**Program Modification effective Spring 2017. See addendum for details.*

This program prepares students for entry-level work as pre-civil engineer technicians for Illinois Department of Transportation (IDOT), county, city or municipal public works, or private civil engineering employers. It also serves as a "ladder" into an Associate in Applied Science (A.A.S.) degree such as the Civil and Environmental Technology degree. Graduates are qualified to work as construction inspection and testing technicians, survey crew members, materials testing technicians, and civil drafters.

CIV 111	Basic Surveying	4
CIV 113	Construction Inspection and Safety	3
CIV 214	Civil Materials & Testing.....	3
EGR 121	Engineering Graphics.....	3
MTH 117	Technical Mathematics I	3

Total Hours for Certificate16

For more information on recommended courses or program specific advising, contact Rob Twardock at (847) 543-2903 or the Engineering, Math and Physical Sciences division at (847) 543-2044.

Computer Information Technology

**Business and Social Sciences Division,
Room T302, (847) 543-2047**

The Computer Information Technology degree programs provide five specialty options with a common core of general education, business and introductory computer courses. These specialty options include Associate in Applied Science degrees in the areas of Network Administration and Security, Computer Forensics, Web Programming, .NET Programming, and Microsoft™ Office Application Specialist. Certificate options in multiple areas are also offered.

The information technology emphasis of these degree programs is a Windows-based environment using office applications and open source tools.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met.

Office Application Specialist (Associate in Applied Science) Plan 22CB

This degree prepares students to use MS Office components to implement business processes and documents. Through the use of general education, business, and computer courses, this program provides an understanding of the system and networking environment needed for application development today.

First Semester (Fall)15-17

CIT	111	Comprehensive Spreadsheets	3
CIT	120	Introduction to Computers.....	3
AOS	113	Comprehensive Word Processing	3
CIT	131	Windows Operating System	3
AOS	122	Business Mathematics <i>or</i>	
MTH	122	College Algebra <i>or</i>	
		MTH Elective (higher MTH 122)***	3-5

Second Semester (Spring)15

CIT	112	Comprehensive Database	3
CIT	114	Introduction to Networking for Programmers ¹ <i>or</i> Office Application Elective	3
CIT	170	Creating Web Pages.....	3
CIT	210	Programming for Office Applications ²	3
ENG	121	English Composition I.....	3

Third Semester (Fall)15-16

ACC	112	Accounting Procedures I <i>or</i>	
ACC	121	Financial Accounting	3-4
AOS	215	Presentation Software	3
BUS	121	Introduction to Business	3
CIT	114	Introduction to Networking for Programmers ¹ <i>or</i> Office Application Elective	3
CIT	271	Markup Language Programming.....	3

Fourth Semester (Spring)15-16

CIT	114	Introduction to Networking for Programmers ¹ <i>or</i> Office Application Elective	3
CMM	111	Communication Skills <i>or</i>	
CMM	121	Fundamentals of Speech <i>or</i>	
CMM	128	Interviewing Practices	3
		Humanities or Fine Arts Elective ³	3
		Office Application Elective	3-4
		Social Sciences Elective*	3

Total Hours for AAS Degree.....60-64

Office Application Specialist Electives

Select 9-10 hours from the list below:

ACC	122	Managerial Accounting	4
CIT	113	Introduction to SQL	3
CIT	130	Operating Systems for A+ Certification.....	3
CIT	132	Linux Operating System.....	3
CIT	134	Introduction to Programming Concepts	3
CIT	171	Web Page Scripting	3
CIT	174	Adobe Dreamweaver	3
CIT	295	Internship	3
ELT	151	PC Hardware Fundamentals.....	3

* To complete an A.A.S., students must meet General Requirements on page 113).

** Certain classes are only offered specific semesters. Check the course scheduling guide.

*** There are prerequisites for Math courses. If you do not meet the prerequisites, begin taking these courses this semester.

¹ CIT 114: Introduction to Networking for Programmers is only offered every 3rd semester so you should enroll in it whenever it becomes available.

² CIT 210 Programming for Office Applications is not offered regularly so you should enroll in it whenever it becomes available.

³ HUM 127 Critical Thinking, PHI 122 Logic, or PHI 125 Introduction to Ethics recommended.

Associate in Applied Science and Career Certificates

Network Administration and Security (Associate in Applied Science) Plan 22CD

This degree program prepares students in the installation, configuration, deployment and administration of network servers and security protocols. Through the use of general education, business, and computer courses, this program provides an understanding of the network infrastructure, IT security environment, and digital forensics methodologies required of network and IT security professionals.

First Semester (Fall)	15-17
CIT 120 Introduction to Computers.....	3
CIT 131 Windows Operating System	3
CIT 132 Linux Operating System	3
CIT 139 Cisco: Introduction to Networks	3
AOS 122 Business Mathematics <i>or</i>	
MTH 122 College Algebra <i>or</i>	
MTH Elective (higher MTH 122)***	3-5

Second Semester (Spring)	15
CIT 133 Network Automation	3
CIT 151 LAN Administration <i>or</i>	
CIT 230 Linux System Administration ¹	3
CIT 152 Network Security Fundamentals	3
CIT 159 Cisco: Routing & Switching	3
ELT 151 PC Hardware Fundamentals	3

Summer Semester	3
BUS 121 Introduction to Business	3

Third Semester (Fall)	15
CIT 252 Hardening the Infrastructure	3
CIT 255 Server Virtualization Technologies	3
CIT 256 Windows Forensic Analysis	3
ENG 121 English Composition I.....	3
PSY 121 Introduction to Psychology <i>or</i>	
PSY 122 Industrial/Organizational Psychology	3

Fourth Semester (Spring)	16
CIT 253 Network Defense and Countermeasures	3
CIT 254 Windows Directory Services.....	3
CIT 258 Network Forensics.....	4
CIT 272 Enterprise Messaging Administration	3
Humanities or Fine Arts Elective ²	3

Summer Semester	3
CMM 111 Communication Skills <i>or</i>	
CMM 121 Fundamentals of Speech <i>or</i>	
CMM 128 Interviewing Practices	3

Total Hours for AAS Degree	67-69
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- * To complete an A.A.S., students must meet General Requirements on page 113).
- ** Certain classes are only offered specific semesters. Check the course scheduling guide.
- *** There are prerequisites for Math courses. If you do not meet the prerequisites, begin taking these courses this semester.
- ¹ CIT 230 Linux System Administration is not offered regularly so you should enroll in it whenever it becomes available.
- ² HUM 127 Critical Thinking, PHI 122 Logic, or PHI 125 Introduction to Ethics recommended.

Web Programming (Associate in Applied Science) Plan 22CJ

This degree prepares students for creating web pages and interfaces using client- and server-side programming for the development of web applications. Through the use of general education, business, and computer courses, the program provides an understanding of the system and networking environment needed for web development today.

First Semester (Fall)	15-17
CIT 120 Introduction to Computers.....	3
CIT 134 Introduction to Programming Concepts	3
CIT 170 Creating Web Pages.....	3
ENG 121 English Composition I.....	3
AOS 122 Business Mathematics <i>or</i>	
MTH 122 College Algebra <i>or</i>	
MTH Elective (higher MTH 122)***	3-5

Second Semester (Spring)	15
BUS 121 Introduction to Business	3
CIT 112 Comprehensive Database	3
CIT 114 Introduction to Networking for Programmers ¹	3
CIT 173 PHP Programming.....	3
PSY 121 Introduction to Psychology <i>or</i>	
PSY 122 Industrial/Organizational Psychology	3

Third Semester (Fall)	15-16
ACC 112 Accounting Procedures I <i>or</i>	
ACC 121 Financial Accounting	3-4
CIT 113 Introduction to SQL	3
CIT 171 Web Page Scripting	3
CIT 271 Markup Language Programming.....	3
CMM 111 Communication Skills <i>or</i>	
CMM 121 Fundamentals of Speech <i>or</i>	
CMM 128 Interviewing Practices	3

Associate in Applied Science and Career Certificates

Fourth Semester (Spring)	15-16
ACC 113 Accounting Procedures II <i>or</i>	
ACC 122 Managerial Accounting <i>or</i>	
BUS 111 Fundamentals of Finance	3-4
CIT 132 Linux Operating System	3
CIT 174 Adobe Dreamweaver	3
CIT 270 Server Side Programming	3
Humanities or Fine Arts Elective ²	3
Total Hours for AAS Degree.....	60-64

* To complete an A.A.S., students must meet General Requirements on page 113).

** Certain classes are only offered specific semesters. Check the course scheduling guide.

*** There are prerequisites for Math courses. If you do not meet the prerequisites, begin taking these courses this semester.

¹ CIT 114: Introduction to Networking for Programmers is only offered every 3rd semester so you should enroll in it whenever it becomes available.

² HUM 127 Critical Thinking, PHI 122 Logic, or PHI 125 Introduction to Ethics recommended.

.NET Programming (Associate in Applied Science) Plan 22CL

This degree program prepares students to use .NET programming to develop and deploy desktop, web and product applications. Through the use of general education, business, and computer courses, this program provides an understanding of the system and networking environment needed for application development today.

First Semester (Fall)	15-17
CIT 120 Introduction to Computers.....	3
CIT 134 Introduction to Programming Concepts	3
CIT 112 Comprehensive Database	3
CIT 170 Creating Web Pages.....	3
AOS 122 Business Mathematics <i>or</i>	
MTH 122 College Algebra <i>or</i>	
MTH Elective (higher MTH 122)***	3-5
Second Semester (Spring)	15-16
ACC 112 Accounting Procedures I <i>or</i>	
ACC 121 Financial Accounting	3-4
BUS 121 Introduction to Business	3
CIT 114 Introduction to Networking for Programmers ¹	3
CIT 138 Introduction to C# Programming	3
ENG 121 English Composition I.....	3
Summer Semester	4
CIT 141 Programming in C++.....	4

Third Semester (Fall)	16
CIT 113 Introduction to SQL	3
CIT 171 Web Page Scripting	3
CIT 215 MS .NET Web Programming	4
CIT 239 Systems Analysis	3
CIT 241 Advanced C++.....	3

Fourth Semester (Spring)	16-17
CIT 216 MS .NET Framework Programming	4
ACC 113 Accounting Procedures II <i>or</i>	
ACC 122 Managerial Accounting <i>or</i>	
BUS 111 Fundamentals of Finance	3-4
CIT 277 MS .NET Software Development Capstone	3
Humanities or Fine Arts Elective ²	3
PSY 121 Introduction to Psychology <i>or</i>	
PSY 122 Industrial/Organizational Psychology	3

Summer Semester	3
CMM 111 Communication Skills <i>or</i>	
CMM 121 Fundamentals of Speech <i>or</i>	
CMM 128 Interviewing Practices	3

Total Hours for AAS Degree.....	69-73
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* To complete an A.A.S., students must meet General Requirements on page 113).

** Certain classes are only offered specific semesters. Check the course scheduling guide.

*** There are prerequisites for Math courses. If you do not meet the prerequisites, begin taking these courses this semester.

¹ CIT 114: Introduction to Networking for Programmers is only offered every 3rd semester so you should enroll in it whenever it becomes available.

² HUM 127 Critical Thinking, PHI 122 Logic, or PHI 125 Introduction to Ethics recommended.

Computer Forensics (Associate in Applied Science) Plan 22CU

First Semester (Fall)	15-17
CIT 120 Introduction to Computers.....	3
CIT 130 Operating Systems for A+ Certification	3
CIT 155 Introduction to Computer Forensics	3
ELT 151 PC Hardware Fundamentals	3
Science or Math Elective*	3-5
Second Semester (Spring)	15
CIT 132 Linux Operating System	3
CIT 139 Cisco: Introduction to Networks	3
CRJ 121 Introduction to Criminal Justice	3
CRJ 123 Introduction to Criminology I.....	3
Humanities or Fine Arts Elective* ¹	3

Associate in Applied Science and Career Certificates

Third Semester (Fall)	18
CIT 152 Network Security Fundamentals	3
CIT 156 Digital Evidence Recovery ²	3
CIT 256 Windows Forensic Analysis	3
CRJ 219 Principles of Criminal Investigations	3
SOC 223 Deviance	3
ENG 120 Technical Composition <i>or</i>	3
ENG 121 English Composition I.....	3

Fourth Semester (Spring)	14-16
CIT 258 Network Forensics.....	4
CIT 259 Topics in Computer Forensics ³	1-3
CMM 111 Communication Skills <i>or</i>	3
CMM 121 Fundamentals of Speech <i>or</i>	3
CMM 128 Interviewing Practices	3
CRJ 222 Criminal Procedural Law	3
CRJ 223 Ethics in Criminal Justice	3

Total Hours for AAS Degree.....**62-66**

* To complete an A.A.S., students must meet General Requirements on page 113). These are prerequisites for Math courses. If you do not meet the prerequisites, begin taking these courses this semester.

** Certain classes are only offered specific semesters. Check the course scheduling guide.

¹ Students may consider taking one or two summer classes to lighten up the load on other semesters

² CIT 156: Digital Evidence Recovery is only offered every 3rd semester so you should enroll in it whenever it becomes available.

³ CIT 259 Topics in Computer Forensics is not offered regularly, so you should enroll in it whenever it becomes available.

Cisco Networking (Certificate) Plan 22CE

This program provides students with a strong background in computer networking, including network fundamentals, routing, switching, network design, troubleshooting, and network security. The program prepares students for the Cisco Certified Entry Networking Technician (CCENT) and Cisco Certified Network Associate (CCNA) exams. The courses use instructional materials provided by Cisco and aligned with the exams. Students receive extensive hands-on laboratory practice in Cisco systems.

CIT 139 Cisco: Introduction to Networks	3
CIT 159 Cisco: Routing and Switching	3
CIT 218 Cisco: Scaling Networks	3
CIT 219 Cisco: Connecting WAN Networks	3

Total Hours for Certificate

Office Application Specialist (Certificate) Plan 22CG

The Office Application Specialist certificate prepares students to apply information technology concepts to solve problems and increase efficiency in the workplace. The certificate develops proficiency in software applications involving data manipulation and management.

Students earning this certificate will be proficient in productivity software applications including word processing, spreadsheets, databases and presentation software, as well as gain work-related knowledge of web page development.

AOS 113 Comprehensive Word Processing.....	3
AOS 215 Presentation Software	3
CIT 111 Comprehensive Spreadsheets	3
CIT 112 Comprehensive Database	3
CIT 170 Creating Web Pages	3
CIT 210 Programming for Office Applications	3
CIT 271 Markup Language Programming	3

Total Hours for Certificate

Desktop Support Technician (Certificate) Plan 22CI

This certificate prepares students for desktop support and customer support jobs. It prepares the student for the A+ Certification (PC-Technician) test and the Microsoft Desktop Support Technician Certification test. These two certifications are useful in obtaining an entry-level job in the Information Technology field.

CIT 130 Operating Systems for A+ Certification.....	3
CIT 157 Enterprise Desktop Support	3
ELT 151 PC Hardware Fundamentals.....	3

Total Hours for Certificate

Network Administration and Security (Certificate) Plan 22CK

The Network Administration and Security certificate prepares students for careers in designing and administering computer networks. In addition, coursework for this curriculum addresses how to keep networks secure from outside intrusion and procedures on securing evidence if network security has been breached.

CIT 131 Windows Operating System	3
CIT 132 Linux Operating System.....	3
CIT 133 Network Automation	3
CIT 139 Cisco: Introduction to Networks	3

CIT	151	LAN Administration <i>or</i>	
CIT	230	Linux System Administration.....	3
CIT	152	Network Security Fundamentals	3
CIT	159	Cisco: Routing and Switches	3
CIT	252	Hardening the Infrastructure	3
CIT	253	Network Defense and Countermeasures	3
CIT	254	Windows Directory Services	3
CIT	255	Server Virtualization Technologies	3
CIT	256	Windows Forensic Analysis	3
CIT	258	Network Forensics	4
CIT	272	Enterprise Messaging Administration	3

Total Hours for Certificate43

**Web Programming
(Certificate) Plan 22CN**

The Web Programming certificate provides students with the necessary skills to begin a career in web development. The student will learn to create web pages and interfaces using client- and server-side programming for the development of web applications. The student will also develop web pages incorporating database applications and components, which will include database administration, security and maintenance.

CIT	113	Introduction to SQL	3
CIT	170	Creating Web Pages	3
CIT	171	Web Page Scripting	3
CIT	173	PHP Programming	3
CIT	174	Adobe Dreamweaver	3
CIT	270	Server Side Programming	3
CIT	271	Markup Language Programming	3

Total Hours for Certificate21

**C++ Programming
(Certificate) Plan 22CO**

The C++ Programming certificate is centered in object oriented technologies. The certificate is intended to enhance programming skills by providing knowledge and experience in the C++ language in a minimal amount of time. It includes interaction with databases and the utilization of a systems approach to problem solving.

CIT	112	Comprehensive Database	3
CIT	113	Introduction to SQL	3
CIT	141	Programming in C++	4
CIT	239	Systems Analysis	3
CIT	241	Advanced C++	3

Total Hours for Certificate16

**.NET Programming
(Certificate) Plan 22CQ**

The .NET Programming certificate focuses on the use of the .NET Framework classes to build current enterprise applications. It is intended to enhance programming skills by providing knowledge and experience in the .NET Framework classes in a minimal amount of time. It includes distributed applications, interaction with databases and the utilization of the .NET systems approach to problem solving.

CIT	113	Introduction to SQL	3
CIT	138	Introduction to C# Programming	3
CIT	215	Microsoft .NET Web Programming	4
CIT	216	Microsoft .NET Framework Programming	4
CIT	239	Systems Analysis	3
CIT	277	MS .NET Software Development Capstone	3

Total Hours for Certificate20

**Computer Forensics Analyst
(Certificate) Plan 22CT**

This program is designed for individuals in both law enforcement and the private sector who wish to learn the skills needed to become a Computer Forensics Analyst. The primary responsibilities of a Computer Forensics Analyst are to collect, secure, and analyze data with evidential value found on digital media and data networks. Students completing this certificate will have a solid foundation in operating systems, networking, digital forensic methodologies and IT Security. Students will learn crime scene notetaking, report writing, and presentation of findings.

CIT	120	Introduction to Computers	3
CIT	130	Operating Systems for A+ Certification.....	3
CIT	132	Linux Operating System.....	3
CIT	139	Cisco: Introduction to Networks	3
CIT	152	Network Security Fundamentals	3
CIT	155	Introduction to Computer Forensics.....	3
CIT	156	Digital Evidence Recovery.....	3
CIT	256	Windows Forensic Analysis	3
CIT	258	Network Forensics	4
CIT	259	Topics in Computer Forensics	1-3
ELT	151	PC Hardware Fundamentals.....	3

Total Hours for Certificate32-34

Security Administration (Certificate) Plan 22CV

The Security Administration certificate is designed for students who currently are employed as Network Administrators or have taken courses in Network Administration. Coursework for this certificate addresses how to keep networks secure from outside intrusion and procedures on securing evidence if network security has been breached. Students pursuing this certificate should have knowledge of Windows PowerShell.

CIT	152	Network Security Fundamentals	3
CIT	155	Introduction to Computer Forensics.....	3
CIT	156	Digital Evidence Recovery.....	3
CIT	252	Hardening the Infrastructure	3
CIT	253	Network Defense and Countermeasures	3
CIT	256	Windows Forensic Analysis	3
CIT	258	Network Forensics	4

Total Hours for Certificate22

Game Development (Certificate) Plan 22CX

The Game Development certificate is for those students who desire to be employed in the video game industry as game developers. Upon completion of this certificate, students will have the knowledge and skill in game strategies, game programming and mathematics to qualify for entry-level game development employment.

CIT	120	Introduction to Computers	3
CIT	134	Introduction to Programming Concepts	3
CIT	141	Programming in C++	4
CIT	175	Game Development and Design Strategies.....	3
CIT	176	2-D Game Development.....	3
CIT	177	3-D Game Development.....	3
CIT	241	Advanced C++	3
CIT	275	Mathematics for Game Development	3
CIT	276	Game Development Projects	3

Total Hours for Certificate28

For more information on recommended courses or program specific advising, contact the following faculty members or the Business and Social Sciences Division at (847) 543-2047:

Changyi Chen / Dan Dainton / Sanjay Kumar
John North / Bob Scherbaum

Computerized Numerical Control Programming

Engineering, Math and Physical Sciences Division
Room T302, (847) 543-2044

Computerized Numerical Control Programming (Associate in Applied Science) Plan 24NA

The Computerized Numerical Control program is designed to provide knowledge and skills needed for employment and advancement in the field of CNC Programming. Programming emphasis is on FANUC and HAAS CNC controlled lathes, milling machines and Wire EDM. Advanced placement in the program may be arranged for experienced programmers and operators. The CNC program is accredited by the National Institute for Metalworking Skills (NIMS) and national credentialing is available. Upon completion of certain courses, students will be prepared to take credentialing exams for an additional fee. To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met.

Required General Education Coursework 15			
CMM	111	Communication Skills	3
ECO	110	Economics for Business and Industry	3
ENG	120	Technical Composition I <i>or</i>	
ENG	121	English Composition I	3
MTH	115	Applied Mathematics II	3
		Humanities or Fine Arts Elective*	3

Required Phase I Coursework 9			
CNC	110	CNC Operations I.....	3
EGR	121	Engineering Graphics	3
MTT	111	Machine Shop I <i>or</i>	
MTT	112	Machining Principles	3

Required Phase II Coursework 10			
CAD	117	Introduction to AutoCAD.....	3
CNC	111	Geometric Dimensioning and Tolerancing....	1
CNC	115	CNC Programming I	3
MTT	211	Jig and Fixture Design	3

Required Phase III Coursework 9			
CAD	170	Introduction to SolidWorks <i>or</i>	
CAD	171	Introduction to Inventor <i>or</i>	
CAD	176	Introduction to Creo	3
CNC	215	Advanced Mill Programming.....	3
		Technical Elective	3

Required Phase IV Coursework 15-16			
CNC	216	Advanced Lathe Programming.....	3
CNC	217	Introduction to Wire EDM Machining <i>or</i>	
EWE	220	Cooperative Work Experience I	3 - 4
CNC	218	Introduction to Master CAM	3
CNC	250	Advanced Manufacturing	3
		Technical Elective	3

Additional Required Coursework6
 MTH 117 Technical Mathematics I3
 Social Science Elective*3

Total Hours for A.A.S. Degree64-65

Technical Electives

Select six hours from the list below. Approval of technical electives must be obtained from the program advisor.

CAD 270 SolidWorks II3
 CAD 276 Creo II.....3
 CNC 210 CNC Operations II3
 CNC 299 Special Topics: CNC Machining Tech1 - 4
 LPO 112 Elements of Photonics3
 LPO 111 Fundamentals of Light and Lasers4
 LPO 113 Photonics-Enabled Technologies3
 MET 111 Manufacturing Processes3
 MET 112 Basic Metallurgy I3
 MET 116 Machine Components and Repair3
 MET 118 Machinery's Handbook.....3
 MET 131 Introduction to Robotics.....3
 MET 214 Mechanical Design and Drafting3
 MTT 111 Machine Shop I3
 MTT 115 Introduction to Die Making3
 MTT 116 Introduction to Moldmaking3
 MTT 210 Machine Shop II3
 MFG 210 Manufacturing Materials3
 WLD 170 General Welding2

**CNC Programming/Operations
 (Certificate) Plan 24NG**

This certificate program provides knowledge and skills needed for entry level employment in CNC programming operating. Students will perform operations and programming on FANUC and HAAS CNC controlled machine tools. Advanced placement and NIMS credentialing may be arranged for experienced machinists.

Phase I.....12
 CNC 110 CNC Operations I.....3
 EGR 121 Engineering Graphics3
 MTH 115 Applied Mathematics II3
 MTT 112 Machining Principles *or*
 MTT 210 Machine Shop II3

Phase II.....12
 CNC 115 CNC Programming I3
 CNC 210 CNC Operations II3
 ENG 120 Technical Composition I *or*
 ENG 121 English Composition I3
 MTT 211 Jig and Fixture Design3

Phase III6
 CNC 215 Advanced Mill Programming *or*
 CNC 216 Advanced Lathe Programming.....3
 CNC 217 Introduction to Wire EDM Machining3

Total Hours for Certificate30

**NIMS Level 1 CNC Operator/Setup Technician
 (Certificate) Plan 24NH**

This certificate program provides the knowledge, skills, and abilities for entry level employment in the field of Computerized Numerical Control (CNC) machining as a CNC Mill or Lathe Operator and/or Setup technician. Students will learn basic blueprint reading, metal cutting principles and tools, and the operation of modern FANUC and HAAS CNC controlled vertical machining centers and turning centers. Each student will be required to demonstrate competency based on the National Institute for Metalworking Skills (NIMS) nationally validated skill standards. Lecture and lab time will focus on the interpersonal, technical, and employment skills necessary to succeed in the trade. Testing for the following NIMS Level I credentials will be administered during the coursework in which the student will be required to complete a performance test (producing precision parts on the machines) and/or a related theory exam: (1) Measurement, Materials and Safety, (2) Job Planning, Benchwork, and Layout, (3) CNC Milling: Operations, (4) CNC Turning: Operations, (5) CNC Milling: Programming, Setup, & Operations, and (6) CNC Turning: Programming, Setup, & Operations.

Phase I.....9
 CNC 110 CNC Operations I.....3
 MTT 110 Machine Trades Blueprint Reading3
 MTT 112 Machining Principles3

Phase II7-10
 CNC 115 CNC Programming I3
 CNC 210 CNC Operations II3
 EWE 220 Cooperative Work Experience I1-4

Total Hours for Certificate16-19

Associate in Applied Science and Career Certificates

NIMS Level 1 CNC Operator (Certificate) Plan 24NJ

This certificate provides the knowledge, skills, and abilities for entry level employment in the field of CNC machining as a CNC Mill or Lathe Operator. Students will learn the operations of a modern FANUC and HAAS CNC controlled vertical machining center and turning center. Each student will be required to demonstrate competency based on the National Institute for Metalworking Skills (NIMS) nationally validated skill standards. Lectures and lab time will focus on the interpersonal, technical, and employment skills necessary to succeed in the trade. Testing for the Level 1 NIMS CNC Mill Operator and Lathe Operator credential will be administered during the coursework in which the student will be required to complete both a performance test (producing precision parts on the machines) and a related theory exam.

CNC 110	CNC Operations I.....	3
MTT 110	Machine Trades Blueprint Reading	3
MTT 112	Machining Principles	3

Total Hours for Certificate9

For more information on recommended courses or program specific advising, contact faculty member Jeff Hines or the Engineering, Math and Physical Science division at (847) 543-2044

Construction Management Technology

Engineering, Math and Physical Sciences Division
Room T302, (847) 543-2044

Construction Management Technology (Associate in Applied Science) Plan 24BA

**Program Modification effective Spring 2017. See addendum for details.*

This program prepares students to work as entry-level construction management technicians in the construction industry. This degree is particularly well-suited for students with field experience in construction trades who desire a more management-oriented position. Job opportunities include positions in estimating, supervision, scheduling, procurement, inspection and testing, site layout design and drafting. Employers include construction firms, suppliers, architects, material testing and inspection companies, and department of public works. Graduate may also transfer many of the program's credits toward a B.S. in Construction Management from area schools.

For students interested in **Sustainable Programs**, please see page 201 for options, or contact the identified department chair for more information.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met.

Required General Education Coursework15-17

* ARC 228	History of Architecture <i>or</i> Humanities or Fine Arts Elective*	3
CMM 111	Communication Skills <i>or</i>	
* CMM 121	Fundamentals of Speech.....	3
* ENG 120	Technical Composition <i>or</i>	
* ENG 121	English Composition I	3
* ECO 110	Economics for Business and Industry <i>or</i>	
* ECO 222	Principles of Microeconomics <i>or</i> Social Science Elective*	3
MTH 117	Technical Mathematics I <i>or</i>	
* MTH 123	Trigonometry <i>or</i>	
* MTH 144	Pre-Calculus	3-5

Required Construction Management Coursework.....49-51

ACC 121	Financial Accounting <i>or</i>	
BUS 115	Elements of Supervision <i>or</i>	
* BUS 121	Introduction to Business	3-4
CIV 111	Basic Surveying <i>or</i>	
* CMT 111	Construction Layout	3-4
* CIV 113	Construction Inspection and Safety	3
* CIV 214	Civil Materials and Testing	3
CMT 110	Introduction to the Built Environment.....	1
* CMT 112	Construction Blueprint Reading.....	3
* CMT 113	Construction Materials	3
CIT 119	Introduction to Office Software <i>or</i>	
* CIT 120	Introduction to Computers	3
* CMT 117	Construction Methods	3
* CMT 118	Mechanical and Electrical Equipment	3
* CMT 119	Specifications and Building Codes	3
* CMT 211	Job Scheduling and Control	3
* CMT 212	Principles of Heavy Construction Methods.....	3
* CMT 213	Construction Law and Documents.....	3
* CMT 214	Construction Estimating.....	3
* CMT 215	Construction Management <i>or</i>	
BUS 238	Project Management <i>or</i>	
EWE 220	Cooperative Work Experience I.....	3
	Technical Elective (see below).....	3

Total Hours for A.A.S. Degree64-68

Technical Electives: ^

Select 3 hours from the list below:

ACC 112	Accounting Procedures.....	3
* ACC 121	Financial Accounting	3
* ARC 121	Architectural Graphics	3
ARC 219	Introduction to Environmental Design.....	3
BUS 219	Small Business Management	3
* BUS 221	Business Law I.....	3
CAD 117	Introduction to AutoCAD.....	3

CAD	178	Introduction to Revit	3
CIV	131	GIS/GPS Applications for Civil and Surveying Technology	3
CMT	115	Carpentry I	3
CMT	116	Carpentry II	3
CMT	299	Special Topics in Construction Management Technology	3
HET	135	Plumbing and Pipefitting I	3

* Courses that may transfer to a four-year college or university towards a Bachelor in Science degree in Construction Management. Note: students desiring to transfer should take MTH 122. Courses required for transfer vary by school. Students should consult with the program advisor to plan an individualized curriculum based on their specific needs.

^ Electives may be substituted for individual courses in construction management core upon consultation with advisor in order to meet specific student learning objectives and/or job requirements.

Construction Management Technology (Certificate) Plan 24BF

**Program Modification effective Summer 2017. See addendum for details.*

This certificate is intended for students desiring to focus on a career in construction management or supervision, and who may already have work experience in the construction field. Courses include the core courses from the A.A.S. degree program that are most closely linked to immediate employment opportunities. Job opportunities include estimating, scheduling, procurement, and field supervision. Other CMT courses may be substituted upon consultation with program advisor.

CMT	112	Construction Blueprint Reading	3
CMT	113	Construction Materials	3
CIT	119	Introduction to Office Software <i>or</i>	
CIT	120	Introduction to Computers.....	3
CMT	117	Construction Methods	3
CMT	211	Job Scheduling and Control	3
CMT	214	Construction Estimating.....	3
CMT	215	Construction Management <i>or</i>	
EWE	220	Cooperative Work Experience I <i>or</i>	
BUS	238	Project Management	3
MTH	117	Technical Mathematics I <i>or</i>	
MTH	123	Trigonometry <i>or</i>	
MTH	144	Precalculus	3-5

Total Hours for Certificate24-26

For more information on recommended courses or program specific advising, contact faculty member Rob Twardock at (847) 543-2903 or the Engineering, Math and Physical Science division at (847) 543-2044.

Criminal Justice

**Business and Social Sciences Division,
Room T302, (847) 543-2047**

Criminal Justice (Associate in Applied Science) Plan 25CE

This program is designed to prepare students for a variety of careers in the criminal justice system at local, state, and federal levels. Students can specialize in a number of areas including law enforcement, criminal investigation, juvenile justice, court services, and community-based and institutional corrections. All students are urged to consult with a criminal justice advisor in planning their program of study.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met.

First Semester	15
ENG 120	Technical Composition I <i>or</i>
ENG 121	English Composition I
	Science or Math Elective*
PSY 121	Introduction to Psychology
CRJ 121	Introduction to Criminal Justice.....
CRJ 122	Introduction to Policing

Second Semester	18
CMM 121	Fundamentals of Speech.....
SOC 121	Introduction to Sociology.....
PSC 121	American National Politics <i>or</i>
PSC 122	State and Local Politics
CRJ 123	Introduction to Criminology.....
CRJ 124	Penology and Corrections
	Concentration/Elective #

Third Semester.....	15
CRJ 221	Criminal Law
CRJ 222	Criminal Procedural Law
CRJ 223	Ethics in Criminal Justice.....
	Humanities or Fine Arts Elective*
	(with I/M designation, if needed)
	Concentration/Elective#

Fourth Semester.....	15
CRJ 229	Juvenile Delinquency
CRJ 270	Criminal Justice Assessment Seminar
	Concentration/Elective#
	Concentration/Elective#
	Concentration/Elective#

Total Hours for A.A.S. Degree63

A minimum of 15 credit hours of Concentration/Elective are required to fulfill this requirement.

Associate in Applied Science and Career Certificates

Concentration/Electives

CIT	155	Introduction to Computer Forensics.....	3
CIT	156	Digital Evidence Recovery.....	3
CIT	256	Windows Forensic Analysis	3
CRJ	118	Evidence Technology	3
CRJ	119	Principles of Direct Supervision	3
CRJ	212	Traffic Law Enforcement	3
CRJ	213	Community Policing.....	3
CRJ	214	Substance Abuse and Criminal Justice.....	3
CRJ	215	Issues in Criminal Justice.....	3
CRJ	216	Police Management and Supervision	3
CRJ	218	Criminal Justice Internship.....	3
CRJ	219	Principles of Criminal Investigation	3
CRJ	220	Independent Research.....	3
CRJ	224	Institutional Corrections	3
CRJ	227	Community Based Corrections	3
CRJ	230	Principles of Courtroom Testimony	3
CRJ	248	Psychology of the Criminal Mind (cross-listed as PSY 248)	3
EDM		Elective	3
EWE	220	Cooperative Work Experience I	3
EWE	270	Cooperative Work Experience II	3
HUS	132	Trauma, Violence, and Prevention	3
HUS	134	Gender-Based Violence	3
HUS	140	Drugs and Society	3
HUS	234	Child Maltreatment.....	3
PLS	110	Introduction to Paralegal Studies	3
SOC	222	Social Problems	3
SOC	223	Deviance.....	3
SWK	121	Introduction to Social Work	3

Criminal Justice (Certificate) Plan 25CF

CRJ	121	Introduction to Criminal Justice.....	3
CRJ	123	Introduction to Criminology.....	3
CRJ	221	Criminal Law	3
PSY	121	Introduction to Psychology	3
SOC	121	Introduction to Sociology.....	3
		Additional CRJ Courses+	15

+Select from all other CRJ courses as well as the CRJ program electives listed above.

Total Hours for Certificate30

For more information on recommended courses or program specific advising, contact the following faculty members or the Business and Social Sciences Division at (847) 543-2047:

Javier Alonso / Jennifer Hulvat / Chris Utecht

Dental Hygiene

**Biological and Health Sciences Division, Room B210,
(847) 543-2042**

Dental Hygiene (Associate in Applied Science) Plan 21DH

This is a Limited Enrollment program. DHY courses are only offered during the day.

Students are required to meet the screening requirements in effect at the time of screening. Students who screen and are accepted into a limited enrollment program will be required to complete the curriculum that is in place at the time of entrance into the program. If students who screen are not granted admission, they must rescreen and satisfy all screening and curriculum requirements in place for a future program start.

Screening Deadline: First Wednesday in February

Dental hygienists are licensed professionals who provide oral health assessment, disease prevention, and health promotion. They are vital members of a dental health team. They serve individuals and families within the community. The Dental Hygiene program at the College of Lake County prepares students to develop the competencies needed to present extensive, preventive oral health care services to the community. The Dental Hygiene program has been granted accreditation status by the American Dental Association.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met.

The number of students that can be admitted to the Dental Hygiene program is limited; therefore, a screening procedure is used to select the academically best qualified from those who request consideration. Preference will be given to residents of Community College District 532 and community college districts with which CLC has a Joint Educational Agreement. Students who live outside of CLC's district but are eligible for in-district tuition because they are employed by a district employer are NOT considered residents of the district for purposes of selection into the program. Attendance at a Program Information Session is required to apply to the program and to learn other specifics of the application process.

Students must have submitted the following documents to the Welcome and One-Stop Center:

- A. Student Information Form
- B. **Official** high school transcript with graduation date OR **Official** GED test scores
OR
Official college transcripts with graduation date and degree awarded
OR
Official foreign high school or college transcript evaluated by a NACES approved agency
- C. Dental Hygiene Program Request for Screening Form
- D. If using courses from another college to meet prerequisites or degree requirements, submit an official transcript to the Records Office. It is also highly recommended to submit a "Request for Evaluation of Prior College Transcripts" form.

Minimum Selection Criteria: Student records must indicate the following:

- A. College Reading and Writing Readiness and Basic Algebra Readiness
- B. CLC Cumulative GPA is 2.0 or above
- C. BIO 123 or BIO 161 or an equivalent (C or better)
- D. CHM 120 or an equivalent course (C or better)
- E. BIO 244 or an equivalent course (C or better)
- F. NLN PAX with minimum acceptable percentile scores of 30 in the verbal, math and science sections, and a composite percentile of 40 (within 3 years of the screening deadline)
- G. Must be eighteen (18) years of age by the first day of the summer session following the screening deadline
- H. Attendance at a Dental Hygiene Program Information Session (within 2 years of the screening deadline.)

Note: Applicants may take the NLN PAX exam once every 90 days (approximately three months). NLN PAX exam results that are less than 90 days between exams will not be considered. Scores used for screening into the nursing program will be valid for only 3 years prior to a screening deadline. Scores older than 3 years will not be considered for screening. Visit www.nlnonlinetesting.org for available test dates and times or visit the Dental Hygiene webpage at www.elcillinois.edu/programs/dhy. Instructions for registering for the test are available on the webpage.

Students who have completed any of the following courses (or an equivalent) must have obtained a grade of "C" or better. These courses are not prerequisites, but program requirements. They may be taken prior to acceptance into the program.

BIO 245 Anatomy and Physiology II

Must be completed before the first fall semester of the program

BIO 246 Microbiology

Must be completed before the first spring semester of the program. If this course is taken during the first fall semester of the program, it must be taken as an evening class.

ENG 121 English Composition I

Must be completed before the first fall semester in the program.

Students who are selected for the program are required to attend a mandatory orientation session. Failure to attend the mandatory orientation session may result in the student losing their seat in the program and the next qualified student on the list will be selected in his/her place.

Note: A student must earn a minimum grade of "C" in each Dental Hygiene course to continue in and graduate from the program. All course prerequisites must be met.

Required General Education Coursework15

CMM 111	Communication Skills <i>or</i>	
CMM 121	Fundamentals of Speech <i>or</i>	
CMM 123	Dynamics of Small Group Discussion <i>or</i>	
CMM 128	Interviewing Practices	.....3
ENG 121	English Composition I	.....3
PSY 121	Introduction to Psychology	.....3
SOC 121	Introduction to Sociology	.....3
	Humanities or Fine Arts Elective	.....3

Additional Required Coursework8

BIO 245	Anatomy and Physiology II	.....4
BIO 246	Microbiology	.....4

Required Dental Hygiene Coursework56

First Semester12

DHY 111	Preclinic Theory and Practice of Dental Hygiene	.....2
DHY 113	Preclinical Dental Hygiene	.....2
DHY 115	Head and Neck Anatomy	.....2
DHY 117	Dental Anatomy	.....2
DHY 131	Oral Histology and Embryology	.....2
DHY 171	Preventive Dental Hygiene	.....2

Associate in Applied Science and Career Certificates

Second Semester	13
DHY 112 Theory and Practice of Dental Hygiene I	2
DHY 114 Clinical Dental Hygiene I.....	2
DHY 116 Dental Radiology I	3
DHY 119 Nutrition and Biochemistry	2
DHY 174 Introduction to Periodontics	2
DHY 175 Dental Pharmacology and Anesthetics.....	2
Summer Session	8
DHY 132 Theory and Practice of Dental Hygiene II	1
DHY 134 Pain Management	2
DHY 176 Dental Materials and Expanded Function.....	3
DHY 179 Clinical Dental Hygiene II	2
Third Semester	14
DHY 211 Theory and Practice of Dental Hygiene III	2
DHY 213 Clinical Dental Hygiene III	4
DHY 215 Dental Radiology II	2
DHY 219 Advanced Periodontics.....	2
DHY 232 General and Oral Pathology	2
DHY 271 Community Dentistry I.....	2
Fourth Semester	9
DHY 212 Theory and Practice of Dental Hygiene IV ..	2
DHY 214 Clinical Dental Hygiene IV	4
DHY 216 Ethics and Jurisprudence	1
DHY 231 Board Review and Licensure	1
DHY 272 Community Dentistry II	1
Total Hours for A.A.S. Degree	79

For more information on recommended courses or program specific advising, contact the following faculty members or the Biological and Health Sciences division at (847) 543-2042:

Kim Aichele / Mary Jacobs / Sue Nierstheimer

Digital Media and Design

**Communication Arts, Humanities and Fine Arts Division
Room B210, (847) 543-2040**

Digital Media and Design (Associate in Applied Science) Plan 23TB

The Digital Media and Design Associate in Applied Science Degree provides students with the conceptual, critical, creative and technical skills needed to design and produce a variety of commercial, educational and artistic media and design projects. Building on conventional communication formats, Digital Media and Design will explore the realm of new media, creating art and design works such as digital sound and music, still and moving images, 3D models, 2D and 3D animations, Web, video and interactive media. This is a robust curriculum designed to keep up with industry developments and trends.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met.

Required General Education Coursework	15
ANT 121 Introduction to Anthropology <i>or</i>	
PSY 121 Introduction to Psychology <i>or</i>	
PSY 122 Psychology in Business and Industry.....	3
CMM 121 Fundamentals of Speech <i>or</i>	
CMM 122 Business and Professional Speaking <i>or</i>	
CMM 128 Interviewing Practices	3
ENG 120 Technical Composition I <i>or</i>	
ENG 121 English Composition I	3
MTH 114 Applied Mathematics <i>or</i>	
MTH 117 Technical Mathematics I <i>or</i>	
MTH 122 College Algebra <i>or</i>	
MTH 141 Quantitative Literacy <i>or</i>	
MTH Elective (higher than MTH 141)	3
PHI 122 Logic <i>or</i> Humanities or Fine Arts Elective* (excluding ART courses).....	3
Required Digital Media and Design Coursework	18
ART 122 Two Dimensional Design	3
ART 149 Digital Photography I.....	3
ART 222 Computer Art I	3
DMD 111 Introduction to Digital Media.....	3
DMD 117 Concepts in New Media	3
DMD Electives (see below)	3

Required Special Option Coursework (below).....33

Select one Specialty Option (33 hours) from the three options below:

Animation Specialty Option

ART 124	Drawing I	3
ART 225	Figure Drawing.....	3
ART 263	2D Computer Animation	3
ART 264	3D Computer Animation	3
DMD 157	Introduction to Animation	3
DMD 173	Introduction to Digital Sound.....	3
DMD 216	Interactive Scripting	3
DMD 233	Video Editing	3
DMD 251	Advanced 3D Modeling	3
DMD 253	Advanced 3D Animation	3
DMD 259	3D Special Effects	3

Graphic Design Specialty Option

ART 111	Printing Production.....	3
ART 123	Color and Design Techniques	3
ART 221	Three Dimensional Design.....	3
ART 271	Introduction to Electronic Graphic Publishing	3
DMD 113	History of Graphic Design	3
DMD 115	Internet Fundamentals	3
DMD 116	Web Design and Development.....	3
DMD 174	Typography.....	3
DMD 273	Advanced Electronic Graphic Publishing	3
DMD 279	Packaging Design	3
ENG 113	Technical Communication Practicum <i>or</i>	
ENG 266	Professional Communication <i>or</i>	
EWE 220	Cooperative Work Experience I	3

Web Development and Interactive Design Specialty Option

ART 111	Printing Production.....	3
DMD 113	History of Graphic Design	3
DMD 115	Internet Fundamentals	3
DMD 116	Web Design and Development.....	3
DMD 157	Introduction to Animation	3
DMD 216	Interactive Scripting <i>or</i>	
CIT 171	Web Page Scripting	3
DMD 218	Advanced Web Design and Development	3
DMD 256	Dynamic Web Design and Development	3
DMD 257	Interactive Animation	3
ENG 113	Technical Communication Practicum <i>or</i>	
ENG 266	Professional Communication <i>or</i>	
EWE 220	Cooperative Work Experience I	3
	Elective (ART, CAD, CIT, or DMD from Animation, video, audio, game, Photography, CAD, database, networking, etc.).....	3

Total hours for A.A.S. degree66

DMD Electives

Select 3 hours from the list below:

BUS 121	Introduction to Business.....	3
BUS 219	Small Business Management	3
BUS 290	Business Plan Development	3
ENG 126	Advanced Composition: Scientific Technical Communication.....	3
ENG 220	Introduction to Scriptwriting for Video, TV and Film	3
DNC	Elective	3
HUM 123	Introduction to Film	3
HUM 222	Film and Society.....	3
MUS	Elective	3

Digital A/V Production and Editing (Associate in Applied Science) Plan 23TM

The Digital Media and Design Associate in Applied Science Degree in Digital A/V Production and Editing provides you with the conceptual, critical, creative and technical skills you'll need to create and produce a variety of commercial, educational and artistic audio and video projects. Building on conventional audio and video communication formats, Digital A/V Production and Editing will explore the realm of new media, creating art and design works including digital sound and music, still and moving images, compositing, special effects, 2D and 3D animations, Web, video and interactive media. We have created a robust curriculum that will keep up with industry developments and trends.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met.

Required General Education Coursework15

ANT 121	Introduction to Anthropology <i>or</i>	
PSY 121	Introduction to Psychology <i>or</i>	
PSY 122	Psychology in Business and Industry.....	3
CMM 121	Fundamentals of Speech <i>or</i>	
CMM 122	Business and Professional Speaking <i>or</i>	
CMM 128	Interviewing Practices	3
ENG 120	Technical Composition I <i>or</i>	
ENG 121	English Composition I	3
MTH 114	Applied Mathematics <i>or</i>	
MTH 117	Technical Mathematics I <i>or</i>	
MTH 122	College Algebra <i>or</i>	
MTH 141	Quantitative Literacy <i>or</i>	
MTH	Elective (higher than MTH 141)	3
PHI 122	Logic <i>or</i> Humanities or Fine Arts Elective (excluding ART courses)*	3

Associate in Applied Science and Career Certificates

Required Digital A/V Production and Editing

Coursework	45
ART 111 Printing Production.....	3
ART 122 Two Dimensional Design	3
ART 149 Digital Photography I.....	3
ART 222 Computer Art I	3
ART 272 Introduction to Video Production	3
ART 274 Video Production II	3
ART 280 Audio Production	3
DMD 111 Introduction to Digital Media.....	3
DMD 115 Internet Fundamentals	3
DMD 116 Web Design and Development.....	3
DMD 117 Concepts in New Media <i>or</i>	
ENG 126 Advanced Composition: Scientific	
Technical Communications.....	3
DMD 173 Introduction to Digital Sound.....	3
DMD 233 Digital Video Editing	3
DMD 277 Digital Media Delivery.....	3
Digital A/V Prod Elective (see below).....	3

Additional Required Coursework3

Select three hours from the list below:

BUS 121 Introduction to Business.....	3
BUS 219 Small Business Management	3
BUS 290 Business Plan Development.....	3
DNC Elective	3
ENG 220 Introduction to Scriptwriting for Video,	
TV, and Film	3
HUM 123 Introduction to Film	3
HUM 222 Film and Society.....	3
MUS Elective	3

Total Hours for A.A.S. Degree63

Digital A/V Production and Editing Electives

Select three hours from the list below:

ART 129 Photography I	3
ART 249 Digital Photography II	3
DMD 157 Introduction to Animation	3
DMD 257 Interactive Animation	3

Multimedia Presentations

(Certificate) Plan 23TE

AOS 215 Presentation Software.....	3
ART 272 Introduction to Video Production.....	3
DMD 111 Introduction to Digital Media.....	3
DMD 173 Introduction to Digital Sound.....	3
DMD 277 Digital Media Delivery.....	3

Total Hours for Certificate15

Multimedia Communications

(Certificate) Plan 23TH

ART 111 Printing Production.....	3
ART 122 Two Dimensional Design	3
ART 222 Computer Art I	3
CMM 121 Fundamentals of Speech <i>or</i>	
CMM 122 Business and Professional Speaking	3
DMD 111 Introduction to Digital Media.....	3
DMD 116 Web Design and Development.....	3
DMD 216 Interactive Scripting	3
ENG 113 Technical Communication Practicum	3
ENG 120 Technical Composition I <i>or</i>	
ENG 121 English Composition I	3
ENG 126 Advanced Composition: Scientific and	
Technical Communication.....	3
ENG 266 Professional Communication	3
Any other DMD course not	
included in this certificate.....	3

Total Hours for Certificate36

For more information on recommended courses or program specific advising, contact the following faculty members or the Communication Art, Humanities and Fine Arts division at (847) 543-2040:

Michael Kozien / Yang Xiang

Early Childhood Education

Business and Social Sciences Division,
Room T302, (847) 543-2047

Early Childhood Education (Associate in Applied Science) Plan 25EA

**Program Modification effective Fall 2016. See addendum for details.*

The Associate in Applied Science Degree program in Early Childhood Education prepares students for careers working with young children. Graduates of the program are DCFS qualified to be lead teachers in and directors of day care centers, preschools, and school-age programs. Public school Pre-K programs employ A.A.S. degree graduates as assistant teachers. Many of the courses transfer to four year institutions with related programs.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met.

First Semester	15
ENG 120 Technical Composition I <i>or</i>	
ENG 121 English Composition I	3
PSY 121 Introduction to Psychology	3
ECE 116 Creative Activities	3
ECE 121+ Introduction to Early Childhood Education ..	3
ECE 124+ Child Development for Educators	3
Second Semester	15-16
CMM 121 Fundamentals of Speech.....	3
Fine Arts or Humanities Elective*	
(with I/M designation, if needed)	3
BIO 120 Environmental Biology <i>or</i>	
BIO 123 Principles of Biology <i>or</i>	
BIO 141 Concepts in Biology <i>or</i>	
MTH 121 Mathematics for Elementary Teaching <i>or</i>	
MTH 140 Contemporary Mathematics <i>or</i>	
MTH 141 Quantitative Literacy <i>or</i>	
PHY 120 Practical Aspects of Physics	3-4
ECE 117 Creative Activities for Infants and Toddlers ..	3
ECE 141 Health, Safety & Nutrition	3
Third Semester	16
ECE 215 Music Activities	3
ECE 132 Professional Ethics in ECE	1
ECE 229 Language Development and Early Literacy..	3
ECE 214+ Group Care of Infants and Toddlers	3
ECE 223 Child, Family and Community	3
ECE 241 Guidance and Social Development	3
Fourth Semester	15-17
ECE 220 + Observation & Assessment	3
ECE 232 Math and Science for Young Children.....	3
EDU 233 Young Children with Special Needs	3
Concentration/Elective #.....	3-4
Concentration/Elective #.....	3-4

Total Hours for A.A.S. Degree61-65

Several courses may only be offered online, or only fall or spring semester which may affect scheduling.

A minimum of 6-8 credit hours of Concentration/Elective are required to fulfill this requirement.

ECE Program Electives

Select 6-8 credit hours from the list below:

ECE 133 Home-Based Child Care Management	3
EDU 223 Technology in the Classroom.....	3
EDU 224 Diversity in Schools and Society	3
EDU 225 Educational Psychology	3
+ EDU 242 Observation and Clinical Experience.....	1
ECE 231 School-Age Programming	3
+ ECE 250 ECE Practicum I—Infants & Toddlers*.....	3
ECE 251 Curriculum Methods—Infants/Toddlers*	3
+ ECE 252 ECE Practicum II—Preschoolers*	3
ECE 253 Curriculum Methods—Preschoolers*	3
ECE 270 Organization and Administration of Early Childhood Programs	3
ECE 299 Special Topics in Early Childhood Education <i>or</i>	
EDU 299 Special Topics in Education	3

^ For students wishing to obtain a teaching credential in the State of Illinois, a grade of C or above is compulsory for all coursework required for the teaching credential. This includes courses in the major, all education courses, and required general electives. This is effective for those applying for teacher certification as of 2012 (Illinois State Board of Education).

*A.A.S. in ECE students who desire to earn the Illinois Gateways to Opportunity ECE Credential—Level 4 and the Illinois Gateways to Opportunity Infant/Toddler Credential—Level 4 must complete these four courses as electives. Upon successful completion of this program, students may complete an application with INCCRRA/ Gateways to Opportunity to receive these credentials. See Department Chair for more details.

ECE 250 and ECE 252 each require 150 hours of classroom work in a NAEYC accredited early childhood center. These courses also require all course prerequisites (see course descriptions in catalog), as well as a current criminal clearance and DCFS mandated medical requirements. Completion of two practicums and relevant curriculum courses will require an additional semester to complete.

ECE 251 and ECE 253 must be taken concurrently (in an online format) with the coordinating practicum course.

Illinois Gateways to Opportunity awards entitlement status to higher education institutions that align their coursework with credential requirements. Students who complete the required courses may meet Gateways credential component requirements, and have up to two years to apply to receive their credential(s). Visit www.ilgateways.com/en/gateways-to-opportunity-credentials.

Associate in Applied Science and Career Certificates

+ ECE 121, ECE 124, ECE 214, ECE 220, ECE 250, ECE 252, EDU 124 and EDU 242 may require daytime field observation and/or experience hours, current Illinois State Police criminal background check, and/or current medical documentation. Check individual catalog descriptions for more information or contact the ECE Department Chair.

Infant-Toddler Specialist (Certificate) Plan 25EC

**Program Modification effective Summer 2017. See addendum for details.*

This certificate program prepares individuals with the knowledge and skills required to work successfully with infants and toddlers in child care programs. All of the courses in this certificate also apply to the A.A.S. degree in Early Childhood Education.

Infant-Toddler Specialist Coursework

ECE	117	Creative Activities for Infants and Toddlers	3
+ ECE	121	Introduction to Early Childhood Education	3
+ ECE	124	Child Development for Educators	3
ECE	141	Health Safety Nutrition	3
+ ECE	214	Group Care of Infants and Toddlers.....	3
ENG	120	Technical Composition I <i>or</i>	
ENG	121	English Composition I	3
PSY	121	Introduction to Psychology	3

Total Hours for Certificate21

^ For students wishing to obtain a teaching license in the State of Illinois, a grade of C or above is compulsory for all coursework required for the teaching license. This includes courses in the major, all education courses, and required general electives. This is effective for those applying for teacher licensure as of 2012 (Illinois State Board of Education).

School-Aged Child Care (Certificate) Plan 25ED

This certificate prepares individuals to work successfully with school-age children in out-of-school programs. Emphasis is placed on teaching practices necessary to plan and deliver developmentally appropriate programming and to create environments and interactions for children aged six to twelve years that meet the social, emotional, physical and cognitive needs of this age group.

+ ECE	124	Child Development for Educators	3
ECE	231	School-Age Programming	3
ENG	120	Technical Composition <i>or</i>	
ENG	121	English Composition I	3
PSY	121	Introduction to Psychology	3
		School-Aged Child Care Electives (see below)	6

Total Hours for Certificate18

School-Aged Child Care Electives

Select 6 hours from the list below:

ART	125	Art for Elementary Teachers	2
ECE	116	Creative Activities	3
+ ECE	121	Introduction to Early Childhood Education.....	3
ECE	132	Professional Ethics in ECE	1
ECE	141	Health, Safety and Nutrition	3
ECE	215	Music Activities	3
ECE	223	Child, Family, and Community	3
ECE	229	Language Development and Early Literacy	3
EDU	121	Introduction to Teaching	3
EDU	222	The Exceptional Child	3
+ EDU	242	Observation and Clinical Experience.....	1
ENG	249	Children's Literature.....	3
PED	129	Fundamentals of Youth Programming	4

Home Based Child Care (Certificate) Plan 25EE

Modification effective Fall 2016, inactive effective Summer 2017. See addendum for details.

This certificate program provides individuals with the knowledge and skills required to successfully operate a home-based child care facility/program. Emphasis is placed on teaching practices necessary to plan and deliver developmentally appropriate programming, environments and interactions to young children.

ENG	120	Technical Composition I <i>or</i>	
ENG	121	English Composition I	3
+ ECE	124	Child Development for Educators	3
ECE	116	Creative Activities	3
+ ECE	121	Introduction to Early Childhood Education.....	3
ECE	133	Home-Based Child Care Management.....	3
ECE	141	Health, Safety and Nutrition	3

Home Based Child Care Electives

Select 6 hours from the list below:

ECE	117	Creative Activities for Infants and Toddlers	3
+ ECE	214	Group Care of Infants and Toddlers.....	3
ECE	223	Child, Family and Community.....	3
ECE	229	Language Development and Early Literacy	3
ECE	232	Math and Science for Young Children.....	3
EDU	233	Young Children with Special Needs	3
ECE	241	Guidance and Social Development	3
ECE	299	Special Topics in Early Childhood Education.....	3
EDU	222	The Exceptional Child	3
EDU	299	Special Topics in Education	3

Total Hours for Certificate24

+ ECE 121, ECE 124, ECE 214, ECE 220, ECE 250, ECE 252, EDU 124 and EDU 242 require daytime field observation and/or experience hours, current Illinois State Police criminal background check, and/or current medical documentation. Check individual catalog descriptions for more information or contact the ECE Department Chair.

^ For students wishing to obtain a teaching license in the State of Illinois, a grade of C or above is compulsory for all coursework required for the teaching license. This includes courses in the major, all education courses, and required general electives. This is effective for those applying for teacher licensure as of 2012 (Illinois State Board of Education).

Administration and Leadership in Early Childhood Education (Certificate) Plan 25EF

This certificate is intended for students who already hold degrees or who have taken extensive coursework in other academic fields. The program provides the additional study that is often required for a career change, to meet requirements for Illinois Department of Children and Family Services (IDCFS) Director Qualifications, National Association for the Education of Young Children (NAEYC) program accreditation criteria, and/or to build skills in early childhood program administration and leadership.

Required Early Childhood Education Coursework.....24

+ ECE 121	Intro to Early Childhood Education	3
+ ECE 124	Child Development for Educators	3
ECE 132	Professional Ethics in ECE	1
ECE 141	Health, Safety, and Nutrition	3
ECE 223	Child, Family, and Community	3
ECE 254	ECE Administrative Practicum * or Four credits of approved elective coursework	4
ECE 270	Administration of ECE Programs	3
EDU 223	Technology in the Classroom.....	3
HCM 113	ServSafe Food Service Sanitation	1

Required Business Coursework6

BUS 115	Elements of Supervision	3
BUS 122	Principles of Marketing	3

Required Communication Coursework.....6

CMM 127	Intercultural Communication	3
CMM 128	Interviewing Practices	3

*See Department Chair for details and application for Illinois Gateways Level 1 Director Credential.

Total Hours for Certificate36

For more information on recommended courses or program specific advising, contact the following faculty members or the Business and Social Sciences Division at (847) 543-2047.

Kathleen Johnston / Diane Wolter

Electrician Apprenticeship

**Engineering, Math and Physical Sciences Division
Room T302, (847) 543-2044**

**Electrician Apprenticeship
(Associate in Applied Science) Plan 24EG**

This program has been established in partnership with the International Brotherhood of Electrical Workers (IBEW), Local 150. Students must be accepted into the IBEW apprenticeship program prior to enrollment in the program.

Courses noted with a plus sign (+) are taken at CLC. All other courses are taken at the IBEW Local 150 classrooms.

Year One15

First Semester

EET 170	DC Circuit Fundamentals.....	2
EMF 111	Electronics Mathematics I	2
EMF 112	Electronics Mathematics II.....	2
ISE 114	National Electrical Code	2
EAP 111	Electrician Apprenticeship Work Experience I.....	2

Second Semester

ELT 111	Electronic Drafting	2
ELC 113	Basic Instrumentation and Shop Practice.....	3
EAP 111	Electrician Apprenticeship Work Experience II	0
	(Continued from 1st semester)	

Year Two13

First Semester

CMT 112	Construction Blueprint Reading.....	3
ELC 172	Applied AC Circuit Theory	2
EAP 112	Electrician Apprenticeship Work Experience II	2

Second Semester

+ ENG 120	Technical Composition I <i>or</i>	
+ ENG 121	English Composition I	3
ISE 118	Power Distribution	3
EAP 112	Electrician Apprenticeship Work Experience II	0
	(Continued from 1st semester)	

Year Three15

First Semester

+ CMM 111	Communication Skills <i>or</i>	
+ CMM 121	Fundamentals of Speech.....	3
ELT 173	Applied Analog Circuits.....	3
EAP 113	Electrician Apprenticeship Work Experience III	2

Associate in Applied Science and Career Certificates

Second Semester	
CMT 118	Mechanical and Electrical Equipment .....3
ELC 114	Motor and Machine Controls .....3
ELC 276	Electrical Industrial Safety .....1
EAP 113	Electrician Apprenticeship Work Experience III .....0
	(Continued from 1st semester)
Fourth Year	.....14
First Semester	
ELC 171	Programmable Logic Controllers .....3
EET 230	Electrical Machines .....3
EAP 114	Electrician Apprenticeship Work Experience IV .....2
Second Semester	
ELT 117	Industrial Digital Electronics I .....3
+ HST 222	US History 1876 to Present <i>or</i>
+ HST 225	American Labor History.....3
EAP 114	Electrician Apprenticeship Work Experience IV .....0
	(Continued from 1st semester)
Year Five	.....11
First Semester	
+ ARC 228	History of Architecture .....3
+ CAD 110	CAD/CAM Concepts <i>or</i>
+ CAD 117	Introduction to AutoCAD.....3
EAP 115	Electrician Apprenticeship Work Experience V .....2
Second Semester	
ELT 171	Industrial Control Systems .....3
EAP 115	Electrician Apprenticeship Work Experience V .....0
	(Continued from 1st semester)
Total Hours for A.A.S. Degree	.....68

For more information on recommended courses or program specific advising, contact faculty member Michelle Leonard or the Engineering, Math and Physical Sciences division at (847) 543-2044.

Electrical Engineering Technology

Engineering, Math and Physical Sciences Division
Room T302, (847) 543-2044

Electrical Engineering Technology (Associate in Applied Science) Plan 24ED

Students are prepared to work in electrical or electronic research, electronic layout, instrumentation, design, field service, communication and service laboratories, as an electrical or electronics engineering technician, installer and repairer, or maintenance. The degree also prepares students for telecommunications, biomedical, broadcast and sound engineering, and sustainable energies, such as solar, wind and geothermal.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met.

First Semester	.....14-16
EET 170	DC Circuit Fundamentals .....2
EET 115	Electronic Laboratory Techniques.....2
EET 174	AC Fundamentals .....2
EET 173	DC Analysis-Network Theorems .....2
MTH 123	Trigonometry <i>or</i>
MTH 144	Precalculus .....3-5
ENG 120	Technical Composition I .....3
Second Semester	.....17
EET 175	AC Analysis and Circuit Theorems .....2
EET 223	Introduction to Digital Electronics .....4
CMM 121	Fundamentals of Speech .....3
PHY 121	General Physics I.....5
SOC 121	Introduction to Sociology .....3
Third Semester	.....18
EET 113	Solid State Electronics.....4
EET 230	Electrical Machinery .....3
MTH 145	Calculus & Analytic Geometry I.....5
PHI 122	Logic .....3
PSY 122	Industrial/Organizational Psychology .....3
Fourth Semester	.....17-19
EET 211	Advanced Solid State Electronics .....4
EET 216	Microprocessors I .....4
ECO 221	Principles of Macroeconomics <i>or</i>
ECO 222	Principles of Microeconomics.....3
	Approved Technical Electives .....6-8

Technical Electives 6-8 hours

MTH 146	Calculus & Analytic Geometry II	.....4
EET 212	Electronic Communications Systems	.....3
EET 130	Introduction to Renewable Energy Sources	.....4
EIT 210	Data and Network Communication	.....4
ELC 171	Programmable Logic Controllers	.....3
ELC 271	Advanced Programmable Controls	.....3
MTH 122	College Algebra	.....4
	Departmentally Approved Elective	.....3-5

Total Hours for A.A.S. Degree66-70

**Electronics Technology
(Certificate) Plan 24EF**

This program provides students with the basic background and skills necessary to work with both analog and digital electronics. A minimum of 35 semester hours credit must be completed for the certificate. Courses not listed here may be taken with division approval.

Core Courses10

EET 170	DC Circuit Fundamentals	.....2
EET 174	AC Fundamentals	.....2
EET 115	Electronic Laboratory Techniques	.....2
EET 223	Introduction to Digital Electronics	.....4

Additional Required Coursework25

Choose at least 25 credit hours from the following list.

EET 173	DC Analysis-Network Theorems	.....2
EET 175	AC Analysis and Circuit Theorems	.....2
EET 216	Microprocessors I	.....4
EET 113	Solid State Electronics	.....4
EET 211	Advanced Solid State Electronics	.....4
MTH 122	College Algebra <i>or</i>	
MTH 144	Precalculus	.....4-5
EET 212	Electronic Communications Systems	.....3
EET 130	Introduction to Renewable Energy Sources	.....4
EET 299	Special Topics: Electrical/Electronics	.....1-4
CAD 117	Introduction to AutoCAD	.....3
MCS 141	Computer Science I	.....4
PHY 120	Practical Aspects of Physics <i>or</i>	
PHY 121	General Physics I	.....4-5

Total Hours for Certificate35

**Electrical/Electronic Maintenance
(Certificate) Plan 24EH**

This certificate is intended to provide students with the skills necessary to perform electrical and electronic installation, trouble-shooting and maintenance procedures in industry, including practical experience with circuitry, motors and motor controls and programmable logic controllers.

Required Coursework24

EET 115	Electronic Laboratory Techniques	.....2
EET 170	DC Circuit Fundamentals	.....2
EET 230	Electrical Machinery	.....3
ELC 114	Motor and Machine Controls	.....3
ELC 171	Programmable Logic Controllers	.....3
ELC 172	Applied AC Circuit Theory	.....2
ELC 271	Advanced Programmable Controls	.....3
ENG 120	Technical Composition I <i>or</i>	
ENG 121	English Composition I	.....3
MTH 117	Technical Mathematics I	.....3

Technical Electives 6-8 hours

EET 130	Introduction to Renewable Energy Sources	..4
EET 223	Introduction to Digital Electronics	.....4
EET 299	Special Topics: Electrical/Electronics	.....1-4
EIT 116	Fiber Optic Fundamentals	.....3
EIT 210	Data and Network Communication	.....4
ELT 151	PC Hardware Fundamentals	.....3
ISE 114	National Electrical Code	.....2
MET 131	Introduction to Robotics	.....3

Total Hours for Certificate30-32

**Fiber Optics Technician
(Certificate) Plan 24EV**

This certificate program is designed to provide students the hands-on experience and knowledge needed to prepare for industry certification in fiber optics technology and to find entry level employment in network technology and telecommunications.

Additionally, this certificate may be used to broaden the experiences of skilled network and systems administrators to include fiber optic analysis, installation and testing.

EIT 111	Digital and Network Fundamentals	.....4
EIT 116	Fiber Optic Fundamentals	.....3

Total Hours for Certificate7

**Wireless Networking Security
(Certificate) Plan 24EU**

This certificate provides the hands-on and theoretical experiences a network administrator needs to be able to design, test and maintain secure wireless and mixed media networks. This program also prepares students to pursue certifications in the field of wireless networking.

EIT	111	Digital and Network Fundamentals	4
EIT	210	Data and Network Communication	4
EIT	230	Secure Wireless Networking	3
EIT	250	Wireless Data Communications	3

Total Hours for Certificate14

For more information on recommended courses or program specific advising, contact faculty member Michelle Leonard or the Engineering, Math and Physical Science division at (847) 543-2044.

Emergency and Disaster Management

**Business and Social Sciences Division,
Room T302, (847) 543-2047**

**Emergency and Disaster Management
(Certificate) Plan 25EM**

**Program Modification effective Spring 2017. See addendum for details.*

This certificate program is designed to assist students in developing and improving their skills in emergency and disaster management. Students will receive an understanding of federal, state and local government and their roles and responsibilities. This certificate is intended for students who currently have an interest or role in emergency management and disaster preparedness, including homeland security issues. The program will include topics of interest to businesses, including NFPA, OSHA, ISO, DOT and related regulations.

EDM	111	Introduction to Emergency Management	3
EDM	112	Emergency Planning.....	3
EDM	113	Professional Development: Emergency Management	3
EDM	114	Communications in Emergency Management	3
EDM	211	Emergency Disaster Response	3
EDM	212	Terrorism and Homeland Security	3

Total Hours for Certificate18

For more information on recommended courses or program specific advising, contact the following faculty member or the Business and Social Sciences Division at (847) 543-2047:

Randy Justus

Emergency Medical Technology

**Biological and Health Sciences Division, Room B210,
(847) 543-2042**

**Emergency Medical Technology
(Associate in Applied Science) Plan 21EA**

This degree provides students with the knowledge and skills needed to gain employment as an emergency medical technician. Graduates of this program will be provided with a high degree of specialized emergency medical training and courses of general education designed to provide breadth of knowledge in a variety of fields, specific scientific knowledge, and additional communication skills.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met.

Required General Education Coursework15

CMM		Elective (see page 114 for selections)	3
ENG	120	Technical Composition I <i>or</i>	
ENG	121	English Composition I	3
MTH	114	Applied Mathematics I <i>or</i>	
MTH		Elective (higher than MTH 114)	3
		Humanities or Fine Arts Elective*	3
		(HUM 127, PHI 122 or PHI 125 recommended)	
PSY	121	Introduction to Psychology <i>or</i>	
		Social Science Elective*	3

Required Emergency Medical Technology Coursework ..33

EMT	111	Emergency Medical Technician-Basic	7
EMT	114	Paramedic Clinical Practicum	3
EMT	115	Paramedic Field Experience Practicum	3
EMT	131	Introduction to Advanced Pre-hospital Care.....	4
EMT	132	Patient Assessment	2
EMT	133	Medical Emergencies	5
EMT	134	Trauma Emergencies	3
EMT	135	Special Considerations and Operations	6

Additional Required Coursework.....14-18

BIO	111	Human Form and Function <i>or</i>	
BIO	244	Anatomy and Physiology I <i>and</i>	
BIO	245	Anatomy and Physiology II	4-8
HIT	111	Medical Terminology	3
HIT	119	Pharmacology	1
		Electives	6

Total Hours for A.A.S. Degree62-66

**Emergency Medical Technician - Basic
(Certificate) Plan 21EM**

Emergency medical technicians provide emergency medical care for illness and injury at the site and enroute to the hospital. They provide pre-hospital and inter-hospital emergency medical services and medical transport services at the basic life support level. Graduates are employed primarily by ambulance services, and by fire and rescue departments. Graduates will understand the emergency services system, the responsibilities of emergency services personnel, as well as assessment, stabilization, and initial pre-hospital medical treatment of injured and ill patients. Completion of this certificate prepares students to take the licensing examination to become an EMT-B (Emergency Medical Technician-Basic). Courses are offered at associated hospitals and fire/rescue departments in Lake County. Day and evening classes are available.

EMT 111 Emergency Medical Technician – Basic7

Total Hours for Certificate7

**Emergency Medical Technician - Paramedic
(Certificate) Plan 21EP**

Paramedics provide emergency medical care for illness and injury at site and enroute to the hospital. Paramedics are trained to provide pre-hospital and inter-hospital emergency medical services and medical transport services at the advanced life support level, including administration of intravenous lines, intubation, and defibrillation. Paramedics are employed primarily by fire and rescue departments and by ambulance services. Students entering this program already must have earned the EMT-B or EMT-I license. Completion of this certificate prepares students to take the licensing examination to become an EMT-P (Emergency Medical Technician-Paramedic). Courses are offered at associated hospitals in Lake County. Day and evening classes are available.

BIO	111	Human Form and Function <i>or</i>	
+ BIO	244	Anatomy and Physiology I <i>and</i>	
+ BIO	245	Anatomy and Physiology II	4-8
EMT	114	EMT Paramedic – Clinical Practicum	3
EMT	115	EMT Paramedic – Field Experience Practicum	3
EMT	131	Introduction to Advanced Pre-hospital Care	4
EMT	132	Patient Assessment	2
EMT	133	Medical Emergencies	5
EMT	134	Trauma Emergencies	3
EMT	135	Special Considerations and Operations	6

Total Hours for Certificate30-34

+ If BIO 124 has been taken, BIO 244 and BIO 245 are not needed. BIO 124 was last offered Summer 2009 and will be accepted through September 2014.

NOTE: All EMT classes are held at area hospitals or fire and rescue departments. Registration for classes, except EMT111-300, is processed directly through the individual site hosting the class. Space is limited and classes fill up quickly. For more information, please contact one of the EMS coordinators listed below:

For more information on recommended courses or program specific advising, contact the following individuals or the Biological and Health Science division at (847) 543-2042:

Vista Medical Center West

EMT-Basic (847) 360-2038
EMT-Paramedic Dave Chase (847) 360-2205

Advocate Condell Medical Center

EMT-Paramedic (847) 990-5309

**NorthShore University HealthSystem/
Highland Park Hospital**

EMT-Basic & Martha Pettineo (847) 480-3787
EMT Paramedic

Important Financial Aid Information

EMT A.A.S. as well as EMT-Basic and EMT-Paramedic certificate programs are *not eligible* for Title IV aid. Only students who are eligible for benefits under the Illinois Veteran’s grant, Illinois National Guard, or MIA/POW may receive financial aid for these programs.

Fire Science Technology

Business and Social Sciences Division,
Room T302, (847) 543-2047

Fire Science Technology (Associate in Applied Science) Plan 25FB

The Fire Science Technology Associate in Applied Science degree is designed to serve the needs of students in the Fire Service and to prepare others to enter the Fire Service.

Many of the Fire Science courses are articulated with the Office of the State Fire Marshall and can be applied towards the requirements for Instructor I, Instructor II, Fire Officer I, Fire Officer II, Apparatus Engineer, and Hazmat Awareness and Operations.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met.

First Semester	15
ENG 120 Technical Composition I <i>or</i>	
ENG 121 English Composition I	3
PSY 121 Introduction to Psychology	3
MTH 114 Applied Mathematics I <i>or</i>	
higher numbered mathematics course.....	3
CIT 119 Introduction to Office Software <i>or</i>	
CIT 120 Introduction to Computers	3
FST 111 Introduction to Fire Service	3
Second Semester	16
CMM 121 Fundamentals of Speech <i>or</i>	
CMM 128 Interviewing Practices	3
PHY 120 Practical Aspects of Physics.....	4
FST 116 Fire Fighting Tactics and Strategy I.....	3
FST 173 Fire Instructor I.....	3
Concentration/Elective #	3
Third Semester	18
PSC 122 State and Local Politics	3
Humanities or Fine Arts Elective*	
(with I/M designation, if needed)	3
FST 177 Fire Prevention Principles I	3
FST 217 Fire Officer Communications.....	3
FST 218 Fire Officer Supervision.....	3
Concentration/Elective #	3
Fourth Semester	15
Concentration/Elective #	3
Total Hours for A.A.S. Degree	64

A minimum of 21 credit hours of Concentration/Electives are required to fulfill this requirement.

Fire Science Electives

Select 21 hours from the list below:

FST 117	Fire Fighting Tactics Stra II	3
FST 118	Incident Command	3
FST 174	Fire Instructor II	3
FST 273	Fire Science Business & Opera	3
FST 274	Fire Administration & the Law	3
FST 279	Special Topics Fire Service	3
EDM 212	Terrorism & Homeland Security	3

A maximum of 7 hours may be selected from the following list towards FST Electives:

EDM 111	Intro to Emergency Management.....	3
EDM 112	Emergency Planning.....	3
EDM 113	Prof. Development: Emer. Mgt.	3
EDM 114	Comm. In Emergency Management	3
EDM 211	Emergency and Disaster Resp.....	3
EMT 111	Emergency Medical Tech-Basic.....	7

Firefighter Basic Operations

(Associate in Applied Science) Plan 25FC

The Firefighter Basic Operations Associate in Applied Science degree is designed to serve the needs of students interested in obtaining the certifications/licenses required for an entry level position in the Fire Service. Students pursuing the A.A.S. degree are required to complete 25 credit hours of general education, 22 credit hours of Fire Science Technology core courses, and 15 hours of Fire Science Technology electives. There are two tracks to this degree. Students may choose the management (Fire Officer I) track or the non-management track.

Students will be required to provide approved personal protective safety equipment which may be purchased or leased. This equipment consists of firefighter turnouts (coat and pants), firefighting footwear, suspenders, gloves, hood, safety glasses, fire helmet, and self-contained breathing apparatus. All equipment must comply with current National Fire Protection Association (NFPA) Standards.

All students must have a valid NFPA 1001 medical physical and a current background investigation, and must consult with a Fire Science Technology adviser to plan and schedule their program.

Admission Requirements

To be admitted to this program the student must apply to the Department Chair. Approval will be approved based on conditions that include completion of the Firefighter Basic Operations application, successful completion of a background investigation that includes, but is not limited to the following: a criminal background investigation and fingerprinting; medical physical meeting NFPA Standard 1582, Chapter 6 (Standard on Comprehensive Occupational Medical Program for Fire Departments/Medical Evaluation of Candidates), including qualitative and quantitative respirator use evaluation; provision of NFPA compliant personal protective equipment consisting of turnout coat, turnout pants, suspenders, footwear, hood, helmet, and gloves, provision of self-contained breathing apparatus facepiece that mates to College of Lake County (CLC) provided SCBA; and acknowledgement that the student will become a member of the CLC Fire Department and the acknowledgement that they are required to provide scheduled staffing for the CLC Fire Department.

Health Physical

Medical physical will meet NFPA Standard 1582, Chapter 6 (Standard on Comprehensive Occupational Medical Program for Fire Departments/Medical Evaluation of Candidates), including qualitative and quantitative respirator use evaluation.

Program Requirements

First Semester	15
ENG 120 Technical Composition I <i>or</i>	
ENG 121 English Composition I	3
PSY 121 Introduction to Psychology	3
MTH 114 Applied Mathematics I <i>or</i>	
higher numbered mathematics course.....	3
CIT 119 Introduction to Office Software <i>or</i>	
CIT 120 Introduction to Computers	3
FST 111 Introduction to Fire Service	3
Second Semester	17
CMM 121 Fundamentals of Speech <i>or</i>	
CMM 128 Interviewing Practices	3
EMT 111 Emergency Medical Tech-Basic.....	7
PHY 120 Practical Aspects of Physics.....	4
PSC 122 State and Local Politics	3
Third Semester	13
FST 130 Basic Operations Firefighter A.....	4
Humanities or Fine Arts Elective *	
(with I/M designation, if needed)	3
Concentration/Elective #	6

Fourth Semester	17
FST 131 Basic Operations Firefighter B.....	4
FST 132 Basic Operations Firefighter	4
Concentration/Elective #	9

Total Hours for A.A.S. Degree

A minimum of 15 credit hours of Concentration/Electives are required to fulfill this requirement.

Elective course selection:

Students must choose 15 elective hours based on their preferred concentration. Management students must take the 15 credit hours listed in the the Management block of elective courses. Non-management students will choose from the Non-Management block of elective courses, which includes some management courses.

Basic Firefighter Operations Electives for Management 15

FST 116 Fire Fighting Tactics Strat I	3
FST 173 Fire Instructor I.....	3
FST 177 Fire Prevention Principles I	3
FST 217 Fire Officer Communications	3
FST 218 Fire Officer Supervision	3
FST 279 Special Topics Fire Service	3
EDM 212 Terrorism & Homeland Security	3

Basic Firefighter Operations Electives

for Non-Management

15	
FST 116 Fire Fighting Tactics Strat I	3
FST 117 Fire Fighting Tactics Stra II	3
FST 118 Incident Command	3
FST 119 Fire Apparatus Engineer.....	3
FST 173 Fire Instructor I.....	3
FST 174 Fire Instructor II	3
FST 177 Fire Prevention Principles I	3
FST 192 Hazardous Materials First Resp	3
FST 217 Fire Officer Communications.....	3
FST 218 Fire Officer Supervision.....	3
FST 273 Fire Science Business & Opera	3
FST 274 Fire Administration & the Law	3
FST 279 Special Topics Fire Service	3
EDM 212 Terrorism & Homeland Security	3

For more information on recommended courses or program specific advising, contact the following faculty member or the Business and Social Sciences Division at (847) 543-2047:

Randy Justus

Associate in Applied Science and Career Certificates

Health and Wellness Promotion

Biological and Health Sciences Division, Room B210,
(847) 543-2042

Health and Wellness Promotion (Associate in Applied Science) Plan 21WA

The focus of the A.A.S. in Health and Wellness Promotion (HWP) is to empower students to help others through prevention of illness, injury, and disease by effective application of principles and practices of holistic coaching. It also provides an opportunity for various health career certificate-seeking students to continue their education in a general health studies capacity and earn an associates degree. Successful completion of this program will prepare students for advanced certifications through the American College of Sports medicine, Wellcoaches Corporation, and the International Coach Federation. The associate degree program is accredited by the National Wellness Institute and the National Consortium for Credentialing Health and Wellness Coaches (NCCHWC). The HWP program is not a limited enrollment program. Day and evening classes are available.

Required General Education Coursework16-20

BIO	111	Human Form and Function or	
BIO	244	Anatomy and Physiology I and	
BIO	245	Anatomy and Physiology II	4-8
CMM	111	Communication Skills or	
CMM	121	Fundamentals of Speech or	
CMM	123	Dynamics/Small Group Discussion	3
ENG	120	Technical Composition I or	
ENG	121	English Composition I	3
PHI	121	Introduction to Philosophy or	
PHI	125	Introduction to Ethics	3
PSY	121	Introduction to Psychology	3

Required Health and Wellness Promotion Coursework ..19

BUS	121	Introduction to Business	3
HCM	175	Nutrition	3
HWP	240	Contemporary Health Issues	3
HWP	257	Health and Wellness Practicum I	1
HWP	258	Health and Wellness Practicum II	1
HWP	260	Sport and Exercise Nutrition	3
HWP	290	Principles of Wellness Coaching	3
PED	228	First Aid/CPR	2

Required Specialty Option25

Select one Specialty Option (25 hours) from the three below:

Personal Training Option

PED	243	Theory and Practice of Fitness	2
PED	270	Biomechanics and Kinesiology	3
PED	271	Exercise Physiology	3
PED	272	Exercise Testing and Prescription	3
		General Electives	14

Massage Therapy Option

MAS	110	Massage Structure and Function I	2
MAS	112	Kinesiology and Palpaton I	2
MAS	114	Massage: Business and Communication I	3
MAS	116	Clinical Skills and Special Problems	3
MAS	119	Introduction to Massage Therapy	1
MAS	131	Massage Therapy I: Swedish	2
MAS	132	Massage Therapy II: Integrative	2
		Electives (select from MAS courses on page 308.)	10

Wellness Coaching Option

CMM	128	Interviewing Practices	3
PED	242	Philosophy of Coaching	3
PSY	224	Theories of Personality	3
		General Electives	16

Total Hours for A.A.S. Degree60-64

Personal Training (Certificate) Plan 21WB

The Personal Training certificate program is designed to provide students with the knowledge, skills, and experience necessary to seek out and maintain viable employment in the health and fitness industry. Curricula are aligned with the American College of Sports Medicine (ACSM) Certified Personal Trainer (CPT) Program. Students will also be encouraged to take the ACSM-CPT examination upon successful completion of program coursework.

BIO	111	Human Form and Function or	
BIO	244	Anatomy and Physiology I and	
BIO	245	Anatomy and Physiology II	4-8
HCM	175	Nutrition or	
HWP	260	Sport and Exercise Nutrition	3
HWP	240	Contemporary Health Issues	3
HWP	257	Health and Wellness Practicum I	1
HWP	258	Health and Wellness Practicum II	1
PED	243	Theory and Practice of Fitness	2
PED	228	First Aid/CPR	2
PED	270	Biomechanics and Kinesiology	3
PED	271	Exercise Physiology	3
PED	272	Exercise Testing and Prescription	3

Total Hours for Certificate25-29

Wellness Coaching (Certificate) Plan 21WC

The Wellness Coaching certificate program is designed to provide students with an introduction to the field of wellness and life coaching. Successful completion of required coursework will assist students with preparation necessary to complete their national certification in wellness or life coaching. It will also enable students to utilize acquired knowledge and skills to enhance existing professional responsibilities. The certificate program is accredited by the National Consortium for Credentialing Health and Wellness Coaches (NCCHWC).

CMM	128	Interviewing Practices	3
HWP	240	Contemporary Health Issues	3
HWP	257	Health and Wellness Practicum I	1
HWP	258	Health and Wellness Practicum II	1
HWP	290	Principles of Wellness Coaching	3
PED	242	Philosophy of Coaching	3
PSY	121	Introduction to Psychology	3

Total Hours for Certificate17

For more information on recommended courses or program specific advising, contact faculty member Francis Ardito at fordito@clcollinois.edu or the Biological and Health Sciences Division at (847) 543-2042.

Health Information Technology

**Biological and Health Sciences Division, Room B210,
(847) 543-2042**

This is a limited enrollment program. Students are required to meet the screening requirements in effect at the time of screening. Students who screen and are accepted into a limited enrollment program will be required to complete the curriculum that is in place at the time of entrance into the program. If students who screen are not granted admission, they must rescreen and satisfy all screening and curriculum requirements in place for a future program start.

Screening Deadline: First Wednesday in February

The field of health information provides a wide variety of professional opportunities in the health care industry. Health information is a unique profession that incorporates clinical, information technology and management skills, giving graduates the background to work in a range of health care settings. Courses in medical terminology, anatomy and physiology, and medical science lay the foundation for the program, which focuses on collecting, maintaining, retrieving, and analyzing the health information of patients. Students also learn the legal aspects of health information, statistics, coding and reimbursement methods, health care quality improvement techniques, as well as health records management.

Graduates of CLC's Health Information Technology Program include coding professionals, health information department managers, cancer registrars, nursing home consultants, clinical documentation specialists, medical billers, and medical office managers, among others. Work settings include hospitals, physicians' offices, clinics, insurance companies, professional associations, nursing homes, and medical billing services.

For students interested in health care, but not direct patient care, health information technology prepares students for a satisfying and rewarding career in health care and related fields.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met.

Associate in Applied Science and Career Certificates

Health Information Technology (Associate in Applied Science) Plan 21HM

Accreditation and Certification

The Health Information Technology Program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM). Graduates of the program are eligible to apply to write for the certification examination of the American Health Information Management Association for the designation RHIT (Registered Health Information Technician).

Admission to the Program

Many courses are available in the evening; however, to complete the degree some day-only classes are required.

Interested students may take HIT 111, 113, 115, 117, 119, 131, 132, 215 and 271 prior to being admitted to the program; however, the number of students admitted to the Professional Practice Experience (HIT 212 and HIT 213) each year is limited. Therefore, a screening procedure is used to select the academically best qualified from those who request consideration. Preference will be given to residents of Community College District 532 (and community colleges with which CLC has a Joint Educational Agreement). Students who live outside of CLC's district but are eligible for in-district tuition because they are employed by a district employer are NOT considered residents of the district for purposes of selection into the program. Students should seek admission to the Health Information Technology Program the year prior to enrolling in HIT 212. (e.g., If you expect to take HIT 212 in Fall 2018, apply by February 2017.) If you are accepted into the program and do not enroll in HIT 212 as scheduled, CLC will attempt to accommodate the schedule change but there is no guarantee you will be permitted to enroll in HIT 212 in subsequent years. Please review the admission requirements that are listed below.

To be considered for admission to the Health Information Technology Program, students must complete the following screening requirements prior to the screening deadline.

Students must have submitted the following documents to the Welcome and One-Stop Center:

- A. Student Information Form
- B. **Official** high school transcript with graduation date OR **Official** GED test scores
OR
Official college transcripts with graduation date and degree awarded
OR
Official foreign high school or college transcript evaluated by a NACES approved agency

C. Health Information Technology Program Request for Screening Form

D. If using courses from another college to meet prerequisites or degree requirements, submit an official transcript to the Records Office. It is also highly recommended to submit a "Request for Evaluation of Prior College Transcripts" form.

Minimum Selection Criteria: student records must indicate the following:

- A. High school graduate or equivalent or high school senior in last term
- B. College Reading and Writing Readiness and Basic Algebra Readiness
- C. CLC Cumulative GPA is 2.0 or above
- D. NLN PAX with minimum composite percentile of 50 (within 3 years of the screening deadline)
- E. Attendance at a Health Information Technology Information Session (within two years of the screening deadline)

Note: Applicants may take the NLN PAX exam once every 90 days (approximately three months). NLN PAX exam results that are less than 90 days between exams will not be considered. Scores used for screening into the nursing program will be valid for only 3 years prior to a screening deadline. Scores older than 3 years will not be considered for screening. Visit www.nlnonlinetesting.org for available test dates and times or visit the Health Information Technology webpage at www.clcillinois.edu/programs/hit. Instructions for registering for the test are available on the webpage.

Students who are selected for the program are required to undergo a background check and a urine drug screen. The results of the background check and drug screen may result in the student losing his/her seat in the program. The costs are borne by the student.

Students who are selected for the program are required to attend a mandatory orientation session. Failure to attend the mandatory orientation session may result in the student losing his/her seat in the program and the next qualified student on the list will be selected in his/her place.

Students must earn a grade of "C or better" in all HIT and BIO courses.

Required General Education Coursework16-20

+ BIO 111	Human Form and Function <i>or</i>	
+ BIO 244	Anatomy and Physiology I <i>and</i>	
BIO 245	Anatomy and Physiology II	4-8
CMM 111	Communication Skills <i>or</i>	
CMM 121	Fundamentals of Speech <i>or</i>	
CMM 122	Business and Professional Speaking <i>or</i>	
CMM 123	Dynamics of Small Group Discussion <i>or</i>	
CMM 128	Interviewing Practices	3
ENG 120	Technical Composition I <i>or</i>	
ENG 121	English Composition I	3
	Humanities or Fine Arts Elective*	3
	Social Science Elective*	3

Required Health Information Technology Coursework43

HIT 111	Medical Terminology	3
HIT 113	Ethical/Legal Aspects of Medical Records	2
HIT 115	Fundamentals of Health Information Technology	3
HIT 117	Basic CPT Coding	3
HIT 119	Pharmacology	1
HIT 131	Basic ICD-10-CM Coding	3
HIT 132	Basic ICD-10-PCS Coding	2
HIT 171	Insurance Procedures for the Medical Office	3
HIT 212	Professional Practice Experience in Health Information I	4
HIT 213	Professional Practice Experience in Health Information II	2
HIT 215	Medical Science	3
■ HIT 217	Health Information Systems and Data Literacy	3
HIT 218	Seminar in Health Information	2
HIT 231	Leadership and Management in Health Information Management	2
HIT 232	Quality Management and Healthcare Statistics	3
HIT 271	Advanced Coding	2
HIT 272	Reimbursement Systems in Healthcare	2

Additional Required Coursework6

AOS 112	Computer Basics/Software Applications <i>or</i>	
CIT 119	Introduction to Office Software <i>or</i>	
CIT 120	Introduction to Computers	3
CIT 111	Comprehensive Spreadsheets <i>or</i>	
CIT 112	Comprehensive Database	3

Total Hours for A.A.S. Degree65-69

~ HIT 232 will be offered in the spring of 2017 ONLY.

■ HIT 217 will be offered in the spring of 2018 ONLY.

+ If BIO 124 has been taken, BIO 111/BIO 244 and BIO 245 are not needed.

Students should seek the advice of the HIT faculty for course scheduling every semester.

Medical Billing Specialist (Certificate) Plan 21HN

Medical billers play a critical role in the financial aspects of a physician’s practice. They report the patient’s diagnosis and the services rendered to that patient using special medical codes. These codes are included on the bills submitted to insurance companies, managed care plans, and Medicare. Medical billers need to have extensive knowledge of medical terminology, coding, and insurance procedures. Medical billers are employed by physicians’ offices, clinics, and billing services.

Medical billing is not a limited enrollment program. Day and evening classes are available.

All of the courses may be applied to the Health Information Technology associate degree program if the student desires to progress in the future to become a Registered Health Information Technician (RHIT).

A student must earn a grade of “C or better” in all HIT and BIO courses.

AOS 112	Computer Basics/Software Applications <i>or</i>	
CIT 119	Introduction to Office Software <i>or</i>	
CIT 120	Introduction to Computers	3
+ BIO 111	Human Form and Function <i>or</i>	
+ BIO 244	Anatomy and Physiology I <i>and</i>	
BIO 245	Anatomy and Physiology II	4-8
HIT 111	Medical Terminology	3
HIT 117	Basic CPT Coding	3
HIT 131	Basic ICD-10-CM Coding	3
HIT 119	Pharmacology	1
HIT 171	Insurance Procedures for the Medical Office	3

Total Hours for Certificate20-24

+ If BIO 124 has been taken, BIO 111/BIO 244 and BIO 245 are not needed.

For more information on recommended courses or program specific advising, contact faculty members Ellen Anderson at (847) 543-2867, Margaret Kyriakos at (847) 543-2879, Christina Melnytschuk at (847) 543-2886 or the Biological and Health Sciences division at (847) 543-2042.

Heating, Ventilation, Air Conditioning, Refrigeration Engineering Technology

**Engineering, Math and Physical Sciences Division
Room T302, (847) 543-2044**

The HVACR program provides instruction in air conditioning, heating, and refrigeration. Introductory courses in electricity, electric motors, and theory of refrigeration are included. Advanced work in the commercial area includes work on reach-in and walk-in units found in stores, dairies, and markets. Other areas of study include uses of air conditioning, temperature and humidity control, air circulation, cleaning, installation, and troubleshooting of equipment. Students are required to provide their own basic tools, and to take a national exit exam which will give passing students national recognition on an A.R.I. (Air Conditioning and Refrigeration Institute) National Registry, which goes to Refrigeration, Heating and Air Conditioning employers.

For students interested in **Sustainable Programs**, please see page 201 for options, or contact the identified department chair for more information.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met.

Residential Heating Technician (Certificate) Plan 24RJ

The Residential Heating Technician Certificate program prepares students for employment as residential heating trainee. This certificate places a strong emphasis on operational characteristics of various types of residential heating equipment, its wiring, and safety procedures. Students learn to use refrigerants, gauges, and electrical test equipment in a residential setting. Students will be given a national exit exam after each advanced course which will provide passing students recognition on the Air Conditioning, Heating, and Refrigeration Institute (AHRI) national registry distributed to heating, air conditioning, ventilation, and refrigeration employers.

Note: Students are required to provide their own basic tools.

HET	110	Basic Refrigeration Systems	4
HET	111	HVACR Electricity I	4
HET	130	Heating I Residential Appliances	4
HET	190	EPA Certification Preparation	2

Total Hours for Certificate14

Residential Air Conditioning Technician (Certificate) Plan 24RN

The Residential Air Conditioning Technician Certificate program prepares students for employment as residential air conditioning trainee. This certificate places a strong emphasis on operational characteristics of various types of residential air conditioning equipment, its wiring, and safety procedures. Students learn to use refrigerants, gauges, and electrical test equipment in a residential setting. Students will be given a national exit exam after each advanced course which provides passing students recognition on the Air Conditioning, Heating, and Refrigeration Institute (AHRI) national registry distributed to heating, air conditioning, ventilation, and refrigeration employers.

Note: Students are required to provide their own basic tools.

HET	110	Basic Refrigeration Systems	4
HET	111	HVACR Electricity I	4
HET	150	Air Conditioning I Split-Systems.....	4
HET	190	EPA Certification Preparation	2

Total Hours for Certificate14

Commercial Refrigeration Technician (Certificate) Plan 24RK

The Commercial Refrigeration Technician Certificate program prepares students for employment as commercial refrigeration trainee. This certificate places a strong emphasis on the commercial refrigeration industry and emphasizes hands-on service and installation techniques, soldering and brazing, safety, and mechanical and electrical troubleshooting. Students learn to use refrigerants, gauges, and electrical test equipment in a commercial setting. Students will be given a national exit exam after each advanced course which provides passing students recognition on the Air Conditioning, Heating, and Refrigeration Institute (AHRI) national registry distributed to heating, air conditioning, ventilation, and refrigeration employers.

Note: Students are required to provide their own basic tools.

HET	110	Basic Refrigeration Systems	4
HET	111	HVACR Electricity I	4
HET	172	Refrigeration II Commercial Appliances	4
HET	190	EPA Certification Preparation	2

Total Hours for Certificate14

**Electrical Troubleshooting Technician
(Certificate) Plan 24RL**

The Electrical Troubleshooting Technician Certificate program prepares students to specialize in electrical troubleshooting for employment as HVAC trainees. This certificate places a strong emphasis on national Electrical Code, meters, schematics, and wiring diagrams, electrical troubleshooting, electrical service procedures, electrical test equipment, and safety. Students learn to use electrical test equipment found in a HVAC setting. Students will be given a national exit exam after each advanced course which provides passing students recognition on the Air Conditioning, Heating, and Refrigeration Institute (AHRI) national registry distributed to heating, air conditioning, ventilation, and refrigeration employers.

Note: Students are required to provide their own basic tools.

HET 110	Basic Refrigeration Systems	4
HET 111	HVACR Electricity I	4
HET 119	HVACR Electricity II	4
HET 190	EPA Certification Preparation	2

Total Hours for Certificate14

**HVAC/R Engineering Technology
(Associate in Applied Science) Plan 24RD**

The Residential HVAC A.A.S. program prepares students for service and installation positions with specialization in the design, layout, installation, and service of residential HVAC equipment. Students acquire skills in safety, HVAC principles, soldering and brazing, mechanical and electrical troubleshooting, refrigerant handling, the use of refrigerant gauges, and electrical test equipment.

The Residential HVAC curriculum is aligned with the educational standards of the Partnership for Air Conditioning, Heating, Refrigeration Accreditation (PAHRA) and the Illinois Occupational Skill Standards for HVACR. HET courses in A/C split-systems, residential HVAC systems, air movement & ventilation, advanced electrical, HVACR codes, EPA and NATE certification preparation, hydronic heating, and a HET capstone course meet re-certification requirements for NATE.

The Residential HVAC program is a partner of the Air Conditioning, Heating, and Refrigeration Institute (AHRI). Upon completion of a second semester course students qualify to sit for the Industry Competency Examination (ICE), a nationally recognized credential in the HVACR industry which provides passing students national recognition on an

AHRI or North American Technician Excellence (NATE) national registry distributed to heating, ventilation, air conditioning, and refrigeration employers.

Note: Students are required to provide their own basic tools.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met.

Required General Education Coursework15

CMM	Elective (See page 114 for selections)	3
ENG 120	Technical Composition I <i>or</i>	
ENG 121	English Composition I	3
ECO 110	Economics for Business and Industry <i>or</i> Social Science Elective *	3
HUM 127	Critical Thinking <i>or</i> Humanities or Fine Arts Elective *	3
MTH 114	Applied Mathematics I <i>or</i>	
MTH 115	Applied Mathematics II <i>or</i>	
MTH 117	Technical Mathematics I	3

**Required HVAC/R Engineering
Technology Coursework**.....40

HET 110	Basic Refrigeration Systems	4
HET 111	HVACR Electricity I	4
HET 119	HVACR Electricity II	4
HET 130	Heating I Residential Appliances	4
HET 150	Air Conditioning I Split-Systems	4
HET 155	HVAC/R Blueprint Reading	1
HET 172	Refrigeration II Commercial Appliances	4
HET 190	EPA Certification Preparation	2
HET 191	HVAC/R Load Calculation	4
HET 230	Air Movement and Ventilation	4
HET 251	Sheet Metal Fabrication	1
HET 252	A/C III Installation and Service	4

Technical Electives.....8-12

HET 170	Refrigeration I Small Appliances	4
HET 192	HVACR Engineering Tech Practicum	1
HET 193	Recertification Preparation	0.5
HET 194	NATE Certification Preparation	2
HET 219	HVACR Electricity III	4
HET 231	Heating II Hydronic Heating Systems	4
HET 250	A/C II Commercial HVAC Appliances	4
HET 272	Refrigeration III Comm. Appliance Install	4
HET 273	Direct Digital Controls	4
HET 293	HVAC Codes	3
HET 294	Green Building/Energy Sustainability	3
PHY 121	General Physics I	5
HET 295	HET Capstone	3
ELC 171	Programmable Logic Controllers	3
ELC 271	Advanced Programmable Controls	3
PHY 121	General Physics I	5
WLD 170	General Welding	3

Total Hours for A.A.S63-67

Associate in Applied Science and Career Certificates

HVAC/R Installation Technician (Certificate) Plan 24RY

This certificate is designed to give the HVAC/R student the ability and knowledge in the area of installation which includes the skills in installing HVAC/R equipment and fabricating sheet metal duct systems.

HET	110	Basic Refrigeration Systems	4
HET	111	HVACR Electricity I	4
HET	130	Heating I Residential Appliances	4
HET	155	HVAC/R Blueprint Reading	1
HET	193	Recertification Preparation or	
HET	190	EPA Certification Preparation	0.5-2
HET	251	Sheet Metal Fabrication.....	1
HET	252	A/C III Installation and Service	4

Total Hours for Certificate18.5-20

HVAC/R Service Technician (Certificate) Plan 24RI

The HVAC/R Service Technician Certificate program prepares students for specialization and employment as both residential and commercial HVAC/R equipment technicians. Courses provide exposure to HVAC/R industry and emphasize hands-on service and installation techniques, soldering and brazing, safety, and mechanical and electrical troubleshooting. Students learn to use refrigerants, gauges, and electrical test equipment in a commercial setting. Students will be given a national exit exam after each advanced course which provide passing students recognition on the Air Conditioning, Heating, and Refrigeration Institute (AHRI) national registry distributed to heating, air conditioning, ventilation, and refrigeration employers.

Note: Students are required to complete the HVAC/R Installation Technician certificate (24RY) before beginning this certificate. In addition students must provide their own basic tools.

HET	119	HVACR Electricity II	4
HET	150	Air Conditioning I Split-Systems	4
HET	191	HVACR Load Calculation.....	4
HET	194	NATE Certification Preparation	2
HET	230	Air Movement and Ventilation	4
HET	231	Heating II Hydronic Heating Systems	4
HET	250	A/C II Commercial HVAC Appliances	4
HET	293	HVAC Codes	3

Total Hours for Certificate.....29

Residential Energy Auditing (Certificate) Plan 24RW

The Residential Energy Audit Certificate prepares students to specialize in the energy audit and insulation of residential buildings, while preparing students for employment as energy auditors. It also prepares students to sit for the Residential Energy Services Network's (RESNET®) exam. Coursework provides an introduction to the energy audit and building insulation industry and emphasizes hands-on blower door inspections, soldering and brazing, safety, and mechanical and electrical troubleshooting. Students learn to use refrigerants, gauges, and electrical test equipment in a residential and commercial building setting.

Note: Students are required to provide their own basic tools.

HET	110	Basic Refrigeration Systems	4
HET	111	HVACR Electricity I	4
HET	291	Energy Auditing	4
HET	292	Resnet Exam Preparation	1
HET	294	Green Building/Energy Sustainability	3

Total Hours for Certificate16

Horticulture

**Biological and Health Sciences Division, Room B210,
(847) 543-2042**

The field of horticulture is evolving quickly to address current sustainability issues, whether in plant production, landscape design or construction and management. The CLC Horticulture program has incorporated sustainability topics across its curriculum to better prepare students for employment in the green industry. Graduates enter a range of employment including local landscape companies, environmental consulting firms, municipalities and park districts, public land management agencies and entrepreneurial ventures.

A.A.S. degree students must select 18 credit hours of General Education electives from those listed on page 114, 27 credit hours of horticultural core courses and 18 hours of coursework in the student's chosen specialty area. Students entering the field must be well-versed in basic botany, plant identification and care, soil science, entomology, plant pathology and business. These courses are included in the core requirements for all majors. Additional coursework to pursue a specialty or major allows students to develop skills in 5 areas of study: landscape design, landscape construction & maintenance, horticulture production, sustainable agriculture, and natural areas management.

Horticulture students may also choose a certificate track, which is a specific combination of 18-25 credit hours within a given specialty area. This option is well-suited for students who wish to enter the job market quickly, enhance their skills in a specific area for career advancement, or redirect their training for a new career. Students may select from certificate programs in: landscape design, landscape maintenance, floral design, arboriculture, sustainable agriculture, and natural areas management.

Horticulture Production

(Associate in Applied Science) Plan 21HA

This program of study is geared for students wanting to grow plants, primarily ornamental and native plants for the landscape industry. Students gain exposure to a variety of growing situation, including greenhouse, high tunnel and nursery production applications. Coursework includes organic and sustainable production options as well as propagation methods.

Required General Education Coursework18

CMM	111	Communication Skills <i>or</i>	
CMM	121	Fundamentals of Speech <i>or</i>	
CMM	123	Dynamics of Small Group Discussion <i>or</i>	
CMM	128	Interviewing Practices	3
ENG	120	Technical Composition I <i>or</i>	
ENG	121	English Composition I	3
		Social Science Electives*	6
		Humanities or Fine Arts Elective*	3
		Science or Math Elective*	3

Required Horticulture Coursework.....27

BIO	222	General Botany	4
HRT	121	Introduction to Horticulture	3
HRT	124	Introduction to Soils	4
HRT	125	Tree and Shrub Identification.....	3
HRT	126	Entomology	3
HRT	127	Perennials, Annuals and Weeds	3
HRT	129	Plant Pathology.....	3
HRT	160	Business Issues in Horticulture <i>or</i>	
BUS	121	Introduction to Business.....	3
HRT	282	Seminars in Horticulture <i>or</i>	
EWE	220	Cooperative Work Experience (Note: The seminar portion of EWE 220 can serve as alternate to HRT 282 as it is comparable content.)	1

Required Horticulture Production Coursework18

HRT	222	Greenhouse Crop Production and Management.	3
HRT	221	Plant Propagation	3
HRT	228	Nursery Production.....	3
HRT	229	Organic and Sustainable Practices	3
HRT	280	Horticulture Practicum <i>or</i>	
EWE	220	Cooperative Work Experience I	3
		Horticulture Electives (HRT 285 recommended).....	3

Total Hours for A.A.S. Degree63

Associate in Applied Science and Career Certificates

Landscape Design

(Associate in Applied Science) Plan 21HB

Design majors are prepared for entry level positions with landscape firms and become versed with all phases of the landscape process from site analysis to design to installation. Students are trained in both hand-drawing and computer graphics, and develop designs for a variety of residential, commercial and public sites.

Required General Education Coursework18

CMM 111	Communication Skills <i>or</i>	
CMM 121	Fundamentals of Speech <i>or</i>	
CMM 123	Dynamics of Small Group Discussion <i>or</i>	
CMM 128	Interviewing Practices	3
ENG 120	Technical Composition I <i>or</i>	
ENG 121	English Composition I	3
	Social Science Electives*	6
	Humanities or Fine Arts Elective*	3
	Science or Math Elective*	3

Required Horticulture Coursework.....27

BIO 222	General Botany	4
HRT 121	Introduction to Horticulture	3
HRT 124	Introduction to Soils	4
HRT 125	Tree and Shrub Identification	3
HRT 126	Entomology	3
HRT 127	Perennials, Annuals and Weeds	3
HRT 129	Plant Pathology	3
HRT 160	Business Issues in Horticulture <i>or</i>	
BUS 121	Introduction to Business	3
HRT 282	Seminars in Horticulture <i>or</i>	
EWE 220	Cooperative Work Experience I	1

Required Landscape Design Coursework18

HRT 140	Landscape Graphics	3
HRT 240	Landscape Design	3
HRT 245	Computer Landscape Design	3
HRT 260	Landscape Construction	3
HRT 280	Horticulture Practicum <i>or</i>	
EWE 220	Cooperative Work Experience I	3
	Horticulture Electives (HRT 285 recommended)	3

Total Hours for A.A.S. Degree63

Landscape Construction and Maintenance

(Associate in Applied Science) Plan 21HC

The construction and maintenance specialty is ideal for those interested in work as landscape contractors, either for landscape firms or as entrepreneurs. Students take all the general horticulture coursework and add relevant specialty courses such as small engines repair and maintenance and urban forestry management.

Students may want to consider additional coursework to pursue the interdisciplinary Sustainable Design and Construction Certificate (Plan 24BB) incorporating architecture, engineering and HVAC technology to prepare for LEED green associate's certification from the U.S. Green Building Council.

Required General Education Coursework18

CMM 111	Communication Skills <i>or</i>	
CMM 121	Fundamentals of Speech <i>or</i>	
CMM 123	Dynamics of Small Group Discussion <i>or</i>	
CMM 128	Interviewing Practices	3
ENG 120	Technical Composition I <i>or</i>	
ENG 121	English Composition I	3
	Social Science Electives*	6
	Humanities or Fine Arts Elective*	3
	Science or Math Elective*	3

Required Horticulture Coursework.....27

BIO 222	General Botany	4
HRT 121	Introduction to Horticulture	3
HRT 124	Introduction to Soils	4
HRT 125	Tree and Shrub Identification	3
HRT 126	Entomology	3
HRT 127	Perennials, Annuals and Weeds	3
HRT 129	Plant Pathology	3
HRT 160	Business Issues in Horticulture <i>or</i>	
BUS 121	Introduction to Business	3
HRT 282	Seminars in Horticulture <i>or</i>	
EWE 220	Cooperative Work Experience I	1

Required Landscape Construction and Maintenance Coursework18

HRT 150	Landscape Maintenance	3
HRT 165	Small Engine Repair and Maintenance	3
HRT 260	Landscape Construction	3
HRT 265	Urban Forestry Management	3
HRT 280	Horticulture Practicum <i>or</i>	
EWE 220	Cooperative Work Experience I	3
	Horticulture Electives (HRT 285 recommended)	3

Total Hours for A.A.S. Degree63

**Natural Areas Management
(Associate in Applied Science) Plan 21HP**

Natural areas management is the practice of land restoration using the scientific principles of restoration ecology and conservation biology. Regional ecology of prairie, savanna, woodland and wetland ecosystems is emphasized. Students will gain experience in floristic identification and monitoring, landscape assessment, and practices of land management such as invasive species control and prescribed burning. Coursework includes extensive fieldtrips and work in various field situations.

Required General Education Coursework18

CMM 111	Communication Skills <i>or</i>	
CMM 121	Fundamentals of Speech <i>or</i>	
CMM 123	Dynamics of Small Group Discussion <i>or</i>	
CMM 128	Interviewing Practices	.....3
ENG 120	Technical Composition I <i>or</i>	
ENG 121	English Composition I	.....3
	Social Science Electives*	.....6
	Humanities or Fine Arts Elective*	.....3
	Science or Math Elective*	.....3

Required Horticulture Coursework.....27

BIO 222	General Botany	.....4
HRT 121	Introduction to Horticulture	.....3
HRT 124	Introduction to Soils	.....4
HRT 125	Tree and Shrub Identification	.....3
HRT 126	Entomology	.....3
HRT 127	Perennials, Annuals and Weeds	.....3
HRT 129	Plant Pathology	.....3
HRT 160	Business Issues in Horticulture <i>or</i>	
BUS 121	Introduction to Business	.....3
HRT 282	Seminars in Horticulture <i>or</i>	
EWE 220	Cooperative Work Experience I	.....1

Required Natural Areas Management Coursework18-19

BIO 120	Environmental Biology	.....4
BIO 126	Local Flora	.....2
ESC 126	Geology of Illinois <i>or</i>	
ESC 224	Environmental Geology	.....2-3
HRT 286	Natural Areas Management	.....4
HRT 280	Horticulture Practicum <i>or</i>	
EWE 220	Cooperative Work Experience I	.....3
	Horticulture Electives (HRT 285 recommended)	.....3

Total Hours for A.A.S. Degree63-64

**Sustainable Agriculture
(Associate in Applied Science) Plan 21HS**

Sustainable agriculture is an emerging specialty field that is growing quickly as we seek to find economically viable ways to maintain farm land and sustainable ways to support local food production. Students will take a variety of hands-on courses in such topics as permaculture, extended season production, and seasonal fruit and vegetable production. Graduates are prepared for work as skilled farm laborers and managers or for entry into entrepreneurial support programs like the Farm Business Development Center.

Required General Education Coursework18

ENG 120	Technical Composition I <i>or</i>	
ENG 121	English Composition I	.....3
CMM 111	Communication Skills <i>or</i>	
CMM 121	Fundamentals of Speech <i>or</i>	
CMM 123	Dynamics/Small Group Discuss <i>or</i>	
CMM 128	Interviewing Practices	.....3
	Social Science Electives *	.....6
	Humanities or Fine Arts Elective *	.....3
	Science or Math Elective *	.....3

Required Horticulture Coursework.....27

BIO 222	General Botany	.....4
HRT 121	Introduction to Horticulture	.....3
HRT 124	Introduction to Soils	.....4
HRT 125	Tree and Shrub Identification	.....3
HRT 126	Entomology	.....3
HRT 127	Perennials, Annuals and Weeds	.....3
HRT 129	Plant Pathology	.....3
HRT 160	Business Issues in Horticulture <i>or</i>	
BUS 121	Introduction to Business	.....3
HRT 282	Seminars in Horticulture <i>or</i>	
EWE 220	Cooperative Work Experience I	.....1

Required Sustainable Agriculture Courses.....18

AGR 111	Permaculture Production	.....2
AGR 112	Season Extension Methods	.....2
AGR 114	Annual Fruit and Vegetable Production	.....2
AGR 210	Agricultural Marketing	.....3
HRT 222	Greenhouse Crop Production and Management	.....3
HRT 221	Plant Propagation	.....3
HRT 229	Organic & Sustainable Practices	.....3

Total Hours for A.A.S. Degree63

Associate in Applied Science and Career Certificates

Landscape Design (Certificate) Plan 21HD

HRT	125	Tree and Shrub Identification.....	3
HRT	127	Perennials, Annuals and Weeds	3
HRT	140	Landscape Graphics	3
HRT	240	Landscape Design.....	3
HRT	245	Computer Landscape Design	3
HRT	260	Landscape Construction	3

Total Hours for Certificate18

Landscape Maintenance (Certificate) Plan 21HH

HRT	125	Tree and Shrub Identification <i>or</i>	
HRT	127	Perennials, Annuals and Weeds	3
HRT	150	Landscape Maintenance	3
HRT	165	Small Engine Repair and Maintenance	3
HRT	160	Business Issues in Horticulture <i>or</i>	
BUS	121	Introduction to Business.....	3
HRT	260	Landscape Construction	3
HRT	265	Urban Forestry Management	3

Total Hours for Certificate18

Floral Design (Certificate) Plan 21HI

**Program Modification effective Spring 2017. See addendum for details.*

HRT	121	Introduction to Horticulture	3
HRT	127	Perennials, Annuals and Weeds	3
HRT	184	Basic Floral Design	3
HRT	185	Advanced Floral Design.....	3
HRT	160	Business Issues in Horticulture <i>or</i>	
BUS	121	Introduction to Business.....	3
HRT	222	Greenhouse Crop Production	3

Total Hours for Certificate18

Arboriculture (Certificate) Plan 21HL

HRT	121	Introduction to Horticulture	3
HRT	125	Tree and Shrub Identification.....	3
HRT	126	Entomology	3
HRT	129	Plant Pathology	3
HRT	150	Landscape Maintenance	3
HRT	265	Urban Forestry Management	3

Total Hours for Certificate18

Natural Areas Management (Certificate) Plan 21HQ

BIO	120	Environmental Biology	4
BIO	126	Local Flora	2
ESC	126	Geology of Illinois <i>or</i>	
ESC	224	Environmental Geology	2-3
HRT	125	Tree and Shrub Identification.....	3
HRT	160	Business Issues in Horticulture <i>or</i>	
BUS	121	Introduction to Business.....	3
HRT	286	Natural Areas Management	4

Total Hours for Certificate18-19

Sustainable Agriculture (Certificate) Plan 21HT

HRT	121	Introduction to Horticulture	3
HRT	124	Introduction to Soils	4
HRT	222	Greenhouse Crop Production and Management	3
HRT	221	Plant Propagation	3
HRT	229	Organic & Sustainable Practices	3
AGR	111	Permaculture Production	2
AGR	112	Season Extension Methods.....	2
AGR	114	Annual Fruit & Vegetable Production	2
AGR	210	Agricultural Marketing.....	3

Total Hours for Certificate25

For more information on recommended courses or program specific advising, contact department chair Rory Klick at (847) 543-2320 or the Biological and Health Sciences division at (847) 543-2042.

Hospitality and Culinary Management

Business and Social Sciences Division,
Room T302, (847) 543-2047

Hospitality and Culinary Management (Associate in Applied Science) Plan 22FB

The Hospitality and Culinary Management program provides students with technical skills in food production and food operations and prepares students for managerial positions in the hospitality industry. Students can pursue careers as cooks, chefs, bakers, pastry chefs, and supervisors and managers in restaurants, clubs, hotels and resorts. Students acquire skills in food sanitation and safety, culinary principles, baking and pastry, supervision and leadership, menu development, purchasing and cost control.

The Hospitality and Culinary Management program is a partner of the National Restaurant Association Educational Foundation (NRAEF). Upon completion of the A.A.S. degree program students qualify to apply for the NRAEF Diploma, a nationally recognized credential in the hospitality industry. The Hospitality and Culinary Management curriculum is aligned with the educational standards of the American Culinary Federation (ACF). CLC courses in Hospitality Supervision, Nutrition, and ServSafe: Foodservice Sanitation meet the initial certification and/or re-certification requirements for the ACF Chefs Certification Program.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met.

First Semester (Fall)	12
HCM 110 Introduction to Hospitality Industry	3
HCM 111 Culinary Principles I	5
HCM 113 ServSafe: Food Service Sanitation	1
AOS 122 Business Math <i>or</i>	
MTH 114 or higher Math Elective	3
Second Semester (Spring)	16
HCM 170 Patisserie I	5
HCM 112 Culinary Principles II	5
HCM 212 Menu Marketing and Management	3
HCM 213 Purchasing & Inventory Control	3
Third Semester (Fall)	14
HCM 171 Culinary Principles III	5
HCM 175 Nutrition	3
PSY 122 Industrial/Organizational Psychology	3
Humanities or Fine Arts Elective*	3

Fourth Semester (Spring)	16
HCM 185 Garde Manger	4
HCM 214 Hospitality Supervision	3
HCM Elective	3
ENG 120 Technical Composition I <i>or</i>	
ENG 121 English Composition I	3
CMM 121 Fundamentals of Speech <i>or</i>	
CMM 122 Business and Professional Speaking <i>or</i>	
CMM 123 Dynamics of Sm. Group Discussion <i>or</i>	
CMM 128 Interviewing Practices	3

Fifth Semester (Fall)	11
HCM 275 Contemporary Restaurant Principles	5
HCM 273 Controlling Hospitality Costs	3
HCM Elective	3

Total Hours for A.A.S. Degree

HCM Electives

HCM 151 American Regional Cuisine	3
HCM 152 European Cuisine	3
HCM 153 Latin American Cuisine	3
HCM 154 Italian Regional Cuisine	3
HCM 155 French Regional Cuisine	3
HCM 159 Culinary Arts Study Abroad	1-3
HCM 271 Hospitality Leadership	3
HCM 272 Culinary & Hospitality Internship	3
HCM 299 Selected Topics in Hospitality	1-5

Baking and Pastry Arts

(Associate in Applied Science Degree) Plan 22FK

The Baking and Pastry Arts program provides students with the knowledge and technical skills needed for employment in the baking and pastry industry. Students can pursue careers as bakers and pastry chefs in bakeries, restaurants, hotels, country clubs, retail stores and catering. Students acquire basic and advanced skills including artisan bread making, European tortes and pastries, chocolate work, frozen desserts, special diets and healthful baking. The program also prepares students for managerial positions in the pastry industry.

First Semester (Fall)	15
HCM 110 Introduction to the Hospitality Industry	3
HCM 113 ServSafe: Food Service Sanitation ¹	
HCM 170 Patisserie I	5
AOS 122 Business Mathematics <i>or</i>	
MTH 114 Applied Mathematics I <i>or</i>	
higher MTH Elective	3
ENG 120 Technical Composition I <i>or</i>	
ENG 121 ENG 121 English Composition I	3

Associate in Applied Science and Career Certificates

Second Semester (Spring)	17
HCM 172 Patisserie II	5
HCM 212 Menu Marketing and Management	3
HCM 213 Purchasing and Inventory Control.....	3
HCM 214 Hospitality Supervision	3
Baking and Pastry Elective (see list).....	3
Third Semester (Fall)	18
HCM 173 Patisserie III.....	5
HCM 175 Nutrition	3
Baking and Pastry Elective (see list).....	4
CMM 121 Fundamentals of Speech <i>or</i>	
CMM 122 Business and Professional Speaking <i>or</i>	
CMM 123 Dynamics of Small Group Discussion <i>or</i>	
CMM 128 Interviewing Practices	3
Humanities or Fine Arts Elective*	3
Fourth Semester (Spring)	15
HCM 174 Advanced Pastry	5
HCM 273 Controlling Hospitality Costs	3
Baking and Pastry Elective (see list).....	4
PSY 122 Industrial/Organizational Psychology	3
Total Hours for A.A.S. Degree	65

Baking and Pastry Electives:

Select at least 11 credit hours

HCM 176 Yeast Breads	3
HCM 177 Advanced Yeast Breads	3
HCM 178 Special Diets and Healthful Baking	4
HCM 179 Cake Decorating	4
HCM 272 Culinary & Hospitality Internship.....	3

Professional Cook (Certificate) Plan 22FD

This program prepares students for entry-level employment in the food service industry. Courses provide an introduction to the hospitality industry and emphasize hands-on cooking techniques, sanitation and safety. Students learn to use recipes and equipment in a commercial kitchen to prepare stocks, sauces, soups, vegetables, starches, salads, and salad dressings. Students earn the ServSafe Foodservice Sanitation license as a part of this certificate.

First Semester	9
HCM 110 Introduction to Hospitality Industry	3
HCM 111 Culinary Principles I	5
HCM 113 ServSafe: Food Service Sanitation	1
Second Semester	8
HCM 112 Culinary Principles II	5
HCM 214 Hospitality Supervision	3
Total Hours for Certificate	17

Professional Chef (Certificate) Plan 22FH

This program builds upon the Professional Cook Certificate and provides students with advanced level culinary skills. Students learn advanced cooking techniques for meat, poultry, seafood and breakfast cookery as well as basic baking techniques. Courses emphasize nutrition, sanitation and safety, and purchasing and inventory management. Students who complete this certificate meet the American Culinary Federation (ACF) initial certification and re-certification requirements for the Sanitation, Nutrition and Supervision courses in the ACF Chefs Certification program.

First Semester	14
HCM 110 Introduction to Hospitality Industry	3
HCM 111 Culinary Principles I	5
HCM 113 ServSafe: Food Service Sanitation	1
HCM 170 Patisserie I	5
Second Semester	11
HCM 112 Culinary Principles II	5
HCM 175 Nutrition	3
HCM 213 Purchasing and Inventory Control.....	3
Third Semester	8
HCM 171 Culinary Principles III.....	5
HCM 214 Hospitality Supervision	3
Total Hours for Certificate	33

Baking and Pastry Assistant (Certificate) Plan 22FJ

This program prepares students for entry-level employment in bakeshop operations in the food service industry, including bakeries, restaurants, hotels, country clubs, retail stores, catering, institutional foodservice and commercial foodservice operations. The program provides students with an understanding of the varied career choices in the hospitality industry. Students gain a basic level of baking and pastry skills and competence in food safety and sanitation practices. Students learn how to use recipes and prepare a variety of breads and pastries including quick breads, yeast breads, pies, pastries, tarts, custards, mousses, and cakes, as well as plate presentation. Students earn the ServSafe Foodservice Sanitation license as a part of this certificate.

First Semester	9
HCM 110 Introduction to the Hospitality Industry	3
HCM 113 ServSafe: Food Service Sanitation	1
HCM 170 Patisserie I	5
Second Semester	8
HCM 172 Patisserie II	5
HCM 214 Hospitality Supervision	3
Total Hours for Certificate	17

Pastry Chef Assistant (Certificate) Plan 22FL

This certificate builds on the Baking and Pastry Assistant certificate and provides students with advanced level baking and pastry skills to prepare students for advanced career opportunities in the pastry industry. Students can acquire skills including advanced and artisan bread making, European tortes and pastries, advanced pastries, confectionery, chocolate work, frozen desserts, specialized diets and healthful baking.

First Semester	9
HCM 110 Introduction to the Hospitality Industry	3
HCM 113 ServSafe: Food Service Sanitation	1
HCM 170 Patisserie I	5

Second Semester	11
HCM 172 Patisserie II	5
HCM 214 Hospitality Supervision	3
Baking and Pastry Elective (see list).....	3

Third Semester	11-12
HCM 173 Patisserie III.....	5
Baking and Pastry Elective (see list)	3-4
Baking and Pastry Elective (see list).....	3

Total Hours for Certificate.....**31**

Baking and Pastry Electives:

Select at least 9 credit hours

HCM 176 Yeast Breads	3
HCM 177 Advanced Yeast Breads	3
HCM 178 Special Diets and Healthful Baking	4
HCM 179 Cake Decorating	4
HCM 272 Culinary & Hospitality Internship.....	3

Hospitality Supervisor (Certificate) Plan 22FG

This program prepares students for entry-level supervisory positions in restaurants, hotels, country clubs, catering, institutional foodservice and commercial foodservice operations. The program provides students with an understanding of the varied career choices in the hospitality industry. Students gain a basic level of cooking skills, and competence in food safety and sanitation practices. Students learn basic supervisory techniques, purchasing, and inventory control. As a part of this certificate, students earn the ServSafe Foodservice Sanitation license and the National Restaurant Association Educational Foundation (NRAEF) ManageFirst certificates for the Introduction to the Hospitality Industry course, Hospitality Supervision course, and Purchasing and Inventory Control course.

First Semester	9
HCM 110 Introduction to Hospitality Industry	3
HCM 111 Culinary Principles I	5
HCM 113 ServSafe: Food Service Sanitation	1

Second Semester	9
HCM 175 Nutrition	3
HCM 213 Purchasing and Inventory Control.....	3
HCM 214 Hospitality Supervision	3

Total Hours for Certificate.....**18**

Hospitality Manager (Certificate) Plan 22FI

This program builds upon the Hospitality Supervisor Certificate and prepares students for advanced level employment as a member of a management team in the hospitality industry. This certificate emphasizes the development and application of managerial and leadership skills. Students acquire skills in menu design, cost control, and continuous improvement. Upon completion of this certificate students will meet the American Culinary Federation (ACF) initial certification and re-certification requirements for the Sanitation, Nutrition, and Supervision courses for the ACF Chefs Certification program.

Additionally, students will receive National Restaurant Association Educational Foundation (NRAEF) ManageFirst certificates for the Menu Marketing and Management course, Hospitality Supervision course and Cost Control course. Completion of this certificate will qualify the student to apply for the NRAEF ManageFirst Diploma, which is a nationally recognized industry credential.

First Semester	9
HCM 110 Introduction to Hospitality Industry	3
HCM 111 Culinary Principles I	5
HCM 113 ServSafe: Food Service Sanitation	1

Second Semester	14
HCM 112 Culinary Principles II	5
HCM 212 Menu Marketing and Management	3
HCM 213 Purchasing and Inventory Control.....	3
HCM 214 Hospitality Supervision	3

Third Semester	12
HCM 175 Nutrition	3
HCM 271 Hospitality Leadership	3
HCM 273 Controlling Hospitality Costs	3
HCM 272 Culinary and Hospitality Internship <i>or</i>	
HCM 299 Selected Topics in Hospitality	3

Total Hours for Certificate.....**35**

For more information on recommended courses or program specific advising, contact the following faculty members or the Business and Social Sciences Division at (847) 543-2047:

Teresa Novinska / William Vena / Rob Wygant

Human Services Program

**Business and Social Sciences Division,
Room T302, (847) 543-2047**

This program prepares students for entry and middle-level positions in agencies and programs specialized in helping people. This includes organizations with programs for children, adolescents, and adults provided through hospitals, nursing homes, institutions for the developmentally disabled, community human services programs, as well as treatment programs for addiction and substance abuse. The degree-seeking student completes general education and Human Services core courses, plus one of the five options. All students are encouraged to consult with department faculty. Human Services courses may transfer to four-year institutions with related programs.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met.

The Human Services Addiction Counseling and Treatment Program (ACT) is accredited by the Illinois Alcohol and other Drug Abuse Professional Certification Agency (IAODAPCA) as both an Advanced and Preparatory Training Program.

Children and Adolescents (Associate in Applied Science) Plan 25HB

First Semester	15
ENG 121 English Composition I.....	3
MTH 140 Contemporary Mathematics <i>or</i>	
Higher Math Elective * <i>or</i>	
Science Elective*	3
PSY 121 Introduction to Psychology	3
SWK 121 Introduction to Social Work	3
HUS 140 Drugs and Society	3

Second Semester	14
CMM 111 Communication Skills <i>or</i>	
CMM 121 Fundamentals of Speech <i>or</i>	
CMM 128 Interviewing Practices	3
PSY 222 Child Growth and Development	3
HUS 123 Introduction to Group Dynamics.....	3
HUS 128 Introduction to Counseling Skills	3
HUS 154 Ethics in Human Services	1
HUS 274 Human Services Practicum Orientation	1

Third Semester	16
HUS 121 Health and Nutrition	3
PSY 226 Adolescent Development	3
HUS 170 Human Services Practicum I.....	4
HUS 234 Child Maltreatment	3
Concentration/Elective #	3

Fourth Semester	16
HUS 171 Human Services Practicum II	4
ECE 223 Child, Family, and Community <i>or</i>	
EDU 222 The Exceptional Child.....	3
SOC 224 Sociology of the Family	3
Humanities or Fine Arts Elective *	3
Concentration/Elective #	3

Total Hours for A.A.S. Degree.....**61**

A minimum of 6 credit hours of Concentration/Elective are required to fulfill this requirement.

Children and Adolescents Concentration/Electives

CRJ 121 Introduction to Criminal Justice	3
CRJ 224 Institutional Corrections	3
CRJ 227 Community-Based Corrections	3
CRJ 229 Juvenile Delinquency	3
CRJ 230 Principles of Courtroom Testimony	3
ECE 141 Health, Safety and Nutrition	3
ECE 214 Group Care of Infants and Toddlers	3
EDU 299 Special Topics in Education.....	1-3
HUS 114 Human Services Supervision.....	3
HUS 132 Trauma, Violence, and Prevention	3
HUS 152 Process Addictions/Impulse Disorders	2
HUS 153 Diverse and Multicultural Populations	2
HUS 155 Pharmacology for Human Services.....	2
HUS 210 Principles of Residential Care	3
HUS 213 Mental Retardation	3
HUS 253 Advanced Addictions Counseling Skills.....	3
HUS 299 Special Topics in Human Services.....	1-3
PSY 223 Abnormal Psychology <i>or</i>	
SOC 223 Deviance	3
SWK 228 Human Sexuality	3

Adult Services

(Associate in Applied Science) Plan 25HC

First Semester	15
ENG 121 English Composition I.....	3
MTH 141 Quantitative Literacy <i>or</i>	
Math Elective * (MTH 140 or higher) <i>or</i>	
Science Elective*	3
PSY 121 Introduction to Psychology	3
SWK 121+ Introduction to Social Work	3
HUS 140 Drugs and Society	3

Second Semester17
 CMM 111+ Communication Skills *or*
 CMM 121+ Fundamentals of Speech *or*
 CMM 128+ Interviewing Practices3
 HUS 123 Introduction to Group Dynamics.....3
 HUS 128 Introduction to Counseling Skills3
 HUS 274 Human Services Practicum Orientation1
 SOC 121 Introduction to Sociology3
 HUS 154 Ethics in Human Services1
 Humanities or Fine Arts Elective +3

Third Semester16
 HUS 170 Human Services Practicum I4
 HUS 121 Health and Nutrition3
 Concentration/Elective #3
 Select 2 of the following 3 classes:6
 HUS 231 Adult Development and Aging
 PSY 220 Lifespan Development
 PSY 226 Adolescent Development

Fourth Semester16
 HUS 171 Human Services Practicum II4
 PSY 223 Abnormal Psychology *or*
 SOC 223 Deviance3
 SOC 224 Sociology of the Family3
 Concentration/Elective #6

Total Hours for A.A.S. Degree64

A minimum of 10 credit hours of Concentration/Elective are required to fulfill this requirement.

+ Completing coursework during the summer session(s) may enable students to complete the program earlier or reduce the course load during fall and spring semesters.

Adult Services Concentration/Electives

CRJ 121 Introduction to Criminal Justice3
 CRJ 124 Penology and Corrections3
 CRJ 224 Institutional Corrections3
 CRJ 227 Community-Based Corrections3
 CRJ 230 Principles of Courtroom Testimony3
 HUS 114 Human Services Supervision.....3
 HUS 116 Principles of Foster Care1
 HUS 132 Trauma, Violence, and Prevention3
 HUS 134 Gender-based Violence4
 HUS 152 Process Addictions/Impulse Disorders2
 HUS 153 Diverse and Multicultural Populations2
 HUS 154 Ethics in Human Services1
 HUS 155 Pharmacology for Human Services2
 HUS 157 Communicable Diseases
 and Substance Abuse2
 HUS 210 Principles of Residential Care3
 HUS 213 Mental Retardation3
 HUS 234 Child Maltreatment3
 HUS 299 Special Topics in Human Services.....1-3
 PRS 111 Survey of Rehabilitation Skills3
 PRS 112 Psychiatric Rehabilitation Skills3
 SWK 228 Human Sexuality3

**Addiction Counseling and Treatment
 (Associate in Applied Science) Plan 25HD**

This is an Illinois Alcohol and Other Drug Abuse Certification Agency (IAODAPCA) accredited Advanced Addiction Training Program. Upon completion, students are qualified to take the CADC exam to become an Illinois Certified Alcohol/Drug Counselor. No additional work experience is necessary.

In order to take advanced courses, students must apply for admittance in the program, which may include background checks, drug screens, and/or interviews. Upon application to the Addiction Counseling and Treatment (ACT) option, students should have no history of alcohol or other drug abuse, any addiction or other addictive disorders, or should be in recovery without relapse and out of treatment for at least 18 months.

First Semester15
 ENG 121 English Composition I3
 PSY 121 Introduction to Psychology3
 HUS 123 Introduction to Group Dynamics.....3
 HUS 128 Introduction to Counseling Skills3
 HUS 140 Drugs and Society3

Second Semester15
 CMM 111+ Communication Skills *or*
 CMM 121+ Fundamentals of Speech *or*
 CMM 128+ Interviewing Practices3
 MTH 140 Contemporary Mathematics *or*
 Higher Level Mathematics *or*
 Science Elective*3
 HUS 151 Addiction Counseling and Treatment I3
 HUS 154 Ethics in Human Services1
 HUS 155 Pharmacology for Human Services2
 SWK 121+ Introduction to Social Work3

Third Semester15
 SOC 121+ Introduction to Sociology3
 HUS 152 Process Addictions and Impulse Disorders2
 HUS 153 Diverse and Multicultural Populations2
 HUS 251 Addiction Counseling and Treatment II4
 HUS 253 Advanced Addiction Counseling Skills.....3
 HUS 274 Human Services Practicum Orientation1

Fourth Semester15
 HUS 121 Health and Nutrition3
 Humanities or Fine Arts Elective+3
 HUS 157 Communicable Diseases
 and Substance Abuse2
 HUS 275 Addiction Counseling Practicum I4
 Select 1 of the following 3 classes+:3
 HUS 231 Adult Development and Aging
 PSY 220 Lifespan Development
 PSY 226 Adolescent Development

Associate in Applied Science and Career Certificates

Fifth Semester	8
HUS 276 Addiction Counseling Practicum II.....	4
SWK 228 Human Sexuality <i>or</i>	
HUS 132 Trauma, Violence, and Prevention	3
HUS 299 Special Topics in Human Services	1

Total Hours for A.A.S. Degree**68**

+ Completing coursework during the summer session(s) may enable students to complete the program earlier or reduce the course load during fall and spring semesters.

This academic plan is designed for a fulltime student. Students opting to attend part time should consult with the HUS Faculty directly for a revised academic plan.

Addiction Counseling and Treatment (Certificate) Plan 25HG

This is an Illinois Alcohol and Other Drug Abuse Certification Agency (IAODAPCA) accredited Advanced Addiction Training Program. Upon completion, students are qualified to take the CADC exam to become an Illinois Certified Alcohol/Drug Counselor. No additional work experience is necessary.

According to IAODAPCA regulations, students who wish to earn their CADC through the Advanced Program must possess a minimum of an associate's degree in Human Services or Behavioral Science from an accredited institution of higher education. Students who do not meet this requirement should complete the A.A.S. in Addiction Counseling and Treatment, Plan 25HD.

In order to be admitted to this option, student must first meet with department faculty. Up to 18 credit hours of prerequisite courses may be transferred from another institution with the permission of the Human Services department chair, upon submission and review of transcripts indicating successful completion. Students needing to meet these prerequisites may take them concurrently with the courses required for the certificate.

In order to take advanced courses, students must apply for admittance in the program, which may include background checks, drug screens, and/or interviews. Upon application to the Addiction Counseling and Treatment (ACT) option, students should have no history of alcohol or other drug abuse, any addiction or other addictive disorders, or should be in recovery without relapse and out of treatment for at least 18 months

Required Prerequisite Coursework

HUS 121 Health and Nutrition.....	3
HUS 123 Introduction to Group Dynamics	3
HUS 128 Introduction to Counseling Skills	3
HUS 140 Drugs and Society	3

Select 3 hours from the following courses:

HUS 231 Adult Development and Aging.....	3
PSY 220 Lifespan Development	3
PSY 226 Adolescent Development	3

Addiction Counseling and Treatment

HUS 151 Addiction Counseling & Treatment I.....	3
HUS 152 Process Addictions/Impulse Disorders.....	2
HUS 153 Diverse/Multicultural Populations	2
HUS 154 Ethics in Human Services	1
HUS 155 Pharmacology for Human Services	2
HUS 157 Communicable Disease/Substance Abuse	2
HUS 251 Addiction Counseling & Treatment II	4
HUS 253 Adv Addictions Counseling Skills	3
HUS 274 Human Services Practicum Orientation.....	1
HUS 275 Addiction Counseling Practicum I.....	4
HUS 276 Addiction Counseling Practicum II	4

Select 3 hours from the following courses:

HUS 132 Trauma Violence and Prevention	3
HUS 299 Special Topics in Human Services	1-3
SWK 121 Introduction to Social Work	3
SWK 228 Human Sexuality	3

Total Hours for Certificate**31**

Correctional Counseling (Associate in Applied Science) Plan 25HK

First Semester	15
ENG 121 English Composition I.....	3
MTH 141 Quantitative Literacy <i>or</i>	
Math Elective * (MTH 140 or higher) <i>or</i>	
Science Elective*	3
PSY 121 Introduction to Psychology	3
HUS 121 Health and Nutrition	3
SWK 121 Introduction to Social Work	3

Second Semester**16**

CMM 111+ Communication Skills <i>or</i>	
CMM 121+ Fundamentals of Speech <i>or</i>	
CMM 128+ Interviewing Practices	3
CRJ 121 Introduction to Criminal Justice	3
HUS 123 Introduction to Group Dynamics.....	3
HUS 128 Introduction to Counseling Skills	3
HUS 140 Drugs and Society	3
HUS 154 Ethics in Human Services (elective).....	1

Third Semester16
 SOC 121 Introduction to Sociology3
 CRJ 227 Community-Based Corrections3
 HUS 274 Human Services Practicum Orientation1
 HUS 231 Adult Development and Aging *or*
 PSY 226 Adolescent Development3
 HUS 253 Advanced Addiction Counseling Skills.....3
 Concentration/Elective3

Fourth Semester13
 HUS 219 Human Services Internship4
 CRJ 214 Substance Abuse and Criminal Justice3
 Concentration/Elective3
 Humanities or Fine Arts Elective*3

Total Hours for A.A.S. Degree60

Correctional Counseling Concentration/Electives
 CRJ 119 Principles of Direct Supervision3
 CRJ 123 Introduction to Criminology3
 CRJ 124 Penology and Corrections3
 CRJ 221 Criminal Law.....3
 CRJ 224 Institutional Corrections3
 CRJ 227 Community-Based Corrections3
 CRJ 229 Juvenile Delinquency3
 CRJ 230 Principles of Courtroom Testimony3
 HUS 114 Human Services Supervision.....3
 HUS 134 Gender-based Violence4
 HUS 152 Process Addictions/Impulse Disorders2
 HUS 154 Ethics in Human Services1
 HUS 157 Communicable Diseases
 and Substance Abuse2
 HUS 210 Principles of Residential Care.....3
 HUS 234 Child Maltreatment3
 HUS 299 Special Topics in Human Services.....1-3
 PSC 122 State and Local Politics3
 PSY 223+ Abnormal Psychology *or*
 SOC 223 +Deviance3

+ Recommended Course (either PSY 223 or SOC 223)
 ++ Students pursuing IAODAPCA’s Certified Criminal Justice Addictions Professional Credential must take HUS 151, HUS 251, HUS 253 and a CRJ course in addition to earning the A.A.S. in Correctional Counseling. Please note: there may be additional requirements by IAODAPCA to obtain this credential.

**Correctional Counseling
 (Certificate) Plan 25HJ**

Required Human Services Coursework9
 HUS 123 Introduction to Group Dynamics3
 HUS 128 Introduction to Counseling Skills3
 HUS 140 Drugs and Society3

Required Correctional Counseling Coursework.....24-25
 CRJ 227 Community-Based Corrections3
 CRJ 121 Introduction to Criminal Justice.....3
 CRJ 214 Substance Abuse and Criminal Justice.....3
 ++CRJ 270 Criminal Justice Assessment Seminar *or*
 * HUS 219 Human Services Internship3-4
 HUS 253 Advanced Addiction Counseling Skills3
 Correctional Counseling Electives
 (see below)9

* Note: HUS 274 Human Services Practicum Orientation is a prerequisite for HUS 219.

Total Hours for Certificate33-34

Correctional Counseling Electives

Select 9 hours from the list below:

CRJ 119 Principles of Direct Supervision3
 CRJ 123 Introduction to Criminology3
 CRJ 124 Penology and Corrections3
 CRJ 221 Criminal Law.....3
 CRJ 224 Institutional Corrections3
 CRJ 227 Community-Based Corrections3
 CRJ 229 Juvenile Delinquency3
 CRJ 230 Principles of Courtroom Testimony3
 CRJ 270 Criminal Justice Assessment3
 HUS 114 Human Services Supervision.....3
 HUS 152 Process Addictions/Impulse Disorders2
 HUS 154 Ethics in Human Services1
 HUS 157 Communicable Diseases
 and Substance Abuse2
 HUS 210 Principles of Residential Care.....3
 HUS 234 Child Maltreatment3
 HUS 251 Addiction Counseling and Treatment II4
 HUS 253 Advanced Addiction Counseling Skills.....3
 HUS 274 Human Services Practicum Orientation1
 HUS 299 Special Topics in Human Services.....1-3
 PSC 122 State and Local Politics3
 PSY 223+ Abnormal Psychology *or*
 SOC 223 +Deviance3

++ Students pursuing the Certified Criminal Justice Addictions Professional credential must take HUS 151, HUS 251, HUS 253 and CRJ 270. Note: there may be additional requirements by IAODAPCA to obtain this credential.

Associate in Applied Science and Career Certificates

General Human Services (Certificate) Plan 25HF

The certificate program is intended for students who already hold professional degrees or have taken extensive course work in other academic fields. Students are strongly encouraged to consult with a department advisor prior to beginning this certificate. The certificate provides the additional study that is often required when there has been a career change.

HUS	123	Introduction to Group Dynamics	3
HUS	128	Introduction to Counseling Skills	3
HUS	140	Drugs and Society	3
*	HUS	170 Human Services Practicum I	4
HUS	231	Adult Development & Aging <i>or</i>	
PSY	222	Child Growth & Development <i>or</i>	
PSY	226	Adolescent Development	3
PSY	121	Introduction to Psychology	3
SOC	224	Sociology of the Family	3
SWK	121	Introduction to Social Work <i>or</i>	
SWK	228	Human Sexuality	3
		Electives (see list below)	6

Total Hours for Certificate31

* Note: HUS 274 Human Services Practicum Orientation is a prerequisite for HUS 170.

Electives

A minimum of 6 additional hours must be selected from one of two Human Services Program Options: Children and Adolescents or Adult Services. Substitutions may be made with department chair or division approval.

Trauma Interventions and Prevention (Associate in Applied Science) Plan 25HL

This program is designed for students who are interested in gaining general knowledge and skills to work with people who have been victims of trauma or violence. Content areas include: Crisis intervention, emergency management, culture of violence, assessment, counseling, etc. The students will gain skills and knowledge to work in entry-level positions in the human services fields including Substance Abuse, Child Care Resource & Referral, Domestic Violence, Homeless Programs, Sexual Violence programs, Corrections, etc.

First Semester .....15			
ENG	121	English Composition I	3
MTH	140	Contemporary Mathematics <i>or</i>	
		Higher Math Elective * <i>or</i>	
		Science Elective*	3
PSY	121	Introduction to Psychology	3
HUS	132	Trauma, Violence and Prevention	3
SWK	121	Introduction to Social Work	3

Second Semester .....16			
CMM	111	Communication Skills <i>or</i>	
CMM	121	Fundamentals of Speech <i>or</i>	
CMM	128	Interviewing Practices	3
HUS	231	Adult Development and Aging <i>or</i>	
PSY	220	Lifespan Development <i>or</i>	
PSY	222	Child Growth and Development <i>or</i>	
PSY	226	Adolescent Development	3
HUS	123	Introduction to Group Dynamics	3
HUS	128	Introduction to Counseling Skills	3
HUS	154	Ethics in Human Services	1
HUS	232	Trauma Interventions	3

Third Semester .....17			
HUS	134	Gender-based Violence	4
HUS	140	Drugs and Society	3
HUS	234	Child Maltreatment	3
HUS	236	Crisis Intervention	3
HUS	274	Human Services Practicum Orientation	1
		Humanities or Fine Arts Elective*	3

Fourth Semester .....14			
HUS	121	Health and Nutrition	3
HUS	219	Human Services Internship	4
		Concentration/Elective#	7

Total Hours for A.A.S. Degree62

Concentration/Electives

Select 7 hours from the list below:

CRJ	119	Principles of Direct Supervision	3
CRJ	123	Introduction to Criminology	3
CRJ	124	Penology and Corrections	3
CRJ	224	Institutional Corrections	3
CRJ	227	Community-Based Corrections	3
CRJ	229	Juvenile Delinquency	3
CRJ	230	Principles of Courtroom Testimony	3
HUS	114	Human Services Supervision	3
HUS	152	Process Addictions/Impulse Disorders	2
HUS	157	Communicable Diseases and Substance Abuse	2
HUS	210	Principles of Residential Care	3
HUS	251	Addiction Counseling and Treatment II	4
HUS	253	Advanced Addiction Counseling Skills	3
HUS	299	Special Topics in Human Services	1-3
PSC	122	State and Local Politics	3
PSY	223+	Abnormal Psychology <i>or</i>	
SOC	223	+Deviance	3

**Trauma Interventions and Prevention
(Certificate) Plan 25HM**

This program is designed for students who have a Bachelors or Masters degree in Human Services, Social Work, Counseling, or an approved related field and are interested in gaining specialized knowledge and skills to work with survivors of various traumas including war, violence, natural and man-made disasters, interpersonal violence, abuse, accidents, and personal/family crises. The students will gain skills and knowledge to enhance their previous education and enable employment in the human services fields such as Substance Use/Addictions, Child Care Resources & Referral, Domestic Violence, Homeless Programs, Sexual Violence programs, Corrections, etc. Students with less than a Bachelors Degree are encouraged to complete the AAS Degree in Trauma Interventions and Prevention, Plan 25HL. The Prerequisite Coursework may be waived by the Department Chair for students with a Masters Degree in an approved program.

Required Prerequisite Coursework

HUS 121	Health and Nutrition	3
HUS 123	Introduction to Group Dynamics	3
HUS 128	Introduction to Counseling Skills	3
HUS 140	Drugs and Society	3
HUS 231	Adult Development & Aging <i>or</i>	
PSY 220	Lifespan Development <i>or</i>	
PSY 222	Child Growth & Development <i>or</i>	
PSY 226	Adolescent Development	3

Required Trauma Interventions and Prevention Coursework

HUS 132	Trauma, Violence and Prevention	3
HUS 134	Gender-Based Violence	4
HUS 154	Ethics in Human Services	1
HUS 219	Internship	4
HUS 232	Trauma Interventions	3
HUS 234	Child Maltreatment	3
HUS 236	Crisis Intervention	3

Select 5 hours from the list below (Must be taken at CLC)

HUS 114	Human Services Supervision	3
HUS 151	Addiction Counseling and Treatment I	3
HUS 152	Process Addictions/Impulse Disorders	2
HUS 157	Communicable Disease/Substance Abuse	2
HUS 234	Child Maltreatment	3
HUS 251	Addiction Counseling and Treatment II	4
HUS 299	Special Topics in Human Services	1-3
SWK 228	Human Sexuality	3
CRJ 123	Introduction to Criminology	3
CRJ 124	Penology and Corrections	3
CRJ 224	Institutional Corrections	3
CRJ 227	Community-Based Corrections	3
CRJ 229	Juvenile Delinquency	3

CRJ 230	Principles of Courtroom Testimony	3
EDM 111	Intro to Emergency Management	3
EDM 211	Emergency and Disaster Response	3
PSC 122	State and Local Politics	3
PSY 223	Abnormal Psychology 3 <i>or</i>	
SOC 223	Deviance	3
HUS 274	Human Services Practicum Orientation	1

Total Hours for Certificate26

**Accelerated Addictions Counseling
and Treatment
(Certificate) Plan 25HN**

This program is an accelerated track of the Addiction Counseling & Treatment program for individuals who have completed or are currently enrolled in a Master’s Degree from an accredited clinical graduate program in Social Work, Counseling, Clinical Psychology, Human Services, or other clinical counseling-related field of study. Upon completion of this advanced program and successfully passing the Certified Alcohol/Drug Counselor (CADC) Exam, the student will earn certification as a CADC from the Illinois Alcoholism and Other Drug Abuse Professional Certification Association (IAODAPCA). To be accepted into this program, students must have completed or be in the second-year of a master’s program, submit a transcript from an accredited clinical graduate program, complete a screening form and meet other requirements such as background checks, drug screens, and interviews with full-time faculty members in Human Services who will also verify course equivalencies. Upon application to this program option, students should have no history of alcohol or other substance use or addictive disorders, or should be in recovery without relapse and out of treatment or correctional supervision for at least 18 months.

Prerequisite Coursework

HUS 140	Drugs and Society	3
HUS 155	Pharmacology for Human Services	2
HUS 151	Addiction Counseling and Treatment I	3
HUS 251	Addiction Counseling and Treatment II	4
HUS 253	Advanced Addictions Counseling Skills	3
HUS 275	Addiction Counseling Practicum I	3
HUS 276	Addiction Counseling Practicum II	1- 4

Total Hours for Certificate19-22

For more information on recommended courses or program specific advising, contact the following faculty members or the Business and Social Sciences Division at (847) 543-2047:

Mick Cullen / Janet Mason

Laser/Photonics/Optics

Engineering, Math and Physical Sciences Division
Room T302, (847) 543-2044

Optics and Photonics Technology (Associate in Applied Science) Plan 24LD

This program prepares graduates for employment in the growing field of photonics - including optics, lasers, fiber optics, and other electro-optical devices. Graduates are qualified for employment in positions such as lab technician, system installer, troubleshooting/repair technician, and marketing and sales representatives. Employers include companies in various industries that use photonics applications; such as manufacturing, aerospace, defense, entertainment, laser manufacturers, energy, medicine, automotive, lighting, and communications. The program includes industry recommended coursework, hands-on experience with state of the art equipment, and project work expected of entry level employees. This program prepares graduates for a successful career in this rapidly growing field.

Recommended first semester courses15-17

LPO	110	Intr to Lasers, Photonics and Optics	.....3
LPO	111	Fundamentals of Light and Lasers	.....4
EET	115	Electronic Laboratory Techniques	.....2
MTH	118	Technical Mathematics II <i>or</i>	
MTH	122	College Algebra or higher level Math (consult with an advisor)	.....3 - 5
ENG	121	English Composition I <i>or</i>	
ENG	120	Technical Composition I	.....3

Recommended second semester courses17-18

LPO	112	Elements of Photonics	.....3
LPO	113	Photonics-Enabled Technologies	.....3
PHY	121	General Physics I (or higher level Physics)	.....4 - 5
EET	170	DC Circuit Fundamentals	.....2
EET	174	AC Fundamentals	.....2
CMM	121	Fundamentals of Speech <i>or</i>	
CMM	122	Business/Professional Speaking <i>or</i>	
CMM	128	Interviewing Practices	.....3

Recommend third semester courses20-22

LPO	212	Elements of Photonics II	.....3
LPO	211	Geometric and Wave Optics	.....3
LPO	250	Laser and Electro-Optic Devices	.....3
LPO	290	LPO Capstone Proposal <i>or</i>	
EWE	220	Cooperative Work Experience I	.....1
EET	223	Introduction to Digital Electronics	.....4
HUM	127	Critical Thinking <i>or</i>	
PHI	125	Introduction to Ethics	.....3
		LPO Elective	.....3-5

Recommended fourth semester courses15-18

LPO	291	LPO Project or Research Capstone <i>or</i>	
EWE	270	Cooperative Work Experience II	.....3
LPO	145	Photonic CAD Applications <i>or</i>	
EET	216	Microprocessors I	.....3-4
EIT	116	Fiber Optic Fundamentals	.....3
ECO	110	Economics for Bus & Industry	.....3
		LPO Elective	.....3-5

LPO Electives

Select from the following list towards LPO Electives:

LPO	134	Introduction to Biophotonics	.....4
BIO	123	Principles of Biology	.....4
BIO	161	General Biology I	.....4
CAD	170	Introduction to SolidWorks	.....3
ELC	171	Programmable Logic Controllers	.....3
ELC	271	Advanced Programmable Controls	.....3
MET	111	Manufacturing Processes	.....3
PHY	122	General Physics II	.....5
PHY	123	Physics for Science & Egr I	.....5
PHY	124	Physics for Science & Egr II	.....5
PHY	221	Physics for Science & Egr III	.....4

Total Hours for A.A.S. Degree67 – 75

Laser/Photonics/Optics (Certificate) Plan 24LA

This certificate introduces students to photonics as an enabling technology and major tool. Students will be introduced to light and lasers, what lasers consist of, characteristics of light, what makes light both coherent and useful, and how it is used in various fields.

EET	115	Electronic Laboratory Techniques	.....2
EET	170	DC Circuit Fundamentals	.....2
EET	174	AC Fundamentals	.....2
LPO	111	Fundamentals of Light and Lasers	.....4
LPO	112	Elements of Photonics	.....3
LPO	113	Photonics-Enabled Technologies	.....3

Total Hours for Certificate16

Applied Lasers (Certificate) Plan 24LC

This certificate provides career oriented students training to enter the laser/photronics/optics support field. The skill sets involved in this certificate provide basic understanding of laser operation, safe handling of lasers and optics, manufacturing, applications, installation and maintenance.

LPO	111	Fundamentals of Light and Lasers	4
LPO	113	Photronics-Enabled Technologies	3
CAD	170	Introduction to SolidWorks	3
LPO	145	Photonic CAD Applications	3

Total Hours for Certificate13

Biophotonics (Certificate) Plan 24LB

This certificate introduces the basics of Photonics (Light) and photonic devices that accept light into an existing program. Light is an enabling technology that aids and is sometimes the foundation for a given industry. This certificate illustrates the interaction of light with a sample as an input to a device which allows a technician to discover a variety of phenomena related to a substance.

LPO	111	Fundamentals of Light and Lasers	4
LPO	112	Elements of Photonics	3
BIO	123	Principles of Biology <i>or</i>	
BIO	161	General Biology I	4
LPO	134	Introduction to Biophotonics	4

Total Hours for Certificate15

For more information on recommended courses or program specific advising, contact faculty member Steve Dulmes, William Kellerhals or the Engineering, Math and Physical Sciences division at (847) 543-2044.

Library Technical Assistant

**Communication Arts, Humanities and Fine Arts Division
Room B210, (847) 543-2040**

Library Technical Assistants work at the paraprofessional or pre-professional level in libraries. They are technical support staff members with specific library related skills. The courses provide a broad foundation of knowledge which can apply to technical or public service work in academic, school, public, or special libraries. The Library Technical Assistant degree program provides for a general public services emphasis and four specialty options with a common core of general education and library science courses.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met.

Library Public Services (Associate in Applied Science) Plan 23LF

Required General Education Coursework15

CMM	111	Communication Skills <i>or</i>	
CMM	121	Fundamentals of Speech <i>or</i>	
CMM	122	Business and Professional Speaking	3
ENG	120	Technical Composition I <i>or</i>	
ENG	121	English Composition I	3
		Humanities or Fine Arts Elective*	3
		Science or Mathematics Elective*	3
		Social Science Elective*	3

Required LTA Coursework.....40

LTA	121	Introduction to Library Science	3
LTA	210	Library Materials	3
LTA	212	Technology for Libraries	3
LTA	214	Cataloging and Classification.....	3
LTA	230	Library Public Services	3
LTA	232	Reference and Information Services	3
LTA	274	Workplace and Supervisory Skills for the LTA	3
LTA	278	Supervised Field Practicum II	4
		Public Services Electives (see next column).....	15

Additional Required Coursework6

CIT	120	Introduction to Computers	3
DMD	115	Internet Fundamentals	3

Total Hours for A.A.S. Degree61

Associate in Applied Science and Career Certificates

LTA Public Services Electives

Select 15 credit hours from the list below:

BUS	115	Elements of Supervision.....	3
CIT	150	Introduction to Local Area Networking.....	3
CMM	127	Intercultural Communication	3
CMM	128	Interviewing Practices	3
DMD	111	Introduction to Digital Media.....	3
DMD	116	Web Design and Development.....	3
ENG	249	Children's Literature.....	3
ENG	266	Professional Communication	3
LTA	234	Readers Advisory Services.....	3
LTA	250	Introduction to Youth Services.....	3
LTA	252	Administration of the School Library Media Center.....	3
# LTA	299	Special Topics in Library Science.....	1-3

See faculty advisor for suggested special topics courses.

Children's Services

(Associate in Applied Science) Plan 23LD

Required General Education Coursework15

CMM	121	Fundamentals of Speech.....	3
ENG	120	Technical Composition I <i>or</i>	
ENG	121	English Composition I	3
PSY	121	Introduction to Psychology	3
		Humanities or Fine Arts Elective*	3
		Science or Mathematics Elective*	3

Required LTA Coursework.....40

LTA	121	Introduction to Library Science	3
LTA	210	Library Materials	3
LTA	212	Technology for Libraries	3
LTA	214	Cataloging and Classification.....	3
LTA	230	Library Public Services	3
LTA	232	Reference and Information Services	3
LTA	274	Workplace and Supervisory Skills for the LTA	3
LTA	278	Supervised Field Practicum II	4
		Children's Services Electives (see next page).....	15

Additional Required Coursework6

CIT	120	Introduction to Computers	3
DMD	115	Internet Fundamentals	3

Total Hours for A.A.S. Degree61

LTA Children's Services Electives

Select 15 hours from the list below:

ART	125	Art for Elementary Teachers	2
CMM	127	Intercultural Communication	3
CMM	220	Creative Dramatics for the Classroom Teacher	3
ECE	115	Music Activities for Young Children	3
ECE	116	Creative Activities	3
ECE	117	Creative Activities for Infants and Toddlers	3
EDU	223	Technology in the Classroom.....	3
ENG	249	Children's Literature.....	3
LTA	234	Readers Advisory Services.....	3
LTA	250	Introduction to Youth Services.....	3
LTA	252	Administration of the School Library Media Center.....	3
# LTA	299	Special Topics in Library Science.....	1-3
PSY	222	Child Growth and Development	3

See faculty advisor for suggested special topics courses.

Library Marketing and Public Relations

(Associate in Applied Science) Plan 23LE

Required General Education Coursework15

CMM	123	Small Group Dynamics	3
ENG	120	Technical Composition I <i>or</i>	
ENG	121	English Composition I	3
		Humanities or Fine Arts Elective*	3
		Science or Mathematics Elective*	3
		Social Science Elective*	3

Required LTA Coursework.....40

LTA	121	Introduction to Library Science	3
LTA	210	Library Materials	3
LTA	212	Technology for Libraries	3
LTA	214	Cataloging and Classification.....	3
LTA	230	Library Public Services	3
LTA	232	Reference and Information Services	3
LTA	274	Workplace and Supervisory Skills for the LTA	3
LTA	278	Supervised Field Practicum II	4
		Library Marketing and PR Electives (see below)	15

Additional Required Coursework6

CIT	120	Introduction to Computers	3
DMD	115	Internet Fundamentals	3

Total Hours for A.A.S. Degree61

LTA Marketing and PR Electives

Select 15 credit hours from the list below:

ART	111	Printing Production.....	3
ART	122	Basic Color and Design	3
ART	222	Introduction to Computer Art.....	3
ART	271	Introduction to Electronic Graphic Publishing	3
BUS	239	Social Media/Networking in Business	3
DMD	111	Introduction to Digital Media.....	3
DMD	116	Web Design and Development	3
ENG	124	Newswriting	3
# LTA	299	Special Topics in Library Science.....	1-3

See faculty advisor for suggested special topics courses.

Library Technology

(Associate in Applied Science) Plan 23LG

Required General Education Coursework15

CMM	111	Communication Skills <i>or</i>	
CMM	121	Fundamentals of Speech <i>or</i>	
CMM	122	Business and Professional Speaking	3
ENG	120	Technical Composition I <i>or</i>	
ENG	121	English Composition I	3
		Humanities or Fine Arts Elective*	3
		Science or Math Elective*	3
		Social Science Elective*	3

Required LTA Coursework.....40

LTA	121	Introduction to Library Science	3
LTA	210	Library Materials	3
LTA	212	Technology for Libraries	3
LTA	214	Cataloging and Classification.....	3
LTA	230	Library Public Services	3
LTA	232	Reference and Information Services	3
LTA	274	Workplace and Supervisory Skills for the LTA	3
LTA	278	Supervised Field Practicum II	4
		Library Technology Electives (see below) ..	15

Additional Required Coursework6

CIT	120	Introduction to Computers	3
DMD	115	Internet Fundamentals	3

Total Hours for A.A.S. Degree61

LTA Library Technology Electives

Select 15 credit hours from the list below:

ART	222	Introduction to Computer Art.....	3
CIT	111	Comprehensive Spreadsheets	3
CIT	112	Comprehensive Database	3
CIT	150	Introduction to Local Area Networking.....	3
CIT	170	Internet Programming for Business	3
DMD	111	Introduction to Digital Media.....	3
DMD	116	Web Design and Development.....	3
DMD	157	Introduction to Animation	3
DMD	218	Advanced Web Design and Development	3
# LTA	299	Special Topics in Library Science.....	1-3

See faculty advisor for suggested special topics courses.

Library Management

(Associate in Applied Science) Plan 23LI

Required General Education Coursework15

CMM	122	Business and Professional Speaking <i>or</i>	
CMM	123	Small Group Dynamics	3
ENG	120	Technical Composition I <i>or</i>	
ENG	121	English Composition I	3
HUM	127	Critical Thinking <i>or</i>	
PHI	125	Introduction to Ethics	3
		Science or Mathematics Elective*	3
		Social Science Elective*	3

Required LTA Coursework.....40

LTA	121	Introduction to Library Science	3
LTA	210	Library Materials	3
LTA	212	Technology for Libraries	3
LTA	214	Cataloging and Classification.....	3
LTA	230	Library Public Services	3
LTA	232	Reference and Information Services	3
LTA	274	Workplace and Supervisory Skills for the LTA	3
LTA	278	Supervised Field Practicum II	4
		Human Resources Electives (see below)	15

Additional Required Coursework6

CIT	120	Introduction to Computers	3
DMD	115	Internet Fundamentals	3

Total Hours for A.A.S. Degree61

LTA Library Management Electives

Select 15 credit hours from the list below:

BUS	113	Human Resource Management	3
BUS	115	Elements of Supervision.....	3
BUS	121	Introduction to Business.....	3
BUS	122	Principles of Marketing	3
BUS	223	Principles of Management	3
CMM	127	Intercultural Communication	3
CMM	128	Interviewing Practices	3
# LTA	299	Special Topics in Library Science	3
PSY	122	Psychology in Business and Industry.....	3

See faculty advisor for suggested special topics courses.

Associate in Applied Science and Career Certificates

Library Technical Assistant (Certificate) Plan 23LH

LTA	121	Introduction to Library Science	3
LTA	210	Library Materials	3
LTA	212	Technology for Libraries	3
LTA	214	Cataloging and Classification.....	3
LTA	230	Library Public Services	3
LTA	232	Reference and Information Services	3
LTA	274	Workplace and Supervisory Skills for the LTA	3
LTA	276	Supervised Field Practicum I <i>or</i>	
LTA	278	Supervised Field Practicum II.....	3-4
DMD	115	Internet Fundamentals	3
		LTA Certificate Elective (see below)	3

Total Hours for Certificate30-31

LTA Certificate Electives

Select 3 credit hours from the list below:

BUS	115	Elements of Supervision.....	3
CIT	120	Introduction to Computers	3
CIT	150	Introduction to Local Area Networking	3
CMM	127	Intercultural Communication	3
CMM	128	Interviewing Practices	3
DMD	111	Introduction to Digital Media.....	3
DMD	116	Web Design and Development.....	3
ENG	249	Children's Literature.....	3
LTA	234	Readers Advisory Services.....	3
LTA	250	Introduction to Youth Services.....	3
# LTA	299	Special Topics in Library Science.....	1-3

See faculty advisor for suggested special topics courses.

For more information on recommended courses or program specific advising, contact faculty member Anne Chernaik or the Communication Arts, Humanities and Fine Arts division at (847) 543-2040.

Machine Tool Trades

Engineering, Math and Physical Sciences Division Room T302, (847) 543-2044

This program prepares students for employment and advancement in the machine tool field. Machinists are skilled workers who are able to read and interpret blueprints, use common hand tools, set up and operate metal cutting machines, and use precision measuring instruments. Advanced placement in this program is possible for experienced machinists. Apprenticeship and N.I.M.S. national credentialing credit is also available. Machine tool courses are approved by the United States Department of Labor, Bureau of Apprenticeship Training and the N.I.M.S. national certified program.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met.

Basic Machining – Phase I (Certificate) Plan 24MJ

Required Phase I Coursework	15	
CNC 110	CNC Operations I.....	3
MTH 114	Applied Mathematics I.....	3
MTT 110	Machine Trades Blueprint Reading	3
MTT 111	Machine Shop I	3
MTT 210	Machine Shop II.....	3

Total Hours for Certificate15

Machine Tool Trades – Phase II (Certificate) Plan 24SM

Required Phase I Coursework (see above)	15	
Required Phase II Coursework	20	
CNC 115	CNC Programming I <i>or</i>	
EWE 220	Cooperative Work Experience I	3
MET 111	Manufacturing Processes	3
MET 112	Basic Metallurgy I	3
MTH 115	Applied Mathematics II	3
MTT 113	Grinding Technology	3
MTT 212	Precision Machining/NIMS Credentialing.....	3
WLD 170	General Welding.....	2

Total Hours for Certificate35

Tool and Mold Maker – Phase III (Advanced) (Certificate) Plan 24SR

Required Phase I and Phase II

Coursework (see above)	35
Required Phase III Coursework	15
CNC 210 CNC Operations II <i>or</i>	
MTT 215 Diemaking II <i>or</i>	
MTT 216 Moldmaking II	3
CNC 217 Introduction to Wire EDM Machining	3
MTT 115 Introduction to Diemaking	3
MTT 116 Introduction to Moldmaking	3
MTT 211 Jig and Fixture Design	3
Total Hours for Advanced Certificate	50

Machine Tool Trades (Associate in Applied Science) Plan 24MD

Students interested in obtaining an A.A.S. Degree must complete all phases required for the Advanced Certificate, as well as the General Education requirements.

Required General Education Coursework	15
CMM 111 Communication Skills	3
ECO 110 Economics for Business and Industry	3
ENG 120 Technical Composition I <i>or</i>	
ENG 121 English Composition I	3
Social Sciences Elective*	3
Humanities or Fine Arts Elective*	3

Required Machine Tool Trades Coursework	50
Phase I	
CNC 110 CNC Operations I.....	3
MTH 114 Applied Mathematics I.....	3
MTT 110 Machine Trades Blueprint Reading	3
MTT 111 Machine Shop I	3
MTT 210 Machine Shop II.....	3

Phase II

CNC 115 CNC Programming I <i>or</i>	
EWE 220 Cooperative Work Experience I	3
MET 111 Manufacturing Processes	3
MET 112 Basic Metallurgy I	3
MTH 115 Applied Mathematics II	3
MTT 113 Grinding Technology	3
MTT 212 Precision Machining/NIMS Credentialing.....	3
WLD 170 General Welding.....	2

Phase III

CNC 210 CNC Operations II <i>or</i>	
MTT 215 Diemaking II <i>or</i>	
MTT 216 Moldmaking II	3
CNC 217 Introduction to Wire EDM Machining	3
MTT 115 Introduction to Diemaking	3
MTT 116 Introduction to Moldmaking	3
MTT 211 Jig and Fixture Design	3

Total Hours for A.A.S. Degree	65
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For more information on recommended courses or program specific advising, contact faculty member Jeff Hines or the Engineering, Math and Physical Sciences division at (847) 543-2044.

Massage Therapy

**Biological and Health Sciences Division, Room B210,
(847) 543-2042**

This certificate program prepares students to achieve entry level competencies as massage therapists in sports clinics, salons, spas, hospitals, private practice, nursing homes, hospices, wellness centers, and other health care and recreational settings.

The Massage Therapy Certificate is designed to prepare an individual to become a licensed professional massage therapist. Successful completion of 3 prerequisite courses plus two semesters in the CLC massage therapy program meets the requirements to take the licensing exam in Illinois or Wisconsin. Massage therapy courses are taken concurrently and include lecture, lab, and clinical hours.

Students who are selected for the program are required to undergo a background check and a urine drug screen prior to beginning the program. The results of the background check and drug screen may result in the student losing their seat in the program. The costs are borne by the student.

An option to earn an A.A.S. in Health and Wellness Promotion is also available. Visit www.clcillinois.edu/programs/mas for more details about the program.

Students must maintain a minimum grade of “C” in all MAS courses to continue in and graduate from the program. In addition, students must maintain a CLC gpa of 2.0 or higher to graduate. All courses comprise the Massage Therapy Program: individual courses may not be taken.

Massage Therapy (Certificate) Plan 21MS

Prerequisite Courses	7
BIO 111 Human Form and Function	4
MAS 119 Introduction to Massage Therapy.....	1
PED 228 First Aid/CPR	2

First Semester	14
MAS 110 Massage Structure and Functions I	2
MAS 112 Kinesiology and Palpation I.....	2
MAS 114 Massage: Communication & Business I	3
MAS 116 Clinical Skills and Special Populations	3
MAS 131 Massage Therapy I: Swedish	2
MAS 132 Massage Therapy II: Integrative	2

Associate in Applied Science and Career Certificates

Second Semester	12
MAS 210 Massage Structure and Function II	2
MAS 212 Kinesiology and Palpation II	2
MAS 214 Massage: Communication and Business II	3
MAS 233 Massage Therapy III: Rehabilitative	2
MAS 234 Massage Therapy IV: Advanced Tech.....	2
MAS 235 Therapeutic Massage Clinic.....	1

Total Hours for Certificate33

Academic Program Entrance Requirements

The following entrance requirements are required of all students:

- 18 years of age or older
- High school graduate or earned GED
- College Reading and Writing Readiness
- Attend a CLC Massage Therapy information session
- A GPA of 2.0 or higher if student has a CLC GPA
- Must provide a CLC/Health Physical form completed by a professional healthcare provider
- To continue in and graduate from the program, students must maintain a minimum grade of “C” in all coursework.

Nonacademic Program Entrance Requirements

Because of the inherent requirements of the profession, the following minimum abilities or essential technical functions are expected of the student:

- Lifting, stretching, and standing over the course of one or two hours
- Use of a full range of motion of the joints, and the ability to perform fine motor movements with the hands
- Ability to perform repetitive tasks such as stooping, bending, twisting, reaching and occasionally kneeling and squatting
- Good physical health and the ability to safely give and receive massages without risk of physical injury; students should consult a doctor to determine whether giving or receiving massages might be harmful to their health in any way
- Ability to respond in an emotionally controlled, professional, and ethical manner at all times and in varied patient care and educational situations
- Major medical health insurance is recommended for the length of the program; student insurance information is available through the CLC Health Center
- Willingness to give massages to (and receive massages from) people of different ages, body types, genders, sexual orientations, and personalities
- Prospective students are strongly encouraged to receive at least one massage from a licensed massage therapist; they are also strongly encouraged to make an appointment at the CLC Student Massage Clinic (See www.clcillinois.edu/programs/mas for details.)

For more information or program specific advising, contact the MAS department chair Joana Pabedinskas at (847) 543-2029 or the Biological and Health Sciences division at (847) 543-2042.

Mechanical Engineering Technology

Engineering, Math and Physical Sciences Division
Room T302, (847) 543-2044

Mechanical Engineering Technology (Associate in Applied Science) Plan 24MB

Mechanical engineering technicians are the semi-professional members of the engineer/scientist/technician team engaged in the design of machines, mechanisms, and other mechanical systems. Assignments may include drafting, designing, research and development, product and materials testing, and supervision. In addition to a broad based background in mechanical design, this program offers training on an industrial CAD system.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met.

Required General Education Coursework15

CMM 111	Communication Skills <i>or</i>	
CMM 121	Fundamentals of Speech.....	3
ENG 120	Technical Composition I <i>or</i>	
ENG 121	English Composition I	3
MTH 117	Technical Mathematics I**	3
ECO 221	Principles of Economics I <i>or</i>	
PSY 121	Introduction to Psychology <i>or</i>	
PSY 122	Psychology in Business and Industry.....	3
	Humanities or Fine Arts Elective*	3

Required Mechanical Engineering Technology Coursework38-39

EGR 121	Engineering Graphics	3
EGR 115	Applied Statistics for Technology <i>and</i>	
EGR 215	Mechanics of Materila for Technology <i>or</i>	
EGR 216	Statics and Mechanics of Materials for Technology.....	5-6
MET 111	Manufacturing Processes	3
MET 115	Industrial Pneumatics and Hydraulics	3
MET 131	Introduction to Robotics.....	3
MET 212	Mechanisms	4
MET 214	Mechanical Design and Drafting	3
MET 215	Machine Design	5
MET 216	Applied Finite Element Analysis	3
MET 231	Mechatronics	3
MTT 111	Machine Shop I <i>or</i>	
MTT 112	Machining Principles	3

Additional Required Coursework	15
CAD 170 Introduction to SolidWorks <i>or</i>	
CAD 176 Introduction to Creo	3
ELC 171 Programmable Logic Controllers	3
HET 111 HVACR Electricity I <i>or</i>	
EET 170 DC Circuit Fundamentals <i>and</i>	
EET 174 AC Fundamentals	4
PHY 121 General Physics I	5
Total Hours for A.A.S. Degree	68-69

** Additional math may be required for students who choose to pursue a Bachelors degree in Mechanical Engineering Technology (BSMET). Contact faculty member Margie Porter at 847-543-2904 for additional information.

Mechanical Engineering Technology Design I – IV Certificates

The following four certificates represent the four “rungs” of a career ladder in the Mechanical Engineering Technology design field. Each certificate represents specialty coursework that students must acquire as they move towards the MET degree.

MET I: Toolbox (Certificate) Plan 24MK

EGR 121 Engineering Graphics	3
MET 111 Manufacturing Processes	3
MTT 111 Machine Shop I <i>or</i>	
MTT 112 Machining Principles	3

Total Hours for Certificate9

MET II Nuts and Bolts (Certificate) Plan 24ML

CAD 170 Introduction to SolidWorks <i>or</i>	
CAD 176 Introduction to Creo	3
CNC 111 Geometric Dimensioning and Tolerancing ..1	
MET 214 Mechanical Design and Drafting	3

Total Hours for Certificate7

MET III: Mechatronics (Certificate) Plan 24MM

MET 115 Industrial Pneumatics and Hydraulics	3
MET 131 Introduction to Robotics.....	3
MET 231 Mechatronics	3

Total Hours for Certificate9

MET IV: Design and Innovation (Certificate) Plan 24MN

MET 212 Mechanisms	4
MET 215 Machine Design	5
MET 216 Applied Finite Element Analysis	3
EGR 115 Applied Statics for Technology <i>and</i>	
EGR 215 Mechanics of Materials for Technology <i>or</i>	
EGR 216 Statics and Mechanics of Materials for Technology.....	5-6

Total Hours for Certificate17-18

Mechanical Service Technician I and II Certificates

The following two certificates will prepare students for the installation, maintenance and repair of the mechanical and basic electrical aspects of industrial machinery in the mechanical service technician field.

Mechanical Service Technician I (Certificate) Plan 24MO

MET 111 Manufacturing Processes	3
MET 115 Industrial Pneumatics and Hydraulics	3
MET 116 Machine Components and Repair	3
MTT 110 Machine Trades Blueprint Reading	3
MTT 111 Machine Shop I	3
WLD 170 General Welding	2

Total Hours for Certificate17

Mechanical Service Technician II (Certificate) Plan 24MP

EET 115 Electronic Laboratory Techniques	2
EET 170 DC Circuit Fundamentals <i>and</i>	
EET 174 AC Fundamentals <i>or</i>	
HET 111 HVACR Electricity I	4
MET 117 Pump Overhaul and Repair	3
MET 118 Machinery's Handbook.....	3
MTT 210 Machine Shop II.....	3
WLD 171 Gas Weld Cutting and Brazing <i>or</i>	
WLD 172 Shielded Metal Arc Welding <i>or</i>	
WLD 175 Gas Metal Arc Welding <i>or</i>	
WLD 178 Gas Tungsten Arc Welding	3

Total Hours for Certificate18

For more information on recommended courses or program specific advising, contact faculty member Margie Porter at (847) 543-2904 or the Engineering, Math and Physical Science division at (847) 543-2044.

Mechatronics Technology

Engineering, Math and Physical Sciences Division
Room T302, (847) 543-2044

Mechatronics Technology (Certificate) Plan 24ZB

The skills taught in this certificate will train technicians in systems, processes and standards supporting the application of integrated systems to include electrical, mechanical, digital hardware and software and control systems.

Required courses:

ARM 111	Fundamentals of High Tech Manufacturing I.....	1
ARM 112	Fundamentals of High Tech Manufacturing II	1
ARM 113	Fundamentals of High Tech Manufacturing III	1
ARM 131	Robot Design and Construction I.....	1
ARM 132	Robot Design and Construction II	1
ARM 133	Robot Design and Construction III	1
ARM 151	Mechanical Systems I.....	1
ARM 152	Mechanical Systems II	1
ARM 153	Mechanical Systems III	1
ARM 156	Electrical Systems I	1
ARM 157	Electrical Systems II.....	1
ARM 158	Electrical Systems III	1
ARM 171	Automation I.....	1
ARM 172	Automation II	1
ARM 173	Automation III	1
ARM 174	Automation IV	1
ARM 175	Automation V	1
ARM 176	Automation VI	1
ARM 191	Pneumatics and Hydraulics I	1
ARM 192	Pneumatics and Hydraulics II	1
ARM 193	Pneumatics and Hydraulics III	1
ARM 196	Electrical Systems Capstone	1
ARM 197	Pneumatic and Hydraulic Systems Capstone	1
ARM 198	Complete Systems Integration	1
	Technical Electives (may include any ARM or MET course not included in this certificate, including MET 299, as agreed upon with a faculty adviser)	6

Total Hours for Certificate30

For more information on recommended courses or program specific advising, contact the Engineering, Math and Physical Science division at (847) 543-2044.

Medical Assisting

Biological and Health Sciences Division, Room B210,
(847) 543-2042

The goal of the Medical Assisting Program is to prepare competent entry level medical assistants in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains. The program trains students to work as Medical Assistants in a variety of settings. Medical Assistants provide routine administrative and clinical tasks to keep the offices of physicians, chiropractors, and other health professionals running smoothly. The tasks vary by office and specialty area. In smaller offices, Medical Assistants are usually generalists, providing both administrative and clinical support. In larger practices, Medical Assistants often specialize in certain areas. Administrative duties include tasks such as scheduling and receiving patients, preparing and maintaining medical records, handling telephone calls and written correspondence, medical transcription, submitting insurance claims, and maintaining practice finances. Clinical duties may include asepsis and infection control, taking patient histories and vital signs, performing first aid and CPR, preparing patients for procedures, performing electrocardiograms (ECGs), assisting the physician with examinations and treatments, performing suture removal, collecting and processing specimens, performing selected lab and diagnostic tests, administering medications (injections), and drawing blood (venipuncture).

Graduates of the Medical Assisting Program may seek employment in various settings such as doctors' offices, clinics, occupational health facilities/programs, lawyers' offices specializing in medical malpractice, urgent care centers, and hospital outpatient departments. Medical Assistants are employed in a variety of medical specialties including but not limited to: Pediatrics, Internal Medicine, Family Practice, Occupational Health, General Surgery, Obstetrics and Gynecology, Oncology, and Gastroenterology.

Students interested in Medical Assisting should have a sincere desire to work with patients directly in an outpatient setting, and a sincere interest in wanting to help people maintain and improve their health.

Accreditation and Certification

The certified Medical Assisting program at the College of Lake County in Waukegan, Illinois, is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Medical Assisting Education Review Board (MAERB).

Commission on Accreditation
of Allied Health Education Programs
25400 U.S. Highway 19 North, Suite 158
Clearwater, FL 33763
(727) 210-2350

Graduates are eligible to sit for the AAMA Certification Examination, where, upon passing the examination, the individual earns the Certified Medical Assistant (CMA) credential.

Program Entrance Requirements

- Attend a Medical Assisting program Information Session within 2 years of program enrollment.
- Apply to the college.
- Submit transcripts to the Records Office at Grayslake Campus: high school or equivalent, any college courses completed or degree). Complete credential evaluation form for college transcript - available in the Office of Admissions.
- Demonstrate College Reading and Writing Readiness and Basic Algebra Readiness (described on page 374 or seek advisor assistance)
- Meet Prerequisites: BIO 111 or BIO 244 and BIO 245 or equivalent transfer course with a grade of C or higher.
- Must be at least 18 years old by start of program.

It is recommended that students meet with an advisor to create a plan (**Interested students may take HIT 111, HIT 119, PBT 110, and PBT 115, MOA 112 and MOA 115 prior to entering the program.)

Upon completion of above program requirements students can enroll in MOA 111 on a first come first serve basis.

New cohorts begin in the fall and spring.

Courses are offered in the fall (daytime) and spring (evening). Interested students may take HIT 111, HIT 119, MOA 112, MOA 115, PBT 110 and PBT 115 prior to taking MOA 111. Preference will be given to residents of Community College District 532 (including community colleges with which CLC has a Joint Educational Agreement). Students who live outside of CLC's district but are eligible for in-district tuition because they are employed by a district employer are NOT considered residents of the district for purposes of selection into the program.

Students must earn a minimum grade of "C" in all MOA, HIT, PBT, and BIO courses listed below to continue in and graduate from any of the certificate or degree programs (including the Healthcare Office Assistant.) In addition, students must maintain a CLC GPA of 2.0 or higher. To complete an A.A.S., students must meet the General Requirements and students should select General Education electives (*) from those listed in the catalog. All course prerequisites must be met.

Students should seek the advice of the MOA faculty for course scheduling every semester.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met.

Associate in Applied Science and Career Certificates

Medical Assisting

(Associate in Applied Science) Plan 21MD

Required General Education Coursework16-20

BIO	111	Human Form and Function <i>or</i>	
BIO	244	Anatomy and Physiology I and	
BIO	245	Anatomy and Physiology II	4-8
CMM	111	Communication Skills <i>or</i>	
CMM	121	Fundamentals of Speech <i>or</i>	
CMM	123	Dynamics of Small Group Discussion <i>or</i>	
CMM	128	Interviewing Practices	3
ENG	121	English Composition I <i>or</i>	
ENG	120	Technical Composition I	3
PSY	121	Introduction to Psychology	3
		Humanities or Fine Arts Elective*	3

Required Medical Assisting Coursework32

HIT	111	Medical Terminology	3
HIT	119	Pharmacology	1
MOA	111	Clinical Medical Assisting I	4
MOA	112	Basic Medical Office and Billing Procedures	4
MOA	115	Insurance Coding for Medical Assistants	3
MOA	211	Clinical Medical Assisting II	4
MOA	212	Medical Assisting Externship	3
		Medical Assisting Electives (see next page)	6
PBT	110	Introduction to Medical Lab Technology	2
PBT	115	Phlebotomy Techniques	2

Additional Required Coursework12

AOS	112	Computer Basics/Software Application <i>or</i>	
CIT	120	Introduction to Computers	3
CIT	111	Comprehensive Spreadsheets <i>or</i>	
CIT	112	Comprehensive Database <i>or</i>	
CIT	119	Introduction to Office Software	3
		General Electives *	6

Total Hours for A.A.S. Degree60-64

Medical Assisting Electives

AOS	119	Records Management	2
AOS	214	Administrative Office Procedures	3
BUS	115	Elements of Supervision	3
HIT	113	Ethical and Legal Aspects of Medical Records	2
HIT	215	Medical Science	3
HWP	240	Contemporary Health Issues	3
NUR	110	Nurse Assisting	7
PBT	116	Clinical Phlebotomy	2
PDS	121	Self Empowerment	1
PED	228	First Aid/CPR	2
PSY	220	Lifespan Development	3

Medical Assisting

(Certificate) Plan 21MA

This is a limited enrollment program. See previous page for details.

AOS	112	Computer Basics/Software Applications or	
CIT	120	Introduction to Computers	3
BIO	111	Human Form and Function or	
BIO	244	Anatomy and Physiology I and	
BIO	245	Anatomy and Physiology II	4-8
HIT	111	Medical Terminology	3
HIT	119	Pharmacology	1
MOA	111	Clinical Medical Assisting I	4
MOA	112	Basic Medical Office & Billing Procedures	4
MOA	115	Insurance Coding for Medical Assisting	3
MOA	211	Clinical Medical Assisting II	4
MOA	212	Medical Assisting Externship	3
PBT	110	Introduction to Medical Lab Technology	2
PBT	115	Phlebotomy Techniques	2
PSY	121	Introduction to Psychology	3

Total Hours for Certificate36-40

Healthcare Office Assistant

(Certificate) Plan 21ME

This is not a limited enrollment program. Interested students do not need to screen to be admitted.

This certificate prepares students to work in the front office of a medical or dental office. Students in the program will learn how to schedule appointments, protect confidentiality of patient information, use proper telephone etiquette, and understand the health insurance claims process. An introduction to basic insurance coding will be included. Students must have adequate computer skills and access to the Internet to complete assignments in this program.

HIT	111	Medical Terminology	3
MOA	112	Basic Medical Office and Billing Procedures	4

Total Hours Required for Certificate7

Technical Standards

Students in the College of Lake County's Medical Assisting Program must demonstrate the ability to perform or learn to perform the following essential skills:

- motor skills sufficient to perform record filing and data input tasks and be able to utilize various computer hardware and software in accomplishing operational functions related to medical assisting activities

- have full range of motion of joints, fine motor movements of the hands, ability to perform repetitive tasks and the ability to stoop, bend, twist, reach and occasionally kneel and squat
- lift and carry objects weighting up to 50 pounds
- push or pull a wheelchair, cart or gurney
- have adequate hearing which permits the individual to communicate in a rational and coherent manner with others in the English language
- examine closely images or other forms of output created by diagnostic equipment; must have color vision; must have good visual acuity for client assessment, medical checking, assisting in medical procedures, and for documentation
- demonstrate critical thinking/cognitive skills needed for problem solving and effective performance of standard medical assisting functions
- adapt effectively to environments with high stress in learning situations
- stand and walk 4 to 8 or more hours per clinical session
- acquire and apply information from classroom instruction, professional practice, independent learning and team projects
- synthesize information regarding healthcare data for formal, verbal and/or written, presentation to healthcare professionals
- follow job related logical thought processes to make judgments
- take initiative and work independently yet recognize self limitations
- demonstrate prolonged concentration skills
- cope in an appropriate manner to common job related stressful situations
- protect the confidentiality and security of health information
- meet the ethical standards of the profession.

Upon entrance, students must be able to perform the essential functions of the curriculum and meet the standards described herein for the program.

For more information on recommended courses or program specific advising, contact the Biological and Health Sciences division at (847) 543-2042.

Medical Imaging

**Biological and Health Sciences Division, Room B210,
(847) 543-2042**

Medical Imaging (Associate in Applied Science) Plan 21MI

This is a limited enrollment program. MIM courses are predominantly offered during the day with the exception of MIM 110. Students are required to meet the screening requirements in effect at the time of screening. Students who screen and are accepted into a limited enrollment program will be required to complete the curriculum that is in place at the time of entrance into the program. If students who screen are not granted admission, they must rescreen and satisfy all screening and curriculum requirements in place for a future program start.

Screening Deadline: First Wednesday in March

The Medical Imaging Program prepares radiographers to work in medical facilities producing radiographic examinations which are interpreted by a radiologist or another medical specialist. Graduates of the program are qualified to take the national certification examination given by the American Registry of Radiologic Technologists. Graduates also meet the additional criteria required for Illinois licensure. The Medical Imaging program is nationally accredited by the Joint Review Committee on Education in Radiologic Technology: 20 North Wacker Drive, Suite 2850 Chicago, IL 60606-3182, (312) 704-5300, mail@jrcert.org.

Consistent with the Mission and goals of the College of Lake County, the Medical Imaging Program strives for excellence in preparing students for entry-level positions in the Medical Imaging profession. By maintaining high academic and clinical standards, graduates receive an Associate in Applied Science degree in Medical Imaging, become eligible for certification as Registered Radiologic Technologists, and attain clinical competency as entry-level professional radiographers.

Interested students may take MIM110 prior to being admitted to the program; however, the number of students that can be admitted to the MIM Program is limited. Therefore, a screening procedure is used to select the academically best qualified from those who request consideration. Preference is given to residents of Community College District 532 (CLC) and residents of other community college districts with which CLC has joint educational agreements. Students who live outside of CLC's district but are eligible for in-district tuition

Associate in Applied Science and Career Certificates

because they are employed by a district employer are NOT considered residents of the district for purposes of selection into the program.

Students enrolled in the program are required to undergo a background check and a urine drug screen prior to attending their clinical site (MIM 170). The results of the background check and drug screen may result in the student losing his/her seat in the program. The costs are borne by the student.

Students who are selected for the program are required to attend a mandatory orientation session. Failure to attend the mandatory orientation session may result in the student losing his/her seat in the program and the next qualified student on the list will be selected in his/her place.

To be considered for admission to the Medical Imaging Program, students must complete the following screening requirements prior to the screening deadline.

Students must have submitted the following documents to the Welcome and One-Stop Center:

- A. Student Information Form.
- B. **Official** high school transcript with graduation date OR **Official** GED test scores
OR
Official college transcripts with graduation date and degree awarded
OR
Official foreign high school or college transcript evaluated by a NACES approved agency
- C. Medical Imaging Program Request for Screening Form
- D. If using courses from another college to meet prerequisites or degree requirements, submit an official transcript to the Records Office. It is also highly recommended to submit a "Request for Evaluation of Prior College Transcripts" form.

Minimum Selection Criteria: student records must indicate the following:

- A. High school graduate or equivalent or high school senior in last term
- B. College Reading and Writing Readiness and Basic Algebra Readiness
- C. CLC Cumulative GPA is 2.0 or above
- D. High school chemistry or physics with a lab (1 year, C or better)
OR
CHM 120 or CHM 121 or PHY 121 or an equivalent course (C or better)
- E. BIO 123 or BIO 161 or an equivalent course (C or better)
- F. High school algebra (2-years, C or better)
OR
MTH 108 or an equivalent course (C or better)
OR
Math Placement Test (indicates proficiency in MTH 108)

- G. Applicants may take the NLN PAX exam once every 90 days (approximately three months). NLN PAX exam results that are less than 90 days between exams will not be considered. Scores used for screening into limited enrollment programs will be valid for only 3 years prior to a screening deadline. Scores older than 3 years will not be considered for screening. Visit www.nlnonlinetesting.org for available test dates and times.
- H. Must be eighteen (18) years of age by mid-term of the fall semester following the screening deadline
- I. Attendance at a Medical Imaging Program Information Session (within two years of the screening deadline)

Students must earn a minimum grade of "C" in each Imaging course to continue in and graduate from the program.

Summer Session One.....4
BIO 244 Anatomy and Physiology I.....4

Fall Semester One16
BIO 245 Anatomy and Physiology II4
MIM 110 Introduction to Medical Imaging3
MIM 111 Radiographic Anatomy and Positioning I5
MIM 112 Principles of Radiographic Exposure.....3
MIM 170 Introduction to the Clinical
Education Center.....1

Spring Semester One.....14
ENG 121 English Composition I3
MIM 113 Radiographic Anatomy and Positioning II....5
MIM 114 Clinical Practice I.....3
PSY 121 Introduction to Psychology3

Summer Session Two.....4
MIM 115 Clinical Practice II3
MIM 116 Advanced Radiographic Procedures I1

Fall Semester Two14
MIM 210 Technical Aspects of Patient Care2
MIM 211 Imaging Equipment6
MIM 212 Clinical Practice III3
CMM 121 Fundamentals of Speech *or*
CMM 123 Dynamics of Small Group Discussion *or*
CMM 128 Interviewing Practices3

Spring Semester Two.....17
MIM 214 Advanced Topics in Radiography6
MIM 215 Clinical Practice IV3
MIM 216 Computer Imaging2
CMM 127 Intercultural Communication3
HUM 127 Critical Thinking3

Summer Session Three3
MIM 271 Clinical Practice V3

Total Hours for A.A.S. Degree72

Pregnancy Policy

During the first semester in the medical imaging program, all students will be taught basic radiation protection procedures. These instructions will include enough background so that students will be able to understand the possible biological risks of ionizing radiation to the embryo and fetus. In addition, any prospective student attending a Medical Imaging information session receives the NRC guide #8.29 and #8.13 with a brief overview.

Information is available through the United States Nuclear Regulatory Commission (NRC) guide #8.13 on instruction concerning prenatal radiation exposure. The NRC guide and forms are available in the appendices of the MIM handbook or at <http://pbadupws.nrc.gov/docs/ML0037/ML003739505.pdf>

A student may voluntarily inform the department chair and the radiation safety officer in writing using the form in the back of guide #8.13 should a pregnancy occur during the educational period. The pregnancy then becomes declared and a fetal dosimeter will be issued to the student to monitor radiation exposure. The signed NRC 8.13 form letter for declaring pregnancy will be placed in the student's CLC file. A student may rescind pregnancy declaration at any time in writing to the department chair.

Once the student declares their pregnancy, the possible risks to the embryo and fetus shall be reviewed and the review documented and signed by the radiation safety officer and the student. The student will then be referred to the department chair for discussion and documentation of the student's pregnancy options.

The student will choose one of the following pregnancy options:

1. The student may continue in the program without modification. In this case, two dosimeters will be used, one worn at the collar and on top of the apron during fluoroscopy and one worn on the belt and under the apron during fluoroscopy to record the student exposure and the fetal exposure respectively. Should recorded fetal exposure increase to 500 mrem or be received at a rate greater than 50 mrem per month at any time during pregnancy, the student will be required to take a leave of absence [see (b) below]. All course objectives and rotations shall be equivalent to any and all students enrolled in those particular courses. Adherence to radiation protection policies should eliminate almost all fetal exposure. Other counseling on radiation protection procedures shall be done as needed.
2. A leave of absence may be taken until the birth of the child. All medical imaging grades will be recorded as withdrawn (W) if the student grades are acceptable at the time. This will permit the student to return with no penalty. Student acceptance to clinical facilities depends upon availability of sites.
3. The student may terminate the program. All medical imaging grades will be recorded as withdrawn (W) if the student grades are acceptable at the time.

For more information on recommended courses or program specific advising, contact the following faculty members or the Biological and Health Sciences division at (847) 543-2042:

Joe Dielman / Lynn Wiechert

Medical Imaging Technical Performance Standards

Medical Imaging is a practice of discipline with cognitive, sensory, affective, and psychomotor performance requirements. Based on those requirements and [the State of Illinois licensing requirements], a list of “Performance Standards” has been developed. Each standard has an example of an activity or activities that a potential student will be required to perform while enrolled in the radiography program. Please note that these examples are not all inclusive.

Issue	Standard	Examples of Required Activities (Not all inclusive)
Visual	Visual ability sufficient for observation and assessment necessary in the operation of equipment and care of patients.	<ul style="list-style-type: none"> • Visualize x-ray collimator centering light and identify its center. • Observe the patient in order to assess the patient’s condition and/or needs from a distance of at least 20 feet. • Can see numbers, letters, calibrations, etc., of varying sizes located on equipment utilized by a radiographer.
Hearing	Auditory abilities sufficient to monitor and assess patient needs, and to provide a safe environment.	<ul style="list-style-type: none"> • Hear a patient talk in a normal tone from a distance of 20 feet • Hear monitor alarm, emergency signals, and cries for help.
Tactile	Tactile ability sufficient for patient assessment and operation of equipment and care of patients.	<ul style="list-style-type: none"> • Perform palpation, tactile assessment and manipulation of body parts to ensure proper body placement and alignment. • Manipulate dials, buttons and switches of various sizes.
Mental	Mental ability sufficient for patient assessment and operation of equipment and care of patients.	<ul style="list-style-type: none"> • Be able to visually concentrate and focus attention, thoughts, and efforts on patients and equipment for varying periods of time. • Be able to respond to patients’ changing physical conditions.
Environmental Requirements	Physical health sufficient enough to be able to tolerate certain conditions present in the clinical setting.	<ul style="list-style-type: none"> • Be able to tolerate risks of discomforts in the clinical setting that require special safety precautions, additional safety education, and health risk monitoring (i.e., ionizing radiation), working with sharps, chemicals, and infectious disease. Students may be required to use protective clothing or gear such as masks, goggles, gloves, and lead aprons.
Communication	Communication abilities sufficient for interaction with others in verbal and written form.	<ul style="list-style-type: none"> • Effectively communicate to the patient in order to converse, instruct the patient, relieve anxiety, gain their cooperation during procedures, understand the patient when they are communicating symptoms of medical emergency.

Issue	Standard	Examples of Required Activities (Not all inclusive)
Mobility	Physical abilities sufficient to move from room to room and maneuver in small spaces.	<ul style="list-style-type: none"> • Assist all patients, according to individual needs and abilities, in moving, turning, transferring from transportation devices to x-ray table, etc. • Be able to push, pull, and lift a minimum 50 lbs. • Push a stretcher and/or wheelchair without injury to self, patient, and others. • Push a mobile x-ray machines from one location to another, including turning corners, getting on and off an elevator, and manipulating it in a patient's room or surgery.
Motor Skills	Gross and fine motor abilities sufficient to provide safe effective patient care.	<ul style="list-style-type: none"> • Manually move the x-ray tube and position the tube at various angles and heights up to 7 feet. • Accurately draw up sterile contrast media and other solutions without contaminating the syringe and/or needles, etc. • Physically be able to administer emergency care including performing CPR. • Place cassettes (image receptors) in Bucky trays and properly manipulate all locks. • Be able to stand for periods as long as 2-hours wearing lead aprons and to walk a distance of 5 miles during a normal work day.
Critical Thinking	Critical thinking ability sufficient for safe, clinical judgment.	<ul style="list-style-type: none"> • Identify cause-effect relationships in clinical situations. • Evaluate radiographs to ascertain that they contain proper identification and are of diagnostic value. • Select exposure factors and accessory devices for all radiographic procedures with consideration of patient size, age, and extent of disease. • Assess patient's condition and needs from a distance of at least 20 feet. • Initiate proper emergency care protocols, including CPR, based on assessment data.
Interpersonal Behavioral and Social Skills	Interpersonal abilities sufficient to interact with individuals, families, and groups from a variety of social, emotional, cultural, and intellectual backgrounds.	<ul style="list-style-type: none"> • Establish rapport with patients, families, and colleagues. • Allow mature, sensitive, and effective relationships with patients and fellow workers (interpersonal skills). • Tolerate physically taxing workload. • Function effectively under stress. • Adapt to changing environments (flexible schedules, emergency conditions). • Display compassion, professionalism, empathy, integrity, concern for others, and interest and motivation.

Developed by St. Petersburg College Radiography Program: Permission granted to CLC.

The American with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 and College of Lake County policy prohibits discrimination against individuals with disabilities. One of the purposes of this document is to ensure that students are aware of the requirements of this program and acknowledge their understanding of the program requirements. Students who have a disability and are in need of accommodations or modifications must contact the Office for Students with Disabilities (“OSD”). The OSD, after consultation with the Program Director, will determine whether or not any reasonable accommodations or modifications can be provided.

Associate in Applied Science and Career Certificates

The Medical Imaging program sets forth the following goals and outcomes:

- Goal 1: Students/graduates will use critical thinking and problem-solving skills.
- Students will demonstrate critical thinking skills.
 - Students will have the ability to modify routine procedures.
- Goal 2: Students/graduates will be clinically competent.
- Students will evaluate radiographs for pathological processes.
 - Students will demonstrate proficiency in the surgical suite.
- Goal 3: Students/graduates will be able to communicate.
- Students will communicate effectively during fluoroscopy examinations.
- Goal 4: Student/graduates will evaluate the importance of professional growth and development.
- Students will assess their growth and development.
 - Students will demonstrate a basic understanding of advanced imaging modalities.
- Goal 5: Program effectiveness measures.
- Students/graduates will pass the certification examination.
 - Graduates will have the knowledge and skills expected by employers as entry technologists.
 - Graduates will obtain employment in radiography.
 - Graduates will complete the program within two years.
 - Graduates will indicate overall satisfaction.

Magnetic Resonance Imaging (MRI) & Computed Tomography (CT) Requirements

These are limited enrollment programs. Didactic courses are only offered online. Students are required to meet the screening requirements in effect at the time of screening. Students who screen and are accepted into a limited enrollment program will be required to complete the curriculum that is in place at the time of entrance into the

program. If students who screen are not granted admission, they must rescreen and satisfy all screening and curriculum requirements in place for a future program start.

Consistent with the Mission and Goals of the College of Lake County, the Magnetic Resonance Imaging and the Computed Tomography certificates strive for excellence in preparing students for advanced-level positions in the Medical Imaging profession. By maintaining high academic and clinical standards, graduates receive a certificate in MRI or CT, become eligible for certification as MRI or CT Registered Technologists, and attain clinical competency as advanced professional radiographers.

1. Students must have submitted the following documents to the Welcome and One-Stop Center:

- A. Student Information Form.
- B. **Official** transcripts with graduation date and degree awarded of your related imaging field
- C. **MRI or CT Request for Screening Form**
- D. Copy of current certification of your imaging field
- E. A professional resume documenting years of experience in a related imaging field (must include employer, job responsibilities, and dates employed)
- F. **Official** copy of your certification scores sent directly to CLC from the certifying agency

2. Meet minimum technical performance standards as defined for the profession.

- Please note that MRI is an advanced certificate and open only to students who are registered in radiography or radiation therapy by the ARRT or in nuclear medicine technology by ARRT or the Nuclear Medicine Technology Certification Board (NMTCB) or in sonography by ARRT or in any sonography-related modality by ARDMS. In addition, students must maintain registration in radiography or radiation therapy by the ARRT or in nuclear medicine technology by the ARRT or NMTCB or in sonography by ARRT or in any sonography-related modality by ARDMS at all times to be eligible for certification and registration in magnetic resonance imaging.
- Please note that CT is an advanced certificate and open only to students who are registered in radiography or radiation therapy. In addition, students must maintain registration in radiography or radiation therapy by the ARRT at all times to be eligible for certification and registration in Computed Tomography.

Screening Deadlines

- **MRI** – The deadline is the first Wednesday in March of odd years. If space is available in the program after the initial screening deadline, qualified students will be accepted in an order based on academic qualifications. All required materials must be submitted to the Records Office by the screening deadlines.
- **CT** – The deadline is the first Wednesday in March of even years. If space is available in the program after the initial screening deadline, qualified students will be accepted in an order based on academic qualifications. All required materials must be submitted to the Records Office by the screening deadlines

The number of students that can be admitted to any clinical education course is limited for any given session. Therefore, a screening procedure is used to select the academically best qualified from those who request consideration.

- Preference is given to residents of Community College District 532 (CLC) and residents of other community college districts with which CLC has a Joint Education Agreement. Students who live outside of CLC’s district but are eligible for in-district tuition because they are employed by a district employer are NOT considered residents of the district for purposes of selection into the program.
- Students who are selected for the program are required to undergo a background check and a urine drug screen. The results of the background check and drug screen may result in the student losing his/her seat in the program. The costs are borne by the student.
- Students must maintain a minimum grade of “C” in each Medical Imaging course to continue in and graduate from the MRI or CT program. In addition, students must maintain a CLC GPA of 2.0 or higher.

For more information on recommended courses or program specific advising, contact faculty member Lynn Wiechert or the Biological and Health Sciences division at (847) 543-2042.

**Magnetic Resonance Imaging
(Certificate) Plan 21MR**

The Magnetic Resonance Imaging (MRI) certificate prepares radiographers to work in medical facilities as MRI technologists. Graduates of the program are qualified to take the national MRI certification examination given by the American Registry of Radiologic Technologists. See previous page for admission requirements.

Note: The lecture portion of the courses is taught online

Fall Semester (odd years)8

MIM 251	MRI Physics and Instrumentation	.....3
MIM 253	MRI Procedures	.....2
MIM 272	MRI Practicum+	.....3

Spring Semester7

MIM 255	MRI Sectional Anatomy and Pathology	.....4
MIM 272	MRI Practicum+	.....3

Total Hours for Certificate15

+ The Practicum has been designed to be flexible and accommodate a variety of schedules. Actual clinic days and hours will be determined by the student and the instructor.

**Computed Tomography
(Certificate) Plan 21MT**

The Computed Tomography (CT) certificate prepares radiographers to work in medical facilities as a CT Technologist. Graduates of the program are qualified to take the national CT certification examination given by the American Registry of Radiologic Technologists (ARRT). See previous page for admission requirements.

Note: The lecture portion of the courses is taught online

Fall Semester (even years)8

MIM 252	CT Physics, Instrumentation, and Procedures I	.....3
MIM 256	CT Sectional Anatomy and Pathology I	.....3
++MIM 273	CT Practicum I+	.....2

Spring Semester8

MIM 254	CT Physics, Instrumentation, and Procedures II	.....3
MIM 258	CT Sectional Anatomy and Pathology II	.....3
MIM 274	CT Practicum II+	.....2

Total Hours for Certificate16

+ The Practicum has been designed to be flexible and accommodate a variety of schedules. Actual clinic days and hours will be determined by the student and the instructor.

Nursing

**Biological and Health Sciences Division, Room B210,
(847) 543-2043**

Nursing (Associate in Applied Science) Plan 21NC

This is a limited enrollment program. Day and evening options are available. Students are required to meet the screening requirements in effect at the time of screening. Students who screen and are accepted into a limited enrollment program will be required to complete the curriculum that is in place at the time of entrance into the program. If students who screen are not granted admission, they must rescreen and satisfy all screening and curriculum requirements in place for a future program start.

Screening Deadlines: First Wednesday in February and the Fourth Wednesday in September

The Associate Degree Program in Nursing prepares individuals to practice as registered nurses in entry level positions across health care settings. The program provides a balanced curriculum of general education and nursing courses. Clinical experience is provided at local hospitals and health care agencies.

The Nursing Program is accredited by the Accreditation Commission for Education in Nursing, 3343 Peachtree Rd., NE, Suite 500, Atlanta, GA 30326, (404) 975-5000, www.nlnac.org/ACEN. It is approved by the State of Illinois Department of Financial and Professional Regulation, 320 West Washington Street, Springfield, IL 62786, www.IDFPR.com. After the completion of the program, the graduate is eligible to take the National Council Licensure Examination (NCLEX) for Registered Nursing and, if completed successfully, may apply to any state in the U.S. for licensure as a registered nurse.

Registered nurses must be licensed by a State Department of Financial and Professional Regulation. To become licensed, applicants must graduate from an approved nursing education program, pass an examination for registered nursing, pay the required fees and satisfy requirements of a UCIA criminal history record check.

Note: Students are expected to read the prospective student packet, view the audio PowerPoint on the Nursing web page or attend an information session.

The number of students admitted into the nursing program is limited for both the fall and spring semester; therefore, a screening procedure is used to select the academically best qualified from those who request consideration. Preference will be given to residents of Community College District 532. Students who live outside of CLC's district but are eligible for in-district tuition because they are employed by a district employer are NOT considered residents of the district for purposes of selection into the program.

To be considered for admission to the Nursing Program, students must complete the following screening requirements prior to the screening deadline.

Students must have submitted the following documents to the Welcome and One-Stop Center :

- A. Student Information Form
- B. **Official** high school transcript with graduation date OR **Official** GED test scores
OR
Official college transcripts with graduation date and degree awarded
OR
Official foreign high school or college transcript evaluated by a NACES approved agency
- C. Nursing Program Request for Screening Form once screening requirements and prerequisites are completed.
- D. If using courses from another college to meet prerequisites or degree requirements, submit an official transcript to the Records Office. It is also highly recommended to submit a "Request for Evaluation of Prior College Transcripts" form.

Minimum Selection Criteria: student records must indicate the following:

- A. College Reading and Writing Readiness and Basic Algebra Readiness
- B. CLC Cumulative GPA is 2.0 or above
- C. CHM 120 or an equivalent course (C or better)
- D. BIO 123 or an equivalent course (C or better)
- E. BIO 244 or an equivalent course (C or better)
- F. NLN PAX with minimum acceptable percentile (relative performance) scores of 50 in the verbal, math, and science sections, and a composite percentile of 60 (within 3 years of the screening deadline)
- G. Current Certified Nurse Assistant (CNA) on the Illinois Healthcare Worker Registry or Illinois Licensed Practical Nurse (LPN) if applicable
- H. Must be eighteen (18) years of age at the start of the program
- I. Attendance at a Nursing Program Information Session (within 2 years of screening deadline.)

****If BIO 244 AND BIO 246 (or equivalent) are completed at another accredited college with a grade of “C” or better, BIO 123 will not be required.**

Please note that MTH 102 or equivalent is a prerequisite for BIO 123 and CHM 120.

Note: Applicants may take the NLN PAX exam once every 90 days (approximately three months). NLN PAX exam results that are less than 90 days between exams will not be considered. Scores used for screening into the nursing program will be valid for only 3 years prior to a screening deadline. Scores older than 3 years will not be considered for screening. Visit www.nlnonlinetesting.org for available test dates and times.

Students who are selected for the program are required to undergo a background check and a urine drug screen. The results of the background check and drug screen may result in the student losing their seat in the program.

Students who are selected for the program are required to attend a *mandatory orientation session*. Failure to attend the mandatory orientation session may result in the student losing their seat in the program.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met. For completion of the A.A.S. degree in Nursing, students will need to follow the program in place at the time they are *accepted* into the Nursing program.

A student must maintain at least a grade of “C” in each nursing course to continue in and graduate from the program.

Summer Term	4
BIO 246 Microbiology	4
Semester One	15
BIO 245 Anatomy and Physiology II	4
NUR 133 Foundational Concepts of Nursing Practice	8
PSY 121 Introduction to Psychology	3
Semester Two	15
ENG 121 English Composition I	3
NUR 134 Medical Surgical Nursing	9
PSY 220 Lifespan Development	3
Semester Three	15
ANT 221 Cultural Anthropology <i>or</i>	
ANT 228 Cross-Cultural Relationships <i>or</i>	
CMM 127 Intercultural Communication	3
NUR 233 Family-Centered Nursing Care	6
NUR 232 Mental Health Nursing	3
Humanities or Fine Arts Elective*	3
Semester Four	15
CMM 121 Fundamentals of Speech <i>or</i>	
CMM 123 Dynamics of Small Group Discussion <i>or</i>	
CMM 128 Interviewing Practices	3
NUR 234 Complex Medical, Surgical and Leadership Nursing	9
General Elective *	3
Total Hours for A.A.S. Degree	64

^ Courses used to fulfill the nursing program screening requirements may not be used as a general elective, with the exception of NUR110.

For more information on recommended courses or program specific advising, contact the nursing education office at (847) 543-2043:

- Mary Buckner / Lucille Coleman / Deb Colver
- Willa Harrison / Becky Hawarny / Barbara Hunt
- Dunia Jordan / Cindy MacDonald / Carmella Mikol
- Amy Morton-Miller / Janet Racina / Mary Scheffler
- Peggy Welch

Nursing Technical Performance Standards

Nursing is a practice discipline with cognitive, sensory, affective, and psychomotor performance requirements. Based on those requirements and [the State of Illinois licensing requirements], a list of “Performance Standards” has been developed. Each standard has an example of an activity or activities that a potential student will be required to perform while enrolled in the nursing program.

Issue	Standard	Examples of Required Activities (Not all inclusive)
Visual	Visual ability for observation and assessment necessary in the operation of equipment and care of patients.	<ul style="list-style-type: none"> • Ability to observe subtle changes in patients such as skin color intensity, color coded supplies and abnormal skin conditions. • Ability to view various equipment settings such as patient monitors, infusion pumps, syringes with minute calibrations and Intravenous and medication labels. • Ability to view computer records necessary for patient care. • Ability to perform procedures using hand-to eye-coordination. • Ability to read medication administration records in paper or electronic format.
Hearing	Auditory abilities sufficient to monitor and assess patient needs, and to provide a safe environment.	<ul style="list-style-type: none"> • Ability to hear and verbally respond to patient questions and directions from instructors, students, and staff, in person and/or over the phone. • Ability to listen to breath and heart sounds while assessing vital signs including BP, pulse, and respiration rate. • Ability to hear equipment monitors such as IV pumps, bed alarms and heart monitors. • Ability to hear patient call lights. • Ability to hear faint body sounds (heart sounds, bowel sounds) and assess placement of tubes. • Ability to hear in situations where masks are required such as surgery or isolation rooms.
Tactile	Tactile ability sufficient for patient assessment and treatment and operation of equipment	<ul style="list-style-type: none"> • Ability to perform the required techniques using patient equipment such as probes, sensors, pumps, bed controls, monitors, and computers. • Ability to perform palpation of pulses in a variety of locations on the body. • Ability to palpate the body surface during physical assessment. • Ability to sense changes in body temperature by touch.
Mental	Mental ability sufficient for patient assessment and treatment and operation of equipment and care of patients.	<ul style="list-style-type: none"> • Ability to visually concentrate and focus attention, thoughts, and efforts on patients and equipment for varying periods of time. • Ability to respond to patients’ changing physical conditions • Ability to function in rapidly changing and high stress situations and environments. • Ability to respond in a calm manner during an emergency situation.

Associate in Applied Science and Career Certificates

Issue	Standard	Examples of Required Activities (Not all inclusive)
Environmental Requirements	Physical health sufficient enough to be able to tolerate certain conditions present in the clinical setting.	<ul style="list-style-type: none"> • Ability to tolerate risks or discomforts in the clinical setting that require special safety precautions, additional safety education, health risk monitoring, working with sharps, chemicals, and infectious disease. Students may be required to use protective clothing or gear such as masks, goggles, gloves.
Communication	Communication abilities sufficient for interaction with others in verbal and written form.	<ul style="list-style-type: none"> • Ability to effectively communicate to the patients in order to assess, instruct, relieve anxiety, converse, gain their cooperation during procedures, provide care and treatments, dispense medications, and understand the patients when they are communicating symptoms of a medical emergency. • Ability to obtain information, explain treatment procedures, initiate health education training, and describe patient situations • Ability to perceive non-verbal communications • Ability to document following ethical and legal guidelines • Ability to read the patient's medical history and/or medical consult. • Ability to document own actions and patient responses as indicated. • Ability to collaborate with other members of the health care team verbally, on the phone or in writing. • Ability to accurately report a patient's condition to others verbally, on the phone or in writing.
Mobility	Physical abilities sufficient to move from room to room and maneuver in small spaces.	<ul style="list-style-type: none"> • Ability to assist all patients in turning, moving in bed, transferring, and ambulating according to individual needs and abilities. • Ability to move in confined spaces. • Ability to stand and walk for prolonged periods of time. • Ability to squat, bend, and stoop. • Ability to push, pull, and lift 50 lbs. • Ability to push a wheelchair, cart, bed, or equipment without injury to self, patient, or others. • Ability to reach above the shoulders to assess and maintain IV fluids or bedside monitors.
Motor Skills	Gross and fine motor abilities sufficient to provide safe effective patient care.	<ul style="list-style-type: none"> • Physically be able to administer emergency care including performing CPR. • Ability to execute the small muscle hand and finger movements required to safely perform nursing procedures such as medication administration, intravenous therapy, dressing changes, and tube or catheter insertion and removal. • Ability to grasp, twist and manipulate small objects such as IV tubing, syringes, droppers, and medication packaging.

Associate in Applied Science and Career Certificates

Issue	Standard	Examples of Required Activities (Not all inclusive)
Critical Thinking	Critical thinking ability sufficient for safe clinical judgment.	<ul style="list-style-type: none"> • Ability to recognize cause-effect relationships in clinical situations. • Ability to develop and implement nursing diagnoses and patient care plans. • Ability to assess subtle changes in a patient's condition and respond appropriately. • Ability to evaluate patient information such as assessment data, vital signs, or laboratory values and respond appropriately. • Ability to safely administer medications and understand the actions and potential reactions. • Ability to initiate proper emergency care protocols, including CPR, based on assessment data.
Interpersonal Behavioral and Social Skills	Interpersonal abilities sufficient to interact with individuals, families, and groups from a variety of social, emotional, cultural, and intellectual backgrounds.	<ul style="list-style-type: none"> • Ability to establish rapport with patients, families, and colleagues. • Ability to allow mature, sensitive, and effective relationships with patients and fellow workers (interpersonal skills). • Ability to tolerate a physically taxing and mentally challenging workload. • Ability to function effectively under stress. • Ability to adapt to changing environments (flexible schedules, emergency conditions, multiple interruptions, noised, distractions). • Ability to display compassion, professionalism, empathy, integrity, concern for others, and interest and motivation. • Ability to negotiate in situations of conflict and appropriately resolve the conflict.

The American with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 and College of Lake County policy prohibits discrimination against individuals with disabilities. One of the purposes of this document is to ensure that students are aware of the requirements of this program and acknowledge their understanding of the program requirements. Students who have a disability and are in need of accommodations or modifications must contact the Office for Students with Disabilities (“OSD”). The OSD, after consultation with the Program Director, will determine whether or not any reasonable accommodations or modifications can be provided.

**Certified Nurse Assisting
(Certificate) Plan 21NB**

This is not a limited enrollment program, however, seats fill quickly. Day evening and Friday-Saturday options are available. Theory classes are offered at all CLC campuses depending upon the section in which you are enrolled. Clinicals are conducted at long term care facilities throughout the community.

This program prepares students for employment as nurse assistants helping those who provide patient care. While the majority of nurse assistants work in long-term care facilities, some are employed in hospitals and other care settings. The program includes emphasis on basic nurse assistant skills and related knowledge. It also provides campus and clinical laboratory experiences and focuses on the role of the nurse assistant as part of the health care team and in meeting legal and regulatory parameters.

This program is approved by the Illinois Department of Public Health, 525 West Jefferson, Springfield, IL 62761, www.idph.state.il.us. Students must satisfy the state required theory and clinical hours of attendance. **Students who fail to attend the first day of class or clinical or fail to meet the state required hours of attendance throughout the course will not be allowed to continue in the class.** Students MUST OFFICIALLY WITHDRAW THEMSELVES from the class by the refund date listed in the current class schedule in order to cancel their financial obligations.

The State of Illinois Health Care Worker Background Check Act of 1995 requires the college to initiate a fingerprint criminal history record check on all individuals registering for the program. The background check and health requirements must be completed prior to enrolling in the course. Students with disqualifying convictions will not be allowed to continue in the course. Disqualifying convictions can be viewed at www.idph.state.il.us/nar/disconvictions.htm. Please consult the CLC nursing web page for additional information regarding the background check at www.clcillinois.edu/programs/nur.

Upon successful completion of this program, students are eligible to take the state mandated written competency examination for Nurse Assistant Certification. To be eligible to take the state exam, students must pass the skill portion of the course and receive a “C” or better grade.

Prerequisites

Students must be at least 16 years of age and have met **one** of the following prerequisites:

1. TABE (form A) score of 10 or higher
OR
2. APT Score of 122 or higher
OR
3. COMPASS ELI score of 251 or higher
OR
4. ELI 97 & 98 with a B or higher
OR
5. ELI 107 with a C or higher
OR
6. ELI 108 with C or higher or ENG 108 with a C or higher
OR
7. College Reading and Writing Readiness

Certificate Requirements

To receive the Certified Nurse Assisting Certificate, a student must receive a minimum grade of “C” in the following NUR course and maintain a CLC GPA of 2.0 or higher.

NUR 110 Nurse Assisting.....7

Total Hours for Certificate7

For more information on recommended courses or program specific advising, contact faculty member Imelda Forsberg at (847) 543-2337, Ruth Belec-Olander at (847) 543-1837 or the Nursing Education office at (847) 543-2043.

Paralegal Studies

Business and Social Sciences Division,
Room T302, (847) 543-2047

Paralegal Studies

(Associate in Applied Science) Plan 22PA

The Paralegal Studies program prepares students to perform substantive and procedural legal work under the supervision of an attorney. Paralegals work in many different areas of law within the public and private sectors, and assist attorneys in the delivery of efficient and cost-effective legal services. The purpose of the program is to prepare students for successful, productive employment and contributions to the legal and business fields. The program provides the foundation for students to think critically and ethically in performing specifically delegated substantive legal work for which a lawyer is responsible. This program is approved by the American Bar Association. ABA guidelines limit the use of online and blended courses for paralegal education. Thus, no PLS degree or certificate will be issued unless at least 10 credit hours of PLS coursework has been completed in a traditional delivery (face-to-face) format.

Paralegal Studies Program Policy on Auditing PLS Courses: Auditing PLS courses is only permitted by students who meet course prerequisites and who are currently employed as paralegals in the field of law that is the topic of the course requested to audit. Students seeking to audit a PLS course must obtain consent of the department chair.

To complete an A.A.S., students must meet the General Requirements on page 113. All course prerequisites must be met.

First Semester	15
PLS 110 Introduction to Paralegal Studies	3
CIT 119 Introduction to Office Software <i>or</i>	
AOS 112 Computer Basics/Software Applications	3
ENG 121 English Composition I	3
PHI 122 Logic <i>or</i>	
PHI 125 Introduction to Ethics	3
PSC 121 American National Politics	3
Second Semester	12
CMM 128 Interviewing Practices	3
ENG 126 Advanced Composition: Scientific and Technical Communications <i>or</i>	
ENG 266 Professional Communication	3
PLS 112 Legal Research and Writing	3
PLS 210 Tort Law+	3
Third Semester	12
PLS 114 Litigation	3
PLS 116 Contract Law+	3
PLS Elective	3
PSY 121 Introduction to Psychology <i>or</i>	
SOC 121 Introduction to Sociology	3

Fourth Semester	12
MTH 114 Applied Mathematics I <i>or</i>	
MTH Elective (114 or higher)*	3
PLS 118 Real Property Law+	3
PLS 211 Drafting Legal Documents	3
PLS Elective	3

Fifth Semester	12
PLS 251 Paralegal Studies Capstone	3
PLS Electives	9

Total Hours for A.A.S. Degree

Paralegal Studies Electives

Select 15 hours from the list below:

BUS 221 Business Law I	3
CRJ 121 Introduction to Criminal Justice	3
CRJ 230 Principles of Courtroom Testimony	3
PLS 212 Business Law II/Corporate and Securities Law	3
PLS 213 Employment and Labor Law	3
PLS 214 Administrative Agency Law	3
PLS 215 Immigration Law	3
PLS 216 Intellectual Property Law	3
PLS 218 Bankruptcy Law	3
PLS 230 Family Law	3
PLS 231 Health Care Law	3
PLS 232 Probate Law	3
PLS 233 Criminal Litigation	3
PLS 234 Elder Law	3
PLS 235 Law Office Technology	3
PLS 236 Alternative Dispute Resolution	3
PLS 250 Internship in Paralegal Studies++	3
PLS 299 Topics in Paralegal Studies	1-6

+ PLS 116, PLS 118, PLS 210 may be taken in any order.

++ PLS 250 and PLS 251 should be reserved for the final semester prior to graduation.

Paralegal Studies (Certificate) Plan 22PB

The Paralegal Studies certificate prepares students to perform substantive and procedural legal work under the supervision of an attorney. Paralegals work in many different areas of law within the public and private sectors, and assist attorneys in the delivery of efficient and cost-effective legal services. The required certificate courses focus on the specific knowledge and skills needed by paralegals in general areas. The elective courses enable students to gain additional knowledge in the legal specialty areas of greatest interest to them. The certificate program is available only to students who already have an Associate's or Bachelor's degree. This program is approved by the American Bar Association. ABA guidelines limit the use of online and blended courses for paralegal education. Thus, no PLS degree or certificate will be issued unless at least 10 credit hours of PLS coursework has been completed in a traditional delivery (face-to-face) format.

Associate in Applied Science and Career Certificates

First Semester	6
PLS 110 Introduction to Paralegal Studies	3
CIT 119 Introduction to Office Software <i>or</i>	
AOS 112 Computer Basics/Software Applications.....	3
Second Semester	12
PLS 112 Legal Research and Writing I	3
PLS 114 Litigation	3
PLS Elective	3
PLS Elective	3
Third Semester	12
PLS Elective	3
PLS Elective	3
PLS 211 Drafting Legal Documents	3
PLS 251 Paralegal Studies Capstone++	3
Total Hours for Certificate	30

Paralegal Studies Certificate Electives

x Select 12 hours from the list below:	
BUS 221 Business Law I	3
CRJ 121 Introduction to Criminal Justice.....	3
CRJ 230 Principles of Courtroom Testimony	3
PLS 116 Contract Law	3
PLS 118 Real Property Law	3
PLS 210 Tort Law	3
PLS 212 Business Law II/Corporate and Securities Law	3
PLS 213 Employment and Labor Law	3
PLS 214 Administrative Agency Law.....	3
PLS 215 Immigration Law	3
PLS 216 Intellectual Property	3
PLS 218 Bankruptcy Law	3
PLS 230 Family Law.....	3
PLS 231 Health Care Law.....	3
PLS 232 Probate	3
PLS 233 Criminal Litigation.....	3
PLS 234 Elder Law	3
PLS 235 Law Office Technology	3
PLS 236 Alternative Dispute Resolution	3
PLS 250 Internship in Paralegal Studies++	3
PLS 299 Topics in Paralegal Studies	1-6

x At least nine credit hours must have the PLS designation, and only one non-PLS elective course may apply towards the certificate.

++ PLS 250 and PLS 251 should be reserved for the final semester prior to graduation.

NOTE: To earn this certificate, students must have completed one of the following degrees: Bachelor of Arts degree, Bachelor of Science degree, Associate in Arts degree, Associate in Science degree or Associate in Applied Science degree* **in addition** to the specialty courses required for the certificate. Students cannot earn both the A.A.S. degree and the certificate in Paralegal Studies simultaneously.

* Students must have a college degree in order to be eligible to pursue a PLS certificate.

All students wishing to pursue the Certificate program must submit a transcript of their degree and screening form to the Welcome and One-Stop Center. To obtain the form, please visit www.clcillinois.edu/limitedenrollment.

For students with A.A.S. degrees and students with any degree from an institution outside the U.S.:

The CLC Paralegal Studies program is approved by the American Bar Association (ABA). The ABA requires that all students who wish to complete a Paralegal Studies Certificate program have completed a minimum of 18 semester credit hours in general education courses in a minimum of three disciplines.

The requirements for all Associate in Arts, Associate in Science, Bachelor of Arts, or Bachelor of Science degrees at accredited U.S. institutions include this level of general education. These disciplines are Social and Behavioral Sciences, Natural Science, English Composition and Literature, Foreign Language, Mathematics, Humanities and Fine Arts. Since master's degree programs do not usually include general education courses, master's level courses cannot be used to meet this requirement.

The general education courses completed by students who have earned Associate in Applied Science degrees and other degrees from non-U.S. institutions may not meet CLC's general education requirements. These students will be required to complete additional general education courses prior to receiving a certificate in Paralegal Studies if they have not had a sufficient number and variety of general education courses.

Therefore, CLC must review students' transcripts to determine whether they have met this general education requirement. To obtain the form, please visit dept.clcillinois.edu/adr/Paralegal_Screening_Form.pdf.

For more information on recommended courses or program specific advising, contact the following faculty members or the Business and Social Sciences Division at (847) 543-2047:

Gayle Miller / Lorri Scott

Phlebotomy Technician

Biological and Health Sciences Division, Room B210,
(847) 543-2042

Phlebotomy Technician (Certificate) Plan 21MP

**Program Modification effective Fall 2016. See addendum for details.*

This certificate prepares students for entry level competencies as phlebotomists in hospitals, clinics, blood banks, and other health care settings. Students will develop skills in performing phlebotomy procedures during on-campus training followed by a clinical practicum during which students spend eight hours a day, five days a week for three weeks (120 hours) at a clinical site during the daytime shift.

This program is approved by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS): 5600 N. River Road, Suite 720, Rosemont, IL 60018-5119, (773) 714-8880, www.naacls.org.

Graduates of this program are eligible for registry by nationally recognized certifying agencies. A high school diploma (or equivalent) is required to take the certification exam.

This is not a limited enrollment program, however, seats fill quickly. Day and evening options are available.

Academic Program Entrance Requirements

- Demonstrate College Reading and Writing Readiness and Basic Algebra Readiness prior to enrolling in PBT 110
- If a student has a CLC GPA, it must be 2.0 or higher
- Be at least 18 years old
- Attend an information session (within 2 years)
- High school graduate; GED or equivalent; or associate degree or higher

Non-academic Program Entrance Requirements

Because of inherent requirements of the profession, the following minimum abilities, i.e. essential functions, are expected of the student:

- Psychomotor skills (eye-hand coordination and finger dexterity) sufficient for safe and successful practice of phlebotomy
- Visual acuity (normal or corrected vision) sufficient for safe and successful practice of phlebotomy
- Adequate English verbal and written communication skills to safely and successfully interact with peers, supervisors and other members of the health care team

Students must earn a minimum grade of “C” in each Phlebotomy course to able to continue in and graduate from the program.

Required Coursework

PBT 110	Introduction to Medical Laboratory Technology	2
PBT 115	Phlebotomy Techniques	2
+ PBT 116	Phlebotomy Clinical	2

Total Hours for Certificate6

+ To be eligible to enroll in PBT 116 Phlebotomy Clinical, students must:

- Earn a grade of “C” or better in PBT 110 and PBT 115
- Have an overall CLC GPA of 2.0 or higher
- Provide proof that all immunizations required to satisfy the phlebotomy health requirements are completed
- Be aware that drug testing and a criminal background check may be required by the clinical sites
- Have permission of the department chair

For more information on recommended courses or program specific advising, contact faculty member Angela Norwood or the Biological and Health Sciences division at (847) 543-2042.

Surgical Technology

Biological and Health Sciences Division, Room B210,
(847) 543-2042

This is a limited enrollment, day only program. Students are required to meet the screening requirements in effect at the time of screening. Students who screen and are accepted into a limited enrollment program will be required to complete the curriculum that is in place at the time of entrance into the program. If students who screen are not granted admission, they must rescreen and satisfy all screening and curriculum requirements in place for a future program start.

Screening Deadline: First Wednesday in March

Surgical technologists are allied health professionals who are integral to the surgical team. They assist in the decontamination and set up of the operating rooms for each procedure, organize the necessary surgical and sterile supplies and equipment, and maintain the quality, safety, and efficiency of the sterile field throughout the surgery.

Surgical technologists might also be involved in transporting patients to and from the operating room, assisting to position patients on the operating table, observing vital signs and checking charts.

During the surgery, technologists help the surgical team with sterile gowns and gloves, they anticipate the needs of the surgeon by watching and understanding the steps and progression of the surgical procedure. They are accountable for the care of surgical instrumentation and equipment before, during, and at the completion of surgical cases.

Graduates of the certificate program are qualified to take the Certified Surgical Technologist (CST) Examination given by the National Board of Surgical Technology and Surgical Assisting (NBSTSA). To complete an A.A.S., in addition to completion of the certificate program, students must complete the required general education courses. All course prerequisites must be met.

Upon acceptance into the program, students are required to undergo a background check and a urine drug screen. These will occur annually and the results of which may result in the student losing his/her seat in the program. The costs are borne by the student.

To be considered for admission to the Surgical Technology Program, students must complete the following screening requirements prior to the screening deadline.

Students must have submitted the following documents to the Welcome and One-Stop Center:

- A. Student Information Form
- B. **Official** high school transcript with graduation date OR **Official** GED test scores
OR
Official college transcripts with graduation date and degree awarded
OR
Official foreign high school or college transcript evaluated by a NACES approved agency
- C. Surgical Technology Program Request for Screening Form
- D. If using courses from another college to meet prerequisites or degree requirements, submit an official transcript to the Records Office. It is also highly recommended to submit a "Request for Evaluation of Prior College Transcripts" form.

Minimum Selection Criteria: student records must indicate the following:

- A. High school graduate or equivalent or high school senior in last term
- B. College Reading and Writing Readiness and Basic Algebra Readiness
- C. CLC Cumulative GPA is 2.0 or above

D. NLN PAX with minimum acceptable percentile scores of 40 in the verbal and 40 in the math sections, and a composite percentile of 40 (within 3 years of the screening deadline)

E. Attendance at a Surgical Technology Information Session (within two years of the screening deadline)

Program Accreditation

The Association of Surgical Technologists (AST) requires that surgical technologists who are applying for certification for the first time must have completed their education in a program that is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). The CLC surgical technology program is fully accredited by CAAHEP, 25400 U.S. Highway 19 North, Suite 158, Clearwater, FL 33763.

Physical and Emotional Ability Performance Standards

Students must meet the physical and emotional ability standards listed below to satisfactorily perform in the Surgical Technology program. Students must:

- have full range of motion of joints, fine motor movements of the hands, ability to perform repetitive tasks and the ability to stoop, bend, twist, reach and occasionally kneel and squat.
- have the ability to lift and carry objects weighing up to 50 pounds.
- be able to push or pull a wheelchair, cart, or gurney.
- have adequate hearing which permits the individual to communicate in a rational and coherent manner with others in the English language.
- have the ability to examine closely images or other forms of output created by diagnostic equipment; must have color vision; must have good visual acuity for client assessment, medication checking, assist during surgical procedures, and for documentation.
- adapt effectively to high stress environments to insure client safety.
- respond in an emotionally controlled manner in learning situations.
- be able to stand and walk 8 or more hours per clinical session.

Please contact the SRG department chair Soheila Kayoud at (847) 543-2776 if you have questions regarding your ability to meet these standards.

Associate in Applied Science and Career Certificates

Physical Demands for the Surgical Technology Program

- Constant (67 – 100%)
 - talking, seeing, and hearing
 - standing for prolonged periods
 - walking at average speed or faster
 - responding quickly to orders
 - manual dexterity
- Frequent (34 – 66%)
 - lifting and moving patients
 - kneeling, bending, stooping
 - pushing, pulling, reaching
 - refraining from nourishment
- Occasionally (10 – 33%)
 - exert up to 100 pounds of force

The number of students that may be admitted to clinical education courses is limited for any given term; therefore, a screening procedure is used to select the academically best qualified from among those who request consideration.

Preference is given to residents of Community College District 532 (CLC) and residents of other community college districts with which CLC has a Joint Education Agreement.

Students who live outside of CLC's district but are eligible for in-district tuition because they are employed by a district employer are NOT considered residents of the district for purposes of selection into the program.

Note: Applicants may take the NLN PAX exam once every 90 days (approximately three months). NLN PAX exam results that are less than 90 days between exams will not be considered. Scores used for screening into limited enrollment programs will be valid for only 3 years prior to a screening deadline. Scores older than 3 years will not be considered for screening. Visit www.nlnonlinetesting.org for available test dates and times or visit the Surgical Technology web page at www.clcillinois.edu/programs/srg. Instructions for registering for the test are available on the web page.

All required materials must be submitted to the Records Office by the screening deadlines.

If space is available in the program after the initial screening deadline, qualified students will be accepted in an order based on academic qualifications.

Students must maintain a minimum grade of "C" in each of the courses listed below to continue in and graduate from the program. In addition, students must maintain a CLC GPA of 2.0 or higher.

Surgical Technology (Certificate) Plan 21SD

BIO	111	Human Form and Function <i>or</i>	
BIO	244	Anatomy and Physiology I <i>and</i>	
BIO	245	Anatomy and Physiology II	4-8
HIT	111	Medical Terminology	3
SRG	110	Introduction to Surgical Technology	6
SRG	111	Principles of Practice and Introduction to Surgical Procedures	7
SRG	112	Surgical Procedures I	6
SRG	113	Surgical Procedures II	6
SRG	114	Surgical Procedures III	3
SRG	115	Surgical Technology Internship	3
SRG	117	Surgical Pharmacology	3
SRG	119	Essentials of Microbiology <i>or</i>	
BIO	246	Microbiology	2-4

Total Hours for Certificate43-49

This certificate will give students the knowledge and skills necessary for employment as entry level scrub surgical technologists and to gain higher level employment in area hospitals and surgical supply businesses. Graduates of this program will be qualified to sit for the National Examination for the Certified Surgical Technologist (CST) Examination given by the National Board of Surgical Technology and Surgical Assisting (NBSTSA).

After completion of the Surgical Technology certificate program (21SD), students may choose to earn the Associates in Applied Sciences in Surgical Technology (21SA) by taking the listed general education courses and SRG 118.

Surgical Technology (Associate in Applied Science) Plan 21SA

**Completion of Surgical Technology
Certificate (21SD)**43-49

Required General Education Coursework16

BIO	123	Principles of Biology	4
CMM	123	Dynamics of Small Group Discussion <i>or</i>	
CMM	128	Interviewing Practices	3
ENG	120	Technical Composition I <i>or</i>	
ENG	121	English Composition I	3
HUM	127	Critical Thinking	3
PSY	121	Introduction to Psychology	3

Additional Required Coursework3
SRG 118 Advanced Surgical Procedures.....3

Total Hours for A.A.S. Degree62-68

For more information on recommended courses or program specific advising, contact faculty member Soheila Kayoud or the Biological and Health Sciences division at (847) 543-2042.

Sustainability Programs

**Engineering, Math and Physical Sciences Division
Room T302, (847) 543-2044**

Sustainability programs provide a broad understanding of the natural world and how it relates to the built environment. Subject matter ranges from horticulture and environmental sciences to construction and engineering, including instruction on the LEED (Leadership in Energy and Environmental Design) Accredited Professional certification. Coursework prepares students for a wide range of occupations related to sustainability, as well as presents fundamental knowledge of environmental issues applicable to contemporary lifestyle and workforce trends.

For more information and resources on current sustainability efforts visit the CLC Sustainability Center, B226, or contact:

Cassandra McKinney, Director,
Green Economy and Sustainable Water Center
cmckinney@clcillinois.edu
(847) 543-2645
Office B226g

Alternative Energy Technologies (Certificate) Plan 24EN

This certificate provides entry level technical instruction on wind, solar and geothermal energy sources. Courses in this certificate may also apply to certificates specific to solar, wind or geothermal energy technologies.

EET	115	Electronic Laboratory Techniques	2
EET	170	DC Circuit Fundamentals.....	2
EET	174	AC Fundamentals	2
EET	130	Intro to Renewable Energy Sources	4
EET	230	Electrical Machinery	3
HET	291	Energy Auditing	4
ISE	114	National Electrical Code	2
MET	115	Industrial Pneumatics Hydraulics.....	3
MET	116	Machine Components and Repair	3

Total Hours for Certificate25

For more information about this program, please contact the Engineering, Mathematics and Physical Sciences division at (847) 543-2044.

Teaching English to Speakers of Other Languages

**Communication Arts, Humanities and Fine Arts Division
Room B210, (847) 543-2040**

Teaching English to Speakers of Other Languages (TESOL) (Certificate) Plan 23TK

This certificate is intended for current teachers, native or non-native speakers, who wish to expand their professional opportunities and to enhance their teaching skills by adding a TESOL certificate to their portfolio and for college graduates and/or first time teachers interested in teaching English in a non-English speaking country; as well as for professionals interested in applying their skills in the field of English language teaching.

Required General Education Coursework	12
CMM 127 Intercultural Communication	3
EDU 121 Introduction to Teaching <i>or</i>	
PSY 121 Introduction to Psychology	3
ENG 127 Introduction to General Linguistics	3
ENG 128 Linguistics and Society	3

Required Specialty Coursework.....	18
ENG 261 Methods of Teaching ESL	3
ENG 262 Theories of Teaching ESL and Bilingual Education.....	3
ENG 265 Grammar for English Language Teachers	3
ENG 267 Phonetics and Phonology for English Language Teachers	3
ENG 268 Assessment of the English Language Learner	3
ENG 271 Teaching English to Speakers of Other Languages Practicum	3

Total Hours for Certificate30

**Teaching English Learners (TEL)
(Certificate) Plan 23TN**

This 18-hour Core Certificate in Teaching English Learners is intended for certified teachers who wish to expand their professional opportunities and to enhance their teaching skills by adding a TEL Core certificate to their portfolio. The coursework for this certificate satisfies the requirements of the ISBE ESL endorsement, including the 100 hours of clinical experience. This endorsement allows certified teachers to teach ESL in grades they are certified to teach. Applicants must complete an application to the State to have this endorsement put on their teaching certificates.

Required Coursework	15
CMM 127 Intercultural Communication	3
ENG 128 Linguistics and Society	3
ENG 261 Methods of Teaching ELLs	3
ENG 262 ELL/Bilingual Education Theory	3
ENG 268 Assessment of ELLs	3
Elective Coursework	3
ENG 127 Intro to General Linguistics <i>or</i>	
ENG 265 Teaching Grammar to ELLs <i>or</i>	
ENG 267 Teaching Pronunciation to ELLs	3
Total Hours for Certificate	18

For more information on recommended courses or program specific advising, contact the following faculty members or the Communication Art, Humanities and Fine Arts division at (847) 543-2040:

Joyce Gatto / Jacinta Thomas

Technical Communication

**Communication Arts, Humanities and Fine Arts Division
Room B210, (847) 543-2040**

Technical communicators are employed in a wide variety of occupational areas to produce the written documentation required at each step of the manufacturing process. They provide the communication links between divergent technical specialties as well as between different levels of technical expertise. This program offers training in both communication skills and technical skills. These skills may be gained two ways: by specializing in communications and electing a technical area or areas, or by specializing in a technical area and electing communications courses.

To complete an A.A.S., students must meet the General Requirements on page 113. In addition, students should select General Education electives (*) from those listed on page 114. All course prerequisites must be met.

**Technical Communication
(Associate in Applied Science) Plan 23TA**

Required General Education Coursework	15-16
CMM 121 Fundamentals of Speech <i>or</i>	
CMM 128 Interviewing Practices	3
ENG 121 English Composition I	3
HUM 127 Critical Thinking <i>or</i>	
PHI 122 Logic <i>or</i>	
Humanities or Fine Arts Elective*	3
MTH 117 Technical Mathematics I <i>or</i>	
MTH 122 College Algebra <i>or</i>	
MTH 141 Quantitative Literacy.....	3-4
PSY 122 Psychology of Business and Industry	3
Required English Coursework	12-13
ENG 113 Technical Communication Practicum <i>or</i>	
EWE 220 Cooperative Work Experience I <i>and</i>	
ENG 266 Professional Communication	3-4
ENG 120 Technical Composition I	3
ENG 126 Advanced Composition: Scientific and Technical Communications	3
ENG Elective (see list below)	3
Required Technical Communications Coursework	11-12
AOS 113 Comprehensive Word Processing <i>or</i>	
ART 271 Introduction to Electronic Graphic Publishing	3
CIT Elective <i>or</i>	
DMD 116 Web Design and Development.....	3
ART 111 Printing Production.....	3
ART 129 Introduction to Photography I <i>or</i>	
ART 222 Computer Art I <i>or</i>	
EGR 121 Engineering Graphics <i>or</i>	
ELT 111 Electronic Drafting	2-3

Additional Required Coursework.....6-7

MTH 118	Technical Mathematics II <i>or</i>	
MTH 123	Trigonometry <i>or</i>	
MTH	Elective (higher than MTH 123)*.....	3-4
	Social Science Elective*	3

Required Technical Specialty Coursework16

Choose technical specialty electives from fields such as advertising, data processing, electronics, engineering, publicity or public relations, sales management, sales promotion, or software development.

Select a minimum of 16 hours from the following courses:

- * BUS 121, 122, 212, 213, 214, 221, 270
- CIT 111, 112, 119, 170, 211, 239
- DMD 111, 115, 116, 174, 218, 219, 273, 279
- EIT 111, 210, 211
- EGR 121
- ELT 111
- HIT 111, 113, 114, 116, 172, 174, 217
- MTH 114, 115, 117, 118
- PLS 110, 112, 212

Total Hours A.A.S. Degree.....60-64

ENG Electives

ENG 122	English Composition II	3
ENG 124	Newswriting I.....	3
ENG 137	Document Design in Technical Writing.....	3
ENG 220	Introduction to Scriptwriting for Video, TV and Film.....	3
ENG 222	Creative Writing I.....	3
ENG 224	Creative Writing II	3

* Students interested in careers in advertising, sales management, sales promotion, publicity or public relations should select these courses.

Choosing a Dual Degree

A student may elect to receive two Associate Degrees, one in Technical Communication and one in a technical field (such as electronics, engineering, etc.). This option is possible because many of the same general education courses are required in both programs and because 15-20 credit hours of technically specialized courses count towards the A.A.S. in Technical Communication. Thus, a student may earn this degree in connection with another degree program by adding the necessary written communications and graphics courses. See a counselor or advisor for more information.

**Technical Communication
(Certificate) Plan 23TG**

ART 111	Printing Production.....	3
ART 222	Computer Art I	3
CMM 128	Interviewing Practices	3
DMD 116	Web Design and Development.....	3
ENG 113	Technical Communication Practicum	3
ENG 120	Technical Composition I	3
ENG 121	English Composition I	3
ENG 126	Advanced Composition: Scientific and Technical Communication.....	3
ENG 266	Professional Communication	3
	Technical Specialty Elective	3

Total Hours for Certificate30

**Professional Technical Communication
(Certificate) Plan 23TI**

This certificate is appropriate for students who have already completed a degree in another field, and wish to retrain and re-enter the job force.

ART 111	Printing Production.....	3
DMD 116	Web Design and Development.....	3
ENG 113	Technical Communication Practicum	3
ENG 120	Technical Composition I	3
ENG 126	Advanced Composition: Scientific and Technical Composition	3
ENG 266	Professional Communication	3

Total Hours for Certificate18

For more information on recommended courses or program specific advising, contact faculty member Lori Allen or the Communication Arts, Humanities and Fine Arts division at (847) 543-2040.

Associate in Applied Science and Career Certificates

Welding

Engineering, Math and Physical Sciences Division
Room T302, (847) 543-2044

Welding (Certificate) Plan 24WL

This certificate program and the specialty certificates prepare the student for employment and advancement in welding and welding related occupations. Advanced standing in the program can be arranged for experienced welders.

MET 112	Basic Metallurgy	3
MET 113	Basic Metallurgy II <i>or</i>	
MET 111	Manufacturing Processes	3
MTH 114	Applied Mathematics I	3
WLD 113	Welding Blueprint Reading	3
WLD 117	Applied Fabricating and Processing	3
WLD 170	General Welding	3
WLD 171	Gas Welding, Cutting and Brazing	3
WLD 172	Shielded Metal Arc Welding	3
WLD 174	Advanced Shielded Metal Arc Welding	3
WLD 175	Gas Metal Arc Welding	3
WLD 176	Welding Certification	3
WLD 178	Gas Tungsten Arc Welding	3
WLD 179	Gas Tungsten Arc Welding II	3
	Technical Elective*	2-3

Total Hours for Certificate41-42

Welding Electives

Select 2-3 hours from the list below with advisor approval:

CAD 110	CAD/CAM Concepts	3
EET 170	DC Circuit Fundamentals	2
EGR 121	Engineering Graphics	3
ELC 172	Applied AC Circuit Theory	2
EWE 220	Cooperative Work Experience I	3
MTT 111	Machine Shop I	3

The following three specialty certificates allow students to attain proficiency to meet more specific job requirements or career objectives in welding and welding related occupations.

Gas Tungsten Arc Welding (Certificate) Plan 24WM

MTH 114	Applied Mathematics I	3
WLD 113	Welding Blueprint Reading	3
WLD 117	Applied Fabricating and Processing	3
WLD 170	General Welding	3
WLD 171	Gas Welding, Cutting and Brazing	3
WLD 176	Welding Certification	3
WLD 178	Gas Tungsten Arc Welding	3
WLD 179	Gas Tungsten Arc Welding II	3

Total Hours for Certificate24

Gas Metal Arc Welding (Certificate) Plan 24WN

MTH 114	Applied Mathematics I	3
WLD 113	Welding Blueprint Reading	3
WLD 117	Applied Fabricating and Processing	3
WLD 170	General Welding	3
WLD 175	Gas Metal Arc Welding	3
WLD 176	Welding Certification	3

Total Hours for Certificate18

Shielded Metal Arc Welding (Certificate) Plan 24WO

MTH 114	Applied Mathematics I	3
WLD 113	Welding Blueprint Reading	3
WLD 117	Applied Fabricating and Processing	3
WLD 170	General Welding	3
WLD 172	Shielded Metal Arc Welding	3
WLD 174	Advanced Shielded Metal Arc Welding	3
WLD 176	Welding Certification	3

Total Hours for Certificate21

For more information on recommended courses or program specific advising, contact faculty member Gary Merriman or the Engineering, Math and Physical Science division at (847) 543-2044.

Joint Agreement Program Listing

The College of Lake County has joint agreements with other community colleges for particular career programs that we may not offer. Schools that participate in Joint Agreements with the College of Lake County are listed in the chart below. The institutions listed below treat CLC students as in-district residents by giving students equal consideration in admission to limited enrollment programs (within limits set forth by joint agreement) and by charging them in-district tuition rates. All programs have been planned with the assistance of citizen’s advisory committees to meet local and regional employment needs. They have also been planned in conformity with the Illinois Community College Board, the Illinois Board of Higher Education, and the Illinois State Board of Education. Students interested in joint agreement programs should contact the Educational Affairs Office at (847) 543-2430 for program information and authorization to register at the appropriate school.

Residents of other communities

The College of Lake County offers programs that other Illinois community colleges may not offer. The following programs (certificates and associate degrees) are available at CLC for in-district tuition rates to the residents of specified Illinois community college districts upon presentation of a Joint Agreement Authorization form obtained at the home district college. Gateway Technical College residents will be assessed a slightly higher tuition rate upon presentation of the Joint Agreement Authorization.

College	Programs Offered by CLC	Programs Offered by Agreement School
<p>Elgin Community College 1700 Spartan Dr. Elgin, IL 60123</p>	<p>Architectural Technology (AAS & Cert) C++ Programmer (Cert) Computer Information Technology</p> <ul style="list-style-type: none"> • Computer Forensics Analyst (Cert) • Desktop Support Technician (Cert) • Game Development (Cert) • Network Administration and Security (AAS & Cert) • .NET Programming (AAS & Cert) • Office Application Specialist (Cert) • Security Administration (Cert) <p>Construction Management Technology (AAS & Cert) Electrical Engineering Technology</p> <ul style="list-style-type: none"> • Electrical Engineering Technology (AAS) • Electrical/Electronics Maintenance (Cert) • Electronics Technology (Cert) <p>Firefighter Basic Operations (AAS) Health & Wellness Promotion</p> <ul style="list-style-type: none"> • Personal Training (Cert) • Wellness Coaching (Cert) <p>Health Information Technology</p> <ul style="list-style-type: none"> • Health Information Technology (AAS) • Medical Transcription (Cert) • Medical Billing Specialist (Cert) <p>Laser/Photonics/Optics</p> <ul style="list-style-type: none"> • Laser/Photonics/Optics (Cert) • Applied Lasers (Cert) • Biophotonics (Cert) <p style="text-align: right;"><i>Continued on next page.</i></p>	<p>Clinical Laboratory Assistant (Cert) Clinical Laboratory Technology (AAS) Dental Assisting (Cert) Dental Office Aide (Cert) Preclinical Dental Assisting (Cert) Histotechnology (AAS & Cert) Physical Therapy Assistant (AAS) Truck Driving (Cert) Truck Driving Owner/Operator (Cert)</p>

Associate in Applied Science and Career Certificates

College	Programs Offered by CLC	Programs Offered by Agreement School
<p>Elgin Community College Continued</p>	<p>Library Technical Assistant</p> <ul style="list-style-type: none"> • Children's Services (AAS) • Library Management (AAS) • Library Marketing and Public Relations (AAS) • Library Technology (AAS) • Library Technical Assistant (Cert) <p>Mechanical Engineering Technology</p> <ul style="list-style-type: none"> • Mechanical Engineering Technology (AAS) • Mechanical Service Technician I and II (Certs) • MET I: Toolbox (Cert) • MET II: Nuts and Bolts (Cert) • MET III: Mechatronics (Cert) • MET IV: Design and Innovation (Cert) <p>Mechatronics (Cert) Sustainable Agriculture (Cert) Web Programming (AAS)</p>	
<p>Gateway Technical College 400 County Rd. H Elkhorn, WI 53121</p> <p>NO CHARGEBACKS WILL BE ISSUED TO THIS SCHOOL</p>	<p>Automotive Collision Repair (AAS & Cert)</p> <p>Electrician Apprenticeship (AAS)</p> <p>Health & Wellness Promotion</p> <ul style="list-style-type: none"> • Health & Wellness Promotion (AAS) • Personal Training (Cert) • Wellness Coaching (Cert) <p>Laser/Photonics/Optics</p> <ul style="list-style-type: none"> • Laser/Photonics/Optics (Cert) • Applied Lasers (Cert) • Biophotonics (Cert) <p>Machine Tool Trades (AAS)</p> <p>Mechatronics (Cert)</p> <p>Medical Imaging</p> <ul style="list-style-type: none"> • Medical Imaging (AAS) • Computed Tomography (Cert) • Magnetic Resonance Imaging (Cert) <p>Phlebotomy Technician (Cert)</p> <p>Sustainable Agriculture (Cert)</p>	<p>Aeronautics-Pilot Training (AAS)*</p> <p>Automated Manufacturing Systems Technology (AAS)</p> <p>Barber (DIP)*</p> <p>Cosmetology (DIP)*</p> <p>Dental Assistant (DIP)*</p> <p>Diesel Equipment Mechanic (DIP)</p> <p>Diesel Equipment Technology (AAS)</p> <p>Electromechanical Technology (AAS)</p> <p>Graphic Communications (AAS)</p> <p>Health Unit Coordinator (DIP)*</p> <p>Industrial/Mobile Hydraulic Mechanic (Cert)</p> <p>Interior Design (AAS)</p> <p>LPN Bridge to Nursing (AAS)*</p> <p><small>* Indicates high demand, limited seats available in program at Gateway Technical College. Per the agreement, priority for admission to the "receiving district" shall be given to residents of the state of the "receiving institution." No residents of the state of the "receiving institution" may be displaced from the "receiving institution" due to this Agreement. Students accepted prior to August 1, 2010 and continuously attending under this agreement will continue to be treated as resident students. All students accepted after August 1, 2010, are eligible to attend Gateway at the resident tuition rate, but are considered out of state in the program's subject-area courses</small></p>

College	Programs Offered by CLC	Programs Offered by Agreement School
<p>Kankakee Community College 100 College Dr. Kankakee, IL 60901</p>	<p>Health and Wellness Promotion</p> <ul style="list-style-type: none"> • Health and Wellness Promotion (AAS) • Personal Training (Cert) • Wellness Coaching (Cert) <p>Laser/Photonics/Optics</p> <ul style="list-style-type: none"> • Laser/Photonics/Optics (Cert) • Applied Lasers (Cert) • Biophotonics (Cert) <p>Surgical Technology (AAS & Cert)</p>	<p>Medical Laboratory Technology (AAS)</p>
<p>McHenry County College 8900 U.S. Hwy. 14 Crystal Lake, IL 60012</p>	<p>Architectural Technology (AAS)</p> <p>Automotive Collision Repair</p> <ul style="list-style-type: none"> • Automotive Collision Repair (AAS & Cert) • Automotive Collision Repair Assistant (Cert) • Automotive Damage Analysis (Cert) • Automotive Refinishing Technician (Cert) • Automotive Structural Repair (Cert) <p>Cisco Networking (Cert)</p> <p>Computer Forensics (AAS)</p> <p>Dental Hygiene (AAS)</p> <p>Digital A/V Production and Editing (AAS)</p> <p>Electrical/Electronic Maintenance (Cert)</p> <p>Electrical Engineering Technology (AAS)</p> <p>Electrician Apprenticeship (AAS)</p> <p>EMT</p> <ul style="list-style-type: none"> • EMT (AAS) • EMT Basic (Cert) • EMT Paramedic (Cert) <p>Emergency & Disaster Management (Cert)</p> <p>Firefighter Basic Operations (AAS)</p> <p>Human Services</p> <ul style="list-style-type: none"> • General Human Services (Cert) • Adult Services (AAS) • Addiction Counseling and Treatment (AAS & Cert) • Children and Adolescents (AAS) • Trauma Interventions and Prevention (AAS & Cert) <p>Hospitality & Culinary Management</p> <ul style="list-style-type: none"> • Hospitality Supervisor (Cert) • Hospitality Manager (Cert) <p style="text-align: right;"><i>Continued on next page.</i></p>	<p>Early Childhood Education (12 & 32 Hr. Cert)</p> <p>EMT*</p> <ul style="list-style-type: none"> • EMT (AAS) • EMT Ambulance (Cert) • EMT Paramedic (Cert) <p>Firefighter Basic (Cert)</p> <p>Geek Technology (Cert)</p> <p>Manufacturing Management (AAS)</p> <p>Manufacturing Supervision (Cert)</p> <p>Occupational Therapy Assistant (AAS)</p> <p>Turf and Golf Course Management (Cert)</p> <p><small>*Program available to students residing in College of Lake County district who need to complete the Emergency Medical Technician Certificate or Paramedic Certificate through fire departments within the Northern Illinois Medical Center Service area.</small></p>

Associate in Applied Science and Career Certificates

College	Programs Offered by CLC	Programs Offered by Agreement School
<p>McHenry County College continued</p>	<p>HVAC Engineering Technology (AAS Degrees & Certs)</p> <p>Laser/Photonics/Optics</p> <ul style="list-style-type: none"> • Laser/Photonics/Optics (Cert) • Applied Lasers (Cert) • Biophotonics (Cert) <p>Library Technical Assistant (AAS degrees & Cert)</p> <p>Machine Tools Trades</p> <ul style="list-style-type: none"> • Machine Tool Trades (AAS) • Tool and Mold Maker Phase III (Cert) <p>Massage Therapy (Cert)</p> <p>Medical Assisting (AAS & Cert)</p> <p>Medical Imaging</p> <ul style="list-style-type: none"> • Medical Imaging (AAS) • Computed Tomography (Cert) • Magnetic Resonance Imaging (Cert) <p>Optics and Photonics Technology (AAS)</p> <p>Phlebotomy Technician (Cert)</p> <p>Surgical Technology (AAS & Cert)</p> <p>Sustainable Agriculture (Cert)</p> <p>Teaching English to Speakers of Other Languages (Cert)</p> <p>Technical Communication</p> <ul style="list-style-type: none"> • Technical Communication (AAS & Cert) • Professional Technical Communication (Cert) <p>Wellness Coaching (Cert)</p> <p>Welding (Cert)</p> <p>Engineering and Math Computer Science Courses:</p> <ul style="list-style-type: none"> • EGR 222 Engineering Mechanics of Materials • EGR 260 Introduction to Circuit Analysis • MTH 225 Introduction to Linear Algebra • PHY 221 Physics for Science & Engineering III 	

College	Programs Offered by CLC	Programs Offered by Agreement School
<p>Oakton Community College 1600 E. Golf Rd. Des Plaines, IL 60016</p> <p>7701 N. Lincoln Ave. Skokie, IL 60077</p>	<p>Automotive Collision Repair (AAS & Cert) Health and Wellness Promotion</p> <ul style="list-style-type: none"> • Health and Wellness Promotion (AAS) • Personal Training (Cert) • Wellness Coaching (Cert) <p>Horticulture</p> <ul style="list-style-type: none"> • Horticulture Production (AAS) • Landscape Design (AAS) • Landscape Construction and Maintenance (AAS) • Natural Areas Management (AAS) • Sustainable Agriculture (AAS) • Arboriculture (Cert) • Floral Design (Cert) • Landscape Design (Cert) • Landscape Maintenance (Cert) • Natural Areas Management (Cert) • Sustainable Agriculture (Cert) <p>Hospitality & Culinary Management</p> <ul style="list-style-type: none"> • Hospitality & Culinary Management (AAS) • Baking and Pastry Arts (AAS) • Baking and Pastry Assistant (Cert) • Hospitality Manager (Cert) • Hospitality Supervisor (Cert) • Professional Chef (Cert) • Professional Cook (Cert) <p>Library Technical Assistant (Cert) Medical Imaging (AAS)</p> <ul style="list-style-type: none"> • Computed Tomography (Cert) • Magnetic Resonance Imaging (Cert) <p>Massage Therapy (Cert) Surgical Technology (Cert) Welding (Cert)</p>	<p>Facilities Management & Engineering (AAS & Certs) Facilities Management (Cert) Facilities Energy Systems Technology (Cert) Financial Services/Investment Analysis (Cert) Graphic Design (AAS & Cert) Animation and Multimedia (Cert) Web Graphic Page Design (Cert) Photography (Cert) Medical Laboratory Technology (AAS) Oracle Database Administrator (DBA) (Cert) Physical Therapist Assistant (AAS)</p>
<p>Triton College 2000 Fifth Ave. River Grove, IL 60171</p>	<p>Laser/Photonics/Optics</p> <ul style="list-style-type: none"> • Laser/Photonics/Optics (Cert) • Applied Lasers (Cert) • Biophotonics (Cert) <p>Medical Imaging</p> <ul style="list-style-type: none"> • Computed Tomography (Cert) • Magnetic Resonance Imaging (Cert) 	<p>Diagnostic Medical Sonography (AAS) Ophthalmic Technician (AAS) GM/AC Delco (AAS) Nuclear Medical Technology (AAS & Cert) Visual Communication (AAS)</p>

Associate in Applied Science and Career Certificates

College	Programs Offered by CLC	Programs Offered by Agreement School
<p>William Rainey Harper College 1200 W. Algonquin Palatine, IL 60067</p>	<p>Addiction Counseling and Treatment (AAS & Cert)</p> <p>Automotive Collision Repair (AAS & Cert)</p> <p>Automotive Technology (AAS & Cert)</p> <p>Civil and Environmental Technology (AAS & Cert)</p> <p>Construction Management Technology (AAS & Cert)</p> <p>Health and Wellness Promotion</p> <ul style="list-style-type: none"> • Health and Wellness Promotion (AAS) • Personal Training (Cert) • Wellness Coaching (Cert) <p>Horticulture</p> <ul style="list-style-type: none"> • Horticulture Production (AAS) • Landscape Construction and Maintenance (AAS) • Landscape Maintenance (Cert) • Landscape Design (AAS & Cert) • Natural Areas Management (AAS & Cert) • Sustainable Agriculture (AAS & Cert) • Arboriculture (Cert) • Floral Design (Cert) <p>Laser/Photonics/Optics</p> <ul style="list-style-type: none"> • Laser/Photonics/Optics (Cert) • Applied Lasers (Cert) • Biophotonics (Cert) <p>Library Technical Assistant</p> <ul style="list-style-type: none"> • Children's Services (AAS) • Library Management (AAS) • Library Marketing and Public Relations (AAS) • Library Technology (AAS) • Library Technical Assistant (Cert) <p>Technical Communication (AAS & Cert)</p> <p>Tool & Mold Maker Phase III (Cert)</p>	<p>Building Codes & Enforcement (Cert)</p> <p>Cardiographic Technician (Cert)</p> <p>Diagnostic Cardiac Sonography (AAS)</p> <p>Diagnostic Medical Sonography (AAS)</p> <p>Dietetic Technician (AAS & Certs)</p> <p>Emergency and Disaster Management (AAS)</p> <p>Fashion Design (AAS & Cert)</p> <p>Fashion Merchandising (AAS)</p> <p>Forensic Science (AAS)</p> <p>Graphic Arts Technology (AAS & Certs)</p> <p>Human Resources (Cert)</p> <p>Interior Design (AAS)</p> <p>Maintenance Technology (AAS)</p> <p>Mammography (Cert)</p> <p>Manufacturing Technology</p> <ul style="list-style-type: none"> • Advanced Manufacturing Technology (Supply Chain Management/Logistics Focus) (AAS) <p>Practical Nursing (Cert)</p> <p>Sign Language Interpreting (Cert)</p> <p>Supply Chain Management</p> <ul style="list-style-type: none"> • Inventory Production Control (Cert) • Physical Distribution (Cert) • Purchasing (Cert) • Supply Chain Management (Cert)

Joint Agreement listings are effective fall 2016 as approved by the CLC Board of Trustees.

Schedule of Classes

This catalog lists courses the College of Lake County intends to offer. Inclusion of a course description does not obligate the college to offer the course in any particular semester. Students are referred to the appropriate class schedule each semester for specific and current information. Prior to each registration period, the class schedule is posted online at www.clcillinois.edu/classes.

Course Numbering

Courses are listed in numerical order by course number within each subject area. All courses, unless otherwise indicated, can be completed within the semester. Students should consult with a counselor or an advisor for the most efficient sequence of courses toward a degree or certificate.

First Digit Indicates Year

Courses numbered 000 to 099 indicate adult education, continuing education, or basic skills courses. Courses numbered 100-199 are normally freshman courses, and 200-299 are usually sophomore courses.

Second Digit Indicates Program

Courses numbered 100-209 with a middle digit of 0 are usually development courses designed to prepare students for enrollment in courses at the career or transfer level. These courses do not apply toward a college degree or career certificate and are not used to compute grade point average.

Courses numbered 110-299 with a middle digit 1, 3, 5, 7, or 9 are usually career courses. In some career programs, middle digits of 2, 4, 6, or 8 are also used for career courses. Policies concerning the transferability of some of these courses to senior colleges and universities vary. Students are urged to consult with:

- the senior institutions of interest
- the transfer information on the CLC website
- a CLC counselor or advisor

Courses number 100-299 with a middle digit 2, 4, or 6 are usually transfer courses. These courses have been articulated according to the standards of the Illinois Community College Board. To ensure a specific course is transferable, students are urged to consult with:

- the senior institutions of interest
- the transfer information on the CLC website
- a CLC counselor or advisors

Third Digit Indicates Sequence

The third digit in any course number serves to distinguish the course from other courses within the same subject area and in the same year.

Prerequisites and Corequisites

To help ensure success in their courses, students must carefully observe requirements that may be placed on enrollment. The College of Lake County uses two types of requirements on enrollment in courses.

Prerequisites are other courses, knowledge, skills, or permission that must be obtained or completed before a student enrolls in a course. Students who believe they possess equivalent knowledge or skills through prior coursework or experience should see the appropriate division office.

Corequisites are other courses, knowledge, skills, or permissions that must be taken or acquired either concurrently with or previous to the course in question.

Course Information and Descriptions

Course Discipline/Prefix Reference

Course descriptions are organized alphabetically by prefix in the following section. The list below shows both the discipline and course prefix for cross reference.

Accounting (**ACC**)
Administrative Office Systems (**AOS**)
Adult Basic Education (**ABE**)
Adult Language Education (**ALE**)
Agriculture (**AGR**)
Anthropology (**ANT**)
Arabic (**ARA**)
Architectural Technology (**ARC**)
Art (**ART**)
Asian/Asian American Studies (**ASI**)
Automation, Robotics and Mechatronics (**ARM**)
Automotive Collision Repair (**ACR**)
Automotive Technology (**AUT**)
Biology (**BIO**)
Business Administration (**BUS**)
Chemistry (**CHM**)
Chinese (**CHI**)
Cisco Networking (**CNA**)
Civil Technology (**CIV**)
College Study Skills (**CSS**)
Communication (**CMM**)
Computer Aided Design (**CAD**)
Computer Drafting Application (**CDA**)
Computer Information Technology (**CIT**)
Computerized Numerical Control (**CNC**)
Construction Management Technology (**CMT**)
Cooperative Education (**EWE**)
Criminal Justice (**CRJ**)
Dance (**DNC**)
Dental Hygiene (**DHY**)
Digital Media and Design (**DMD**)
Early Childhood Education (**ECE**)
Earth Science (**ESC**)
Economics (**ECO**)
Education (**EDU**)
Educational Work Experience (**EWE**)
Electrical Technology (**ELC**)
Electrical Engineering Technology (**EET**)
Electrician Apprenticeship (**EAP**)
Electronics Engineering Technology (**ELT**)
Electronics Manufacturing (**EMF**)
Emergency and Disaster Management (**EDM**)
Emergency Medical Technology (**EMT**)
Engineering (**EGR**)
English (**ENG**)
English Language Instruction (**ELI**)
English as a Second Language (**ESL**)
Fire Science Technology (**FST**)
French (**FRN**)
Gender and Sexuality Studies (**GXS**)
General Education Development (**GED**)
Geography (**GEG**)
German (**GER**)
Health Information Technology (**HIT**)
Health and Wellness Promotion (**HWP**)
Heating and Air Conditioning Engineering Technology (**HET**)
History (**HST**)
Horticulture (**HRT**)
Hospitality and Culinary Management (**HCM**)
Human Services (**HUS**)
Humanities (**HUM**)
Industrial Electrician (**ISE**)
International Studies in Social Science (**SSI**)
Italian (**ITL**)
Japanese (**JPN**)
Laser/Photonics/Optics (**LPO**)
Latin American Studies (**LAT**)
Liberal Arts & Science (**LAS**)
Library Science (**LSC**)
Library Technical Assistant (**LTA**)
Machine Tool Trades (**MTT**)
Manufacturing Technology (**MFG**)
Massage Therapy (**MAS**)
Math Computer Science (**MCS**)
Mathematics (**MTH**)
Mechanical Engineering Technology (**MET**)
Medical Assisting (**MOA**)
Medical Imaging (**MIM**)
Music (**MUS**)
Nanoscience Technology (**NAN**)
Nursing (**NUR**)
Paralegal Studies (**PLS**)
Personal Development (**PDS**)
Philosophy (**PHI**)
Phlebotomy (**PBT**)
Photography (**see ART**)
Physical Education (**PED**)
Physics (**PHY**)
Political Science (**PSC**)
Psychiatric Rehabilitation (**PRS**)
Psychology (**PSY**)
Russian (**RUS**)
Science (**SCI**)
Social Science (**SSC**)
Social Studies Topics (**SST**)
Social Work (**SWK**)
Sociology (**SOC**)
Spanish (**SPA**)
Spanish Adult Education (**SAE**)
Surgical Technology (**SRG**)
Theatre (**THE**)
Vocational Skills Training (**VST**)
Water-Wastewater (**WWW**)
Welding (**WLD**)
Continuing Education Courses

Course Information and Descriptions

Gender and Sexuality		IAI Code	Music		IAI Code
GXS 121	Introduction to Gender Studies I	S9 900	MUS 124	Introduction to Music	F1900
GXS 229*	Sex, Gender and Power	S7 904D	MUS 224	Music Literature	F1902
History		IAI Code	Philosophy		IAI Code
HST 121	History of Western Civilization to 1500	S2902	PHI 121	Introduction to Philosophy	H4900
HST 122	History of Western Civilization from 1500	S2903	PHI 122*	Logic	H4906
HST 126	History of Non-Western World since 1500	S2905N	PHI 123	Philosophy of Religion	H4905
HST 127	History of Chinese Culture & Society	S2914N	PHI 125	Introduction to Ethics	H4904
HST 221	U.S. History to 1876	S2900	PHI 126	World Religions	H5904N
HST 222	United States History 1876 to Present	S2901	PHI 221	Asian Philosophy	H4903N
HST 245	History of Latin America I to 1825	S2910N	Physics		IAI Code
HST 246	History of Latin America II from 1825	S2911N	PHY 120	Practical Aspects of Physics	P1901L
Humanities		IAI Code	PHY 121	General Physics I	P1900L
HUM 121	Humanities: Ancient Times to the Middle Ages	HF902	PHY 123	Physics for Science & Engineering I	P2900L
HUM 122	Humanities: Renaissance to the Present	HF903	Political Science		IAI Code
HUM 123*	Introduction to Film	F2908	PSC 121	American National Politics	S5900
HUM 126	Introduction to the Performing Arts	F9900	PSC 122	State & Local Politics	S5902
HUM 127*	Critical Thinking	H4906	PSC 221	Comparative Political Systems	S5905
HUM 128	Introduction to Middle-Eastern Civilizations	H2903N	PSC 222	International Relations	S5904
HUM 129	Introduction to East Asian Civilization	HF904N	Psychology		IAI Code
HUM 140*	Introduction to International Film	F2909	PSY 121	Introduction to Psychology	S6900
HUM 141	World Humanities of 20/21 Century	HF904N	PSY 220	Lifespan Development	S6902
HUM 221	American Decades	HF906D	PSY 222	Child Growth & Development	S6903
HUM 222*	Film and Society	F2908	PSY 225	Social Psychology	S8900
HUM 226	Women and the Arts	HF907D	PSY 226	Adolescent Development	S6904
Italian		IAI Code	Russian		IAI Code
ITL 222*	Intermediate Italian II	H1900	RUS 222*	Intermediate Russian II	H1900
ITL 223*	Italian Civilization I	H1900	Sociology		IAI Code
Japanese		IAI Code	SOC 121	Introduction to Sociology	S7900
JPN 222*	Intermediate Japanese II	H1900	SOC 222	Social Problems	S7901
Math		IAI Code	SOC 224	Sociology of the Family	S7902
MTH 127	Finite Mathematics I	M1906	SOC 225	Class, Race and Gender	S7903D
MTH 140+	Contemporary Math	M1904	SOC 229*	Sex, Gender and Power	S7904D
MTH 141+	Quantitative Literacy	M1901	Spanish		IAI Code
MTH 145	Calculus & Analytic Geometry I	M1900-1	SPA 222*	Intermediate Spanish II	H1900
MTH 146	Calculus & Analytic Geometry II	M1900-2	SPA 223*	Spanish Civilization I	H1900
MTH 221	Mathematics for Elementary Teaching II	M1903	SPA 224*	Spanish Civilization II	H1900
MTH 222	Elementary Statistics	M1902	Theatre		IAI Code
MTH 224	Calculus for Business and Social Sciences	M1900-B	THE 121	Introduction to Theatre I	F1907
MTH 244	Discrete Mathematics	M1905	THE 123	Diversity in American Theatre	F1909D
MTH 246	Calculus & Analytic Geometry III	M1900-3	<p>* Several CLC courses share an IAI number; however, each IAI number may be used only once for a general education requirement. Students may use a course with the same IAI number as an elective only. Courses that share an IAI number are noted with an asterisk (*).</p> <p>+ MTH 140 and MTH 141 do not fulfill the general education mathematics requirements in Associate in Science degrees.</p>		

College of Lake County's Major IAI Courses

The chart below shows CLC's transfer courses that meet IAI (Illinois Articulation Initiative) core curriculum for specific transfer majors developed to date. IAI major course codes follow the CLC title. Course descriptions in this section also included IAI codes as appropriate.

Accounting		IAI Code	English (See Mass Communication)	
ACC 121	Financial Accounting	BUS 903		
ACC 122	Managerial Accounting	BUS 904	Horticulture (See Agriculture)	
Agriculture		IAI Code	Industrial Technology	IAI Code
HRT 121	Introduction to Horticulture	AG 905	EGR 121	Engineering Design Graphics
			MET 111	Manufacturing Processes
Biology		IAI Code		IND 911
BIO 161*	General Biology I	BIO 910		IND 913
BIO 162*	General Biology II	BIO 910	Mass Communication	IAI Code
Business Administration		IAI Code	BUS 214	Advertising
CIT 120	Introduction to Computers	BUS 902	ENG 123	Mass Communications
MTH 222	Elementary Statistics	BUS 901	ENG 124	Newswriting I
Chemistry		IAI Code	Math Computer Science	IAI Code
CHM 121	General Chemistry I	CHM 911	MCS 140*	Computer Programming
CHM 123	General Chemistry II	CHM 912		for Engineering & Science
CHM 222	Organic Chemistry I	CHM 913	MCS 141*	Computer Science I
CHM 223	Organic Chemistry II	CHM 914	MCS 142	Computer Science II
Computer Information Technology		IAI Code	MTH 244	Discrete Mathematics
CIT 141	Programming in C++	CS 911		
CIT 241	Advanced C++	CS 912	Math	IAI Code
MTH 244	Discrete Mathematics	CS 915	MTH 145	Calculus & Analytic Geometry I
Criminal Justice		IAI Code	MTH 146	Calculus & Analytic Geometry II
CRJ 121	Introduction to Criminal Justice	CRJ 901	MTH 225	Introduction to Linear Algebra
CRJ 123	Introduction to Criminology	CRJ 912	MTH 227	Ordinary Differential Equations
CRJ 124	Penology and Corrections	CRJ 911	MTH 246	Calculus & Analytic Geometry III
CRJ 229	Juvenile Delinquency	CRJ 914		
Engineering		IAI Code	Psychology	IAI Code
EGR 121	Engineering Design Graphics	EGR 941	PSY 223	Abnormal Psychology
EGR 125	Engineering Statics	EGR 942		
EGR 221	Statics and Dynamics	EGR 944	Theatre	IAI Code
EGR 222	Engineering Mechanics of Materials	EGR 945	CMM 124	Oral Interpretation
EGR 225	Engineering Dynamics	EGR 943	THE 125	Principles of Acting
EGR 260	Introduction to Circuit Analysis	EGR 931L	THE 126	Stagecraft

* Several CLC courses share an IAI number; however, each IAI number may be used only once for a general education requirement. Students may use a course with the same IAI number as an elective only. Courses that share an IAI number are noted with an asterisk (*).

Course Information and Descriptions

Sample Course Listing

ACC 111 Office Accounting (3-0) 3 hours

course prefix	course number	course title	hours of lecture per week	hours of lab per week	semester hours of credit
ACC	111	Office Accounting	3	0	3

IAI S1 900N - Illinois Articulation Initiative General Education (IAI Number)

Accounting (ACC)

Business and Social Sciences Division,
Room T302, (847) 543-2047

ACC 112 Accounting Procedures I (3-0) 3 Hours

This course is an introduction to basic accounting procedures. Emphasis is on the processing of financial transactions through the accounting cycle. Additional topics include accounting for merchandising entities, cash, and payroll.

Prerequisite: College Reading and Writing Readiness or concurrent enrollment in ENG 109 or ELI 109 AND Basic Algebra Readiness

Course fee

ACC 113 Accounting Procedures II (3-0) 3 Hours

This course focuses on the analysis of financial statements by studying the individual components of those statements and how they are accounted for. Specifically the course will cover the accounting for cash, receivables, inventory, plant assets, debt and equity for both corporations and partnerships, as well as financial statement analysis and the statement of cash flows. Upon completion of the course, students will be able to interpret financial statements of businesses/corporations in order to assist them in making more informed business/financial decisions.

Prerequisite: College Reading and Writing Readiness AND ACC 112 (C or better) or higher level financial accounting course

Course fee

Typically offered fall and spring only

ACC 114 Payroll Accounting (2-0) 2 Hours

This course is a practical study of current social security, income tax, employment and unemployment laws and their effect on basic payroll accounting systems. Course coverage includes the preparation of payroll records and tax returns.

Prerequisite: ACC 112 (C or better) or higher level financial accounting course

Course fee

Typically offered spring only

ACC 121 Financial Accounting (4-0) 4 Hours

This is an introductory course focusing on financial reporting for external users. Course coverage includes basic accounting principles, the accounting cycle with an emphasis on transaction analysis, and financial statements. Specific course topics include the valuation and reporting of cash, receivables, inventory, long-term assets, current and long-term liabilities and stockholders' equity.

Prerequisites: College Reading and Writing Readiness AND AOS 122 or MTH 102 or MTH 105 (all C or better) or higher math course or appropriate score on the Math Placement Test

Recommended: BUS 121

Course fee

IAI: BUS 903

ACC 122 Managerial Accounting (4-0) 4 Hours

This introductory course in managerial accounting focuses on internal planning and control. Emphasis is on identifying and applying relevant accounting and financial information for management decisions. Topical areas include product costing, operational control, cost allocation, capital budgeting, profit planning, performance reporting, and variance analysis.

Prerequisite: ACC 113 or ACC 121 (either C or better)

Recommended: CIT 119 or CIT 120

Course fee

IAI: BUS 904

ACC 171 Introduction to QuickBooks (2-0) 2 Hours

This course provides an introduction to QuickBooks. Topics covered include company set up, processing transactions through the accounting cycle, merchandising transactions, banking and payroll.

Prerequisites: ACC 112 or ACC 121 (either C or better) - AND - CIT 119 or CIT 120 (either C or better) OR consent of department chair

Course fee

Typically offered spring only

ACC 172 Capstone Experience: Accounting Clerk (1-0) 1 Hour

Students in this course will complete a capstone project consisting of a comprehensive accounting practice set and end of project evaluation. Completing and reporting on this practice set will give students the opportunity to synthesize and put into practice the knowledge and skills acquired in all other courses in the Accounting Clerk Certificate program.

Prerequisite or Corequisite: ACC 113, ACC 114, ACC 171, AOS 111, AOS 122, CIT 111, and CIT 119

Course fee

Typically offered spring only

ACC 212 Federal Tax Accounting I (3-0) 3 Hours

Federal Tax Accounting I involves the practical study of Federal Tax Law as related to the individual and sole proprietorship. Topics covered include history of Federal Income Tax, Personal and Dependency Exemptions, Cash and Accrual Methods, Gross Income inclusions and exclusions, Depreciation Methods, Property Transactions, Realization and Recognition of Gain or Loss, Deductions for and from Adjusted Gross Income (AGI), Itemized Deductions, Passive Activity rules and Tax Credits.

Prerequisite: ACC 113 or ACC 121 (both C or better)

Course fee

Typically offered fall and summer only

ACC 213 Federal Tax Accounting II (3-0) 3 Hours

This course is an introduction to corporate, partnership, trust, estate and exempt entity taxation. The overall emphasis of the course is on the taxation of corporations and flow-through entities. The student will also become familiar with various related subjects including Alternative Minimum Tax, Accumulated Earnings Tax, Gift and Estate Tax and International Taxation.

Prerequisite: ACC 212 (C or better)

Course fee

Typically offered spring only

ACC 214 Cost Accounting (3-0) 3 Hours

Cost Accounting as a tool for management is emphasized throughout the course. Students will study topics such as cost-volume-profit relationships, budgeting, standard costs, responsibility accounting and job-order and process costing. Traditional methodology is emphasized. Contemporary methodology and concepts relating to ABC and JIT accounting are introduced.

Prerequisite: ACC 122 (C or better)

Course fee

Typically offered spring only

ACC 221 Intermediate Accounting I (4-0) 4 Hours

An intensive study of financial accounting theory and procedures involving the topical areas of accounting standards and theory development, the statements of income, retained earnings, and financial position, time value of money, cash, receivables, inventory, plant assets, depreciation, intangible assets and current liabilities. Grade of "B" or better in Financial and Managerial Accounting (ACC121 and ACC122) is recommended, grade of "C" or better is required.

Prerequisite: ACC 122 (C or better)

Course fee

Typically offered fall and spring only

ACC 222 Intermediate Accounting II (4-0) 4 Hours

An intensive continuation of the study of financial accounting theory and procedures involving the topical areas of accounting for long term liabilities, shareholder equity, investments, revenue recognition, financial analysis, preparation of the Statement of Cash Flows, accounting for income taxes, pensions, leases, changes and errors, and disclosure.

Prerequisite: ACC 221 (C or better)

Course fee

Typically offered spring only

ACC 251 Financial Accounting Research (1-0) 1 Hour

This course is an introduction to the research process as it applies to financial accounting. The primary focus will be on the use of an Internet based research system to obtain authoritative evidence to support answers to accounting questions.

Corequisite: ACC 222

Typically offered summer only

ACC 252 Research Topics in Taxation (1-0) 1 Hour

This course summarizes the art of navigating the federal income tax laws, as well as other authoritative literature, and developing a supportable conclusion to tax issues that do not possess definitive answers. This course will expose students to a variety of tax authoritative documents, as well as their citations. Students will be trained to use tax research software and will ultimately be assessed on their ability to create and communicate defensible tax positions.

Corequisite: ACC 213

Typically offered summer only

ACC 270 Advanced Accounting (4-0) 4 Hours

Advanced accounting includes the study of accounting theory and practice as it relates to business combinations and consolidated financial statements, accounting and reporting for governmental and not for profit organizations, and the accounting for equity transactions for partnerships. This course is recommended for students who plan to sit for the CPA exam and practicing accountants needing further study of the above described topics.

Prerequisite: ACC 222 (C or better) OR ACC 221 (B or better) and concurrent enrollment in ACC 222.

Typically offered spring only

ACC 271 Auditing (3-0) 3 Hours

An intensive study of theory and procedures applied in the performance of an audit including the topical areas of audit reporting, auditing standards and evidence, components of audit risk, and the evaluation and impact of internal control environment and information systems. The legal, ethical and regulatory dimensions will be examined with emphasis on how government affects auditing and financial reporting through Sarbanes-Oxley Act and other relevant acts.

Prerequisite: ACC 222 (C or better) OR ACC 221 (B or better) and concurrent enrollment in ACC 222.

Typically offered fall only

ACC 299 Special Topics in Accounting (Variable) 1-6 Hours

This course is designed to allow students to study a topic or topics that are not a part of the existing curriculum. Topics identified will be current or emerging topics within the accounting profession or topics that provide additional depth within an accounting specialty area. This course may be repeated for up to a total of six credit hours.

May be taken four times, but any topic only once

Administrative Office Systems (AOS)

Business and Social Sciences Division,
Room T302, (847) 543-2047

AOS 111 Business Communication (3-0) 3 Hours

This course is designed to improve communication skills and prepare students for success in a team environment. Students will learn how to write clearly and concisely. Topics include a review of punctuation, document formatting and techniques in composing effective business letters, memoranda, reports, employment letters, resumes, and working with electronic messages and digital media.

Prerequisite: College Reading and Writing Readiness

Course fee

AOS 112 Computer Basics/Software Applications (3-0) 3 Hours

This course provides a comprehensive study of the use of computers and technologies. Class topics include computer hardware, software, operating systems, and electronic communications such as email, the Internet, and networks. Students will have an opportunity to analyze computer-purchasing strategies, as well as acquire knowledge on data security and storage. Hands-on software experience will be provided utilizing Word, Excel, Access, PowerPoint, the Internet, and email.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100

Course fee

Course Information and Descriptions

AOS 113 Comprehensive Word Processing (3-0) 3 Hours

This is a comprehensive course in the use of word processing software on a computer. Topics include entering, editing, formatting, saving, retrieving, using writing tools, and printing. Advanced and specialized topics to be covered include tables, merge, macros, outlining, templates, styles, themes, footnotes/endnotes, headers/footers, and graphics. Several projects will be completed during the semester.

Course fee

AOS 114 Outlook (1-0) 1 Hour

In this course, students will learn the features of Microsoft Outlook software. Topics covered include using Outlook for e-mail, using the Calendar feature to schedule events and appointments, entering and editing contacts, and creating and updating tasks and notes. Several projects will be completed during the semester.

Course fee

AOS 118 Advanced Word Processing/ Desktop Publishing (3-0) 3 Hours

In this course students will gain an understanding of desktop publishing concepts using Word and Publisher applications. Topics covered include desktop publishing terminology, graphics, typestyles, styles, design principles, forms creation, and web publishing and storage. Students will produce and assemble a portfolio of their work including business cards, flyers, brochures, and newsletters that combine text with graphics.

Prerequisite: AOS 113 or passing score on the Microsoft Word Skill Check Test AND College Reading and Writing Readiness

Course fee

Typically offered fall and spring only

AOS 122 Business Mathematics (3-0) 3 Hours

Students will solve math problems encountered in a business environment. Areas of study include a review of mathematical computations, algebra, percentages, discounts, markups/markdowns, simple and compound interest, loans, depreciation, inventory, and stocks and bonds.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

AOS 170 Computer Keyboarding I (1.5-1) 2 Hours

Computer Keyboarding I meets the needs of individuals seeking basic keyboarding skills on computers and provides the initial instruction leading to an employable skill level. By learning to use proper "touch" keystroking techniques, students will master the alphabetic keyboard including numbers and symbols. Once the keyboard is learned, emphasis will be placed on building speed and accuracy.

Course fee

AOS 171 Computer Keyboarding II (1.5-1) 2 Hours

This course is designed to continue building speed and accuracy skills on the alphabetic keyboard using proper "touch" keyboarding techniques. Proper formatting of basic business documents used in today's office will be introduced.

Prerequisite: AOS 170, or *Corequisite* AOS 170, or permission of instructor

Course fee

Typically offered fall and spring only

AOS 172 Business English (3-0) 3 Hours

This course is designed to teach the application of standard rules of business English necessary to ensure accuracy in written communications in the business office. This course includes intensive coverage of correct business word usage, punctuation, grammar, and sentence structure.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100

AOS 175 Keyboarding Speed and Accuracy Building (1.5-1) 2 Hours

This course is for students with intermediate skill levels who wish to improve their speed and accuracy on the computer.

Course fee

AOS 178 Intermediate Keyboarding (2-2) 3 Hours

Intermediate Keyboarding focuses on increasing speed/accuracy on timings and increasing the production rate of office documents.

Students will learn formatting of business correspondence. A knowledge of word processing software is required.

Prerequisite: College Reading and Writing Readiness AND AOS 171 or AOS 175 or permission of instructor

Course fee

AOS 214 Administrative Office Procedures (3-0) 3 Hours

This course will prepare students for the role of the professional office manager in today's global job market. Topics to be covered include defining the administrative office manager, understanding basic forms of organizations, developing problem-solving skills, recruiting and orienting a culturally diverse workforce, and analyzing office jobs, salaries, benefits, and workplace issues. Also covered will be resume writing, travel arrangements, planning meetings and conferences, and time and record management.

Prerequisite: College Reading and Writing Readiness

Typically offered fall and spring only

AOS 215 Presentation Software (3-0) 3 Hours

In this course students will learn to design, create, and present dynamic presentations using Microsoft's PowerPoint software. Topics include adding media, custom animation, and web posting.

Prerequisite: College Reading and Writing Readiness

Course fee

AOS 216 Integrated Office Projects (3-0) 3 Hours

Students will complete integrated projects required in a business environment. Students will use the components of Microsoft Office (Word, Excel, PowerPoint, Access, Outlook) and the Internet. This is a capstone course that requires the integration of previously learned skills.

Prerequisites: (AOS 112 and AOS 113) or CIT 119

Course fee

Typically offered fall and spring only

AOS 233 Management Skills (3-0) 3 Hours

This course focuses on the actions of managers as they perform their planning/leading/organizing/controlling responsibilities. Students in this course will both study and practice critical management competencies. These competencies include problem-solving, relationship building, motivating, leading teams, performance management, conflict resolution, delegating, and change management.

AOS 233 and BUS 233 are cross-listed.

Prerequisite: BUS 121 or AOS 214 or Department Consent.

Typically offered spring only

AOS 237 Managerial Communication (3-0) 3 Hours

This course will guide students in developing the communication skills needed to be successful as a manager. The course is organized in a workshop format, in which students develop, refine, and practice communication skills used by successful managers. The course includes a focus on both oral and written skills used in business at a management level. The content of the course will also include a focus on organization, non-verbal (both delivery and listening) and presentation skills. At the conclusion of the course, students will be able to prepare written business documents such as proposals, memos, and emails; organize and conduct meetings and write meeting minutes; and make formal and informal business presentations. Students will have developed communication skills that effectively inform and persuade their audience in addition to enhancing their credibility as managers.

AOS 237 and BUS 237 are cross-listed.

Prerequisite: AOS 111 or ENG 121

Typically offered fall and spring only

AOS 239 Social Media/Social Networking in Business (3-0) 3 Hours

This course provides an introduction to the use of social media and social networking within a business context. The course provides an overview of the role of social media and networking in building and managing customer relationships as a component of the marketing program. Students will develop the tools to communicate with customers using the major social network platforms such as Facebook, LinkedIn, Twitter and blogs.

AOS 239 and BUS 239 are cross-listed.

Prerequisite: College Reading and Writing Readiness

Course fee

Typically offered spring only

AOS 253 Leadership (3-0) 3 Hours

This course will focus on the elements and concepts related to leadership. Various levels of leadership concepts will be examined including self-leadership, entrepreneurial leadership, team leadership, strategic leadership, and organizational leadership. Topics include leadership vision, culture and values, and strategy development and execution. Personal leadership competencies such as emotional intelligence, cross-cultural competencies, and leveraging via delegation and talent development will also be covered.

AOS 253 and BUS 253 are cross-listed.

Prerequisite: BUS 121 or Department Consent.

Recommended: BUS 223 or BUS 233 or AOS 233

Typically offered fall only

AOS 299 Selected Topics in Office Automation (Variable) 1-3 Hours

A course designed to meet the needs of students for specialized instruction in current office automation topics. Topics will be identified for each section of the course.

Course fee

May be taken four times, but any topic only once

Adult Basic Education (ABE)**Adult Basic Education, GED® and ESL Division
Building 4, (847) 543-2021**

Adult Education classes are intended for people who live in Lake County. They are not appropriate for students with B1, B2, F1, F2, J1 or J2 visas, nor are they appropriate for short-term visitors to the U.S.

In general, students must be at least 18 years old in order to enroll in adult education classes. However, 16-year-olds and 17-year-olds may register with an official Secondary School Reference Form signed by their local High School authorized representative. U.S. High School graduates and 16-year-olds must meet additional eligibility requirements. New students must attend an orientation session before attending classes.

The Adult Basic Education, GED and ESL Division provides several specific types of educational opportunities and is funded in part by grants from the federal government.

ABE 10 Literacy I (Variable) 3-6 Hours

This course is an individualized program of instruction focusing on developing literacy skills in reading, writing and arithmetic. The course is designed to meet each student's personal goals.

Course fee

May be taken four times for credit

ABE 11 Literacy II (3-0) 3 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course is designed to raise students' basic literacy skills in reading, writing and arithmetic to a grade level equivalent of 2.0 or higher on a standardized assessment (e.g. TABE). Students will progress at their own rate.

Course fee

ABE 13 Beginning Mathematics 1 (Variable) 0.5-4 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This mathematics course will cover whole numbers 0-100. *Course fee*

ABE 15 Beginning Mathematics 2 (Variable) 0.5-4 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This mathematics course will cover addition and subtraction. *Course fee*

ABE 17 Beginning Mathematics 3 (Variable) 0.5-4 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This mathematics course will cover geometric properties. *Course fee*

ABE 19 Beginning Mathematics 4 (Variable) 0.5-4 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This mathematics course will cover surveys and graphs. *Course fee*

Course Information and Descriptions

- ABE 20 Beginning ABE I (Variable) 3-6 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This course is an individualized program of instruction for students with emerging reading, writing, language, arithmetic and life skills development. Students will progress and master the basic skills at their own rate. Students' needs determine level and kinds of materials used.
Course fee May be taken four times for credit
- ABE 21 Beginning ABE II (3-0) 3 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This course will review, teach and maintain basic skills in reading, writing, math and life skills. Students will progress at their own rate. Students' needs determine level and kinds of materials
Course fee May be taken four times for credit
- ABE 22 Basic Reading 1 (Variable) 0.5-4 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This reading class teaches syllable patterns, phonemes, vocabulary and reading comprehension strategies.
Course fee May be taken four times for credit
- ABE 23 Basic Mathematics 1 (Variable) 0.5-6 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This mathematics course will cover basic number concepts, mathematical language, and whole number topics (0-100,000). *Course fee May be taken four times for credit*
- ABE 24 Basic Reading 2 (Variable) 0.5-4 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This course is a reading class that includes development of basic decoding skills, vocabulary, fluency and comprehension.
Course fee May be taken four times for credit
- ABE 25 Basic Mathematics 2 (Variable) 0.5-4 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This mathematics course will cover an introduction to fractions and pictorial representation.
Course fee May be taken four times for credit
- ABE 26 Basic Reading 3 (Variable) 0.5-4 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This basic reading class teaches syllable patterns, phonemes, vocabulary and reading comprehension strategies.
Course fee May be taken four times for credit
- ABE 27 Basic Mathematics 3 (Variable) 0.5-4 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This mathematics course will cover an introduction to geometry and rounding of whole numbers
Course fee May be taken four times for credit
- ABE 28 Basic Reading 4 (Variable) 0.5-4 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This basic reading class teaches syllable patterns, phonemes, vocabulary and reading comprehension strategies.
Course fee May be taken four times for credit
- ABE 29 Basic Mathematics 4 (Variable) 0.5-4 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This mathematics course will cover multiplication and division facts (0-12) and simple probability.
Course fee May be taken four times for credit
- ABE 30 Intermediate ABE I (Variable) 3-6 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This course is for students who want to progress and master the basic skills in a group learning situation. Course instruction will include reading, language development, writing and mathematics. Students may progress at their own rate.
Course fee May be taken four times for credit
- ABE 31 Intermediate ABE II (3-0) 3 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This course will include intermediate reading, language development, writing and mathematics skills.
Course fee May be taken four times for credit
- ABE 32 Intermediate Reading 1 (Variable) 0.5-4 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This course covers intermediate basic reading comprehension strategies, vocabulary, fluency and decoding skills.
Course fee May be taken four times for credit
- ABE 33 Intermediate Mathematics 1 (Variable) 0.5-6 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This mathematics course will cover basic numeracy concepts of decimals and conversions of fractions, decimals and percents. *Course fee May be taken four times for credit*
- ABE 34 Intermediate Reading 2 (Variable) 0.5-4 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This course covers intermediate basic reading comprehension strategies, vocabulary, fluency and decoding skills.
Course fee May be taken four times for credit
- ABE 35 Intermediate Mathematics 2 (Variable) 0.5-4 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This mathematics course will cover multiplication and division of multi-digit numbers and order of operations.
Course fee May be taken four times for credit
- ABE 36 Intermediate Reading 3 (Variable) 0.5-4 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This course is an intermediate basic reading class that develops decoding skills, vocabulary, fluency and comprehension.
Course fee May be taken four times for credit
- ABE 37 Intermediate Mathematics 3 (Variable) 0.5-4 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This mathematics course will cover the four basic math operations with decimals, and coordinate graphing of points.
Course fee May be taken four times for credit

ABE 38 Intermediate Reading 4 (Variable) 0.5-6 Hours
 This course is an intermediate basic reading class that develops decoding skills, vocabulary, fluency and comprehension.
Course fee
May be taken four times for credit

ABE 39 Intermediate Mathematics 4 (Variable) 0.5-4 Hours
**Course Modification effective Fall 2016. For details, refer to addendum.*
 This mathematics course will cover the four basic math operations with fractions, measurements, angles and interpretation of complex graphs and charts.
Course fee *May be taken four times for credit*

ABE 40 Advanced ABE I (Variable) 3-6 Hours
**Course Modification effective Fall 2016. For details, refer to addendum.*
 This course focuses on instruction in reading, language development mathematics, as well as problem-solving skills. Real-life applications including work-related skills will be covered. Students' needs determine level and kinds of materials used.
Course fee *May be taken four times for credit*

ABE 41 Advanced ABE II (3-0) 3 Hours
**Course Modification effective Fall 2016. For details, refer to addendum.*
 This course is a continuation of ABE 040. It is designed to teach and review basic reading, writing, mathematics, and problem-solving skills. Real-life applications including work-related skills will be covered. Students' needs determine level and kinds of materials used.
Course fee *May be taken four times for credit*

ABE 42 Advanced Reading 1 (Variable) 0.5-4 Hours
**Course Modification effective Fall 2016. For details, refer to addendum.*
 This course teaches advanced basic reading comprehension strategies, vocabulary, fluency and decoding skills.
Course fee *May be taken four times for credit*

ABE 43 High Intermediate Mathematics 1 (Variable) 0.5-6 Hours
**Course Modification effective Fall 2016. For details, refer to addendum.*
 This mathematics course will cover computations with positive and negative integers, application of number properties and a continuation of graphic representation.
Course fee *May be taken four times for credit*

ABE 44 Advanced Reading 2 (Variable) 0.5-4 Hours
**Course Modification effective Fall 2016. For details, refer to addendum.* This course teaches advanced basic reading comprehension strategies, vocabulary, fluency and decoding skills.
Course fee *May be taken four times for credit*

ABE 45 High Intermediate Mathematics 2 (Variable) 0.5-4 Hours
**Course Modification effective Fall 2016. For details, refer to addendum.*
 This Mathematics course will cover exponents, radicals, functions and 3-dimensional geometric figures.
Course fee *May be taken four times for credit*

ABE 46 Advanced Reading 3 (Variable) 0.5-4 Hours
**Course Modification effective Fall 2016. For details, refer to addendum.*
 This course teaches advanced basic reading comprehension strategies, vocabulary, fluency and decoding skills.
Course fee
May be taken four times for credit

ABE 47 High Intermediate Mathematics 3 (Variable) 0.5-4 Hours
**Course Modification effective Fall 2016. For details, refer to addendum.*
 This mathematics course will cover problems involving ratio, proportion and percentages.
Course fee *May be taken four times for credit*

ABE 48 Advanced Reading 4 (Variable) 0.5-4 Hours
**Course Modification effective Fall 2016. For details, refer to addendum.*
 This course teaches advanced basic reading comprehension strategies, vocabulary, fluency and decoding skills.
Course fee

ABE 49 High Intermediate Mathematics 4 (Variable) 0.5-4 Hours
**Course Modification effective Fall 2016. For details, refer to addendum.*
 This mathematics course will cover algebraic expression, equations, statistics and probabilities.
Course fee

Agriculture (AGR)

Biological and Health Sciences Division,
 Room B210, (847) 543-2042

AGR 111 Permaculture Production (1-2) 2 Hours
 This course introduces students to the production and management of perennial food and orchard crops. Crop production plans for multi-year phased growing operations are emphasized. Harvest, storage and shipping methods to maximize crops sales also are covered. Field practices are part of each class session.
Prerequisite: College Reading and Writing Readiness or concurrent enrollment in ENG 109 or ELI 109 or ENG 100 AND a score of 34 or higher on the Math Placement Test or Basic Algebra Readiness
Recommended: Basic biology or ecology coursework
Course fee

AGR 112 Season Extension Methods (1-2) 2 Hours
 This course introduces students to season extension growing methods such as floating row covers, cold frames and high tunnels. Changeover of cool -warm season crops to allow for year-round growing and control of harvest timing are covered.
Prerequisite: College Reading and Writing Readiness or concurrent enrollment in ENG 109 or ELI 109 or ENG 100 AND a score of 34 or higher on the Math Placement Test or Basic Algebra Readiness
Course fee

AGR 114 Annual Fruit and Vegetable Production (1-2) 2 Hours
 This course introduces students to the planning, planting, production and harvesting of annual food crops. Intercropping, vertical growing, successional planting and other harvest maximization techniques are addressed. Sustainable practices for regional climate and soil conditions and organic growing methods are emphasized. Class includes hands-on growing activities.
Prerequisite: College Reading and Writing Readiness or concurrent enrollment in ENG 109 or ELI 109 or ENG 100 AND a score of 34 or higher on the Math Placement Test or Basic Algebra Readiness
Course fee

Course Information and Descriptions

AGR 210 Agricultural Marketing (3-0) 3 Hours

This course introduces students to various farm-to-market business approaches including community supported agriculture (CSA), farm-to-institution, farmer's markets and other direct market sales.

Wholesale distribution and creation of value-added products also are covered. Students develop an agricultural business plan for class, and visit local farm businesses.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Recommended: BUS 121, BUS 122, or HRT 160

Anthropology (ANT)

Business and Social Sciences Division,
Room T302, (847) 543-2047

ANT 121 Introduction to Anthropology (3-0) 3 Hours

This course is an introduction to the nature of humans and their development and relationship to the physical, social, and cultural environments both past and present. This course surveys the major fields of anthropology: physical anthropology, ethnology, linguistics, and archaeology, with an emphasis on non-Western cultures and underrepresented groups.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100

Note: For online sections, College Reading and Writing Readiness is required

Fulfills the CLC I/M Education Requirement.

IAI: S1 900N

ANT 221 Cultural Anthropology (3-0) 3 Hours

This course is a study of the nature and development of culture. The economic, political, religious and social organizations of selected human groups (with an emphasis on non-Western and underrepresented groups) are examined, compared and evaluated. It explores the cultural determinations of individual human behavior and means of adaptation.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100

Note: For online sections, College Reading and Writing Readiness is required

Fulfills the CLC I/M Education Requirement.

IAI: S1 901N

ANT 222 Introduction to Physical Anthropology (3-0) 3 Hours

This course is an introductory survey of basic concepts, theories, and information addressing physical anthropology. Specifically, this course explores human origins, primate and human fossil records, population genetics, human adaptation and variation, and humankind's place in the world ecology.

Prerequisite: College Reading and Writing Readiness

IAI: S1 902

ANT 224 Introduction to Archaeology (3-0) 3 Hours

This course is a survey of the concepts and methods essential to the study of prehistoric cultures with emphasis on the prehistoric cultures of the Americans. Topics include site location, techniques of excavation, methods of dating artifacts and sites, analysis of artifacts, reconstruction of culture history and cultural resource management.

Prerequisite: College Reading and Writing Readiness

IAI: S1 903

ANT 226 Field Methods (3-0) 3 Hours

This course is an introduction to the techniques of field archaeology and includes instruction in excavation and recording, exploratory surveys and mapping, project planning, research design, laboratory analysis, and preparation of research reports. The class will be conducted at an approved archaeological site, such as the Mayflower Archaeological Preserve in Belize, Central America. The course will be comprised of actual field work, along with lectures and discussion.

Prerequisite: College Reading and Writing Readiness

ANT 228 Cross-Cultural Relationships (3-0) 3 Hours

Combining the anthropological traditions of a strong cross-cultural approach, a focus on small-scale cultures, and an emphasis on traditionally underrepresented groups, this course offers a unique perspective on the analysis and understanding of the globalization process. Application of anthropological concepts, techniques, and information will be applied to understanding the global mix of cultures increasingly forged by economic development, with particular attention given to the relationships, obligations, and responsibilities of small and large-scale cultures.

Prerequisite: College Reading and Writing Readiness

Fulfills the CLC I/M Education Requirement.

IAI: S1 904D

ANT 299 Special Topics in Anthropology (Variable) 1-3 Hours

This course addresses the in-depth study of special topics in anthropology that do not have specific courses in the catalogue. Course content will vary depending on the topic being studied and may include topics in Cultural Anthropology, Archaeology, Physical Anthropology, Applied Anthropology, and Linguistic Anthropology. This course may be taken four times for a maximum of 6 hours towards degree completion.

Prerequisite: To be determined relative to topic

May be taken four times, but any topic only once

Arabic (ARA)

Communication Arts, Humanities and
Fine Arts Division, Room B210, (847) 543-2040

ARA 121 Elementary Modern Standard Arabic I (4-0) 4 Hours

An introduction to the phonology and writing systems of modern standard Arabic and its basic vocabulary and fundamental structures. This course offers combined training in listening, speaking, reading, and writing through dialogues, texts, and narratives with historical, literary, and religious content.

ARA 122 Elementary Modern Standard Arabic II (4-0) 4 Hours

A continuation of the mastery of Arabic phonology, basic vocabulary, and fundamental syntax. This course puts emphasis on oral reading and writing practice based on selected texts from Islamic literature, including the Qur'an and Hadith.
Prerequisite: ARA 121

ARA 221 Intermediate Modern Standard Arabic I (4-0) 4 Hours

Expansion of the student's understanding of the Arabic language with active vocabulary and structure and the development of reading and oral skills. Selected readings include texts and narratives from various genres of Arabic prose literature.
Prerequisite: ARA 122

ARA 222 Intermediate Modern Standard Arabic II (4-0) 4 Hours

This course continues to expand the knowledge of Arabic grammar, with emphasis in verbal and written communication. Films, readings and materials from newspapers, magazines, and media are utilized so students explore the Arabic-speaking world and cultures based on authentic materials.

Prerequisite: ARA 221

Fulfills the CLC I/M Education Requirement.

IAI: H1 900

Architectural Technology (ARC)

Engineering, Math and Physical Sciences Division,
Room T302, (847) 543-2044

ARC 121 Architectural Graphics (2-3) 3 Hours

A course which presents the fundamental principles of graphical communication for the Architectural student in architectural terms. Students will learn to understand the built environment through drawing. Students will learn to communicate concepts verbally and graphically through both hand and computer drawing.
Course fee

ARC 151 Advanced Concepts of Project/AutoCAD Management (2-2) 3 Hours

Course is designed to teach an understanding of the concepts of sharing data through xref management as it relates to the division of AutoCAD files regarding the use of xref base drawing, model space drawing and paper space drawing. Establishing files that relate to the indexing of Construction Drawings will also be addressed.
Prerequisite: ARC 121 and CAD 117

ARC 170 Architectural Design (2-3) 3 Hours

This course enables the student to become familiar with the basic principles and considerations involved in the functional aesthetic aspects of architectural design. The course further provides the student with practical "hands on" experience in solving architectural design problems.

Note: Completion of Architectural Graphics (ARC 121) or an equivalent drawing course is recommended. Some knowledge of architectural materials and construction techniques will be helpful.
Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Course fee

ARC 171 Architectural Working Drawings (2-2) 3 Hours

This course provides the student with the knowledge and skills necessary to draw detailed building construction documents. Students draw site plans, foundation plans, floor plans, elevations and sections.

Prerequisite: ARC 121, CAD 117, and CAD 178 (previously CAD 214) (all C or better)

Course fee

Typically offered fall only

ARC 211 Structural Steel Design (2-3) 3 Hours

Relating of structural steel components to a total structural system.

Note: Student must furnish basic required equipment.

Prerequisite: EGR 216

ARC 214 Reinforced Concrete and Timber Design (2-3) 3 Hours

Relating concrete and timber structure components to total structural system.

Note: Student must furnish basic required equipment.

Prerequisite: EGR 216

ARC 215 Architectural Project Planning (2-4) 4 Hours

This course provides the student with a practical problem-solving situation under job-like conditions. The student will synthesize all information previously learned to complete a building design project. This practical project will take the entire semester to complete and will incorporate information from all previous course work in the Architecture Program.

Note: Fourth semester standing in the Architectural Program and departmental advisement are recommended.

Prerequisite: ARC 171 (C or better)

Course fee

ARC 216 Architectural Illustration (2-2) 3 Hours

This course is designed for students who are interested in using Autodesk 3ds Max Design software to enhance their 3D designs. Students will use the software to create 3D illustrations and rendering of products, interiors/exterior of buildings to produce professional presentation quality drawings. The topics include advanced modeling and modifiers, advanced materials, animation, and the use of mental ray rendering software. *Note:* Completion of CAD179, or familiarity with Autodesk 3ds Max Design, is recommended prior to taking this course.

Note: This course is cross listed with CAD 279.

Course fee

Typically offered spring only

ARC 219 Introduction to Environmental Design (3-0) 3 Hours

Sustainable design is demanded in the marketplace and is necessary for projects that attempt to get toward a 0 carbon footprint. Students will analyze case studies of existing sustainable designs. Students will be able to explain the development of sustainable design. Students will develop an understanding of sustainable design and will be able to determine ways of providing a sustainable design as the solution to a design problem.

Prerequisite: College Reading and Writing Readiness

ARC 228 History of Architecture (3-0) 3 Hours

Students will develop an understanding of building typologies and the background of notable architecture. Emphasis will be on the survey of styles of architecture from classical to modern architecture.

Prerequisite: College Reading and Writing Readiness

Course Information and Descriptions

ARC 251 Architectural Analysis (2-2) 3 Hours

This course will advance the student's ability to perform analysis of the form and space of the built environment beginning with experiential and empirical inquiry and expanding to formal, visual, compositional, and perceptual techniques.

Prerequisite: ARC 121, ARC 171 and CAD 117 (all C or better)

ARC 252 Beginnings of Modern Architectural Theory (3-0) 3 Hours

This course is an introduction to the concept of architectural theory as an integral part of making, understanding, and interpreting works of architecture.

Prerequisite: College Reading and Writing Readiness

ARC 271 Commercial Working Drawings (2-2) 3 Hours

Course designed to prepare students to complete plans and details of construction drawings of commercial buildings including; site plans, foundation, floor, wall, and roofing systems.

Prerequisite: ARC 121

Course fee

Typically offered spring only

ARC 275 Portfolio and Professional Development (0-2) 1 Hour

This course will assist in preparing students for architectural career positions and develop skills that will increase their success in the market place. Presentation of design projects and professional development activities to enhance the student's portfolio will be included.

Note: Instructor consent required. This course must be taken in the last semester before graduation and after the completion of 2 credit hours of Cooperative Work Experience. In addition, participation in an agreed upon professional group is required. (Fee will apply)

ARC 299 Special Topics: Architecture Technology (Variable) 1-4 Hours

This course is designed to respond to the rapidly developing pace of advancement in technology. Specialized topics will include the areas of design and construction.

Note: Topics will be identified for each section of the course.

Prerequisite: To be determined relative to topic

May be taken four times, but any topic only once

Art (ART)

Communication Arts, Humanities and
Fine Arts Division, Room B210, (847) 543-2040

ART 111 Printing Production (3-0) 3 Hours

This course is a survey of the graphic arts process from the written copy to the finished piece, using technical aspects of digital print production. An overview of Electronic Print Technology will be explored. Students will learn terminology to communicate with others in the field. Specific units will draw on current industry software (object-oriented graphics) and paint software (bitmapped images), graphic design, typography, and color. The first half of

course covers computer prepress including all software needed for art preparation. The second half of this course covers contemporary and historic printing methods.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100

Course fee

ART 121 Introduction to Art (3-0) 3 Hours

This course will introduce students to an appreciation of the visual arts through an intercultural, social/historical approach. The course will also emphasize the nature of the creative process, integrating a study of the conceptual principles, with methods and materials which influence artistic critical thinking, problem solving, exploration, and discovery.

Note: A museum visit will be required during the semester at student expense. See course syllabus for approximate cost.

Prerequisite: College Reading and Writing Readiness

IAI: F2 900

ART 122 Two Dimensional Design (0-6) 3 Hours

This course is a basic studio experience for those interested in fine arts, commercial arts or art education. Students will carry out a series of problems relating to the elements and principles of two-dimensional design. The course will develop the students' organizational abilities and technical skills, with the focus on verbal, written and visual definitions of terms and concepts of two-dimensional design used by artists and designers.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100

ART 123 Color and Design Techniques (0-6) 3 Hours

This studio course is a continuation of ART 122 that focuses on two dimensional design concepts, principles, and techniques. Use of color techniques and development will be focused on through a variety of mediums.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: ART 122 (C or better)

ART 124 Drawing I (0-6) 3 Hours

This course provides students with an introduction to drawing concepts and processes through freehand application. Throughout the course, in-class and out-of-class assignments will stress linear and tonal approaches to describe objects drawn from direct observation. The outline of class work is progressive and includes contour line drawing assignments, visual measuring and sighting, shape quality, composition, linear perspective, value drawing, master studies, and self-portraiture. Mediums employed will be graphite pencil, charcoal, and conte crayon.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100

ART 125 Art for Elementary Teachers I (0-4) 2 Hours

A basic studio experience open to all students but designed for those majoring in general elementary education and those who are already teaching or working in some capacity with children at the elementary level. The student will be given practical experience in carrying out a series of techniques, teaching methods, and projects relating to the elements and principles of teaching art. (This course is primarily designed as a methods course for those people who would wish to add art to the elementary curriculum.)

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100

Course fee

ART 126 Art for Elementary Teachers II (0-4) 2 Hours

Designed as a continuation of ART 125 to provide additional studio experiences in greater depth for students who want additional experience in the methods and techniques of art and teaching art to children.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: ART 125

Course fee

ART 127 Drawing II (0-6) 3 Hours

This is a second level drawing course in which freehand linear, tonal, and color approaches will be used to describe the relationships of objects and spaces drawn from direct observation. All work will build off of basic drawing principles. Composition, application of media, concept development, and finished quality of each work will be stressed. Mediums employed will be graphite pencil, charcoal, conte crayon, and chalk pastel.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: ART 124

ART 128 Watercolor I (0-4) 2 Hours

This course explores the methods and techniques of water-soluble painting media with an emphasis on developing knowledge of compositional elements in watercolor.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100

ART 129 Photography I (2-2) 3 Hours

This course introduces students to the principles of the photographic process from picture taking to printing. Emphasis is placed on historical photographs to illustrate these principles. The course includes the use of cameras, darkroom equipment, film processing, printing, and elements of photographic composition. It is designed for students with little or no background in photography.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100

Course fee

ART 149 Digital Photography I (2-2) 3 Hours

This course covers the capture, processing, and output of digital images. Digital camera and scanner input technology, as well as inkjet and electronic media output are explored. Technical instruction in Adobe Photoshop image processing software will also be covered.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100

Course fee

ART 220 Watercolor II (0-4) 2 Hours

This course is a continuation of Watercolor I with emphasis on advanced investigation of aesthetic concerns of water-based media. The course covers development of sophisticated ideas and techniques through directed experimentation. Various aqueous media will be explored through lecture, demonstrations and projects. Illustrated lectures examining the history of watercolor as a viable expression in the visual arts will be included.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: ART128

ART 221 Three Dimensional Design (0-6) 3 Hours

This course is a studio experience intended to introduce students to three-dimensional design through the use of a variety of materials, processes and concepts. The course stresses the technical aspects of design, construction, problem solving, and presentation, as well as concept development.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100

ART 222 Computer Art I (0-6) 3 Hours

This course presents a computer software-based approach to produce art. Visual image manipulation and generation will be stressed, including the integration of computer hardware, software, and peripheral devices as tools to manufacture, capture, and combine traditional and contemporary visual ideas as applied to art and design.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100

Course fee

ART 223 Sculpture I (0-6) 3 Hours

This course is an introduction to the processes of creating three-dimensional sculptural art forms. Students will be exposed to a variety of techniques, materials, and equipment used by artists to create sculpture.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100

Course fee

Course Information and Descriptions

ART 224 Painting I (0-6) 3 Hours

This course will expose students to the methods and techniques of various painting media to develop knowledge of composition. The course will concentrate on the basic techniques of the direct and indirect methods of oil painting.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100

ART 225 Figure Drawing (0-6) 3 Hours

Continuation of basic drawing with the application of drawing techniques and concepts as related to the figure.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: ART 124

Course fee

Typically offered fall only

ART 226 Ceramics I (0-6) 3 Hours

This beginning ceramics course covers basic handbuilding (pinching, coiling, and slab building), wheel throwing (basic cylinder and bowl forms), and glaze techniques. Emphasis is placed on the understanding of the ceramic process and ceramics as a fine art medium.

Note: Students are required to provide their own clay tools, which are available in the bookstore. Clay and glazes will be supplied. Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100

Course fee

ART 227 Painting II (0-6) 3 Hours

This course is an advanced study of the methods and techniques of the various painting media, as well as problems of composition. Emphasis is on the development of ideas, content and technique.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: ART 224

ART 228 Sculpture II (0-6) 3 Hours

This is an advanced course designed to help students understand the development of materials and processes necessary to transform ideas and concepts into three dimensional forms. Technical information in materials and processes of forming, attaching, and manipulating materials, as well as welding, casting, and carving will be included.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100

Course fee

ART 229 Photography II (2-2) 3 Hours

This course provides an advanced technical and artistic approach to photography which includes camera use, darkroom techniques, and references to the history of photography. Students will develop skills through the development of a portfolio.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: ART 129

Course fee

Typically offered spring only

ART 240 History of Art I (3-0) 3 Hours

A survey of the history of the civilizations of the prehistoric era and the ancient world before 1400 by examination of specific works of art and architecture including artifacts and monuments from Mesopotamia, Egypt, Greece, Rome, India, Japan, Africa, Amerindian/Mesoamerica, Early Christian/Byzantine, the Middle Ages, and the Middle East.

Note: A museum visit will be required during the semester at student expense. See course syllabus for approximate cost.

Prerequisite: College Reading and Writing Readiness

Fulfills the CLC I/M Education Requirement.

IAI: F2 901

ART 241 History of Art II (3-0) 3 Hours

This course is a survey of the history of the civilizations, countries, and culture areas from the dawn of the Renaissance tradition in Italy through the present day in Western Europe, Asia, India, Africa, Amerindian/Mesoamerica and the Middle East by means of exposure to specific works of art and architecture.

Note: A museum visit will be required during the semester at student expense. See course syllabus for approximate cost.

Prerequisite: College Reading and Writing Readiness

Fulfills the CLC I/M Education Requirement.

Typically offered spring only

IAI: F2 902

ART 244 Color Photography (2-2) 3 Hours

This color photography course covers color theory, color darkroom procedures, color filtration, and the historical and technical developments of color photography. Students must provide a camera and color darkroom materials for use in completing course assignments.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: ART 129

Course fee

ART 245 Jewelry I (0-6) 3 Hours

This is a beginning course in the design and fabrication of small three dimensional objects. Emphasis is placed on gaining an understanding of the aesthetic concerns of small scale metal work and the skills and techniques of producing jewelry as art. Students will design and learn processes, while developing sensitivity to techniques and ideas, and producing works that stress craftsmanship. This course is fundamentally an extension of Sculpture and Design in the third dimension in a utilitarian form: the balance between aesthetics and technique.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate cost.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100

Course fee

ART 246 Ceramics II (0-6) 3 Hours

This course is a continuation of Ceramics I with further exploration of wheel throwing, handbuilding, glaze techniques, and kiln firing. Students will learn how to throw plates, fit lids, pull handles, and create spouts. Students will also learn the ceramic process by participating in clay mixing, glaze mixing, kiln loading, and kiln firing. Functional form and how it relates to sculpture will also be explored.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: ART 226 (C or better)

Course fee

ART 247 Ceramics III (0-6) 3 Hours

This third ceramics course is a continuation of Ceramics II. Students will continue to develop their personal artistic direction with more independence, while being introduced to other forming and firing methods on a rotating basis. Students will continue to learn the ceramic process by participating in clay mixing, glaze mixing, and kiln loading. They will further their understanding of firing by participating in kiln firings.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: ART 246 (C or better)

Course fee

ART 248 Individual Art Projects (0-6) 3 Hours

This course is designed to provide opportunities for students to pursue interests in specific areas of art with instructor supervision in such cases where the student has already completed the course offerings in that area.

Note: Must have successfully completed all possible courses in a discipline, e.g., Painting, Sculpture, Design, Drawing, Photography, Computer Art, or Art History.

Prerequisite: College Reading and Writing Readiness OR Instructor Consent. Must have successfully completed all possible courses in a discipline, e.g., painting, sculpture, design, drawing, Photography, Computer Art, or Art History.

Course fee

May be taken four times for credit toward degree

ART 249 Digital Photography II (2-2) 3 Hours

Digital Photography II is a continuation of Digital Photography I and expands upon the skills and techniques learned in the beginning course. Course work includes instruction in color management, raster image processor (RIP) output routines, hybrid digital and traditional processes, multi-channel imaging, and other advanced techniques. Adobe's Photoshop image processing software comprises the bulk of the course work. This course is for students with moderate to advanced experience in digital photography.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: ART 149

Course fee

ART 260 History of Photography (3-0) 3 Hours

This course traces the historical development of photography as an art form from 1839 to the present. Discussions will begin with the pre-history of the camera obscura through the discoveries of the inventors of photography as an art form. Discussions will include critical analysis of types of photographs and aesthetic movements in photography. Multicultural/intercultural aspects, as well as contributions of women to the photographic arts, will be discussed.

Contributions of photography to the other arts also will be included.

Note: A museum visit will be required during the semester at student expense. See course syllabus for approximate cost.

Prerequisite: College Reading and Writing Readiness

IAI: F2 904

ART 261 Non-Western Art History (3-0) 3 Hours

This course introduces non-Western cultural perspectives. Emphasis will be placed on, but not limited to, African, Latin American, Middle Eastern, Indian, Asian, and Oceanic art forms throughout history. Students should be able to demonstrate an historical understanding of art as a product reflective of non-Western social and cultural development. This course will discuss the art with an emphasis on the perspectives of third world countries and underrepresented and minority groups.

Prerequisite: College Reading and Writing Readiness

Fulfills the CLC I/M Education Requirement.

IAI: F2 903N

ART 262 Commercial Photography (2-2) 3 Hours

This is a course designed to instruct the photography student in specialized techniques used in the creation of saleable photographs, and use of photographic equipment for revealing the form and demonstration of products. Students will also learn techniques of documentary and journalistic photography. Students will explore the use of photographic lighting as a creative tool for product enhancement. Students will explore use of tungsten light and electronic flash in a studio setting.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: ART 129

ART 263 2D Computer Animation (0-6) 3 Hours

This is a hands-on intermediate level course in the creation and development of 2D animations. Through various assigned projects the student will be exposed to the history of animation, theory, image manipulation, drawing, video, audio and other various animation techniques. This intermediate level course will provide the student with knowledge of computer animation on a simple and complex level. The course will explore the incorporation of different mediums within computer animation, and the student will gain an understanding of professional technical skills within their lessons and independent projects.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: ART 122 and ART 222

Course fee

ART 264 3D Computer Animation (0-6) 3 Hours

This is a hands-on intermediate level course in the creation and development of 3D animations. Through various assigned projects the student will be exposed to the history of animation, theory, image manipulation, lighting, wire frames, vector points, drawing, video, audio and other various animation techniques. This course will provide the student with the knowledge of computer animation on a simple and complex level. The course will explore the incorporation of different mediums within computer animation, and the student will gain an understanding of professional technical skills from their lessons and independent projects.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: ART 263

Course fee

Course Information and Descriptions

ART 267 Wood and Soda Fired Ceramics (0-6) 3 Hours

This course will investigate the technical and aesthetic possibilities of firing with wood and soda. Students are introduced to and participate in the entire firing process including: the preparation of the kilns and ceramic pieces for firing, firing speed, atmospheric changes, introduction of ash or sodium, cooling processes, unloading of the kilns and clean up of the artwork. Assigned and self-directed projects will be made using a variety of hand building and wheel throwing techniques. Various clay bodies, slips and glazes will also be explored in order to achieve the most desirable results.

Prerequisite: ART 246 (C or better)

May be taken four times for credit toward degree

ART 271 Introduction to Electronic Graphic Publishing (0-6) 3 Hours

This is an introductory art course in the creation and development of computer graphic designed images. Through assignments and projects, the student will learn the history of graphic design, theory, image manipulation, logo creation, art, typography, and page layout. The student will also develop professional technical skills, as well as experience in their application. This course will provide the student with a foundation for future computer graphics courses.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: ART 222

Course fee

ART 272 Introduction to Video Production (0-6) 3 Hours

Students are introduced to the concepts and processes of visual storytelling with an emphasis on motion pictures. Students will learn file theory and techniques in all phases of production, which will give them a foundation for future production classes. Narrative skills will be strengthened through using still photography for storyboards, computers and video equipment to produce various individual and group projects.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: ART 149 or ART 249

Course fee

ART 274 Video Production II (0-6) 3 Hours

Video Production II is an intermediate level class that will take the basic skills from the Introduction to Video Production course and move the student into a more technological and advanced area of video production. This course will focus on the concepts and process of documentary production, with a strong emphasis on film style video production. Students will become introduced to digital video and non-linear editing. The exploration of documentary theory and script writing will be studied. Students will become exposed to a wide variety of foreign and domestic films to develop a critical eye for the production process, technique, and critiques.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Prerequisite: ART 272 and ART 280

Course fee

ART 275 Digital Illustration (0-6) 3 Hours

This course will introduce students to illustration styles from diverse cultures and convey how these different artistic styles can be applied to a contemporary digital art medium. Critical examination of illustration artists and their artistic expressions will be taught, as will industry standard techniques and perspectives. Students will develop skills in two dimensional design, color, and strategic use of line weight, along with balance and positioning of graphic elements.

Prerequisite: ART 222

ART 280 Audio Production (0-6) 3 Hours

The Exploration of Audio Production is a unique application of field and studio production techniques, lecturing in sound theory, recording live audio, utilizing and learning how microphones are used for certain situations, operating studio and field mixers, learning the proper way to handle equipment and utilizing contemporary audio software. Altering sound waves, audio sync with video, and other various techniques will be explored. In addition to classroom lectures and lab assignments, students will be organized into production units. As skills are developed each production group will be responsible for producing studio and field audio recordings. The class projects will be brought back to the sound studio for critiquing purposes.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Course fee

ART 299 Special Topics in Art (Variable) 1-3 Hours

Special topics in the field of art, which are outside of the existing curriculum, will be developed. Courses will provide an opportunity for in-depth study of topics pertinent to both traditional and contemporary mediums and themes.

Note: Additional materials beyond those covered by course or lab fees will be required. See course syllabus for a list of materials and approximate costs.

Course fee

May be taken four times for credit toward degree

Astronomy

Astronomy courses are listed under Earth Science.

Asian/Asian American Studies (ASI)

Communication Arts, Humanities and
Fine Arts Division, Room B210, (847) 543-2040

ASI 121 Introduction to Asian American Studies (3-0) 3 Hours

This interdisciplinary course will introduce students to key ideas and issues in the study of Asian American histories, cultures, and racial formation including, but not limited to, matters of migration, social/cultural/legal citizenship, social movements, and cultural politics. Materials will include films, literature, historical and sociological texts, and media and popular culture texts and productions.

Prerequisite: College Reading and Writing Readiness

Fulfills the CLC I/M Education Requirement.

Automation, Robotics and Mechatronics (ARM)

Engineering, Math and Physical Sciences Division,
Room T302, (847) 543-2044

ARM 111 Fundamentals of High Tech Manufacturing I (1-0) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course will cover Occupational Safety and Health Administration (OSHA) safety standards, industrial hazards, personal protective equipment, fire and emergency response, Lockout/Tagout (LOTO), and ergonomics.

Prerequisite: COMPASS ELI score of 200 or higher, APT score of 80 or higher, ELI 103 (C or better), ELI 104 (C or better), ELI 107 (C or better), or College Reading and Writing Readiness AND Basic Algebra Readiness.

ARM 112 Fundamentals of High Tech Manufacturing II (1-0) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course will cover basic manufacturing and production, basic measurement devices, manufacturing efficiency techniques and industrial supply chain systems.

Corequisite: ARM 111 or consent of department

ARM 113 Fundamentals of High Tech Manufacturing III (1-0) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course will cover simple machines, basic electrical and fluid power systems, basic troubleshooting and problem solving techniques, and basic preventive and total productive maintenance. *Corequisite:* ARM 112 or consent of department

ARM 114 Fundamentals of High Tech Manufacturing IV (1-0) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course will cover troubleshooting and problem solving techniques specific to quality control in manufacturing environments. *Corequisite:* ARM 113 or consent of department

ARM 116 Mechatronics Graphics I (.5-1) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course covers the role of technical drawings in industry, examples of different types of technical drawings, measurements using rulers, calipers and micrometers, and introduction to sketching techniques and to 3-view drawings.

Prerequisite: COMPASS ELI score of 200 or higher, APT score of 80 or higher, ELI 103 (C or better), ELI 104 (C or better), ELI 107 (C or better), or College Reading and Writing Readiness AND Basic Algebra Readiness.

Course fee

ARM 117 Mechatronics Graphics II (.5-1) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course continues coverage of 3-view visualization and sketching techniques. It also covers introduction to special views, dimensioning techniques and drawing layout.

Corequisite: ARM 116 or consent of department

Course fee

ARM 118 Mechatronics Graphics III (.5-1) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course will cover tolerancing, Computer Aided Design (CAD) terminology and basic object drawing, modification of existing CAD drawings and CAD dimensioning.

Corequisite: ARM 117 or consent of department

Course fee

ARM 119 Mechatronics Graphics IV (.5-1) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course will cover drafting standards, basic electrical symbols and schematics, basic fluids symbols and schematics, technical documentation and the use of embedded Computer Aided Design (CAD) package objects to create schematic drawings.

Corequisite: ARM 118 or consent of department *Course fee*

ARM 131 Robot Design and Construction I (.5-1) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course will cover the history and development of robots, types of robots, robot components, and basic robot physics. The course will also touch on technical sketching as applied to robot design.

Prerequisite: COMPASS ELI score of 200 or higher, APT score of 80 or higher, ELI 103 (C or better), ELI 104 (C or better), ELI 107 (C or better), or College Reading and Writing Readiness AND Basic Algebra Readiness. *Course fee*

ARM 132 Robot Design and Construction II (.5-1) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course will cover spur, bevel and worm gears, gear trains, mobile chassis design, wheel configurations, DC and AC motors, servo and stepper motors, and power supplies as applied to mobile robots.

Corequisite: ARM 131 or consent of department *Course fee*

ARM 133 Robot Design and Construction III (.5-1) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course will cover microcontrollers, digital and analog signals, sensors, friction and bearings as applied to mobile robots along with the design and construction of robotic arms.

Corequisite: ARM 132 or consent of department *Course fee*

ARM 134 Robot Design and Construction IV (.5-1) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course will cover robot programming in "C" to include variables, basic programming structures, for and while loops, if-else statements. A final robot project will be required.

Corequisite: ARM 133 or consent of department *Course fee*

ARM 151 Mechanical Systems I (.5-1) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course covers basic safety protocol, the role of mechanical components in complex mechatronic systems, the flow of energy in a mechatronic system, calculation of force, accelerations, speed, torque, etc. and basic maintenance and systems-level troubleshooting.

Prerequisite: COMPASS ELI score of 200 or higher, APT score of 80 or higher, ELI 103 (C or better), ELI 104 (C or better), ELI 107 (C or better), or College Reading and Writing Readiness AND Basic Algebra Readiness. *Course fee*

ARM 152 Mechanical Systems II (.5-1) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course covers gears and gear drives, chain and sprocket systems, power transmission, pulley drives, synchronous drives, lubrication requirements of mechanical components, analyzing technical data sheets, and basic troubleshooting.

Corequisite: ARM 151 or consent of department

Course fee

Course Information and Descriptions

ARM 153 Mechanical Systems III (.5-1) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course will cover mechanical shafts, couplings and bearings, lubrication, preventative and predictive maintenance of shafts, couplings, bushings, seals and bearings, alignment and troubleshooting.

Corequisite: ARM 152 or consent of department *Course fee*

ARM 154 Mechanical Systems IV (.5-1) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course will cover clutches and brakes, linear motion technology, flexible elements and troubleshooting the mechanical components in a complete mechatronic system.

Corequisite: ARM 153 or consent of department *Course fee*

ARM 155 STEM Workplace Professional Skills (1-0) 1 Hour

This course introduces students to principles of professional behavior in the industrial workplace. It covers the individual attitude and behavioral skills that are important to a person's success in an industrial environment. Students are typically enrolled in STEM technical career areas such as mechatronics, environmental technology, machine tool trades and other similar career areas.

ARM 156 Electrical Systems I (.5-1) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course will cover the basic electrical components in a mechatronic system. Topics covered will include electrical safety; current, voltage, resistance and power in AC and DC circuits; principles of resistance, inductance, capacitance, impedance, frequency, magnetism and transformers; basic function of AC/DC power supplies; operation of multimeters, oscilloscopes, frequency counters, wiggys, logic probes and amp clamps.

Prerequisite: COMPASS ELI score of 200 or higher, APT score of 80 or higher, ELI 103 (C or better), ELI 104 (C or better), ELI 107 (C or better), or College Reading and Writing Readiness AND Basic Algebra Readiness. *Course fee*

ARM 157 Electrical Systems II (.5-1) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course will cover fundamentals of parallel circuits, balancing bridges, reed switches, current dividers, voltage dividers, relays, indicators, solenoids and troubleshooting.

Corequisite: ARM 156 or consent of department *Course fee*

ARM 158 Electrical Systems III (.5-1) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course will cover electromagnetism; switches; photoelectric, capacitive, and inductive sensors; DC motor and generator introduction; AC motor and circuitry introduction; waveforms; instrumentation, and troubleshooting techniques.

Corequisite: ARM 157 or consent of department *Course fee*

ARM 159 Electrical Systems IV (.5-1) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course will cover capacitors, inductors, diodes, transistors, wiring diagrams, DC power supplies, transformers, complete mechatronic systems and systems troubleshooting. *Corequisite:* ARM 158 or consent of department

Course fee

ARM 171 Automation I (.5-1) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course will cover electrical safety, fundamentals of DC motor operations, starting methods for DC motors, speed control, and troubleshooting DC motors, introduction to Programmable Logic Controllers (PLCs) and PLC terminology, hardware components and general classification of PLCs.

Prerequisite: COMPASS ELI score of 200 or higher, APT score of 80 or higher, ELI 103 (C or better), ELI 104 (C or better), ELI 107 (C or better), or College Reading and Writing Readiness AND Basic Algebra Readiness. *Course fee*

ARM 172 Automation II (.5-1) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course will cover fundamentals of AC motors, intro to 3-phase distribution, transformers, PLC architecture, peripheral support devices, analog and digital circuit structures, and Boolean algebra. *Corequisite:* ARM 171 or consent of department *Course fee*

ARM 173 Automation III (.5-1) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course covers AC induction motors, AC motor starting methods, AC motor speed control, and PLC input/output module devices and symbols.

Corequisite: ARM 172 or consent of department *Course fee*

ARM 174 Automation IV (.5-1) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course will cover regenerative braking, National Electrical code (NEC) standards for installation and overload protection of motors, relay logic and ladder logic diagrams, circuit diagrams, scan time, and fundamentals of PLC programming.

Corequisite: ARM 173 or consent of department *Course fee*

ARM 175 Automation V (.5-1) 1 Hour

This course will cover entering and editing a PLC program, monitoring a program, component addressing, analog to digital conversions, PLC program troubleshooting and troubleshooting codes.

Corequisite: ARM 174 or consent of department *Course fee*

ARM 176 Automation VI (.5-1) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This is course will cover PLC data manipulation instruction, closed loop systems, arithmetic functions, and technical limits in implementation and how to overcome and improve them. *Corequisite:* ARM 175 or consent of department *Course fee*

ARM 177 Automation VII (.5-1) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course will cover PLC timers, counters, and subroutines.

Corequisite: ARM 176 or consent of department *Course fee*

ARM 178 Automation VIII (.5-1) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course will cover identification of PLC logic and hardware faults and symptoms, isolating and correcting a fault, and troubleshooting procedures for closed loop systems.

Corequisite: ARM 177 or consent of instructor *Course fee*

ARM 191 Pneumatics and Hydraulics I (.5-1) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course will cover basic safety rules and standards when working with mechatronic systems, introduction to fluid power, basic principles of hydraulics, fluid power components, hydraulic fluids and basic principles of pneumatics.

Prerequisite: COMPASS ELI score of 200 or higher, APT score of 80 or higher, ELI 103 (C or better), ELI 104 (C or better), ELI 107 (C or better), or College Reading and Writing Readiness AND Basic Algebra Readiness. *Course fee*

ARM 192 Pneumatics and Hydraulics II (.5-1) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course will continue coverage of basic pneumatics and will also cover power supplies, vacuum pumps, circuit diagrams and system tracing, pneumatic components, and system operation and troubleshooting.

Corequisite: ARM 191 or consent of department *Course fee*

ARM 193 Pneumatics and Hydraulics III (.5-1) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course will cover electronic controls, hydraulic cylinders and directional control valves, technical documentation, measurements and adjustments on a fluid system, troubleshooting and predictive/preventative maintenance.

Corequisite: ARM 192 or consent of department *Course fee*

ARM 194 Pneumatics and Hydraulics IV (.5-1) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course covers pressure control valves, flow control, speed control, mobile hydraulic systems and complete fluids troubleshooting in a mechatronics system.

Corequisite: ARM 193 or consent of department *Course fee*

ARM 196 Electrical Systems Capstone (.5-1) 1 Hour

This is the second module of a four module, one credit hour capstone course which will provide students with the skills and knowledge to repair, operate and troubleshoot an entire mechatronics system. The emphasis in this module will be electric and electronic systems.

Prerequisite: ARM 153, ARM 158, and ARM 173 (all C or better)
Course fee

ARM 197 Pneumatic and Hydraulic Systems Capstone (.5-1) 1 Hour

This is the third module of a four module, one credit hour capstone course which will provide students with the skills and knowledge to repair, operate and troubleshoot an entire mechatronics system. The emphasis in this module will be pneumatic and hydraulic systems.

Concurrent Enrollment: ARM 196

Course fee

ARM 198 Complete Systems Integration (.5-1) 1 Hour

This is the fourth module of a four module, one credit hour capstone course which will provide students with the skills and knowledge to repair, operate and troubleshoot an entire mechatronics system. The emphasis in this module will be PLC and whole mechatronic system diagnostics.

Concurrent Enrollment: ARM 197

Course fee

Automotive Collision Repair (ACR)

Engineering, Math and Physical Sciences Division,
Room T302, (847) 543-2044

ACR 110 Introduction to Automotive Collision Repair (2-2) 3 Hours

This course provides the beginning automotive collision students with an introduction to careers in the Automotive Collision Repair (ACR) Industry, repair processes, collision shop equipment, tool safety and proper usage, personal protection equipment used in collision repair, and the design and construction of the modern automobile. Classroom discussions and hands-on labs utilizing live vehicles and training aids will be used to enhance proficiencies.

Recommended: ENG 109 or ELI 109

ACR 112 Non-Structural Repair I (3-4) 5 Hours

(Formerly ABR 110) This course will focus on the design and construction of the modern automobile. Students are introduced to theory and the fundamentals commonly used in sheet metal repair processes, chemical and plastic welding repair processes, along with removal, installation, and adjustment of moveable vehicle glass. Replacement of exterior bolted vehicle body panels including proper fitment and adjustment, and replacement of exterior lights and trim will also be covered. Classroom discussions and hands-on labs utilizing live vehicles and training aids will be used to enhance proficiencies.

Corequisite: ACR 110 (C or better)

Course fee

ACR 115 Automotive Welding (3-4) 5 Hours

(Formerly ABR 115) This course will introduce the students to theory and the fundamentals of common ferrous and non-ferrous metal welding processes used in the collision repair industry. The course will focus on welding safety, gas welding and cutting, electrical arc welding and cutting, both flat and out-of-position welding techniques, and the five most common weld joints used in automotive collision repair. Classroom discussions and in-lab hands-on welding will prepare the student to take the I-CAR Welding Qualification Exams.

Corequisite: ACR 110 (C or better)

Course fee

ACR 119 Paintless Dent Removal (2-2) 3 Hours

This course will introduce the students to theory and the fundamentals of common Paintless Dent Removal (PDR) processes, along with tools and equipment used in the collision repair industry. The course will focus on: dent theory, vehicle inspection, dent identification, PDR tool identification and recommended application, PDR vocabulary, hand and eye coordination, dent access and repair set-up, and final clean up of vehicle finish. Classroom discussions and hands-on labs utilizing live vehicles and training aids will be used to enhance proficiencies.

Prerequisite: ACR 110 and ACR 112 (formerly ABR 110) (both C or better)

Course Information and Descriptions

ACR 131 Automotive Refinishing I (2-2) 3 Hours

(Formerly ABR 130) This course will introduce the students to theory and basic fundamentals of vehicle finishing processes. The course will focus on paint and finishing safety, environmental practices, vehicle masking and protection, and surface preparation for the first coat of the finishing process. The course will also cover identification, set-up, and break down of finishing equipment, proper mixing and application of primers, sealers, and single stage paints. Classroom discussions and hands-on labs utilizing live vehicles and training aids will be used to enhance proficiencies.

Corequisite: ACR 110 (C or better)

Course fee

ACR 132 Automotive Refinishing II (3-4) 5 Hours

(Formerly ABR 131) This course will introduce the students to theory and the fundamentals of base coat and clear coat finishes, identification, set-up, and break down of finishing equipment, along with proper mixing and application of solvent base finishes. Application techniques of automotive color and clear finishes on metal, fiberglass, and automotive plastics will be covered. Classroom discussions and hands-on labs utilizing live vehicles and training aids will be used to enhance proficiencies.

Prerequisite: ACR 110 and ACR 131 (formerly ABR 130) (both C or better)

Corequisite: ACR 215 (ABR 215) (C or better)

Course fee

ACR 137 Automotive Mechanical Systems (3-4) 5 Hours

(Formerly ABR 137) This course will introduce the students to theory and the fundamentals of the steering and suspension systems, drive trains, and braking systems as they apply to a collision repair technician. The course will focus on identification, theories of operation, diagnosis, and repair procedures of the vehicle's mechanical systems as a direct result of a vehicle collision. Classroom discussions and hands-on labs utilizing live vehicles and training aids will be used to enhance proficiencies.

Corequisite: ACR 110 (C or better)

Course fee

ACR 138 Automotive Electrical Systems (3-4) 5 Hours

(Formerly ABR 138) This course will introduce the students to theory and the fundamentals of the air conditioning systems, cooling systems, fuel and exhaust systems, and automotive electronic systems as they apply to a collision repair technician. The course will focus on identification, theories of operation, diagnosis, and repair procedures of vehicle electrical systems as a direct result of a vehicle collision. Classroom discussions and hands-on labs utilizing live vehicles and training aids will be used to enhance proficiencies.

Corequisite: ACR 110 (C or better)

Course fee

ACR 212 Non-Structural Repair II (3-4) 5 Hours

(Formerly ABR 111) This course will introduce the students to theory and the fundamentals of repairing non-bolted vehicle body panels. The course will focus on the removal of interior and exterior trim, hardware, removing and installing stationary glass, non-bolted body panel replacement using both chemical adhesion and fusion processes, proper alignment methods, and application of body seam sealers and foams. Classroom discussions and hands-on labs utilizing live vehicles and training aids will be used to enhance proficiencies.

Note: Work Experience may be considered to meet the prerequisite.

Prerequisite: ACR 110, ACR 112 (ABR 110), and ACR 115 (ABR 115) (all C or better)

Corequisite: ACR 138 (ABR 138) (C or better)

Course fee

ACR 215 Automotive Detailing (2-2) 3 Hours

(Formerly ABR 215) This course will introduce students to theory and the fundamentals of interior and exterior vehicle cleaning, and vehicle finish defect correction. The course will focus on: vehicle interior trim identification, soiled/stains identification, interior odor removal/neutralizing and interior cleaning processes. Exterior cleaning and correction processes including identification of vehicle finish defects and finish correction will be discussed. Classroom discussions and hands-on labs utilizing live vehicles and training aids will be used to enhance proficiencies.

Corequisite: ACR 110 (C or better)

Course fee

ACR 230 Structural Repair (3-4) 5 Hours

(Formerly ABR 230) This course will introduce the students to theory and the fundamentals of the vehicle's structural system. The course will focus on the identification and analysis of structural damage using both manual and computer measuring systems, determining correct repair procedures, and straightening of structural panels. Replacement or sectioning of structural panels, panel corrosion protection, and restraint system will also be covered. Classroom discussions and hands-on labs utilizing live vehicles and training aids will be used to enhance proficiencies.

Prerequisite: ACR 110, ACR 112 (formerly ABR 110), and ACR 115 (formerly ABR 115) (all C or better)

Corequisite: ACR 137 (C or better)

Course fee

ACR 233 Automotive Refinishing III (3-4) 5 Hours

(Formerly ABR 133) This course will introduce the students to theory and the fundamentals of color hue, saturation, and brightness and the tinting of automotive finishes. The course will focus on color matching, application of automotive finishes during the blending processes, and spray techniques. Students will also be introduced to waterborne base automotive finishes. Classroom discussions and hands-on labs utilizing live vehicles and training aids will be used to enhance proficiencies.

Prerequisite: ACR 132 (formerly ABR 131) and ACR 215 (formerly ABR 215) (both C or better)

Course fee

ACR 234 Refinishing IV - Custom Painting (2-2) 3 Hours

This course will introduce the students to theory and the fundamentals of flames, pin-striping, wood grains, texture finishes, mural design, gold leafing, air brushing, and graphic design for automotive applications. The course will focus on the design, set-up, and application of custom finishes. Application techniques using air-brushes, mini-jet spray guns, pin striping brushes, and other non-conventional equipment will also be covered. Classroom discussions and hands-on labs utilizing live vehicles and training aids will be used to enhance proficiencies.

Prerequisite: ACR 233 (formerly ABR 133) (C or better)

ACR 235 Damage Analysis and Shop Procedures (2-2) 3 Hours

(Formerly ABR 235) This course will introduce students to theory and the fundamentals of identifying types of vehicle damages post collision. The course will focus on the preparation of written damage analysis, computerized analysis systems, and training on body shop management and operation systems. The course is designed for students who are interested in pursuing a career within the insurance industry as a damage analyzer, or a career as a collision shop manager/estimator. Customer relation skills and issues will be discussed. Classroom discussions and hands-on labs utilizing live vehicles and training aids will be used to enhance proficiencies.

Prerequisite: ACR 110 and ACR 112 (formerly ABR 110) (both C or better)

Course fee

Automotive Technology (AUT)

Engineering, Math and Physical Sciences Division,
Room T302, (847) 543-2044

AUT 110 Introduction to Automotive Technology (3-2) 4 Hours
(Formerly AUT 174) This course provides the beginning automotive technician the opportunity to increase his or her knowledge of certain mechanical actions and reactions related to the automobile. Proper and safe use of hand and precision tools, and use of common automotive supplies, such as bolts, gaskets, will be covered.
Course fee

AUT 111 Engine Rebuilding (4-2) 5 Hours
(Formerly AUT 171) This course covers rebuilding of engines, including theory, diagnosis, measurement, light machining, and correct reassembly procedures. The lubrication, cooling, and fuel support systems are included. *Note:* The students will be required to provide their own basic tools.
Corequisite: AUT 110 (formerly AUT 174)
Course fee

AUT 112 Braking Systems (4-2) 5 Hours
(Formerly AUT 175) This course provides instruction in the theory of operation, diagnosis, and servicing of automotive drum and disc brake systems. Students will perform complete brake service including the proper machining of drums and rotors. Diagonally split brakes, four wheel discs, anti-lock systems will be covered. *Note:* The students will be required to provide their own basic tools.
Corequisite: AUT 110 (formerly AUT 174)
Course fee

AUT 113 Suspension and Alignment (4-2) 5 Hours
(Formerly AUT 176) This course covers theory of operation, diagnosis, maintenance, repair and adjustment procedures pertaining to steering gears, steering linkages, wheels and tires, and suspensions. *Note:* The students will be required to provide their own basic tools.
Corequisite: AUT 110 (formerly AUT 174)
Course fee

AUT 131 Auto Electrical I (4-2) 5 Hours
(Formerly AUT 172) This course offers the beginning automotive technician an opportunity to gain understanding of the theory, operation, and testing of basic electricity, the automotive battery, starting systems, charging systems, and lighting systems. *Note:* Students will be required to provide their own basic tools.
Corequisite: AUT 110 (formerly AUT 174)
Course fee

AUT 132 Manual Drive Train and Axles (4-2) 5 Hours
(Formerly AUT 273) This introductory course focuses on the repair and overhaul of manual transmissions, transaxles and drive line components. Theories of operation, diagnosis, maintenance, and repair procedures pertaining to manual transmissions, transaxle and drive line components are covered. *Note:* The students will be required to provide their own basic tools.
Corequisite: AUT 110 (formerly AUT 174)
Course fee

AUT 151 Powertrain Systems (4-2) 5 Hours
(Formerly AUT 271) This course focuses on an overview of the operation, diagnosis and repair of power train control systems and components. Principles of carburetion, exhaust systems, fuel delivery systems, ignition systems, and emission control systems will be covered, as well as electronic engine control systems and automotive testing equipment. *Note:* Students will be required to provide their own basic tools.
Prerequisite: AUT 111 (formerly AUT 171) and AUT 131 (formerly AUT 172) (all C or better)
Course fee

AUT 215 Automotive Management (3-0) 3 Hours
Automotive business organization, service department management, and human relations aspect of management in areas of employer-employee relationships, customer-employee relations, and interdepartmental relations.
Typically offered spring only

AUT 217 Automotive Service Consulting (3-0) 3 Hours
In this course the student will study the principles and procedures involved in operation of an automotive service facility as a service consultant. Communication both in terms of customer relations and internal relations with service facility personnel is discussed. In addition, computerized databases, written communication with respect to estimates, repair orders, and invoices is covered as well as communication with customers by telephone. Service/Maintenance intervals, warranty, service contracts, service bulletins, and campaign recalls relative the vehicle identified is explained. Sales skills relative to service needs and shop operations relative to efficient workflow and industry procedures are presented.
Typically offered fall and summer only

AUT 231 Auto Electrical II (4-2) 5 Hours
(Formerly AUT 173) This course covers the theory of operation, diagnosis, and repair of body wiring, lighting circuits, accessories, gauges, and networks. *Note:* The students will be required to provide their own basic tools.
Prerequisite: AUT 131 (formerly AUT 172) (C or better)
Course fee

AUT 232 Automatic Transmission and Transaxle (4-2) 5 Hours
(Formerly AUT 274) This course focuses on the repair and overhaul of automatic transmissions. Theories of operation, diagnosis, maintenance, and repair procedures pertaining to automatic transmissions, automatic transaxles, and torque converters are covered. *Note:* The students will be required to provide their own basic tools.
Prerequisite: AUT 131 (formerly AUT 172) (C or better)
Course fee

AUT 233 Advanced Driveline Systems (3-2) 4 Hours
(Formerly AUT 280) This course covers advanced topics in design and diagnosis for manual transmission, automatic transmission, coupling devices, four wheel drive (4WD) systems, and all wheel drive (AWD) systems. In addition current trends and future technologies in driveline systems will be examined. This course is designed for students and professionals specializing in driveline technologies. *Note:* Students will be required to provide their own basic tools.
Prerequisite: AUT 232 (formerly AUT 274) and AUT 132 (formerly AUT 273) (all C or better) or Consent of Instructor with current A2 and A3 Automotive Service Excellence (ASE) certifications or approved work experience

Course Information and Descriptions

AUT 251 Powertrain Controls (4-2) 5 Hours

(Formerly AUT 272) This course focuses on the diagnosis, testing, and service of computerized powertrain control systems. Topics will include diagnosis and repair of computer and network operation, sensors and inputs, advanced charging, starting and ignition system. Advanced electronic test equipment including Scan Tools, DMM's and Oscilloscopes will be emphasized. *Note:* Students will be required to bring their own tools

Prerequisite: AUT 111 (formerly AUT 171), AUT 131 (formerly AUT 172) (all C or better)

Corequisite: AUT 151 (formerly AUT 271)

Course fee

AUT 252 Powertrain Management (4-2) 5 Hours

(Formerly AUT 276) This course provides students with the opportunity to review and enhance their theory and service skills in automotive electrical systems, fuel systems, engine mechanical diagnosis, emission control systems, and electronic engine control systems. Students will work with engine analyzers and hand-held test equipment common to the automotive service industry. *Note:* The students will be required to provide their own basic tools.

Prerequisite: AUT 111 (formerly AUT 171), AUT 131 (formerly AUT 172), AUT 231 (formerly AUT 173) and AUT 251 (formerly AUT 272) (all C or better)

Course fee

AUT 275 Air Conditioning and Heating (4-2) 5 Hours

This course gives the automotive technician the opportunity to gain an understanding of the theory of automotive air conditioning, heating and ventilation systems and the related service procedures. Students may also gain certification in recycling and recovery of refrigerants.

Note: The students will be required to provide their own basic tools.

Prerequisite: AUT 131 (formerly AUT 172) (C or better)

Course fee

Typically offered spring and summer only

AUT 278 Hybrid and Alternate Fuels (4-2) 5 Hours

Course withdrawn effective Summer 2016.

This course covers the design, operation, repair and maintenance of hybrid vehicles from all manufacturers. It also touches on emerging technologies such as alternative fuels, fuel cell and pure electric vehicles. It is designed for the experienced technician or automotive program graduate who has a thorough understanding of vehicle service and repair.

Prerequisite: Consent of Instructor or Department Chair, and student must have an automotive degree or major automotive certificate or equivalent work experience. *Course fee*

AUT 290 Advanced Specialization (2-6) 5 Hours

(Formerly AUT 277) This is the capstone course in the automotive program. It gives the student the opportunity to practice operations in a shop environment and situation similar to the repair industry. All areas of the automobile are covered including engines, brakes, suspension, transmissions, electrical systems, and climate control. *Note:* The students will be required to provide their own basic tools. *Prerequisite:* 20 Credits in AUT courses and Consent of Instructor Students must have earned a grade of C or better in all previous automotive courses.

Course fee

AUT 299 Special Topics in the Automotive Industry (Variable) 0.5-5 Hours

This course is designed to provide automotive students with opportunities to explore the diversity of topics, businesses, and products within the automotive industry not specifically addressed by existing courses in the catalog. This course may be taken up to four times, any topic only once, for a maximum of 6 hours towards degree completion.

May be taken four times, but any topic only once

Typically offered fall only

Biology (BIO)

Biological and Health Sciences Division,
Room B210, (847) 543-2042

BIO 111 Human Form and Function (3-2) 4 Hours

This course is intended to provide students with a preliminary, non-transfer level introduction to human anatomy and physiology. It is designed to prepare students requiring only a technical level of familiarity with human anatomy, providing the background required for fields such as surgical technology and Emergency Medical Technology - Paramedic.

Prerequisite: College Reading and Writing Readiness

Course fee

BIO 120 Environmental Biology (3-2) 4 Hours

This course focuses on the relationships between humans and the environment. Topics include ecology, population biology, modification of our environment, resource use, land use planning, pollution, and energy. The goal is to better understand the biological and social problems that human use and misuse of the environment cause. Students may not receive credit for both BIO 120 and BIO 140. *Note:* Required, local field trips are scheduled during several (approximate 1/2) of the lab periods. Students are responsible for their own transportation to and from field sites. This course is recommended for non-science majors needing a one-semester lab science course.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100 -AND- Basic Algebra Readiness

Course fee

IAI: L1 905L

BIO 123 Principles of Biology (3-2) 4 Hours

This course introduces basic biological principles of life processes held in common by all organisms. Topics covered include the chemical and physical basis of life, cell structure and function, concepts of heredity, population genetics, and evolution. *Note:* Though this course will provide a general understanding of the basics of cellular biology qualifying it as general education course it will also provide a foundation for those students potentially entering an allied health program (dental hygiene, nursing, medical images, etc.).

Prerequisites: MTH 102 or MTH 105 (both C or better) or an appropriate score on the Math Placement Test or Math ACT of 22 or higher - AND - College Reading and Writing Readiness

Course fee

IAI: L1 900L

BIO 126 Local Flora (1-2) 2 Hours

Introduces lab and field identification of plants of northeastern Illinois. Students use taxonomic keys and make useful collections of plants from various habitats.

Note: Field trips during scheduled class time are an essential part of this course and are, therefore, required. The cost of travel to the site of the field work will be borne by the student.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Course fee

May be taken three times, but any topic only once

BIO 127 Introduction to Evolution (3-0) 3 Hours

This course examines the concept of evolution and mechanisms by which evolution proceeds. An analysis of the evidence for evolution, a section on basic genetics, and a brief treatment of challenges to evolution are included.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Course fee

IAI: L1 907

BIO 128 Natural History of Selected Areas (2-2) 3 Hours

This course examines a specific biogeographical area that has been selected for its unique biological communities. Organisms and ecological relationships are considered, and the effects of human activity are emphasized. Some of the areas that have been studied include the American Tropics, the Everglades, and the Appalachian Mountains.

Note: This course is taught as a field course and should be considered a general education elective; it will NOT meet the CLC laboratory science requirement. Camping, backpacking, and/or canoeing may be included. Travel expenses are paid by the student.

May be taken twice, but any topic only once

BIO 140 Environmental Biology without Lab (3-0) 3 Hours

This non-lab course studies environmental issues that arise from the interaction of humans and the environment. Topics include ecology, population biology, modification of our environment, resource use, land use planning, and energy. The goal is to better understand both the problems brought about by human use and misuse of the environment and potential solutions for those problems. Students may not receive credit for both BIO 140 and BIO 120.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100 -AND- Basic Algebra Readiness

IAI: L1 905

BIO 141 Concepts in Biology (3-2) 4 Hours

This course emphasizes scientific inquiry through selected concepts of biology, such as organization, function, heredity, evolution and ecology. Biological issues with personal and social implications will be introduced to enable students to make informed decisions. A laboratory component will reinforce concepts introduced in the lecture portion of class.

Note: This course is recommended for non-science majors needing a one-semester lab science course and is not intended for students wishing to enter an allied health or pre-professional field.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100 -AND- Basic Algebra Readiness

Course fee

IAI: L1 900L

BIO 143 Biology Laboratory (0-3 hours) 1 Hour

This laboratory course is designed for students who have taken the lecture component of a general biology course at another institution and are seeking credit for BIO 123 - Principles of Biology in order to meet a prerequisite for BIO 244 - Anatomy & Physiology or BIO 246 - Microbiology. Students will participate in labs that reinforce concepts such as scientific method, biomolecules, respiration, enzymes, and natural selection.

Course fee

BIO 149 Genetics and Society (3-0) 3 Hours

This course examines cell structure and function, the nature of the gene, cell division (mitosis vs. meiosis), Mendelian genetics, hereditary disorders, recombinant DNA technology, the genetic evidence supporting evolution, and ethical issues that arise due to our increased knowledge and technology as it relates to genetics.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Course fee

IAI: L1 906

BIO 161 General Biology I (3-3) 4 Hours

This course introduces general biological principles of life processes common to all organisms. Topics covered include the nature of life, unifying themes underlying biology, chemical basis of life, cell structure and function, energetics, cell reproduction, concepts of genetics and inheritance patterns, molecular genetics, and biotechnology. This course is the first semester of a two semester sequence intended for biology majors and students seeking careers in medicine, pharmacy, dentistry, occupational therapy, physical therapy, or veterinary medicine.

Note: Knowledge of chemistry is helpful.

Prerequisites: MTH 108 or MTH 107 (both C or better) or appropriate score on the Math Placement Test or Math ACT of 25 or higher AND College Reading and Writing Readiness

Course fee

IAI: L1910L, BIO910

BIO 162 General Biology II (3-3) 4 Hours

This course examines the following areas of biology: ecology, evolution, systematics, biological diversity, and various systems. Laboratory work includes field and laboratory experiments and computer simulations. This course is the second semester of a two semester sequence intended for biology majors and students seeking careers in medicine, pharmacy, dentistry, occupational therapy, physical therapy, or veterinary medicine.

Prerequisite: BIO 161(C or better)

Course fee

IAI: L1910L, BIO910

BIO 221 General Zoology (2-4) 4 Hours

This course examines the structure, function, natural history, and phylogeny of animals. Basic principles of evolution, origins and content of major phyla, and vertebrate phylogeny are included. The evolution of the vertebrates is emphasized.

Prerequisite: BIO 161(C or better)

Course fee

Course Information and Descriptions

BIO 222 General Botany (2-4) 4 Hours

This course is a comparative study of organisms including photosynthetic protists, fungi, and plants. Morphology, both microscopic and macroscopic, and lifecycle are emphasized with a focus on evolutionary advancements within the taxa. Identification includes representative species of each taxa in addition to plant family characteristics. Ecology with an emphasis on plant conservation is included.

Prerequisite: BIO 120, BIO 123, BIO 161 or HRT 121 (C or better in any one)

Course fee

BIO 225 Environmental Problems (2-4) 4 Hours

This course is a continuation of the study of ecology and current environmental problems that were introduced in BIO 120. Topics include hazardous wastes and chemicals, species extinction and management, and pollution of Lake Michigan. The emphasis in lab will be to study various types of pollution and ecological processes.

Prerequisite: BIO 120 (C or better)

Course fee

BIO 226 Field Biology (2-2) 3 Hours

This course provides students with the opportunity to study plant and animal communities in various biomes. Topics include life histories and interdependence of organisms within the communities, and collection, identification, and preservation of specimens. Department consent required.

Note: This course is taught as a field course and should be considered a general education elective; it will NOT meet the CLC laboratory science requirement. Camping, backpacking, and/or canoeing may be included. Travel expenses are paid by the student.

May be taken twice, but any topic only once

BIO 244 Anatomy and Physiology I (3-2) 4 Hours

This course is the first of a two semester Anatomy and Physiology sequence that begins with an introduction to homeostasis and feedback loops. The structure and function of the following body systems will be explored: the integumentary system, skeletal system, muscular system and nervous system. Within each body system, students learn the normal anatomy and physiology of the system as well as some diseases associated with each system. Human skeletons, human models, preserved sheep organs, and preserved cats are used in labs as representatives of human anatomy.

Prerequisite: BIO 123 (formerly BIO 121) or BIO 161 (all C or better)

Course fee

BIO 245 Anatomy and Physiology II (3-2) 4 Hours

This course is a continuation of BIO 244. It builds on the general information about homeostasis and the specific body systems covered in BIO 244. Within each body system, students learn the normal anatomy and physiology of the system as well as some diseases associated with each system. This course begins with the endocrine system, followed by the cardiovascular system, lymphatic and immune systems, respiratory system, digestive system (including metabolism), urinary system (including fluid and electrolyte regulation), and the reproductive system. Human skeletons, human models, preserved sheep organs, and preserved cats are used in labs as representatives of human anatomy.

Prerequisite: BIO 124 or BIO 244 (C or better)

Course fee

BIO 246 Microbiology (2-4) 4 Hours

This course examines microorganisms with an emphasis on the bacterial groups. Morphology, principal activities and properties of bacteria, yeasts, molds, viruses, selected algae, and protozoan will be discussed. The role of microorganisms in natural systems, infection, immunity, foods, and industry will be covered. Laboratory techniques in handling, culturing, and identifying microorganisms will be emphasized

Prerequisite: BIO 123 (formerly BIO 121) or BIO 161 (all C or better)

Course fee

BIO 299 Special Topics in Biology (Variable) 1-3 Hours

This course addresses the in-depth study of special topics in biology that do not have specific courses in the catalog. Course content will vary depending on the topic being studied. Topics may include environmental issues, risks to human health, implications of recent research in Biology, etc. This course is repeatable up to three times, any topic only once, for a maximum of 6 hours towards degree completion.

Course fee

May be taken four times for credit toward degree

Business Administration (BUS)

Business and Social Sciences Division,
Room T302, (847) 543-2047

BUS 111 Fundamentals of Finance (3-0) 3 Hours

Study of basic methods and quantitative tools of Business Finance. Short and long term investment decision making for businesses and individuals.

Prerequisite: College Reading and Writing Readiness AND ACC 112 or higher ACC course

Typically offered fall only

BUS 113 Human Resource Management (3-0) 3 Hours

Personnel functions, wage systems, incentives, fringe benefits, cost budgeting, policy implementation, leadership styles, and disciplinary procedures.

Prerequisite: College Reading and Writing Readiness

Typically offered spring only

BUS 115 Elements of Supervision (3-0) 3 Hours

This course introduces the role of the supervisor and how it fits in the overall management of an organization. Emphasis is on how the supervisor can impact a department's productivity. Topics will include: supervisory planning, time management, organizing and delegating tasks, training and coaching employees, Equal Employment Opportunity guidelines, labor relations, managing conflict and stress in the work environment, creating a safe and healthy work environment, and productivity improvement.

Prerequisite: College Reading and Writing Readiness

Typically offered spring only

BUS 119 Personal Finance (3-0) 3 Hours

This course covers the basics of financial planning, including budgeting, managing expenses, investments, insurance, estate planning, retirement planning and tax planning. Basic investment principles, such as forms of risk, historical returns, and risk/return tradeoff are explored. The major investment alternatives, stocks, bonds, mutual funds, and real estate, are examined.

Prerequisite: College Reading and Writing Readiness

BUS 121 Introduction to Business (3-0) 3 Hours

This course provides a broad overview of the principles and functions of business. Topics included are: management, marketing, global business practices, finance, human resource management, accounting and business law.

Prerequisite: College Reading and Writing Readiness

BUS 122 Principles of Marketing (3-0) 3 Hours

Introduction to marketing fundamentals, nature of competition, basic marketing problems, policies of business enterprises, and marketing operation planning.

Note: Prior or concurrent enrollment in BUS 121 is strongly recommended.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

BUS 131 Entrepreneurship (3-0) 3 Hours

This course focuses on the entrepreneurial process and prepares students for developing a mindset for thinking creatively. The course examines the concepts and tools related to the development of new entrepreneurial ventures, including developing an idea, starting a new venture, growing the venture, successfully harvesting (selling) it and starting again. In a pragmatic way, students are engaged to discover critical aspects of entrepreneurship and what level of competencies, experience, attitudes, resources, and networks are required to pursue entrepreneurial opportunities.

Prerequisite: College Reading and Writing Readiness

Recommended: BUS 121

Typically offered spring only

BUS 132 Business Ethics (3-0) 3 Hours

This course introduces students to the principal ethical theories and concepts of human conduct and character and will provide a critical evaluation of these theories and concepts as they apply to particular moral problems and business decision making and policy. The class will evaluate the principles, values and standards that guide behavior in the business world. Students will study and analyze various business scenarios to determine ethical and non-ethical behavior. This course will include a large amount of case study work to aid students in identifying ethical behavior in the current business environment and provide opportunities to practice sound ethical decision making.

Prerequisite: College Reading and Writing Readiness

Recommended: BUS 121

BUS 212 Business to Business Marketing (3-0) 3 Hours

Business to Business (B2B) Marketing provides students with an understanding of how to market products and services to organizations rather than consumers. Market development, market mix concepts and target market planning are studied.

Prerequisite: BUS 121 or BUS 122

Typically offered fall only

BUS 213 Principles of Professional Selling (3-0) 3 Hours

An efficient, skilled sales force can positively impact every organization. Principles of Professional Selling provides students with the skills to efficiently and effectively communicate value and develop long-term relationships with customers and prospects. Students will see how a win-win customer relationship develops. They will learn to recognize a problem, develop solutions, and provide the important post-sale service and support.

Prerequisite: BUS 121

Typically offered spring only

BUS 214 Advertising (3-0) 3 Hours

This course provides an understanding of advertising within the integrated marketing communications of the firm. Principles and practical applications of promotional research, consumer behavior, media identification and selection, creative strategy, copywriting, layout, budgeting and legal aspects of advertising and promotion will be covered. Students will develop an advertising campaign for a single product, service or small business.

Prerequisite: BUS 121

Typically offered spring only

IAI: MC 912

BUS 215 Operations Management (3-0) 3 Hours

This class will give students a broad, practical perspective towards the field of Operations Management, a core business function. Students will examine concepts and problems encountered in planning, operating and controlling the production of goods and services. Topics include scheduling, inventory management, logistics, quality assurance, supply chain management, facility location and the use of state of the art computer systems to better manage operations.

Prerequisite: Basic Algebra Readiness and BUS 121

Typically offered spring only

BUS 219 Small Business Management (3-0) 3 Hours

This course is focused on the role of small business in our society, the problems and opportunities connected with starting a new venture, and the management skills required to successfully operate the on-going business. Students will explore the strategic and organizational factors that lead to profitability and growth. The course is intended to meet the needs of those now managing a small business, those considering the possibilities of entrepreneurship and those who wish to learn more about how small businesses operate.

Prerequisite: BUS 121 (C or better) or Department Consent

Typically offered fall and spring only

BUS 221 Business Law I (3-0) 3 Hours

This course introduces principles of American law governing business and personal transactions. Areas covered include contracts and agency. The course also introduces the American legal environment: the court system, administrative agency procedures, and government regulation in the areas of antitrust, employment and consumer transactions.

Prerequisite: BUS 121 or PLS 110

Course Information and Descriptions

BUS 222 Business Law II/Corporate and Securities Law (3-0) 3 Hours

This course provides an overview of various forms of business structures; including sole proprietorships, partnerships and corporations as well as other forms of business. Additional topics covered include the Uniform Commercial Code (UCC), leases, secured transactions and the laws administered by the Securities and Exchange Commission. The student will learn how to draft documents that are important to these fields of law.

BUS 222 and PLS 212 are cross-listed.

Prerequisite: PLS 110 (C or better) or BUS 221

Typically offered spring and summer only

BUS 223 Principles of Management (3-0) 3 Hours

This course is a study of management theories, emphasizing the management functions of planning, decision-making, organizing, leading and controlling which are relevant in a variety of organizations. Emphasis is on theories, concepts, and models related to these key management functions with the intent to better understand the manager's role in contributing to an organization's desired objectives.

Prerequisite: BUS 121

BUS 233 Management Skills (3-0) 3 Hours

This course focuses on the actions of managers as they perform their planning/leading/organizing/controlling responsibilities. Students in this course will both study and practice critical management competencies. These competencies include problem-solving, relationship building, motivating, leading teams, performance management, conflict resolution, delegating, and change management.

AOS 233 and BUS 233 are cross-listed.

Prerequisite: BUS 121 or AOS 214 or Department Consent.

Typically offered spring only

BUS 237 Managerial Communication (3-0) 3 Hours

This course will guide students in developing the communication skills needed to be successful as a manager. The course is organized in a workshop format, in which students develop, refine and practice communication skills used by successful managers. The course includes a focus on both oral and written skills used in business at a management level. The content of the course will also include a focus on organization, non-verbal (both delivery and listening) and presentation skills. At the conclusion of the course, students will be able to prepare written business documents such as proposals, memos, and emails; organize and conduct meetings and write meeting minutes; and make formal and informal business presentations. Students will have developed communication skills that effectively inform and persuade their audience in addition to enhancing their credibility as managers.

AOS 237 and BUS 237 are cross-listed.

Prerequisite: AOS 111 or ENG 121

Typically offered fall and spring only

BUS 238 Project Management (3-0) 3 Hours

This course will focus on the concepts and tools related to the management of projects within organizations. Students will examine all phases of project management including planning, scheduling, control, and termination. Topics include writing project plans, developing work breakdown structures, project scheduling, resource management, earned value analysis, and project risk management.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Recommended: BUS 121

Typically offered fall and spring only

BUS 239 Social Media/Social Networking in Business (3-0) 3 Hours

This course provides an introduction to the use of social media and social networking within a business context. The course provides an overview of the role of social media and networking in building and managing customer relationships as a component of the marketing program. Students will develop the tools to communicate with customers using the major social network platforms such as Facebook, LinkedIn, Twitter and blogs.

AOS 239 and BUS 239 are cross-listed.

Prerequisite: College Reading and Writing Readiness

Course fee

Typically offered spring only

BUS 253 Leadership (3-0) 3 Hours

This course will focus on the elements and concepts related to leadership. Various levels of leadership concepts will be examined including self-leadership, entrepreneurial leadership, team leadership, strategic leadership, and organizational leadership. Topics include leadership vision, culture and values, and strategy development and execution. Personal leadership competencies such as emotional intelligence, cross-cultural competencies, and leveraging via delegation and talent development will also be covered.

AOS 253 and BUS 253 are cross-listed.

Prerequisite: BUS 121 or Department Consent.

Recommended: BUS 223 or BUS 233 or AOS 233

Typically offered fall only

BUS 290 Business Plan Development (3-0) 3 Hours

This course is focused on the development of a comprehensive business plan to serve as a "blueprint" for running a small business, written in a format suitable for presentation to stakeholders and potential investors. Students will conduct industry/market research, assess feasibility, and analyze strategic business models as part of the business plan development process. Additional material on taxes, interpersonal skills, customer service, Small Business Administration services, and related issues will be presented to ready the student to enter the world of small business.

Prerequisite: BUS 121 (C or better) or Department Consent

Typically offered fall only

BUS 299 Selected Topics in Business (Variable) 1-3 Hours

This course is designed to provide students with more information about specialized areas of business. These areas may be current issues that are of a career or management development nature.

Note: Topics will be identified for each section of the course; prerequisite depends upon the selected topic.

May be taken four times for credit toward degree

Chemistry (CHM)

Biological and Health Sciences Division,
Room B210, (847) 543-2042

CHM 120 Chemical Concepts (3-2) 4 Hours

A survey course that includes the fundamentals of chemical composition, chemical calculations, solutions, states of matter, the periodic table, acids, bases and pH, radioactivity and nuclear processes, and a brief overview of organic and biochemistry.

Note: Recommended for non-science majors.

Prerequisites: MTH 102 or MTH 105 (both C or better) or an appropriate score on the Math Placement Test or Math ACT of 22 or higher - AND - College Reading and Writing Readiness

Course fee

IAI: P1 902L

CHM 121 General Chemistry I (3-4) 5 Hours

This course develops an analytical approach to solving chemical problems. The student is provided with principles that relate chemical structure, energy and reactivity and is introduced to the following topics: composition and properties of matter, nomenclature, stoichiometry, solutions, gas laws, thermochemistry, atomic structure and periodic trends, bonding, molecular geometries, and properties of liquids, solids and gases. This course is the first semester of a two semester sequence intended for chemistry majors, science majors, engineering majors, and students seeking careers in pre-professional health related fields.

Prerequisite: One year of High School Chemistry (C or better) or CHM 120 (C or better) AND MTH 108 or MTH 107 (both C or better) or appropriate score on the Math Placement Test or Math ACT of 25 or higher AND College Reading and Writing Readiness

Course fee

IAI: P1 902L, CHM 911

CHM 123 General Chemistry II (3-4) 5 Hours

This course is the second semester of a two semester sequence intended for chemistry majors, and students seeking careers in pre-professional health-related fields. It continues some of the topics presented in CHM 121, General Chemistry I, in more detail. The student is also introduced to the following topics: dynamics of solution formation, various ways to express solution concentrations, colligative properties, chemical kinetics, reaction mechanisms, chemical equilibrium, acids, bases, hydrolysis, buffers, titration, solubility, thermodynamics, and electrochemistry. The course also includes introductory work in qualitative analysis.

Prerequisite: CHM 121 (C or better)

Course fee

IAI: CHM 912

CHM 125 Elementary Organic Chemistry (3-4) 5 Hours

Survey of organic chemistry. Provides a basic understanding of nomenclature, structure, stereochemistry, and reactivity. Introduces spectroscopy and biochemistry.

Prerequisite: CHM 121 (C or better)

Course fee

CHM 140 Chemistry for a Changing World (3-0) 3 Hours

Course is intended for non-science students seeking general education credit in a physical science course without a laboratory. Course emphasizes basic principles of chemistry and their relationship to the modern world. This course will foster an interest in science by preparing students to make effective decisions by developing thinking skills that can be applied to challenges in a changing world. Topics include air and water pollution, energy resources, basic biochemistry, and current scientific developments involving chemistry. *Note:* students may not receive credit towards a degree for both CHM 140 and CHM 142.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

IAI: P1 903

CHM 142 Chemistry for a Changing World-LAB (3-2) 4 Hours

Course is intended for non-science students seeking general education credit in a physical science course with a laboratory component. Course emphasizes basic principles of chemistry and their relationship to the modern world. This course will foster an interest in science by preparing students to make effective decisions by developing thinking skills that can be applied to challenges in a changing world. Topics include air and water pollution, energy resources, basic biochemistry, and current scientific developments involving chemistry. *Note:* students may not receive credit towards a degree for both CHM 140 and CHM 142.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Course fee

IAI: P1 903L

CHM 161 Chemistry Laboratory (0-4) 2 Hours

This laboratory course is intended for students who have taken a lecture component of a general chemistry course at another institution and are seeking credit for CHM 121 – General Chemistry I so as to meet a prerequisite for CHM 123 – General Chemistry II. Students will participate in labs that emphasize concepts such as safety, scientific method, physical and chemical properties, gases, thermochemistry, measurements and calculations, chemical reactions, titration, molecular models, and spectrophotometry.

CHM 222 Organic Chemistry I (3-4) 5 Hours

This course introduces students to theoretical concepts and experimental techniques related to the chemistry of carbon compounds. Topics will include nomenclature, acid-base systems, alkanes, alkenes, alkynes, alkyl halides, alcohols, ethers, stereochemistry, and major substitution, addition, and elimination reaction mechanisms. The laboratory experiments will include basic techniques of separation and purification of organic compounds and synthesis of compounds using reactions presented in the lectures. This course is the first of a two-semester sequence and is intended for chemistry majors and students seeking careers in pre-professional medical-related fields.

Prerequisite: CHM 123 (C or better)

Course fee

IAI: CHM 913

Course Information and Descriptions

CHM 223 Organic Chemistry II (3-4) 5 Hours

This course presents the fundamental principles of organic chemistry with an emphasis on the syntheses, reactions, mechanisms, structures and identification of organic compounds. Topics include nomenclature, instrumental analyses, aromatic compounds, carboxylic acids and their derivatives, aldehydes, ketones, condensation reactions, amines, and an introduction to biochemical molecules. Laboratory includes preparation and separation of organic compounds, analyses of properties and identification of organic compounds. This course is the second semester of a two semester organic chemistry sequence (CHM 222 followed by CHM 223) and is intended for chemistry majors and students seeking careers in other sciences and pre-professional medical-related fields.

Prerequisite: CHM 222 (C or better)

Course fee

IAI: CHM 914

Chinese (CHI)

Communication Arts, Humanities and
Fine Arts Division, Room B210, (847) 543-2040

CHI 121 Beginning Chinese I (4-0) 4 Hours

This course is the first semester of a one year introduction to Mandarin Chinese, the official standard language of Mainland China and Taiwan. Emphasis will be on developing basic listening, speaking, reading and writing skills within the context of the modern Chinese culture.

CHI 122 Beginning Chinese II (4-0) 4 Hours

This course is the second semester of a one year introduction to Mandarin Chinese, the official standard language of Mainland China and Taiwan. Listening, speaking, reading and writing skills will be further developed within the context of Chinese culture.

Prerequisite: CHI 121

CHI 221 Intermediate Chinese I (4-0) 4 Hours

This course is the first semester of one year of continuing study for beginning Chinese learners who have studied Book I and II, Elementary Chinese Reader, or have equivalent mastery of the Chinese language. Grammar and character writing review with continuation of development of listening, speaking, reading, and writing skills.

CHI 222 Intermediate Chinese II (4-0) 4 Hours

This course continues to expand the knowledge of Chinese grammar, with emphasis in verbal and written communication. Films, short videos, readings and materials from newspapers, magazines, and media are utilized so students explore the Chinese speaking world and cultures based on authentic materials.

Prerequisite: CHI 221

Fulfills the CLC I/M Education Requirement.

IAI: H1 900

Cisco Networking

Cisco Networking courses are listed under Computer Information Technology.

Civil and Environmental Technology (CIV)

Engineering, Math and Physical Sciences Division,
Room T302, (847) 543-2044

CIV 111 Basic Surveying (2-4) 4 Hours

This course introduces the principles, theory, and equipment of surveying for surveying technicians and surveying transfer students. The course includes development of survey field practices and related computations including steel tape corrections, traverse adjustment, horizontal curves, and area calculations, and introduction to GPS positioning.

Prerequisite: MTH 117 (MTH 118 recommended) OR MTH 123 (C or better) OR MTH 144 (C or better) OR 28 or higher on the math portion of the ACT OR consent of instructor

Course fee

Typically offered fall only

CIV 113 Construction Inspection and Safety (3-0) 3 Hours

This course introduces Civil Technology and Construction Management students to the principles of construction inspection and safety, including safety practices, Occupational, Safety, and Health Administration (OSHA) requirements, legal aspects, and applicable specifications, codes and standards. The duties of a project inspector, resident engineer, and building inspector (building official) are discussed.

Prerequisite: College Reading and Writing Readiness

Typically offered fall only

CIV 214 Civil Materials and Testing (2-2) 3 Hours

Investigation of properties and testing of materials used in civil and heavy construction with the major focus on concrete, fine-grained soil, and aggregates. Emphasis is on basic material properties and testing methodology, both lab and field.

Note: Completion of MTH 117 and CMT 113 is highly recommended.

Course fee

Typically offered spring only

CIV 215 Special Problems (2-3) 3 Hours

Problems of individual interest in civil technology. Advanced study in one or more technical areas such as highway design, pollution control, and surveying may be approved.

Note: Student must furnish basic required equipment.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Communication (CMM)

Communication Arts, Humanities and
Fine Arts Division, Room B210, (847) 543-2040

CMM 111 Communication Skills (3-0) 3 Hours

For students in career programs or individuals interested in improving communication skills. Acquaints students with a variety of interpersonal communication concepts and theories designed to improve communication competence. The focus is on interpersonal communication but intrapersonal communication is also addressed. Topics include the communication process and factors influencing it, cultural influences, verbal and non-verbal messages, relational maintenance, and productive conflict strategies.

CMM 121 Fundamentals of Speech (3-0) 3 Hours

For students interested in improving their oral communication competency. This course combines a theoretical basis with practical verbal and nonverbal skills to enhance public speaking effectiveness. Students learn how to develop, research, organize, adapt, deliver and critique messages.

Prerequisite: College Reading and Writing Readiness

IAI: C2 900

CMM 122 Business and Professional Speaking (3-0) 3 Hours

For students desiring additional and concentrated experience in public speaking. A workshop oriented course covering informative, demonstrative, persuasive and argumentative speaking. Basic goal is for student to think and speak comfortably and effectively before an audience.

Prerequisite: College Reading and Writing Readiness

CMM 123 Dynamics of Small Group Discussion (3-0) 3 Hours

The study of small groups with an emphasis on decision making and problem solving. A behavioral approach to group communication that includes leadership, interpersonal relationships, communication barriers, conflict resolution, etc. Although of general interest, course should be of special interest to students in business, teaching or psychology programs.

Prerequisite: College Reading and Writing Readiness

CMM 124 Oral Interpretation (3-0) 3 Hours

Understanding and appreciation of literature through performing it orally in class, both individually and in groups. For students who desire more familiarity with literature and/or students interested in developing their speaking voice.

Prerequisite: College Reading and Writing Readiness

IAI: TA 916

CMM 125 Communication and Gender (3-0) 3 Hours

This course explores how gender influences the communications process. Components of male and female, male and male, female and female, interactions and how each affects our ability to communicate across and within the sexes are reviewed. Major theories of gender communication, and practical approaches to communicating more effectively with persons from the other and same genders will also be examined.

Prerequisite: College Reading and Writing Readiness

CMM 127 Intercultural Communication (3-0) 3 Hours

This course will examine the complex relationships between communication and culture by using social, psychological, interpretive and critical perspectives. Additionally, this course will allow one to consider the role that communication has in creating, maintaining, or challenging cultural assumptions, norms, rules and power structures and will also encourage one to consider the importance of social, historical, and cultural contexts in intercultural interactions. Students of CMM127 will explore how diverse underlying cultural orientations and patterns influence communication within and between cultures and will learn to evaluate their own and other's communicative behaviors from a culturally sensitive perspective. Throughout the semester, students will build communication skills with a particular emphasis on bridging cultural barriers through in class and out of class activities. Theoretical and practical aspects of intercultural communication will be addressed with a focus on building culturally competent communication skills.

Prerequisite: College Reading and Writing Readiness

Fulfills the CLC I/M Education Requirement.

CMM 128 Interviewing Practices (3-0) 3 Hours

Techniques and skills to improve fluency, accuracy, and persuasiveness in one-to-one communication. Covers all types of interviewing and process of dyadic communication.

Prerequisite: College Reading and Writing Readiness

CMM 129 Argumentation and Debate (3-0) 3 Hours

This course provides an overview of the theory and practice of argumentation and debate including burdens of proof, stock issues, evidence, reasoning, and debate strategies and procedures. Students participate in debates on fact, value, and policy issues.

Prerequisite: College Reading and Writing Readiness

CMM 221 Applied Forensics (Variable) 1-3 Hours

This course provides practical experience in the preparation of public speeches, oral interpretation programs, group performances, and preparation of speaking situations for public presentations in forensic/speech competition. The student may take the course up to three times but for a maximum of three credit hours.

May be taken four times, but any topic only once

CMM 299 Special Topics in Communication (Variable) 1-3 Hours

This course addresses the in-depth study of special topics in communication that do not have specific courses in the catalog. Course content will vary depending on the topic being studied. Topics may include campaign or presidential rhetoric, nonverbal communication, listening, or health, family or religious communication. This course is repeatable up to three times, any topic only once, for a maximum of 6 hours toward degree completion.

May be taken three times, but any topic only once

Course Information and Descriptions

Computer Aided Design (CAD)

Engineering, Math and Physical Sciences Division,
Room T302, (847) 543-2044

CAD 110 CAD/CAM Concepts (2-2) 3 Hours

This course will introduce the student to how computers are used in Computer Aided Design. The course will cover basic functions of Windows operating system, as well as computer hardware and software and how the operating system relates to the use of both. Extensive use of the internet will be used to download software and information. CAD software will be introduced including AutoCAD (for 2D drawings), Inventor (for 3D mechanical parts), and Revit (for 3D architectural models).

Prerequisite: College Reading and Writing Readiness or consent of instructor

Course fee

CAD 111 CAD Drafting Application I (3-2) 4 Hours

This course is designed to introduce the student to the tools and techniques of the CAD-drafting profession. CAD-drafting skills are learned through intensive classroom practice using AutoCAD Computer Aided Design Software and through discussions and demonstrations using professionally prepared materials. Topics include geometric constructions, sketching, threads and fasteners, scales, multiviews, dimensioning and tolerancing, sectional views, auxiliary views, and pictorial views.

Course fee

Typically offered summer only

CAD 117 Introduction to AutoCAD (2-2) 3 Hours

The course is designed to introduce students to the use of AutoCAD for computer-aided design and drafting. 2D drawing, modifying and dimensioning is emphasized.

Note: Completion of CAD 110 is recommended.

Course fee

CAD 170 Introduction to SolidWorks (2-2) 3 Hours

(Formerly CAD 173) This course is designed as an introduction to the SolidWorks Computer Aided Design software. Topics will include part creation, use of features, assembly modeling, and drawing creation.

Note: Completion of CAD 117 or a strong working knowledge of another CAD software is recommended prior to taking this course.

Course fee

CAD 171 Introduction to Inventor (2-2) 3 Hours

The course is designed as an introduction to the Inventor Computer Aided Design software. Topics will include part creation, use of features, assembly modeling and drawing management.

Note: Completion of CAD 117 or a strong working knowledge of another CAD software is recommended prior to taking this course.

Course fee

CAD 176 Introduction to Creo (2-2) 3 Hours

This course is designed as an introduction to the Creo Computer Aided Design software. Topics will range from 3-dimensional solid modeling to detail drawing creation and assembly. *Note:* Completion of CAD 117, equivalent industrial experience, or strong working knowledge of another CAD software is recommended prior to taking this course

Course fee

CAD 177 Civil Drafting (2-2) 3 Hours

This course will introduce students to software used in the preparation of civil and surveying drawings. Software studied includes AutoCAD and advanced applications such as Land Development Desktop and Civil 3D.

Prerequisites: CAD 117 or EGR 121 or ARC 121 or consent of instructor

Course fee

Typically offered spring only

CAD 178 Introduction to Revit (2-2) 3 Hours

(Formerly CAD 214) This course is designed as an introduction to the Revit Computer Aided Design software. Topics will include building 3D architectural project models with walls, window, doors, floors, roofs, stairs; creating schedules; adding views and annotation to the sheets to create construction documents. *Note:* Completion of ARC 121 or equivalent industrial experience recommended.

Course fee

CAD 179 Introduction to Autodesk 3ds Max (2-2) 3 Hours

Animation and rendering of 3 dimensional objects for architects, graphic illustrators and product designers. Software emphasized is Autodesk 3ds Max.

Course fee

CAD 211 Mechanical Detailing with GD&T (2-2) 3 Hours

This course will help students interested in CAD to advance their knowledge and skills of mechanical drafting operations utilizing an industrial CAD system. Emphasis is on the principles and applications of geometric dimensioning and tolerancing techniques, using the ASME 14.5-2009 Standard.

Prerequisite: CAD 170 (previously CAD 173) or CAD 171 or CAD 176

Course fee

Typically offered spring only

CAD 217 AutoCAD II (2-2) 3 Hours

Discussion and lab work are presented dealing with advanced drawing and dimensioning techniques, attributes, and individualized customization of AutoCAD menus and files.

Prerequisite: CAD 117 or EGR 121 or ARC 121

Course fee

Typically offered spring only

CAD 270 SolidWorks II (2-2) 3 Hours

(Formerly CAD 174) This course is designed as a continuation of CAD 170 Introduction to SolidWorks. It expands the topics started in CAD 170. It also covers sheet metal part creation, basic mold design, and importing files from other CAD programs.

Prerequisite: CAD 170 (previously CAD 173)

Course fee

Typically offered fall only

CAD 271 Inventor II (2-2) 3 Hours

This course is a continuation of CAD 171. It further explores the Inventor Computer Aided Design software. Topics include but are not limited to advanced part modeling, sheet metal parts, iParts, advanced assemblies, "Design Center", border and titleblock creation, toolbar and command customization.

Prerequisite: CAD 171 (C or better)

Course fee

Typically offered fall only

CAD 273 Advanced CAD Specialization (Variable) 1-3 Hours

The course is of a project nature where the student will select and complete one or more projects throughout the semester. There will be periodic reports to the instructor in the form of a formal written progress report. Specific prerequisite will be determined by the instructor.

Course fee

CAD 276 Creo II (2-2) 3 Hours

This course builds upon CAD176 and further explores the Creo Computer Aided Design software. Topics include but are not limited to advanced part modeling, advanced assemblies, and an introduction to Creo Simulate (formerly Mechanica) as a design tool.

Prerequisite: CAD 176

Course fee

Typically offered spring only

CAD 278 Revit II (2-2) 3 Hours

This course is designed as a continuation of CAD178, Introduction to Revit. It expands the topics started in CAD178. It also covers more advanced concepts such as Conceptual Massing, Family Creation, Site and Structural Tools, Design Options, Phasing and Rendering.

Prerequisite: CAD 178 (previously CAD 214) with a grade of C or better

Typically offered fall only

CAD 279 Design Visualization Using 3ds Max Design (2-2) 3 Hours

This course is designed for students who are interested in using Autodesk 3ds Max Design software to enhance their 3D designs. Students will use the software to create 3D illustrations and rendering of products, interiors/exterior of buildings to produce professional presentation quality drawings. The topics include advanced modeling and modifiers, advanced materials, animation, and the use of mental ray rendering software. *Note:* Completion of CAD179, or familiarity with Autodesk 3ds Max Design, is recommended prior to taking this course. *Note:* This course is cross listed with ARC 216.

Course fee

Typically offered spring only

Computer Information Technology (CIT)

Business and Social Sciences Division,
Room T302, (847) 543-2047

CIT 111 Comprehensive Spreadsheets (3-0) 3 Hours

Covers the advanced features of spreadsheet use and design. File building techniques, the creation of high-quality graphics, database features including query and table handling are also covered. Use of financial, date, and time functions will be included. Use of macros will cover automating operations, building and customizing spreadsheets with interactive macros, and improving macro performance including Visual Basic macros.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Course fee

CIT 112 Comprehensive Database (3-0) 3 Hours

This course introduces the concepts and features of a PC-based relational database using Microsoft™ Access. Students will learn to create and modify tables, customized queries, forms and reports. Other topics include: embedding objects, creating macros, using Visual Basic for Applications (VBA), and database administrative tasks. Students will need to have basic knowledge of Windows and familiarity of basic application software functions to be successful in this course.

Prerequisite: College Reading and Writing Readiness

Course fee

CIT 113 Introduction to SQL (3-0) 3 Hours

This course will cover the essential concepts of relational databases using SQL (Structured Query Language). Students will develop skills necessary to effectively interact with an SQL database. Emphasis is on the SQL commands required for designing, accessing and manipulating databases. Students will gain practical hands-on experience using lab exercises and lab experiences.

Prerequisite: CIT 112 (Previously CIS 230) - AND - a CIT programming course or a passing score on the Programming Placement Test

Course fee

Typically offered fall and spring only

CIT 114 Introduction to Networking for Programmers (3-0) 3 Hours

This course introduces students to the fundamentals of networking and the Internet, and how they apply to application development. Students will learn about networking hardware and software, especially the standard protocols used to communicate data over a network. Students will also learn about the services available on the Internet and how they can be used in application development. Students will examine how to build secure applications and protect data in a network environment.

Prerequisite: CIT 120 (Previously CIS 120) or passing score on the Introduction to Computers Placement Test

Course fee

Typically not offered every term

CIT 119 Introduction to Office Software (2-2) 3 Hours

This course is a hands-on course for students wanting to learn the basics of productivity software including: word processing, spreadsheets, databases, and presentation software. Basic operating system tasks will also be presented. Software used for this class includes a current version of Windows, Word, Excel, Access, and PowerPoint.

Note: This course is not intended for CIT majors and does not apply towards any CIT degree or certificate.

Prerequisite: College Reading and Writing Readiness or concurrent enrollment in ENG 109 or ELI 109 AND Basic Algebra Readiness or concurrent enrollment in MTH 114

Course fee

Course Information and Descriptions

CIT 120 Introduction to Computers (3-0) 3 Hours

In this course students will learn about the significant role of computers in business and society. Students will be introduced to concepts addressing computer hardware and software, networking, multimedia, telecommunications, careers in the Information Technology field, and current computer-related issues. This course has a computer lab component where students get hands-on experience using a current integrated software package (Microsoft™ Office®) to better understand how computers are used in a business environment.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Course fee

IAI: BUS 902

CIT 130 Operating Systems for A+ Certificate (3-0) 3 Hours

This course covers the essential elements of Operating Systems. Specific features along with general concepts of the selected operating system will be addressed. System optimization, memory management, identity management, installation, and software/hardware management will be an integral part of this course. This course covers the objectives for the latest A+ Operating System technologies test.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Course fee

Typically offered fall and spring only

CIT 131 Windows Operating System (3-0) 3 Hours

This course covers the essential elements of the latest Client Windows Operating System. Specific features along with general concepts of the Windows operating system will be addressed. System optimization, memory management, installation, and software/hardware management will be an integral part of this course. The course prepares a student for Microsoft Certified Professional (MCP) test.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Course fee

CIT 132 Linux Operating System (3-0) 3 Hours

This course introduces students to the Linux operating system and the skills they need to effectively use and administer the Linux operating system. The course includes Linux installation and configuration, shell commands and scripts, Linux file system and processes management, and basic system administration tasks. By the end of the course, students will be familiar with the Linux command-line environment, utilities, applications, as well as the graphical X Window environment.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Course fee

CIT 133 Network Automation (3-0) 3 Hours

This course introduces students to basic shell scripting concepts used in automating administrative tasks in the Windows and Linux operating systems. Students will learn how to run commands in the command-line interface, write and debug scripts, handle errors, employ script parameters, and establish script security.

Prerequisite: CIT 130 or CIT 131

Corequisite: CIT 132

Course fee

CIT 134 Introduction to Programming Concepts (3-0) 3 Hours

This course introduces students to programming logic constructs used in structured programming. Problem solving and structure types (sequence, decision, and repetition) will be presented. Other programming concepts presented in this course include: numeric and string variables, data input and output techniques, functions and procedures, arrays, and processing sequential files.

Note: This course is a CIT core prerequisite and is required before taking a second level programming course.

Corequisite: CIT 120 or passing score on the Introduction to Computers Placement Test

Course fee

CIT 137 Object Oriented Programming using Java (3-0) 3 Hours

Encapsulation, inheritance and polymorphism, as implemented in the unique Java way, will be an important basis for study. Students will write Java programs for business applications and applets for the Internet. There will be special emphasis on C and C++ differences such as multithreading, graphics, multimedia, Java classes, and the larger Java environment. Basic GUI components from the Abstract Windowing Toolkit (AWT) and Java Foundation classes (Swing) will be covered.

Prerequisite: CIT 134 or equivalent or a passing score on the Programming Placement Test

Course fee

Typically offered spring only

CIT 138 Introduction to C# Programming (3-0) 3 Hours

This course introduces students to the C# programming language. Students will create console-based and Graphical User Interfaces (GUI) applications. For the GUI applications, the student will build window-based and web-based forms, adding controls and setting properties for these controls. Design ideas for menus and the use of graphics, color, and layout will be explored. Classes and objects are introduced along with encapsulation, implementation and interface inheritance, and polymorphism as implemented in C#. The classes and objects of the .NET framework will be integrated into the building of the students' C# applications. A number of simple application examples will be used to gain debugging experience in addition to developing original applications.

Prerequisite: CIT 134 or equivalent or a passing score on the Programming Placement Test

Course fee

Typically offered fall and spring only

CIT 139 Cisco: Introduction to Networks (2-2) 3 Hours

(Formerly CNA 111) This course covers the architecture, structure, functions, components, and models of the Internet and other computer networks. The principles and structure of Internet Protocol (IP) addressing and the fundamentals of Ethernet concepts, media, and basic network operations are introduced. Students will build simple local area networks, perform basic configurations for routers and switches, and implement IP addressing schemes.

Recommended: CIT 120

Course fee

CIT 141 Programming in C++ (4-0) 4 Hours

Extends the knowledge of programming by demonstrating how C++ implements the basic constructs of Object Oriented Programming (OOP). Encapsulation, inheritance and polymorphism, the three fundamental criteria for OOP, will be examined closely. Students will implement C++ programs organized as a cooperative collection of objects, each of which represents an instance of some class, and whose classes are all members of a hierarchy of classes united via different kinds of class relationships. In addition, exception handling and object persistence will be deployed in these classes.

Prerequisite: CIT 134 or equivalent or a passing score on the Programming Placement Test

Course fee

IAI: CS 911

CIT 151 Windows Server Administration (2-2) 3 Hours

This course covers the implementation, management, maintenance, and provisioning services essential to the administration of Windows Server across multiple network infrastructure platforms. Major topics include installing and configuring servers, configuring server roles and features, administering print, storage and network services, configuring and managing server and group policies, implementing business continuity and disaster recovery, including managing high availability server configurations. Students will develop skills to qualify for a position as a network systems administrator or a computer support specialist.

Prerequisite: CIT 131 AND CIT 139 or CIT 150 (all C or better)

Corequisite: CIT 133

Course fee

Typically offered spring only

CIT 152 Network Security Fundamentals (3-0) 3 Hours

This course is designed for administrators who are responsible for the day-to-day administration and security of Microsoft Windows. Students should have general knowledge of networking concepts and Windows OS to be successful in this course. This course will prepare the student for Security+ certification.

Prerequisite: CIT 130 or CIT 131 AND CIT 139 or CIT 150 (all C or better)

Course fee

Typically offered fall and spring only

CIT 155 Introduction to Computer Forensics (3-0) 3 Hours

This course is designed to introduce students to crime scene investigation and processing, forensic science and computer forensics topics. Areas addressed in this course include: crime scene procedures and documentation, collecting and preserving evidence, computer forensic science, locating digital evidence, and basic legal principles related to computer forensics. Emphasis will be placed on the role of computer forensics with the other forensic sciences.

Prerequisite: College Reading and Writing Readiness

Typically offered fall and spring only

CIT 156 Digital Evidence Recovery (2-2) 3 Hours

This course is designed to provide students with the knowledge and skills to master first-level Computer Forensics topics. Areas addressed in this course include hardware, software, ethics, examination standards, preparing and verifying forensically sterile examination media, note taking, and report writing. Special emphasis will be given to the Windows and Linux operating systems as they pertain to Computer Forensics investigations. Practical exercises on preparing and verifying forensically sterile examination media will be included as part of the class curriculum.

Prerequisites: CIT 130 or CIT 131 (both C or better)

Course fee

Typically not offered every term

CIT 157 Enterprise Desktop Support (2-2) 3 Hours

This course concentrates on help desk issues for the current Windows operating system desktop and examines installation, configuration, networking, wireless, and security problems and their resolution. The course also addresses performance issues for both software and hardware, details how to improve the overall system's performance, covers communication, teamwork, and listening abilities, and prepares students for both the Microsoft Certified IT Professional Enterprise Desktop Support Technician and Enterprise Desktop Administrator certification tests.

Corequisite: CIT 130

Course fee

Typically offered fall and spring only

CIT 159 Cisco: Routing and Switching (2-2) 3 Hours

(Formerly CNA 112) This course describes the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with Routing Information Protocol (RIPv1), RIPv2, single-area and multi-area Open Shortest Path First (OSPF) protocol, Virtual Local Area Networks (VLANs), and Inter-VLAN routing in both IPv4 and IPv6 networks.

Prerequisite: CIT 139

Recommended: CIT 131

Course fee

CIT 170 Creating Web Pages (3-0) 3 Hours

In this course students are introduced to technical aspects of Web page creation. Topics presented in this course include: beginning through advanced concepts of programming in Web markup languages HTML and XHTML; formatting Web pages using Cascading Style Sheets (CSS); Web page interactivity using the Web browser scripting language JavaScript; adding graphics, sound, video, and Java applets into Web pages; and how data is exchanged on the Web using XML. Students will also gain the skills required to publish and maintain Web sites.

Prerequisite: College Reading and Writing Readiness

Course fee

CIT 171 Web Page Scripting (3-0) 3 Hours

This course is designed as an introduction to creating dynamic interactive Web pages and sites using client-side scripting, code embedded directly into a Web page. Topics presented in this course include: beginning through advanced concepts of Web page client-side scripting, browser object model (BOM), validating and submitting user input, passing user input data between Web pages during navigation, cookies, security issues, animation, document object model (DOM), dynamic HTML (DHTML), and updating Web pages with AJAX. Debugging techniques will be covered extensively. Students will also gain the skills required to publish and maintain Web sites.

Prerequisite: CIT 170 or DMD 116

Course fee

Typically offered fall only

Course Information and Descriptions

CIT 173 PHP Programming (3-0) 3 Hours

This course is designed as an introduction to PHP, an open source, interpretive, cross-platform, HTML embedded server-side scripting language used to create dynamic Web sites. The main objective of this course is to provide students with the knowledge and skills necessary to design and develop dynamic database-driven Web pages using PHP.

Prerequisite: CIT 170 or DMD 116

Course fee

Typically offered spring only

CIT 174 Adobe Dreamweaver (3-0) 3 Hours

This course introduces students to the fundamentals of Adobe Dreamweaver, the industry's leading application for developing websites. Students will gain the knowledge and hands-on skills they need to plan, build, and manage commercial websites using Dreamweaver's intuitive visual interface. Topics covered in this course include Cascading Style Sheets (CSS) templates, images, links, tables, forms, frameworks, media objects, publishing, mobile websites, and accessibility. Best practices and current web standards are emphasized throughout the course.

Prerequisite: College Reading and Writing Readiness

Typically offered spring only

CIT 175 Game Development & Design Strategies (3-0) 3 Hours

This course will examine the cultural and social aspects of games from early man to current computer games, and study games from the perspective of the narrative, mathematical, statistical and developmental points of view. Students will examine the key principles of the game creation process and apply them to the creation of an original game design document.

In this course, students will design key components for an original game including character designs, back story, obstacles, strategies, rules, scoring systems, and level designs. In class reviews, discussions, and demonstrations will assist in refining and focusing the game design document. A finalized game design document will be compiled from the various weekly written assignments. Students will present the design in a pitch style setting and defend their design choices.

Prerequisite: College Reading and Writing Readiness

Typically not offered every term

CIT 176 2D Game Development (3-0) 3 Hours

This course provides students with skills to create their own computer games utilizing game development tools. Through hands-on work students learn how to use a typical game engine and its scripts to design, implement, and test interactive computer games. This course does not require prior computer programming skills.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Course fee

Typically not offered every term

CIT 177 3D Game Development (3-0) 3 Hours

This course provides students with skills to develop computer games utilizing 3D game development tools. Through hands-on work students apply 3D game design concepts and principles to complete deliverables for a 3D game conversion. Students will also learn and practice the process of game development while working on their projects. This course does not require prior computer programming skills.

Prerequisite: CIT 176

Course fee

Typically not offered every term

CIT 210 Programming for Office Applications (3-0) 3 Hours

This course is designed to provide students with the skills to automate and extend Office applications by learning macros, Visual Basic for Applications (VBA) programming, and XML data interfacing. This course will cover manipulating the underlying objects of the different office applications. It will explain how event handling within VBA can be used to automate the handling of office documents. It will show how to use XML to transfer information between applications on both the local and remote computers flexibly.

Note: Familiarity with MS Word and MS Access is recommended.

Prerequisite: CIT 111

Course fee

Typically not offered every term

CIT 215 Microsoft .NET Web Programming (4-0) 4 Hours

This course provides students with experience in creating, configuring, and deploying web applications using Visual Basic or Visual C# and the Microsoft .NET Framework. The course includes building web applications and web services employing custom controls, authentication, authorization, and personalization services. This course provides the student experience with integrating data with web applications by using several different database management systems such as SQL Server, Oracle, and Access.

Prerequisite: CIT 138 (C or better)

Course fee

Typically offered fall only

CIT 216 Microsoft .NET Framework Programming (4-0) 4 Hours

This course provides students with in-depth coverage of the Microsoft .NET Framework components using Visual C#. Topics include system types and collections, services, threading, application configuration, input/output, security, interoperability, globalization, drawing and text manipulation. This course also covers Microsoft .NET Presentation Foundation, Windows Communication Foundation, and Windows Workflow Foundation application development.

Prerequisite: CIT 138

Course fee

Typically offered spring only

CIT 218 Cisco: Scaling Networks (2-2) 3 Hours

(Formerly CNA 113) This course describes the architecture, components, and operations of routers and switches in a larger and more complex network. Students learn how to configure routers and switches for advanced functionality and resolve common issues with Open Shortest Path First (OSPF) protocol, Enhanced Interior Gateway Routing Protocol (EIGRP), Spanning-Tree Protocol (STP), and VLAN Trunking Protocol (VTP) in both IPv4 and IPv6 networks. In addition, students develop the knowledge and skills needed to implement Dynamic Host Configuration Protocol (DHCP) and Domain Name System (DNS) operations in a network.

Prerequisite: CIT 159 or Department Consent

Course fee

Typically not offered every term

CIT 219 Cisco: Connecting WAN Networks (2-2) 3 Hours
 (Formerly CNA 114) This course discusses the wide area networks (WAN) technologies and network services required by converged applications in a complex network. The course enables students to understand the selection criteria of network devices and WAN technologies to meet network requirements. Students learn how to configure and troubleshoot network devices and resolve common issues with data link protocols. In addition, students develop the knowledge and skills needed to implement Internet Protocol Security (IPSec) and Virtual Private Network (VPN) operations in a complex network.

Prerequisite: CIT 218

Course fee

Typically not offered every term

CIT 230 Linux System Administration (3-0) 3 Hours
 This course introduces students to the Linux administration, networking, and security. The course covers administration techniques, networking and network service configurations, and security measures on the user, file, and network. By the end of the course, students will be able to perform common administration tasks, configure and maintain secure networking and common network services.

Prerequisites: CIT 132

Corequisite: CIT 133

Course fee

Typically not offered every term

CIT 239 Systems Analysis (3-0) 3 Hours
 This course will examine different software development methodologies for developing and implementing information systems. It discusses the use of Computer Aided Software Engineering (CASE) tools used to increase developers' productivity. The student will capture the requirements, analyze the needs of these requirements and design a solution for satisfying the requirements for a project of their choice. The system concentrates on object-oriented techniques for representing the solution and uses the Unified Modeling Language (UML) to describe the requirements, analysis and design models for the student's project. The design phase will examine the impact of user interfaces, database designs, and program and transaction control. Concepts of the systems development life cycle are presented along with support activities such as project management, configuration management and risk management, conversion and final evaluation. Business needs and the human aspects of EDP are stressed.

Prerequisite: CIT 135 or CIT 137 or CIT 138 or CIT 141 or higher level object oriented programming language

Course fee

Typically offered fall only

CIT 241 Advanced C++ (3-0) 3 Hours
 Extends the students' knowledge of C++ through the study of the application of data structures and an introduction to frameworks. The student will learn the basic concepts and the application of the normal data structures of vectors, linked lists, stacks, queues, and trees. These concepts will be examined through discussion on the implementation of these data structures in The Standard Template Library components. These studies will be based on C++ templates and C++ exception handling. The course will examine searching and sorting algorithms especially in relation to the data structures studied above. The course will also study the concepts and use of frameworks emphasizing the C++ Stream I/O classes and their

relationships. With this knowledge, students will be able to apply appropriate data structures to solve programming problems. The student will understand the use of frameworks as a basis to solving a class of problems. **SOFTWARE:** MS-Windows and a recent C++ compiler with a supporting STL.

Prerequisite: CIT 141

Course fee

Typically offered fall only

IAI: CS 912

CIT 252 Hardening the Infrastructure (3-0) 3 Hours
 This course provides students with hands-on experience in hardening a variety of networking systems. Topics include Linux and Windows operating systems, routers, wireless networks, auditing and contingency planning. This is one of the courses in a two-course series to prepare students for the industry-recognized Security Certified Network Professional Certification (SCNP).

Prerequisites: CIT 151 or CIT 230 (C or better), and CIT 152 (C or better) or instructor consent.

Course fee

Typically offered fall only

CIT 253 Network Defense and Countermeasures (3-0) 3 Hours

In this capstone course students will use knowledge from previous courses to design a secure network infrastructure as a member of a project team. Topics introduced in this course will include managing and installing firewalls, implementing IPSec and VPNs, designing intrusion detection systems, routing fundamentals including the use of ACL's, and the fundamentals of wireless network infrastructures. This capstone course provides students with the practical skills necessary to enhance their network security background and prepare for Professional Security Certifications.

Prerequisite: CIT 252 (C or better) or Consent of Instructor

Course fee

Typically offered spring only

CIT 254 Windows Directory Services (3-0) 3 Hours

This course covers the essential elements in implementing and administering Windows Active Directory security in medium to very large computing environments. This course uses the current Windows Server product and students learn how to deploy, upgrade, configure, and maintain Active Directory services. This course prepares the student for one of the exams that leads to Server Administration Certification.

Prerequisite: CIT 151 (C or better) or Consent of Instructor

Course fee

Typically offered spring only

CIT 255 Server Virtualization Technologies (3-0) 3 Hours

This course covers the fundamentals of enterprise class server virtualization, which forms the basis for private and public cloud technologies, as well as drastically reduces the data center footprint. Students will learn to install, configure and maintain a virtualization environment, including both server virtualization (ESX / Hyper-V) and virtual desktop infrastructure (VDI). Best practices will be covered for the leading virtualization vendors.

Prerequisite: CIT 151 or CIT 230 (either C or better) or Consent of Instructor

Course fee

Typically offered fall only

Course Information and Descriptions

CIT 256 Windows Forensic Analysis (2-2) 3 Hours

This course provides students with the knowledge and skills needed to master Windows forensic analysis topics using industry standard forensic tools. Areas addressed in this course include the New Technology File System (NTFS), steganography, case management, data acquisition and verification, bookmarking, search methodologies, signature and hash analysis, recovering data in unallocated space, examining Windows artifacts, parsing compound files, decoding encrypted data, and case reporting.

Prerequisite: CIT 130 or CIT 131 (either C or better)

Course fee

Typically offered fall only

CIT 258 Network Forensics (3-2) 4 Hours

This course expands the Computer Forensics curriculum by presenting the science of forensic analysis of data commonly transmitted via modern computer networks. It extends the forensic topics presented in the computer evidence recovery courses (CIT156 and CIT256) by introducing and detailing the impact of modern networking to computer investigations. In addition to re-enforcing the knowledge of "passive" evidence collection as taught in the course's prerequisites, the course aims to introduce forensic topics related to "active" evidence collection techniques including network data tapping and safely examining malicious software. The student who satisfactorily completes this course will be ready to participate in formal evidence collection and analysis for a non-law enforcement organization. Further studies in law enforcement may be required for the student to leverage these skills as part of a criminal investigation.

Prerequisite: CIT 150 or CIT 139 AND CIT 256

Course fee

Typically offered spring only

CIT 259 Topics in Computer Forensics (Variable) 1-3 Hours

This course is designed to meet the needs of students for specialized instruction in current Computer Forensics topics. Topics and course credit hours will be identified by individual section. This course is repeatable up to three times, any topic only once, for a maximum of 6 hours towards degree completion.

Prerequisite: To be determined relative to topic

Course fee

May be taken four times for credit toward degree

Typically not offered every term

CIT 270 Server-Side Programming (3-0) 3 Hours

This course is designed to emphasize server-side programming for the Internet. Topics include the fundamentals of server-side programming using server-side objects to create dynamic web pages and build an e-commerce site with shopping cart and server-side database connections. Students will gain an overall understanding of building a dynamic business based website for today's corporations and small businesses. A major project will be required for students to program their own dynamic website including a fully functional shopping cart.

Prerequisites: CIT 171 and CIT 113

Course fee

Typically offered spring only

CIT 271 Markup Language Programming (3-0) 3 Hours

This course is designed to present the fundamentals of Extended Markup Language (XML). The key capabilities, limitations, and differences between SGML, HTML, XHTML, and XML will be covered. Incorporation of XML technologies and how to use them for data exchange applications on the web, e-commerce, and non-web applications will be emphasized

Prerequisites: CIT 170 and CIT 112

Course fee

Typically offered fall only

CIT 272 Enterprise Messaging Administration (3-0) 3 Hours

This course provides students with the knowledge and skills needed to configure and manage an enterprise messaging environment. It also provides guidelines, best practices, and considerations for optimizing mail server deployment. Major topics include managing users, mailboxes, servers, and security as well as monitoring and troubleshooting the mail server.

Prerequisite: CIT 151 (C or better) or Consent of Instructor

Course fee

Typically offered spring only

CIT 275 Mathematics for Game Development (3-0) 3 Hours

This course provides students with fundamental math and physics concepts, principles, and formulas that are crucial to developing successful games. Topics such as trigonometry snippets, vector and matrix operations, transformations, momentum and collision, and 1D/2D/3D motion show students step by step how to use math and physics to improve their levels of game development.

Prerequisite: CIT 177 and MTH 122

Recommended: CIT 141 or other programming class

Course fee

Typically not offered every term

CIT 276 Game Development Projects (3-0) 3 Hours

This course provides students with special programming skills on a major 3D game engine. Students build their profiles in this game development capstone course with major projects utilizing not only game engine functionalities but also associated engine scripts and coding. The primary outcome of this capstone course is for the student to create a video game demo to show potential employers.

Prerequisite: CIT 177 and CIT 241

Course fee

Typically not offered every term

CIT 277 MS .NET Software Development Capstone (3-0) 3 Hours

This course provides hands-on experience analyzing, designing, developing, and implementing a .NET software project which will include both window-based and web-based components spread across multiple nodes. The course projects will also cover quality assurance, project management basics, and documentation. The course uses case studies to demonstrate the various components of .NET Framework development. Students will carry a project through all phases from feasibility study to implementation.

Corequisite: CIT 216 and CIT 239

Course fee

Typically offered spring only

CIT 295 CIT Internship (1-10) 3 Hours

This internship course provides students an opportunity to apply skills gained from previously taken CIT and supporting courses in a real-time work environment. Students will obtain direct industry experience while exploring various aspects of employment within the field of professional computing and information technology. They will gain practical work experience under the supervision of an Information Technology professional in day-to-day, on-site technical work. Student must complete 150 hours of work at the internship site, as well as attend a one-hour/week internship seminar.

Prerequisite: Any 200 level CIT course (3 credit hours or more) with C or better and Consent of Instructor

Typically offered fall and spring only

CIT 299 Selected Topics in Computer Information Technology (Variable) 1-4 Hours

A course designed to meet the needs of students for specialized instruction in current computer information technology topics.

Note: Topics will be identified for each section of the course.

Course fee

May be taken four times, but any topic only once

Computerized Numerical Control (CNC)

Engineering, Math and Physical Sciences Division,
Room T302, (847) 543-2044

CNC 110 CNC Operations I (2-2) 3 Hours

Set-up and operation of CNC FANUC and HAAS controlled industrial vertical milling machines and turning centers.

Note: Machine shop experience or MTT 111 or MTT 112 is recommended.

Course fee

Typically offered fall and spring only

CNC 111 Geometric Dimensioning and Tolerancing (1-0) 1 Hour

This course will assist Machine Tool students to advance their knowledge and skills on the principles and applications of Geometric Dimensioning and Tolerancing techniques using the ASME Y14.5-2009 standard.

Prerequisite: Basic Algebra Readiness

Typically offered summer only

CNC 115 CNC Programming I (2-2) 3 Hours

Provides students with the basic principles and practices of numerical control machining. Manual parts programming will be performed for CNC lathes and milling machines.

Note: It is recommended that either CNC 110, MTT 112 or machine tool industrial experience should precede this course. Shop math skills or MTH 115 are also recommended.

Course fee

Typically offered fall and spring only

CNC 210 CNC Operations II (2-2) 3 Hours

Advanced set-ups, operations, and features of FANUC controlled CNC machine tools are covered including the use of a vertical machining center, and turning center and Wire EDM.

Prerequisite: CNC 110

Course fee

Typically offered summer only

CNC 215 Advanced Mill Programming (2-2) 3 Hours

A continuation of CNC 115 including advanced manual part programming on a FANUC and HAAS controlled CNC mill and 4 weeks of CNC Wire EDM. Sub programs, macros, threadmilling rotation and other transformations are also included.

Note: Industrial shop math or MTH 115 is strongly recommended.

Prerequisite: CNC 115

Course fee

Typically offered spring only

CNC 216 Advanced Lathe Programming (2-2) 3 Hours

Designed as a continuation of Computerized Numerical Control Lathe manual programming. The nature of the material will range from lathe G&M codes to advanced level conversational programming, sub programs, macro and other advanced techniques.

Note: Industrial shop math or MTH 115 is strongly recommended.

Prerequisite: CNC 115

Course fee

Typically offered fall only

CNC 217 Introduction to Wire EDM Machining (2-2) 3 Hours

Designed as an introduction to the concepts of Operation and Programming of a FANUC CNC Wire Electrical Discharge Machine. The nature of the material will range from basic operation to G&M codes for programming.

Note: Students with Machine Shop or CNC Programming experience may contact the department chair if interested in alternative methods of meeting the prerequisite.

Prerequisites: CNC 110 and CNC 115

Course fee

Typically offered spring only

CNC 218 Introduction to Master CAM (2-2) 3 Hours

Computer Aided Design and Manufacturing processes are discussed and implemented utilizing Master Cam software. Parts will initially be drawn in the CAD environment. The NC instructions necessary to drive a CNC machine tool to manufacture these parts will then be generated in the CAM environment.

Prerequisites: CNC 115 or MTT 112 -AND - CAD 117

Course fee

Typically offered fall only

CNC 219 CNC Specialization (1-6) 4 Hours

An advanced CNC course in which the student chooses a topic of specialization. Topics may include areas such as programming 4 and 5 axis machines, NC tooling, conversational programming, robotics and CNC, digitizing, etc. Course work may be completed at an arranged industrial site.

Note: Manual Part Programming experience is strongly recommended.

Prerequisites: CNC 215 or CNC 216 and MTH 117

Course fee

Course Information and Descriptions

CNC 230 Master CAM II (2-3) 3 Hours

Computer Aided Design and manufacturing processes are discussed and implemented utilizing Master Cam 3D software for the Mill, Lathe and Wire EDM machines. Parts will initially be drawn or imported from a CAD environment. The NC instructions necessary to drive a CNC machine tool to manufacture these parts will then be generated in the CAM environment. This is not a course to be taken without previous Mastercam, CNC, and CAD experience.

Prerequisite: CNC 218 or Instructor Consent

Typically offered spring only

CNC 250 Advanced Manufacturing (2-2) 3 Hours

This capstone course will apply the knowledge and skills used in Computer Aided Design and manufacturing processes. The course will utilize Mastercam software, a CNC machining center and the student's choice in CAD software. Students will learn the knowledge and skills necessary to import files from a CAD environment into Mastercam to create tool paths and generate a "G" code program, download the program to the CNC machine tool and setup the CNC machine to manufacture the part.

Prerequisite: CNC 110 and CNC 218 (both with C or better); AND CAD 117 or CAD 170 (previously CAD 173) or CAD 171 or CAD 176 (C or better); OR Consent of Instructor

CNC 299 Special Topics: CNC Machining Technology (Variable) 1-4 Hours

This course provides students with additional information about specialized areas in CNC machining technology. Topics will be identified for each section of the course. This course is repeatable up to two times, any topic only once, for a maximum of 6 hours towards degree completion.

Prerequisite: To be determined relative to topic

May be taken twice for credit toward degree

Construction Management Technology (CMT)

Engineering, Math and Physical Sciences Division,
Room T302, (847) 543-2044

CMT 110 Introduction to the Built Environment (1-0) 1 Hour

This course provides an introduction to the fields of architecture, construction contracting, and civil technology, including surveying. Case studies and guest speakers are used to expose students to various professions and careers in the field. The course also provides students with resources for academic success.

CMT 111 Construction Layout (2-3) 3 Hours

Theory, principles and techniques of construction layout. Includes field procedures in fundamental surveying as well as site, foundation and frame layout.

Note: MTH 117 or equivalent is highly recommended.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Course fee

Typically offered summer only

CMT 112 Construction Blueprint Reading (3-0) 3 Hours

This course provides an overview of construction methods with an emphasis on the development of skills in reading, interpreting, and gathering information from residential and commercial working drawings.

Note: Students enrolled in the CMT program should take this course in their first semester of study.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Course fee

CMT 113 Construction Materials (3-0) 3 Hours

This course provides an overview and analysis of the properties, application, and testing methods of conventional construction materials. Emphasis is placed on the structural materials: wood, concrete, masonry and steel.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Course fee

Typically offered fall only

CMT 115 Carpentry I (2-2) 3 Hours

This course covers the essential details of frame dwelling construction, such as footings, girders, floor joists, floor openings, subflooring, balloon and platform types of framing, and rough framing of window and door openings are covered. The proper and safe usage of power and hand tools will also be covered.

Prerequisite: Basic Algebra Readiness

Course fee

CMT 116 Carpentry II (2-2) 3 Hours

This course covers roof framing and interior and exterior trim. Related work includes instruction in the building of cornices; applying exterior wall coverings; the construction of door and window frames; the application of baseboards, casings, and jambs; hanging and fitting doors; and the installation of hardware.

Prerequisite: CMT 115

Course fee

CMT 117 Construction Methods (3-0) 3 Hours

This course provides an overview and analysis of conventional construction methods with a focus on concrete, soils, steel, masonry, wood, and overall construction safety. The application of building materials in various construction systems is emphasized, including basic design of temporary structures such as formwork.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Course fee

Typically offered spring only

CMT 118 Mechanical and Electrical Equipment (3-0) 3 Hours

This course reviews the equipment and materials used in the electrical, mechanical, plumbing, and environmental systems of buildings. Students perform basic design calculations.

Prerequisite: College Reading and Writing Readiness and Basic Algebra Readiness

Recommended: MTH 117 (C or better)

Typically offered spring only

** New courses offered effective Fall 2016 (refer to addendum for details):*

CAP 111 Construction Apprenticeship Work Experience I

CAP 112 Construction Apprenticeship Work Experience II

CAP 113 Construction Apprenticeship Work Experience III

CAP 114 Construction Apprenticeship Work Experience IV

CMT 119 Specifications and Building Codes (3-0) 3 Hours

This course reviews construction specifications and how they relate to national, state, and local building codes. Topics related to job safety and Occupational, Safety, and Health Administration (OSHA) regulations will also be discussed.

Prerequisite: College Reading and Writing Readiness and Basic Algebra Readiness

Recommended: ENG 120 as a co-requisite; completion of CMT 112 or equivalent experience is highly recommended prior to taking this course.

Typically offered spring only

CMT 211 Job Scheduling and Control (3-0) 3 Hours

This course provides the student with fundamental knowledge and skill in job planning and scheduling. Students will be involved in all phases of planning and scheduling from the simple process of listing and sequencing to the development of the more complicated critical path network.

Prerequisite: College Reading and Writing Readiness and Basic Algebra Readiness

Recommended: At least 30 hours completed in CMT curriculum and completion of CMT 112 and 114 (both C or better) OR equivalent construction experience.

Course fee

Typically offered spring only

CMT 212 Principles of Heavy Construction (3-0) 3 Hours

Various principles and practices employed in heavy construction. Equipment and materials necessary for a particular construction technique are emphasized.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Typically offered fall only

CMT 213 Construction Law and Documents (3-0) 3 Hours

This course examines the legal aspects of construction law and contract documents. State and federal construction related documents are also discussed.

Prerequisite: College Reading and Writing Readiness and Basic Algebra Readiness

Recommended: CMT 112 or equivalent construction experience as well as completion of 30 hours or more in the CMT curriculum

Typically offered fall only

CMT 214 Construction Estimating (3-0) 3 Hours

This course examines the theory, principles and techniques of construction estimating, including take-offs. The analysis of labor, overhead and profit is also introduced.

Prerequisite: College Reading and Writing Readiness and Basic Algebra Readiness

Recommended: At least 30 hours completed in CMT curriculum and completion of CMT 114 C or better OR equivalent skills using MS Excel

Course fee

Typically offered fall only

CMT 215 Construction Management (3-0) 3 Hours

Students use basic construction management tools in a practical project management setting. The importance of positive relationships between office and field activities is stressed. Students execute a simulated project from start to finish. *Note:* Degree-seeking students should take this course at the end of their course of study.

Prerequisite: CMT 113, CMT 114, and CMT 117 (all C or better), College Reading and Writing Readiness and Basic Algebra Readiness

Recommended: At least 30 hours completed in CMT curriculum and CMT 211 (C or better) OR equivalent construction experience

Typically offered spring only

CMT 299 Special Topics in Construction Management Technology (Variable) 1-3 Hours

This course is expected to serve students in the CMT and CIV programs and members of the Lake County Construction community. The course is proposed to provide an opportunity to offer courses on special topics that are not part of the regular curriculum. These topics may be advanced topics that will not be repeated, or an offering made on a trial basis that may be added to the A.A.S. or certificate curriculum.

May be taken four times for credit toward degree

Criminal Justice (CRJ)

Business and Social Sciences Division,
Room T302, (847) 543-2047

CRJ 118 Evidence Technology (2-2) 3 Hours

This course is an introduction to the scientific methods involved in the recognition, collection, and preservation of physical evidence at crime scenes. The value of physical evidence will be demonstrated. Problems and procedures in handling evidence are examined. The use of scientific methods, techniques, and instrumentation will be explored.

Prerequisite: CRJ 219

CRJ 119 Principles of Direct Supervision (3-0) 3 Hours

This course is designed to provide the student with the knowledge and skills necessary for the supervision of inmates in the direct supervision environment. An emphasis will be placed on the evolution of direct supervision jails, as well as the management styles, interpersonal skills, policies and procedures, and day-to-day operations of direct supervision facilities.

Prerequisite: College Reading and Writing Readiness

CRJ 121 Introduction to Criminal Justice (3-0) 3 Hours

This course examines the legal process and the administration of justice in American society. Students will be exposed to the criminal process from the police function through adjudication, sentencing, and corrections, as well as the social, moral, and political issues involved in the administration of justice in a free society.

Prerequisite: College Reading and Writing Readiness

IAI: CRJ 901

Course Information and Descriptions

CRJ 122 Introduction to Policing (3-0) 3 Hours

This course examines the history, structure, and behavior of police in America. Students will be exposed to various topics, such as: the heritage of American policing; police systems including federal, state and local policing; the patrol function; police discretion; police-community relations; police accountability; and police and the Constitution.

Prerequisite: College Reading and Writing Readiness

Recommended: CRJ 121

CRJ 123 Introduction to Criminology (3-0) 3 Hours

This course is designed to familiarize the student with the social and legal aspects of crime in American society. An emphasis is placed on the definition of crime and deviance, the nature and extent of the crime problem, the history of criminology, criminological theory, violent crime, economic crime, public-order crime, and victimology.

Prerequisite: College Reading and Writing Readiness

IAI: CRJ 912

CRJ 124 Penology and Corrections (3-0) 3 Hours

**Course Modification effective Spring 2017. For details, refer to addendum.*

This course examines the history, philosophy, and administration of corrections in America. An emphasis will be placed on philosophies of punishment, sentencing strategies, the prison community, alternatives to incarceration, and various reform efforts. Critical issues facing corrections will be examined.

Prerequisite: College Reading and Writing Readiness

Typically offered fall and spring only IAI: CRJ 911

CRJ 212 Traffic Law Enforcement (3-0) 3 Hours

This course is a survey of traffic law enforcement problems and responses. An emphasis will be on the history and growth of traffic problems, organization for traffic control, accident investigation, and the analysis and interpretation of accidents. Traffic laws in the Illinois Vehicle Code will also be covered.

Prerequisite: College Reading and Writing Readiness

Recommended: CRJ 121

Typically offered spring only

CRJ 213 Community Policing (3-0) 3 Hours

This course is a survey of community policing in the law enforcement field. An emphasis is placed on police-community relations, interpersonal skills, dealing with diversity, interacting with special populations in the citizenry, victims of crime, criminal offenders, and coordinated crime prevention efforts in the community.

Prerequisite: College Reading and Writing Readiness

Recommended: CRJ 121

Typically offered fall only

CRJ 214 Substance Abuse and Criminal Justice (3-0) 3 Hours

This course examines drugs in American society from a criminal justice perspective, including the nature and extent of drug-taking behavior, the history and theories of drug use and abuse, the relationship between drugs and crime, drugs and the criminal justice system, the specific legally-restricted drugs in our society, drug prevention and treatment, and drug policy.

Prerequisite: College Reading and Writing Readiness

Recommended: CRJ 121

CRJ 215 Issues in Criminal Justice (3-0) 3 Hours

This course explores critical issues related to the criminal justice system. An in-depth study of a specific current issue in criminal justice will be offered.

Prerequisite: College Reading and Writing Readiness

May be taken twice, but any topic only once

CRJ 216 Police Management and Supervision (3-0) 3 Hours

This course analyzes the administration and management of police operations. An emphasis is placed on the distribution of personnel, specialized units, communication models, leadership principles, budgetary issues, management theory, and supervisory techniques appropriate to law enforcement.

Prerequisite: College Reading and Writing Readiness

CRJ 218 Criminal Justice Internship (0-15) 3 Hours

This course is designed to broaden educational experience of students through appropriate observation of selected criminal justice agencies to correlate theory with actual practice. Students assigned to local criminal justice agencies and/or related agencies for a maximum of 16 hours per week.

Prerequisite: Criminal Justice major with minimum of 30 semester hours completed and approval of criminal internship coordinator.

CRJ 219 Principles of Criminal Investigation (3-0) 3 Hours

This course is an introduction of criminal investigation procedures; theory and practice of investigations. An emphasis is placed on methods of investigation for different types of criminal activity.

Prerequisite: College Reading and Writing Readiness

Recommended: CRJ 121

Typically offered fall and spring only

CRJ 220 Independent Research (Variable) 1-3 Hours

This course involves independent research and study under the direct supervision of a faculty member. Subject must be approved by the assigned faculty member.

Prerequisites: Criminal Justice major and consent of the Criminal Justice department chair

CRJ 221 Criminal Law (3-0) 3 Hours

This course explores the history and development of the criminal law as a system of social control. An emphasis is placed on legal principles and substantive law. Elements of a crime, specific statutes, and various affirmative defenses are analyzed.

Prerequisite: College Reading and Writing Readiness

Recommended: CRJ 121

CRJ 222 Criminal Procedural Law (3-0) 3 Hours

This course exposes the student to the field of criminal procedural law. The course will examine certain civil liberties guaranteed in the Bill of Rights to the U.S. and Illinois Constitutions and how they relate to law enforcement procedures of arrest, search and seizure, and interrogation. An emphasis will be placed on the rulings of the U.S. Supreme and Federal Appellate Courts as well as on the rulings of the Illinois Supreme and Appellate Courts. Basic rules of evidence and formal charging will also be discussed.

Prerequisite: College Reading and Writing Readiness

Recommended: CRJ 121

CRJ 223 Ethics in Criminal Justice (3-0) 3 Hours

This course offers a thorough study of ethical philosophies and their application to criminal justice practitioners. Aspects of morality, leadership, ethical reasoning, professional standards, and codes of ethics will be addressed. Resolution of ethical dilemmas will also be considered. The practical focus of ethical decision making topics will center on law enforcement and correctional ethics and will include scenarios.

Prerequisite: College Reading and Writing Readiness

Recommended: CRJ 121

Typically offered fall and spring only

CRJ 224 Institutional Corrections (3-0) 3 Hours

This course will provide students with exposure to a variety of perspectives about the operations of the largest and most expensive component of the American criminal justice system, Institutional Corrections. Jails and prisons in the United States house more than two million Americans and continue to grow. This course will help students gain an understanding of how these systems operate as well as how they attempt to control the rapid growth in inmate populations, institutions, staff and expenses.

Prerequisite: College Reading and Writing Readiness

Recommended: CRJ 124

Typically offered fall only

CRJ 227 Community-Based Corrections (3-0) 3 Hours

This course examines the use of the community in the treatment and control of individuals in the correctional process. Students are exposed to such topics as probation, parole, restitution, community service, deferred prosecution, work release, halfway houses, group homes, and other strategies designed for community corrections.

Prerequisite: College Reading and Writing Readiness

Typically offered spring only

CRJ 229 Juvenile Delinquency (3-0) 3 Hours

This course examines juvenile delinquency in American society, including the historical, behavioral, legal, and correctional aspects of delinquency. Emphasis is placed on the nature and extent of delinquency in the United States, the traditional theories of delinquent behavior, and the legal processing of juvenile offenders.

Prerequisite: College Reading and Writing Readiness

Recommended: CRJ 121

IAI: CRJ 914

CRJ 230 Principles of Courtroom Testimony (3-0) 3 Hours

This course offers an in-depth study of evidence and courtroom testimony for professionals. It will cover the ethical philosophies of courtroom and administrative hearing testimony and their application to practitioners in the field. Students will work toward mastering an understanding of basic courtroom evidence and testifying from scenarios. Upon completion of this course the student will be prepared to offer competent testimony at any trial or hearing.

Prerequisite: College Reading and Writing Readiness

CRJ 248 Psychology of the Criminal Mind (3-0) 3 Hours

This course exposes the student to the field of Criminal Psychology. The purpose of this course is to develop an understanding as to the origins of criminal behavior and the clinical and social implications of violent crime. The course will examine the etiology, nature, assessment, and behavior of individuals who commit crime with an emphasis on violent crimes. Included in this examination will be the role of the family and other social factors, media violence, and genetics. The basic rules of crime scene analysis and processing will also be discussed.

CRJ 248 and PSY 248 are cross-listed.

Prerequisite: PSY 121 C or better,

Recommended: CRJ 219

CRJ 270 Criminal Justice Assessment Seminar (3-0) 3 Hours

This course is required of all the students completing the associate in applied science degree (A.A.S) in Criminal Justice. Students will be assessed as to the knowledge and foundational skills they have attained in the criminal justice program. Basic skills, thinking skills, and personal qualities will be evaluated as they relate to criminal justice occupations. Career development exercises will be conducted. A comprehensive examination is required.

Prerequisite: Sophomore Standing

Dance (DNC)

Communication Arts, Humanities and
Fine Arts Division, Room B210, (847) 543-2040

DNC 121 Introduction to Ballet I (3-0) 3 Hours

This course is designed for students interested in the fundamentals of ballet, whether they are beginning ballet dancers, teachers of theater movement, returning dancers, or persons interested in dance as a fine art. It is also designed so that any college student will develop his/her kinesthetic intelligence (literacy) at the place and experience of his or her technical background.

DNC 122 Modern Dance Technique I (3-0) 3 Hours

This course is designed for students interested in the fundamentals of modern dance, whether they are beginning dancers, teachers of theater movement, athletes, or persons interested in dance as a fine art. It is also designed so that a student will develop his/her kinesthetic intelligence (literacy) at the place and experience of his/her technical background. Modern Dance Technique I will develop physical proficiency in variable movements that apply to all dance genres.

DNC 123 Jazz Technique I (3-0) 3 Hours

This course is designed for students interested in the fundamentals of jazz dance, whether they are beginning dancers, teachers of theater movement, athletes, returning dancers or persons interested in dance as a fine art. It is also designed so that any student will develop his/her kinesthetic intelligence (literacy) at the place and experience of his/her technical background.

DNC 124 Beginning Yoga (3-0) 3 Hours

In this course students will study the physical and philosophical foundations of Yoga, the ancient art of unifying the body and mind. Students will learn and practice physical postures (asanas), as well as techniques for proper breathing, relaxation and concentration. An introduction to the philosophy and history of Yoga are included in this study, which students will explore through readings and written assignments. Special attention will be paid to anatomy and kinesiology as it applies to the dancer. By the end of the course, students will demonstrate a kinesthetic awareness of the body, and the ability to use yoga as a tool for enhancing dance training, performance and daily living. This course is repeatable up to four times but will only count for graduation once.

Course Information and Descriptions

DNC 125 Elements of Dance Composition I (3-0) 3 Hours

This course will explore the basic concepts of dance composition (i.e. space, time, gravity, energy), and aesthetic theories of choreography of dance, through variable choreographic assignments and exercises. This course will also include selected studies of acclaimed choreographers and their works in the history of dance.

DNC 126 Dance Forms I (3-0) 3 Hours

This course explores specific movements, styles, and social and cultural backgrounds of various dance forms. It will increase students' technical abilities as well as broaden their understanding of the history of selected dance traditions and practices throughout the world. Each semester, one to three various dance forms will be introduced. The students will be immersed in the physical characteristics of the movement aesthetics as well as the cultural context in which each dance form exists. Examples of dance forms include African, Indian, Native American, Tap, Irish, Flamenco, Kabuki, etc.

May be taken twice for credit; any form/level once

DNC 129 Dance Practicum I (Variable) 1-3 Hours

This course provides students with supervised practical experience in dance performance, technique studies, and/or production. Course can be tailored to various aspects of dance production including performance, choreography, teaching, directing, costume design, and lighting. *Note:* This course is repeatable for a maximum of 12 hours, but only 6 credits may be applied toward degree completion.

Prerequisite: Consent of Instructor

Recommended: Strong verbal communication skills

May be taken twice for credit toward degree

DNC 141 Beginning Hip Hop (3-0) 3 Hours

This course is designed for students interested in the fundamentals of hip hop dance. The course will introduce students to the basic movement skills as well as develop an understanding of the historical and artistic aspects of hip hop culture.

DNC 142 Beginning Capoeira (3-0) 3 Hours

This course is designed for students interested in the fundamentals of Capoeira, an Afro-Brazilian martial art form that incorporates elements of dance, martial arts, music, and acrobatics. Students will be introduced to the basic movement skills, musical instruments and songs inherent in Capoeira, as well as engage students in developing an understanding of the historical and cultural aspects of Capoeira culture.

DNC 143 Beginning Tap (3-0) 3 Hours

This course is designed for students interested in the fundamentals of tap technique. Students will learn basic movement skills, rhythmic variations, tempo and musical phrasing through a series of tap combinations. Students will also develop an understanding of the historical and cultural aspects of tap as an American art form.

DNC 221 Intermediate Ballet Technique (3-0) 3 Hours

This course is designed for students continuing beyond the fundamentals of ballet, and wishing to develop his/her ballet technique. Intermediate Ballet will particularly stress strength, flexibility, musical ability and endurance; as such barre exercises will progress to releve, and turns and batterie work will be doubled. Center work will also be extended, and if possible, some introductory pointe work will occur at mid-semester, (to be done only 15 minutes at the end of a class period).

Prerequisite: DNC 121

DNC 222 Intermediate Modern Dance Technique (3-0) 3 Hours

This course is designed for students continuing beyond the fundamentals of modern dance and wishing to develop their modern dance technique. Intermediate Modern Dance Technique is for beginning dancers, teachers of theater movement, athletes, or persons interested in dance as a fine art. Great choreographers will also be explored and imitated through various class sessions.

Prerequisite: DNC 122

DNC 223 Intermediate Jazz Technique (3-0) 3 Hours

Intermediate Jazz Technique is designed for students continuing beyond the fundamentals of jazz technique to further develop their dance skills. The course is for intermediate dancers, teachers of theatre movement, returning dancers, athletes, or persons interested in dance as a fine art. Students will develop their kinesthetic literacy at the places and experiences of their technical backgrounds. Various great choreographers will be explored and imitated.

Prerequisite: DNC 123

May be taken twice for credit toward degree

DNC 224 Intermediate Yoga (3-0) 3 Hours

In this course students will deepen their study and practice of yoga. Students will master the basic knowledge learned in Beginning Yoga, while studying advanced poses and breathing techniques. The course will look more deeply into Indian philosophy, responding in writing to portions of India's classic text, the Bhagavad-Gita. Special attention will be paid to anatomy and kinesiology as it applies to the dancer. By the end of the course, students will demonstrate an advanced kinesthetic awareness of the body, the ability to perform advanced poses, and a deeper understanding of the philosophy and science of yoga. This course may be taken up to four times, but will only count one time towards graduation.

Prerequisite: DNC 124

DNC 240 The Art of Dance (3-0) 3 Hours

This course introduces students to an interdisciplinary, multicultural study of the art of dance. Combining an historical framework with various dance genres and a study of stylistic movement, the course introduces ancient and modern trends; a variety of genres, including ballet, modern, jazz, kabuki, court, and video; psychological and philosophical aspects of movement; and the work of selected choreographers. Students will examine cross-cultural and historical views of a variety of theatrical and non-theatrical dance forms and investigate the numerous ways that dance functions in different societies. Students will attend live dance performances and demonstrate the ability to contextualize their views within the framework of the course content. Students will also move from the study of history and the creative process of dance to the role of a member of the dance audience and dance critic.

Prerequisite: College Reading and Writing Readiness

Fulfills the CLC I/M Education Requirement.

IAI: F1 906

DNC 241 Intermediate Hip Hop (3-0) 3 Hours

This course is designed for students continuing beyond the fundamentals of hip hop dance, and with an interest in developing more advanced skills in hip hop technique. Intermediate hip hop is designed to expand the kinesthetic intelligence and cultural knowledge of hip hop as an art form. The course will introduce students to theories of how commercialization and globalization have impacted the evolution of hip hop across the world.

Prerequisite: DNC 141 (C or better)

* DNC 160 Teaching Methods I (new course) offered effective Spring 2017. Refer to addendum for details.

DNC 242 Intermediate Capoeira (3-0) 3 Hours
 This course is designed for students continuing beyond the fundamentals of beginning Capoeira, and with an interest in developing more advanced skills in Capoeira technique. Intermediate Capoeira is designed to expand the kinesthetic intelligence and cultural knowledge of Capoeira as an art form. The course will introduce students to the developments of contemporary Capoeira and Capoeiristas who have made significant contributions to the development of Capoeira world-wide.
Prerequisite: DNC 142 (C or better)

Dental Hygiene (DHY)

Biological and Health Sciences Division,
 Room B210, (847) 543-2042

DHY 111 Preclinic Theory and Practice of Dental Hygiene (2-0) 2 Hours
 This course provides students with an introduction to the knowledge and skills to control and prevent dental disease. Principles of disease transmission, infection control, patient assessment, treatment planning and fundamental instrumentation will be presented.
Prerequisites: BIO 244 and BIO 245 (both C or better) AND Admission to the Dental Hygiene Program
Course fee

DHY 112 Theory and Practice of Dental Hygiene I (2-0) 2 Hours
 This course is a continuation of DHY 111. The principles and procedures will be systematically presented through lectures, reading assignments and case-based activities. Emphasis will be placed on infectious diseases, patient assessment and treatment planning through case studies, instrument sharpening, ultrasonic scaling, fluoride supplements, advanced instrumentation and medical emergencies.
Prerequisites: BIO 246, DHY 113, DHY 115, DHY 117, DHY 171 (all C or better)
Course fee

DHY 113 Pre-Clinical Dental Hygiene (0-6) 2 Hours
 This course provides clinical practice in fundamental dental hygiene and instrumentation skills on manikin (typodont) models and student partners.
Corequisite: DHY 111
Course fee

DHY 114 Clinical Dental Hygiene I (0-8) 2 Hours
 This course is a transition from the pre-clinic setting to beginning dental hygiene patient care. It is an orientation to clinic policies, procedures, and protocols as well as an opportunity to apply pre-clinical skills to patient care.
Corequisite: DHY 112
Course fee

DHY 115 Head and Neck Anatomy (2-0) 2 Hours
 This course includes detailed study of the anatomy of the head and neck with special emphasis on the human skeletal, muscular, glandular, circulatory, nervous and epithelial structures of the head and neck.
Corequisite: DHY 111
Course fee

DHY 116 Dental Radiology I (2-3) 3 Hours
 This course provides the basic fundamentals of radiology. Theory in radiation physics, safety and biological effects of ionizing radiation will be introduced. The laboratory portion of the course introduces intraoral and extraoral exposure techniques, processing, mounting, edentulous radiography, digital radiography and fundamental interpretation of dental radiographs.
Corequisite: DHY 112
Course fee

DHY 117 Dental Anatomy (1-2) 2 Hours
 This course introduces the students to terminology relating to anatomic structures of the oral cavity. Special emphasis is placed on the teeth and root morphology of both primary and permanent teeth and occlusal classification.
Corequisite: DHY 111
Course fee

DHY 119 Nutrition and Biochemistry (2-0) 2 Hours
 The course provides the students with a foundation of the fundamental principles of oral biochemistry, and biochemistry. Emphasis will be placed on nutrition and the effects of nutrition on the oral cavity and supporting structures of the teeth, and assessment of patient's nutritional needs.
Corequisite: DHY 112
Course fee

DHY 131 Oral Histology and Embryology (2-0) 2 Hours
 This course provides students with an introduction to the microscopic characteristics of the tissues of the oral cavity. Human histology and orofacial embryology will be introduced.
Corequisite: DHY 111
Course fee

DHY 132 Theory and Practice of Dental Hygiene II (1-0) 1 Hour
 This course is a continuation of DHY 112. The fundamental theories necessary to perform oral prophylaxis treatment will be the focus. The principles and procedures will be systematically presented through lectures, reading assignments and case-based activities.
Prerequisite: DHY 112, DHY 114, DHY 116, DHY 119, DHY 174, and DHY 175 (all C or better)
Course fee

DHY 134 Pain Management (1-2) 2 Hours
 The course focuses on the safe and effective practice of local anesthesia in dentistry. Emphasis is on avoiding the complications that may result from hazards or errors in technique.
Corequisite: DHY 179
Course fee

DHY 171 Preventive Dental Hygiene (2-0) 2 Hours
 This course provides students with a foundation of knowledge in the activities of preventive dental hygiene. Topics include plaque and calculus control, etiology and progression of dental disease, tooth brushing and flossing techniques, dental hygiene aids, and care of appliances.
Corequisite: DHY 111
Course fee

Course Information and Descriptions

DHY 174 Introduction to Periodontics (2-0) 2 Hours

This course introduces the student to the fundamental theories of periodontics. The course focuses on macro and micro anatomy, biochemistry and physiology of the periodontium. Epidemiology, microbiology and the etiology of periodontal disease will also be included.

Corequisite: DHY 112

Course fee

DHY 175 Dental Pharmacology and Anesthetic (2-0) 2 Hours

This course is an introduction to the study of drugs, including their pharmacologic effects, adverse reactions, indications, and contraindications as they relate to the patient's medical history and dental hygiene treatment.

Corequisite: DHY 112

Course fee

DHY 176 Dental Material and Expanded Function (2-2) 3 Hours

This course provides fundamental information about the use and manipulation of materials used in dentistry and expanded functions performed by dental auxiliaries. Emphasis is placed on materials and functions utilized by the dental hygienist.

Corequisite: DHY 179

Course fee

DHY 179 Clinical Dental Hygiene II (0-6) 2 Hours

This course is a continuation of Clinical Dental Hygiene I. Analysis of assessment findings is emphasized in order to plan and implement individualized comprehensive dental hygiene patient care.

Prerequisite: DHY 112, DHY 114, DHY 116, DHY 119, DHY 174 (all C or better)

Corequisite: DHY 132

Course fee

DHY 211 Theory and Practice of Dental Hygiene III (2-0) 2 Hours

This course is a continuation of DHY 179. Emphasis is placed on medically compromised and special needs patients.

Prerequisite: DHY 134, DHY 176, and DHY 179 (C or better in all)

Course fee

DHY 212 Theory and Practice of Dental Hygiene IV (2-0) 2 Hours

This course is a continuation of DHY 211. Emphasis is placed on professional relationships and the various roles dental hygienists encounter in the various dental specialties and personal preparation for dental hygiene practice. Includes practice management.

Prerequisites: DHY 211, DHY 213, DHY 215, DHY 219, DHY 232, and DHY 271 (C or better in each)

Course fee

DHY 213 Clinical Dental Hygiene III (0-12 hours) 4 Hours

This course is a continuation of Clinical Dental Hygiene II. Problem solving, critical thinking, and self-evaluation are emphasized as well as timely dental hygiene patient care.

Prerequisite: DHY 179 (C or better)

Corequisite: DHY 211

Course fee

DHY 214 Clinical Dental Hygiene IV (0-12 hours) 4 Hours

This course is a continuation of Clinical Dental Hygiene III with advanced clinical treatment techniques and emphasis on the dental hygiene diagnosis and non-surgical periodontal therapy.

Prerequisite: DHY 213 (C or better)

Corequisite: DHY 212

Course fee

DHY 215 Dental Radiology II (1-3) 2 Hours

This course is a continuation of DHY 116 Dental Radiology I.

Emphasis is placed on oral maxillofacial radiographic interpretation in conjunction with analyzing case studies.

Corequisite: DHY 211

Course fee

DHY 216 Ethics and Jurisprudence (1-0) 1 Hour

This course focuses on the ethical and legal obligations of the dental professionals to the community and public they serve.

Corequisite: DHY 212

Course fee

DHY 219 Advanced Periodontics (2-0) 2 Hours

Course content includes additional knowledge required to diagnose and treat periodontal diseases, clinical management of the periodontium and adjunctive therapies relevant to the maintenance of periodontal health. Emphasis is placed on the differential diagnosis and treatment of periodontal disease. Surgical and post-surgical topics will also be covered in this course.

Corequisite: DHY 211

Course fee

DHY 231 Board Review and Licensure (1-0) 1 Hour

This course provides the students with a review of the fundamental knowledge needed to be successful on the National and Regional Board Exams.

Emphasis is on preparation for board exams and requirements for dental hygiene licensure.

Course fee

DHY 232 General and Oral Pathology (2-0) 2 Hours

This course focuses on the fundamentals of the general and oral pathological processes. Emphasis is placed on the diseases and disease processes of the periodontal tissues and oral structures. Clinical manifestations of disease will be correlated with dental hygiene practice.

Corequisite: DHY 211

Course fee

DHY 271 Community Dentistry I (2-0) 2 Hours

This course introduces the current concepts of community health. The course focuses on how community dental health issues relate to the delivery of dental care to society. Emphasis is placed on the value of the role of the dental hygienist in public health. Students will learn to review and interpret dental scientific literature.

Corequisite: DHY 211

Course fee

DHY 272 Community Dentistry II (0-4) 1 Hour

This course focuses on implementation and evaluation of community outreach programs and the delivery of dental care to society.

Corequisite: DHY 212

Course fee

Digital Media and Design (DMD)

Communication Arts, Humanities and
Fine Arts Division, Room B210, (847) 543-2040

DMD 111 Introduction to Digital Media (3-0) 3 Hours

This course will explore the variety of hardware and software now used to produce digital media, from simple audience-oriented presentations to highly interactive applications. Through lectures, demonstrations, and hands-on laboratory experience, we will examine the production techniques, application uses, trends, business and legal concerns, design elements, and the product evaluation standards currently used in the digital media industry. Students will develop the design, storyboards, and prototype for a project.

Course fee

DMD 113 History of Graphic Design (3-0) 3 Hours

This course is a general survey of the history of graphic design from its origins to contemporary practice. The goals of this course are to provide the following: the visual vocabulary of the development of signs and symbols, insight into the continuity of design thinking, understanding the social/political context of the practice, foundation for pursuit of research in the field of design.

Prerequisite: College Reading and Writing Readiness

Course fee

Typically offered fall and spring only

DMD 115 Internet Fundamentals (3-0) 3 Hours

This course addresses in detail everything students need to know to access, explore, and use the world's richest information resource: the Internet. The course examines software, online provider options, costs, the telecommunication process, E-mail, FTP, Chat, Usenet, the World Wide Web and Web 2.0. Students will get step by step instructions on how to access, research, and retrieve academic, personal, and professional information.

Course fee

DMD 116 Web Design and Development (2-2) 3 Hours

This course is an introduction to Web page design and creation using industry standard Web design software. Students will learn to use graphics, sound, video, animation, scripts, and Cascading Style Sheets (CSS) to enhance Web pages. The course will cover the basic concepts of Web design and color with an emphasis on designing for visual appeal and user-friendly navigation. Students will also gain a fundamental knowledge of HTML/XHTML and the skills to publish and maintain Web sites.

Note: Recommended DMD 111 or DMD 115 or student must possess basic computer/Internet skills which include creating, saving, and editing files in the Windows or MAC operating systems; performing basic editing (copy/paste); copying files; using folders and subfolders to organize and manage files; downloading files off the Internet; opening Web sites; and using search engines.

Course fee

DMD 117 Concepts in New Media (3-0) 3 Hours

This course is an introductory evaluation of the critical concepts of new media, and their impact on our society and culture. Through readings, lectures, group discussions and hands-on experience, students will study the technical, economic, political, legal, aesthetic, and cultural implications of new media.

Prerequisite: College Reading and Writing Readiness

Course fee

Typically offered fall and spring only

DMD 157 Introduction to Animation (2-2) 3 Hours

This course will introduce students to 2D animation using state-of-the-art industry relevant software and hardware. Students will explore various animation concepts and techniques including history, drawing, rotoscoping, basic movement, timing, soundtrack/dialogue synchronization, and editing. Through lectures, discussions, demonstrations and screenings students will view and discuss animation that is currently used in television, film, interactive media and the Internet.

Prerequisite: College Reading and Writing Readiness

Course fee

Typically offered fall and spring only

DMD 173 Introduction to Digital Sound (3-0) 3 Hours

This course introduces students to the exploration of digital sound for multimedia. Students will learn how to manipulate wave files, understand various sound file formats, compressions, history of digital sound, and the difference between analog and digital sound editing. Students will write and develop sound scripts and sound projects for multimedia. Students will explore the different job functions of audio production and learn to work together in a team environment. The course will also introduce students to the basics of producing audio for the Web and interactive applications.

Course fee

Typically offered fall and spring only

DMD 174 Typography (2-2) 3 Hours

This course introduces students to the use of typography within the design process. Major topics to cover include anatomy of letterforms, type history, classification systems, methods of typographic communication, critical comparisons of type styles, contemporary trends and typography as image. Students will learn both technical and creative ways type can be used through lectures, discussion, critiques, and hands-on projects. The course explores 2D communication and design solutions using typography.

Prerequisite: DMD 113 or ART 122

Course fee

Typically offered fall and spring only

DMD 216 Interactive Scripting (2-2) 3 Hours

This course is designed for digital media designers who need to integrate advanced control management and interactivity into their media applications. Students will gain a fundamental knowledge of a popular scripting language for making media applications that users can interact with. The focus of the course is on using pre-designed models and functions in industry-standard software that embed the scripting language to create interactivity involving graphics, audio, video, animation and other media elements. Students will use creative and logical thinking while completing three major projects concerning animation, game, and Web site design. The concepts, principles, and steps of interaction design will be introduced and applied to the projects.

Prerequisite: DMD 116 or Consent of Instructor.

Course fee

Typically offered fall and spring only

DMD 217 Multimedia Authoring (3-0) 3 Hours

This course is geared toward multimedia designers who will be creating kiosks, CD ROM software, marketing and educational software, and interactive sites. Students will use a popular authoring software package to create an interactive multimedia presentation. The design, storyboarding, prototyping, testing and production techniques for creating a multimedia package will be followed with the final project.

Typically not offered every term

Course Information and Descriptions

DMD 218 Advanced Web Design and Development (2-2) 3 Hours

This course takes DMD 116 Web Design and Development to another level and has a two-fold focus. A state-of-the-art Web design program will be used to explore advanced Web production skills such as layers and table-free layouts, templates, re-usable elements, external Cascading Style Sheets, XML, automation of dynamic HTML, and site management. Through projects, the course will also cover more advanced design concepts in Web site creation, such as efficient navigation design, designing for portability and accessibility, separating content from presentation for easy site updating and maintenance, planning interactivity, and search engine optimization. Throughout the course, students will also review how to adapt the basic principles of design to the Web environment, particular how to use color and typography creatively in Web design, and how to achieve effective Web page layout.

Prerequisite: DMD 116 -OR- CIT 170

Course fee

Typically offered fall and spring only

DMD 219 Building Instructional Websites (3-0) 3 Hours

Students will examine the application of instructional design to teaching through an Internet or Intranet. Students will be creating advanced web pages for use in a training or educational setting, examining methods of creating interactive learning experiences and examining methods to integrate learning strategies into online course material.

Prerequisite: DMD 111, DMD 115, DMD 116 or consent of instructor.

Typically not offered every term

DMD 233 Digital Video Editing (2-2) 3 Hours

This course introduces students to the basics of postproduction non-linear digital video editing for multimedia, video and web capabilities. Students will produce, edit, and optimize video using industry relevant editing software. Upon completion of the course students will be able to create and produce digital videos and incorporated compressed and rendered projects into CD ROMs, DVD and Web technologies. In addition to learning the technical capabilities of the software, students will discuss digital video theory, concepts of video art and design, and the role digital video plays in the world of film, animation, animation and Web interactivity.

Course fee

Typically offered fall and spring only

DMD 251 Advanced 3D Modeling (2-2) 3 Hours

This course is designed as an advanced modeling course for students who are experienced with basic 3D modeling concepts and technical practice. The course introduces more sophisticated concepts and techniques such as polygon modeling, texture mapping, lighting and rendering. Through hands-on practice students will focus on modeling concepts and development relating to character, environmental, materials and lighting design.

Prerequisite: ART 264

Course fee

Typically offered fall and spring only

DMD 253 Advanced 3D Animation (2-2) 3 Hours

This course is designed as an advanced animation course for students who are experienced with basic 3D animation concepts and technical practice. The course introduces more sophisticated concepts and techniques with an emphasis on animation development through hands-on practice. The course will focus on animation concepts and creative animation design expanding students' knowledge of topics, tools and techniques.

Prerequisite: ART 264

Course fee

Typically offered fall and spring only

DMD 256 Dynamic Web Design and Development (2-2) 3 Hours

This project-based, advanced course is developed for digital media designers who will be creating Web sites with dynamic content and secure data transfer. Students will learn to use industry-standard software/applications to set up Web sites with dynamic content and professional-quality customizable pages. Emphasis will be on how to use the built-in features of the software/applications to complete desired tasks, such as form processing, retrieving data from a database and updating the database from a Web interface, and giving the user password-secured access to Web sites. Students will learn the basic syntax of a popular server-side language for dynamic page generation. The database query language SQL will also be introduced.

Prerequisite: DMD 116 with a grade of C or better.

Course fee

Typically offered fall and spring only

DMD 257 Interactive Animation (2-2) 3 Hours

This course is an overview of developing and designing interactive presentations, animations and Web sites using an industry relevant, vector-based interactive animation program. Topics covered include storyboarding, 2D animation, scripting, navigational mapping and motion graphics. Upon completion of the course students should be able to design and create interactive presentations utilizing animations, audio, video, and navigational components incorporated into CD ROM, DVD and Web technologies. In addition to learning the technical capabilities of the software, students will discuss Multimedia theory, concepts of interactive art and design, and the role interactive animation plays in the world of Web interactivity.

Prerequisite: DMD 116 or Consent of Instructor.

Course fee

Typically offered fall and spring only

DMD 259 3D Special Effects (2-2) 3 Hours

This course is designed as an advanced level computer course using state-of-the-art industry-relevant special effects 3D software. In conjunction with 3D modeling and animation, students will learn to create and produce special effects including: atmospheric effects, natural effects, smoke, explosions, motion blurs, and advanced texture and material generation. Concepts, theories and terms relating to special effects used in films, games, interactive media and the Internet will be discussed.

Prerequisite: DMD 251 and DMD 253

Course fee

Typically offered fall and spring only

DMD 273 Advanced Electronic Graphic Publishing (2-2)**3 Hours**

This course is designed as an advanced study of two dimensional design principles for creating page layout. The course will provide students the opportunity to develop a complete print identity design system in support of a marketing strategy including strategies of consumer decision-making. Students will develop all aspects including a fully functioning prototype for a variety of different client needs. The course will look into the mass production issues as well as specialty types of print packages.

Prerequisite: ART 271 and Basic Algebra Readiness

Course fee

Typically offered fall and spring only

DMD 277 Digital Media Delivery (2-2)**3 Hours**

This advanced-level course will examine various software programs and techniques for generating, delivering and managing streaming/live media content. Students will learn digital media data types, compression technologies and streaming technologies. Tools and techniques for graphics and audio/video capture will be reviewed. Students will also explore applications for building content sharing in a networked environment. They will build a prototype Web application with streamed/live media as a final project.

Prerequisite: DMD 116 and DMD 173 OR DMD 233 and College Reading and Writing Readiness OR Consent of Instructor

Course fee

Typically offered fall and spring only

DMD 279 Packaging Design (2-2)**3 Hours**

This course is designed as an overview of two dimensional design principles for creating three-dimensional packaging. The history of design packaging and strategies of consumer decision-making will be explored. The course will provide students the opportunity to develop a complete package identity design system in support of a marketing strategy. Students will develop all aspects including a fully functioning prototype for a variety of different client needs. The course will look into the mass production issues as well as specialty types of packaging.

Prerequisite: Basic Algebra Readiness, DMD 174, and DMD 273

Course fee

Typically offered fall and spring only

DMD 299 Selected Topics in Digital Media and Design (Variable)**1-3 Hours**

This course addresses the in-depth study of special topics in digital media and design that explore cutting-edge knowledge, concepts and techniques, and new developments in the industry. Course content will vary depending on the topic being studied.

Course fee

May be taken four times, but any topic only once

Early Childhood Education (ECE)

Business and Social Sciences Division,
Room T302, (847) 543-2047

ECE 116 Creative Activities (2-2)**3 Hours**

This course focuses on facilitating creative activities and environments for young children ages three through eight. Course includes experiences in art, music, language arts, science, mathematics, and dramatic/social play. Each class involves discussion of child development theory, hands-on experiences in planning and implementing appropriate activities, exchange of ideas, and collaborative strategies. *Note:* Materials fee required.

Prerequisite: College Reading and Writing Readiness

Course fee

ECE 117 Creative Activities for Infants and Toddlers (3-0)**3 Hours**

This course focuses on developing appropriate creative experiences and environments for children from birth through age three. Content includes choosing quality books, planning and implementing sensory activities, music and movement experiences, language play, exposure to the natural world, developing fine and gross motor skills, exploring art media, pretend play, and social interaction. *Note:* Materials fee required.

Prerequisite: College Reading and Writing Readiness

Course fee

ECE 121 Introduction to Early Childhood Education (3-0)**3 Hours**

This survey course provides an overview of early childhood care and education including historical and cultural perspectives, organization, structure, programming, and evidence-based practices. Professional and evidence-based practices of highly-qualified early childhood educators are outlined with an emphasis on their ability to enhance development and learning of each and every child between the ages of birth and eight. Considerations for diversity of culture, language, race, socioeconomic status, gender, ethnicity, and ability will be included.

Note: Students are required to complete ten hours of field observations in diverse early childhood settings. Current Illinois State Police criminal background check may be required.

Prerequisite: College Reading and Writing Readiness

ECE 124 Child Development for Educators (3-0)**3 Hours**

This course provides an overview of the theory and principles of human growth and development from conception through adolescence. Content includes an in-depth study of the inter-relatedness of physical, cognitive, social and emotional aspects of development. Development is studied in the context of family, gender, culture, language, ability, socioeconomics, diversity, and society. Special emphasis will be on the theories of Piaget, Vygotsky, Erikson, and Gardner with implications for applied classroom practice.

ECE 124 and EDU 124 are cross-listed.

Prerequisite: College Reading and Writing Readiness

Course Information and Descriptions

ECE 132 Professional Ethics in Early Childhood Education (1-0) 1 Hour

This course acquaints the student with the importance of professional ethics in early childhood education as they apply to children, families, colleagues, community/society and administrators. Students will develop skill in making responsible professional judgments based on the Code of Ethical Conduct and Statement of Commitment set forth by the National Association for the Education of Young Children.

Prerequisite: ECE 121 (C or better)

ECE 133 Home-Based Childcare Management (3-0) 3 Hours

This course focuses on the specialized knowledge and skills needed to provide high quality home-based child care for children 6 weeks to 12 years of age. It includes Illinois Department of Children and Family Services regulations and other legal requirements related to physical environment and health, safety and nutrition; child development principles and best practices; appropriate guidance and curriculum for multi-age groups; relationships with culturally diverse parents and coworkers. Small business administrative skills are also emphasized.

Prerequisite: College Reading and Writing Readiness

ECE 141 Health, Safety, and Nutrition for Young Children (3-0) 3 Hours

This course provides an overview of the health, safety and nutritional needs of young children and early childhood practices to ensure the health and well-being of each child in a group setting. Content includes roles and responsibilities of adults in meeting children's diverse needs, the promotion of healthy lifestyle practices, understanding common childhood illnesses and injuries, meeting health, nutrition and safety standards, and planning nutritious meals that are appropriate for each child.

Prerequisite: College Reading and Writing Readiness

ECE 214 Group Care of Infants and Toddlers (3-0) 3 Hours

This course is an overview of infant and toddler early care and education programs. Emphasis is on the care and protection of very young children; developmentally appropriate curriculum; working with diverse families; the impact and interaction of the physical environment and social climate on the young child. This course includes a required field experience of 20 daytime hours at a site determined by the Instructor.

Prerequisite: ECE 121 and ECE 124 (both C or better), and current Illinois State Police criminal background check required.

ECE 215 Music Activities for Young Children (2-2) 3 Hours

(Formerly ECE 115) This course emphasizes the role of music in the early childhood program through descriptive lecture and experiential music activities. The sequence of children's musical development and the relationship between early music exposure and children's physical, social/emotional, and cognitive development will be covered. Skills in singing, listening, creative movement, and using rhythm instruments will be developed. Previous music experience is not required.

Prerequisite: ECE 124 or EDU 124 (both C or better)

ECE 220 Observation and Assessment (3-0) 3 Hours

This course prepares students to complete authentic, alternative, classroom-based assessments on young children, as well as manage standardized tests in an appropriate manner. The course will further provide the student with the knowledge and skills to interpret and use the information gained to plan curriculum that is responsive to and supportive of children's learning and development. Students will have the opportunity to engage in assessment processes through classroom observations, providing each student with a stronger understanding of child development skills. Students learn about and explore a variety of age, linguistically, individually, and culturally appropriate formal and informal assessments. Students will practice gathering and sharing information on each child's skills, abilities, interests and needs, birth through age 8. Includes required daytime field experience hours in diverse settings.

Note: Current Illinois State Police criminal background check required.

Prerequisite: ECE 121 and ECE 124 (both C or better)

ECE 223 Child, Family, and Community (3-0) 3 Hours

This course focuses on the diverse needs of the child within the context of family, school and community. The course will examine the interplay of diverse cultures, lifestyles, abilities, language and communication with the role of the early childhood environment and other community institutions. Students will gain an understanding of their professional role in supporting evidence-based practices that strengthen respectful, collaborative family/child partnerships through effective use of community and family resources.

Prerequisite: ECE 121 and ECE 124 (both C or better)

ECE 229 Language Development and Early Literacy (3-0) 3 Hours

This course focuses on the development of speech, language, and emergent literacy in the young child. Students will gain an understanding of how children progress through stages of language acquisition, as well as the influence of culture and diversity on language and literacy development. Students will explore and develop strategies for facilitating language development and emergent literacy, create integrated curriculum activities, and assess children's literature for developmental and cultural appropriateness.

Prerequisite: ECE 121 and ECE 124 (both C or better)

ECE 231 School-Age Programming (3-0) 3 Hours

This course examines knowledge and skills needed to work effectively with school-age children from diverse cultural and socioeconomic backgrounds. It focuses on planning, organizing, and implementing appropriate curriculum for school-age children in organized childcare programs.

Prerequisite: ECE 121 and ECE 124 (both C or better)

ECE 232 Math and Science for Young Children (3-0) 3 Hours

This course incorporates theories, research, and pedagogy as it relates to mathematics and science for the young child. Emphasis is on the exploration of principles, methods, and appropriate materials. Students learn how to promote children's emerging math skills and science concepts through discovery and play. Includes planning, preparation, and assessment techniques for relevant early childhood math and science curriculum.

Prerequisite: ECE 121 and ECE 124 (both C or better)

Recommended: Basic Algebra Readiness

ECE 233 Young Children with Special Needs (3-0) 3 Hours

This course focuses on practical techniques for working with young children, from birth through age five, in inclusive early childhood settings. Characteristics of children with various types of special needs, as well as curriculum, routines, and classroom management strategies, are identified. The historical, philosophical, and legal basis for the importance of family involvement in early intervention services and programs is explored.

Prerequisite: ECE 121 and ECE 124 (both C or better)

ECE 241 Guidance and Social Development (3-0) 3 Hours

This course introduces practical principles and techniques for providing a balanced, child-centered approach to addressing the developmental needs and abilities of children in the early childhood years. Course content includes review of general theories of child guidance and how guidance encourages autonomy and self-discipline while promoting development of positive self-concept and early social development. Emphasis is placed on encouraging self-esteem, activities to promote pro-social behaviors, the relationship between the classroom environment and behavior, and the importance of observation to understand the underlying causes of behavior.

Prerequisite: ECE 121 and ECE 124 (both C or better)

ECE 250 Early Childhood Education Practicum - Infants and Toddlers (0-4) 2 Hours

This course provides students with the opportunity to apply evidence-based practices based on early childhood education principles and theories and is focused on the unique needs of infants and toddlers. Students work with diverse young children and families in high-quality, culturally, linguistically, and ability diverse early childhood settings under the supervision of a site supervisor and a college course work supervisor. 10-12 hours of classroom work with infants and/or toddlers will be required each week for a total of 150 hours.

Note: Students taking this course must be enrolled in the Early Childhood Education A.A.S. Current Illinois State Police criminal background check required along with current medical documentation.

Prerequisite: 30 cr hrs in ECE courses to include ECE 117, 132, 141, 214, 215, 220, 223, 229 and 241 (all C or better); CLC GPA 2.40 or above; Dept Chair approval 60 days prior to the first day of the semester.

Concurrent Enrollment: ECE 250 and 251

ECE 251 Curriculum Development I (2-0) 2 Hours

This course covers the principles involved in planning, implementing and evaluating developmentally appropriate, evidence-based curriculum to meet the unique needs of infants and toddlers. The course focuses on relationships among developmental theory, philosophy, practice, and development of curriculum based on the needs and interests of young children including those who are culturally, linguistically, and ability diverse. The analysis of a wide range of early childhood curriculum models is emphasized. *Note:* Students taking this course must be enrolled in the Early Childhood Education A.A.S.

Prerequisite: 30 cr hrs in ECE courses to include ECE 117, 132, 141, 214, 215, 220, 223, 229 and 241 (all C or better); CLC GPA 2.40 or above; Dept Chair approval 60 days prior to the first day of the semester.

Concurrent Enrollment: ECE 250 and 251

ECE 252 Early Childhood Education Practicum - Preschool (0-4) 2 Hours

This course provides students with the opportunity to apply evidence-based practices based on early childhood education principles and theories, focused on young children ages 3 - 5. Students work with diverse young children and families in high-quality, culturally, linguistically, and ability diverse early childhood settings under the supervision of a site supervisor and a college course work supervisor. 10-12 hours of classroom work with preschool-age children will be required each week for a total of 150 hours.

Note: Students taking this course must be enrolled in the Early Childhood Education A.A.S. Current Illinois State Police criminal background check required along with current medical documentation.

Prerequisite: 30 cr hrs in ECE courses to include ECE 116, 121, 124, 132, 141, 215, 220, 229 and 241 (all C or better); CLC GPA 2.40 or above; Dept Chair approval 60 days prior to the first day of the semester.

Concurrent Enrollment: ECE 252 and 253

ECE 253 Curriculum Development II (2-0) 2 Hours

The principles involved in planning, implementing and evaluating developmentally appropriate, evidence-based curriculum for preschoolers are studied. The course focuses on relationships among developmental theory, philosophy, practice, and development of curriculum based on the needs and interests of young children including those who are culturally, linguistically, and ability diverse. The analysis of a wide range of early childhood curriculum models is emphasized. *Note:* Students taking this course must be enrolled in the Early Childhood Education A.A.S.

Prerequisite: 30 cr hrs in ECE courses to include ECE 116, 121, 124, 132, 141, 215, 220, 229 and 241 (all C or better); CLC GPA 2.40 or above; Dept Chair approval 60 days prior to the first day of the semester.

Concurrent Enrollment: ECE 252 and 253

ECE 254 Early Childhood Education Practicum - Administrative (0-8) 4 Hours

This course is a practicum designed for those individuals who are interested in serving as administrators or directors of early childhood programs. The focus of this practicum experience is the application of early childhood leadership strategies, administrative skills and knowledge. Students are supervised by a college instructor, while working closely with an assigned early childhood program administrator or director. Course assignments are focused on program assessment and improvement, staff training, parent education, and fiscal and business management. The student will be supervised by a qualified director for 300 documented hours as mandated by the Illinois Gateways to Opportunity Director Credential - Level I. Other requirements for this Illinois Director Credential also apply. See Department Chair for further information. *Prerequisite:* Completion of all other course requirements for Administration and Leadership of Early Childhood Education Certificate 25EF; Overall G.P.A. of 2.5; and Consent of Department Chair 60 days prior to enrollment.

* ECE 242 Math Activities for Young Children (new course) offered effective Spring 2017. Refer to addendum for details.

Course Information and Descriptions

ECE 270 Organization and Administration of Early Childhood Programs (3-0) 3 Hours

This course is intended for students who are interested in becoming or who are currently serving as leaders of early childhood programs (directors, assistant directors, program coordinators). The course will acquaint students with the organization, regulation, management, and evaluation of programs serving young children. Course content includes staff management including staff selection, mentoring, supervision, and evaluation; parent and community relationships; children's educational programming; safety, design, and arrangement of the physical environment; use of technology; advocacy. Issues of culture and diversity are explored, as well as strategies for respectful communication, problem-solving, and collaboration with families and the community.

Prerequisite: ECE 121, ECE 124, and 9 additional credit hours in Early Childhood Education (all with grades C or better).

ECE 299 Special Topics in Early Childhood Education (Variable) 1-3 Hours

These special topic courses will focus on a specific current issue in the area of early childhood care and education. A maximum of 6 credit hours of ECE 299 or EDU 299 may be used as elective toward an AAS or AA degree in early childhood education.

Prerequisite: To be determined relative to topic
May be taken four times, but any topic only once

Earth Science (ESC)

Engineering, Math and Physical Sciences Division,
Room T302, (847) 543-2044

ESC 120 Earth Science (3-2) 4 Hours

This course is designed for students of non-science or science major who are interested in physical features related to our dynamic earth. Topics of the course include some fundamental concepts and features in geology, meteorology and astronomy, such as earthquakes, volcanic activities weathering process, surface water, atmosphere components, weather, the universe, the solar system, etc. Course materials are organized to enable students to understand how different components of our dynamic earth are related to one another. Most topics are assisted with hands-on lab exercises.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Course fee

IAI: P1 905L

ESC 121 Physical Geology (3-2) 4 Hours

For those who wish to explore an interest in geology, major in geology, or satisfy lab science requirements. Topics include igneous rocks and volcanism, sedimentary rocks and stratigraphy, metamorphic rocks and metamorphism, weathering, mass wasting, streams, deserts and glaciers. Lab studies concentrate on minerals, rocks and topographic maps.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Course fee

IAI: P1 907L

ESC 122 Historical Geology (3-2) 4 Hours

Primarily for those majoring in geology or those who wish to understand the geologic evolution of North America. Combines a regional and topical approach to continental development, crustal structure, and mountain building. Regional stratigraphy is integrated with the origin and evolution of plants and animals. Lab topics include structural geology, geologic maps, fossils, and a mapping project.

Prerequisite: ESC 121

Course fee

ESC 123 Introduction to Meteorology (3-0) 3 Hours

For the non-science major or those who wish to gain a comprehensive overview of the science of meteorology without a laboratory component. The primary goal of this course is to help students become better educated consumers of the massive amount of weather information now available to them. Topics will include high and low pressure systems, fronts, clouds, the jet stream, winter precipitation, thunderstorms and severe weather, hurricanes, air-ocean interactions (El Nino and La Nina), weather analysis, an introduction to weather forecasting, and human impacts on weather and climate. The student should be comfortable with interpreting maps, charts, and diagrams. *Note:* students may not receive credit toward a degree for both ESC 123 and ESC 127.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100 -AND- Basic Algebra Readiness

IAI: P1 905

ESC 124 Oceanography (3-0) 3 Hours

For the non-science major or those who wish to gain a comprehensive overview of the science of oceanography. Topics include a history of oceanographic investigations; topography, structure, and evolution of the ocean basin; chemical and physical properties of ocean water and water masses; waves; tides; oceanic circulation; shoreline processes; estuaries; marine sediments; hurricanes; resources; fisheries; and ecology.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

IAI: P1 905

ESC 125 Geology of the National Parks (3-0) 3 Hours

This introductory course is designed for students and community members who are interested in learning basic geologic features of national parks. No previous Geology or Earth Science knowledge is necessary. Topics include basic geologic principles and concepts, such as the Earth's materials (minerals and rocks), plate tectonics and various dynamic features related to the plate interactions, and a brief history of the Earth. Various unique geologic features in national parks are introduced and discussed.

Note: This course is for students who are pursuing either non-science or science degrees and should help students prepare for a field travel/study course (ESC226, Field Geology, 3 credits) to various national parks offered in summers.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100

IAI: P1 907

ESC 126 Geology of Illinois (2-0) 2 Hours

A survey of the principle aspects of Illinois geology, with emphasis on the landforms, rocks, soil, structure and glacial history of Illinois and parts of adjacent states. Also active geologic processes today, resource development, land and water use and management.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Typically offered spring only, even years only

ESC 127 Introduction to Meteorology with Lab (3-2) 4 Hours

This course is intended for the non-science major or those who wish to gain a comprehensive overview of the science of meteorology with a laboratory component. The primary goal of this course is to help students become better educated consumers of the massive amount of weather information now available to them. Topics will include high and low pressure systems, fronts, clouds, the jet stream, winter precipitation, thunderstorms and severe weather, hurricanes, air-ocean interactions (El Nino and La Nina), weather analysis, an introduction to weather forecasting, and human impacts on weather and climate. The student should be comfortable with interpreting maps, charts, and diagrams.

Note: students may not receive credit toward a degree for both ESC 123 and ESC 127.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100 -AND- Basic Algebra Readiness

IAI: P1 905L

ESC 128 Great Mysteries of the Earth (3-0) 3 Hours

This course is for the non-science major or those pursuing an interest in the geosciences. This course will examine selected mysteries, myths, and pseudoscience of our world from the content areas of earthquake myths, volcano myths, flood myths, landform myths, and mass extinctions through the application of the scientific method. Major topic examples may include Atlantis, Piltdown Man, and Noah's Flood.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

IAI: P1 905

ESC 129 Severe and Hazardous Weather (3-0) 3 Hours

This course is designed for students who wish to gain a better understanding of the causes and impacts of various types of extreme weather. Meteorological concepts and processes that cause severe and hazardous weather will be presented in a non-technical manner during the first part of the course. Subsequently, specific types of severe and hazardous weather will be examined as well as an investigation of their historical, economic, and human consequences. Severe weather topics may include lightning, hail, tornadoes, floods, drought, cold and heat waves, blizzards, ice storms, wind storms, hurricanes, and El Nino/La Nina. Students should be comfortable interpreting maps, charts, and diagrams.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100 AND Basic Algebra Readiness

IAI: P1 905

ESC 140 Introduction to Astronomy with Lab (3-2) 4 Hours

This course is for the non-science major or those who wish to gain a comprehensive overview of the science of astronomy. This descriptive treatment of astronomy will include topics such as the history of astronomy, the solar system, stellar evolution, the Milky Way, and beyond. Students may not receive credit toward a degree for both ESC 140 and ESC 141.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Course fee

IAI: P1 906L

ESC 141 Introduction to Astronomy (3-0) 3 Hours

This course is for the non-science major or those who wish to gain a comprehensive overview of the science of astronomy. This descriptive treatment of astronomy will include topics such as the history of astronomy, the solar system, stellar evolution, the Milky Way, and beyond. Students may not receive credit toward a degree for both ESC 140 and ESC 141.

Prerequisite: College Reading and Writing Readiness or concurrent enrollment in ENG 109 or ELI 109 AND Basic Algebra Readiness

IAI: P1 906

ESC 224 Environmental Geology (3-0) 3 Hours

For the non-science major or as a foundation course for those wishing to major in environmental sciences. A critical and objective approach is utilized to evaluate the human interrelationship with geological hazards and problems. Volcanoes, earthquakes, landslides and subsidence, surface and groundwater hydrology, waste disposal, mineral resources, and the energy situation are all included.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

IAI: P1 908

ESC 226 Field Geology (2-2) 3 Hours

Introduction to basic geological field methods and application of geological concepts through field studies of selected regions. May include camping, backpacking, canoeing, and/or hiking, occasionally under rigorous conditions. Travel expenses are paid by the student. Should be considered a general education elective; will NOT meet CLC laboratory science requirement.

Course fee

May be taken twice, but any topic only once

ESC 299 Special Topics in Earth Science (Variable) 1-4 Hours

This course is designed to provide students with information about specialized areas in Earth Science including areas such as geology, meteorology, oceanography, astronomy or climatology. Topics will be identified by course section: see course schedule for specific information.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

May be taken four times, but any topic only once

Economics (ECO)

Business and Social Sciences Division,
Room T302, (847) 543-2047

ECO 110 Economics for Business and Industry (3-0) 3 Hours

This course is a brief survey of both microeconomic and macroeconomic principles to provide the student with the basic tools to understand current economic problems and policies. It is intended for students pursuing an AAS degree.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100 AND Department Consent

Recommended: Basic Algebra Ready

Course Information and Descriptions

ECO 221 Principles of Macroeconomics (3-0) 3 Hours

The course surveys basic economic concepts with an emphasis on macroeconomic analysis and fiscal and monetary policies. Current economic problems such as inflation, unemployment, and stagflation are explored and discussed from diverse economic models (e.g.: Classical, Neo-Keynesian, Neo-Classical, Monetarist, and Rational Expectations Models). The discussions also include an analysis and critique of macroeconomic policies.

Prerequisite: College Reading and Writing Readiness AND MTH 102 OR MTH 105 (C or better) OR higher level math course (C or better) OR AOS 122 (C or better) OR appropriate score on Math Placement Test OR Math ACT score of 22 or higher

IAI: S3 901

ECO 222 Principles of Microeconomics (3-0) 3 Hours

This course deals with economic decision making at the level of the individual household, the individual firm, and individual markets. The course covers basic microeconomic concepts such as competitive markets, supply and demand, elasticity, consumer theory, theory of the firm, competitive firms, monopoly, oligopoly, and monopolistic competition, resource pricing and select current economic problems.

Prerequisite: College Reading and Writing Readiness AND MTH 102 OR MTH 105 (C or better) OR higher level math course (C or better) OR AOS 122 (C or better) OR appropriate score on Math Placement Test OR Math ACT score of 22 or higher

IAI: S3 902

ECO 223 Money, Banking, and Financial Markets (3-0) 3 Hours

The course emphasizes the economic and monetary history and theory of money and banking in the United States. Primary focus is given to the role that banks and financial institutions serve in economic development. Also discussed are the impacts of Federal Reserve monetary policy decisions on the aggregate economy using macroeconomic analysis. The relative effectiveness of monetary policy on financial markets is also evaluated.

Prerequisite: ECO 221 (C or better)

ECO 224 Public Finance (3-0) 3 Hours

This course explains the economic functions of government in a capitalistic economic system. It focuses on government operations in two distinct areas: government expenditure and government revenue. First, government expenditure programs are examined with primary emphasis on the provision of public goods and on welfare distribution functions. The second aspect of the course examines how the government collects revenue. Topics such as cost-benefit analysis and ability to pay and benefit principles of taxation are explained as well as the relationship between fiscal policy and debt and deficit management.

Prerequisite: ECO 221 or ECO 222 (either C or better)

ECO 225 Comparative Economic Systems (3-0) 3 Hours

This course analyzes the role of economic institutions, policies, and producers in economic growth and macroeconomic stabilization in different countries across the world. It will use theory and application in case studies to analyze the varying approaches to using a market economy or other economic systems in the countries studied. This course fulfills the CLC international/multicultural requirement.

Prerequisite: ECO 221 (C or better)

Fulfills the CLC I/M Education Requirement.

Education (EDU)

Business and Social Sciences Division,
Room T302, (847) 543-2047

EDU 121 Introduction to Teaching (2-2) 3 Hours

This course provides the prospective teacher with an introduction to teaching in United States school systems. Other topics included are history and philosophy of education, school organization and governance, ethical and legal issues, the nature of teaching, curriculum, the social context, diversity, professional leadership, and current issues.

Prerequisite: College Reading and Writing Readiness

EDU 124 Child Development for Educators (3-0) 3 Hours

This course provides an overview of the theory and principles of human growth and development from conception through adolescence. Content includes an in-depth study of the inter-relatedness of physical, cognitive, social and emotional aspects of development. Development is studied in the context of family, gender, culture, language, ability, socioeconomics, diversity, and society. Special emphasis will be on the theories of Piaget, Vygotsky, Erikson, and Gardner with implications for applied classroom practice.

ECE 124 and EDU 124 are cross-listed.

Prerequisite: College Reading and Writing Readiness

EDU 222 The Exceptional Child (3-0) 3 Hours

This course is an overview of children and adolescents with exceptional cognitive, physical, social, and emotional characteristics, including learning disabilities. It includes assessment, screening, educational needs, family communication, community resources, and legal aspects.

Prerequisite: EDU 124 (C or better) or PSY 226 (C or better)

EDU 223 Technology in the Classroom (3-0) 3 Hours

This course focuses on the uses of basic technology for management and instruction in PreK-12 classrooms. Students will develop the knowledge and skills they need to appropriately and responsibly use technology tools, resources, processes, and systems; to access, retrieve and evaluate information from various media; and to successfully integrate computers into the curriculum. *Note:* Basic computer skills recommended.

Prerequisite: ECE 121 or EDU 121 (both C or better)

Course fee

EDU 224 Diversity in Schools and Society (3-0) 3 Hours

This course will survey the personal, social, political, legal, cultural, and educational factors involved in diversity and human relations, and how these factors impact teaching, learning, and other human interactions. The course will cover the major diversity theories, as well as use an experiential model for making theoretical knowledge relevant in the individual teacher's life. Topics include racial, ethnic, social class, linguistic, religious, cultural, and sexual diversity.

Prerequisite: College Reading and Writing Readiness

Recommended: EDU 121

Fulfills the CLC I/M Education Requirement.

EDU 225 Educational Psychology (3-0) 3 Hours

This course addresses psychological principles underlying educational practice. Theories concerning cognitive and psychological development, human learning, and motivation are studied with emphasis on application for instruction, including assessment. Emphasis will also be placed on learner-centered instruction and diversity.

Prerequisite: ECE 121 or EDU 121 (both C or better) AND ECE 124 or EDU 124 (both C or better) OR PSY 121 (C or better)

EDU 226 Introduction to the Foundations of Reading (3-0) 3 Hours

This course is an introduction to theory and practice in teaching reading and related language arts areas. It includes information on basic components of reading and language arts instruction and on the importance of literacy learning. It introduces Illinois Learning Standards in the areas of reading and language arts.

Prerequisite: EDU 121 and EDU 124 (both C or better)

EDU 242 Observational/Clinical Experience in Education (0-2) 1 Hour

This course is a pre-student teaching practicum. It allows students who are considering the field of education an opportunity to observe and interact with certified teachers and children in a classroom setting. Required participation includes a minimum of 30 clock hours in the public/private school classroom. A weekly 30 minute seminar is provided for students to focus on classroom issues including classroom management, effective teaching methods, and learning styles. Students will discuss positive/negative classroom situations as they gain experience through this practicum. Supervision will be provided by a cooperating teacher and the college instructor.

Note: (ECE 121 or EDU 121) AND (ECE 124 or EDU 124) are recommended but not required before taking this course.

Corequisites may also be taken as prerequisites. A criminal background check is required for this course. Please wait for instructions on the first day of class.

Prerequisite: College Reading and Writing Readiness

Corequisite: ECE 121 or EDU 121 or EDU 222 or EDU 225

May be taken three times for credit toward degree

EDU 299 Special Topics in Education (Variable) 1-3 Hours

Special topics in the field of education will be developed. Topics will focus on a specific current issue in the areas of early childhood, elementary, secondary, or special education. A maximum of 6 credit hours of EDU 299 or ECE 299 may be used as elective credit toward an AA or AAS degree in education.

Prerequisite: College Reading and Writing Readiness

May be taken four times, but any topic only once

EDU 999 Preparing for the TAP or ACT+Writing (Variable) 1-3 Hours

This course is designed to prepare prospective teachers to take and pass the Test of Academic Proficiency (TAP) by refreshing or improving skills and abilities in Reading, Writing, and Mathematics. This course is repeatable up to three times, any topic only once, for a maximum of 3 hours toward degree completion. This course will also prepare students who wish to take the ACT plus writing test, as an alternative to the TAP.

Prerequisite: College Reading and Writing Readiness and Basic Algebra Readiness OR Consent of Department

Recommended: ENG 121 and MTH 121 (both C or better)

May be taken three times, but any topic only once

Educational Work Experience (EWE)

Cooperative Education Office, Building E,
Room E101, (847) 543-2058

EWE 121 Introduction to Volunteerism (1-0) 1 Hour

This course is designed to introduce students to the ideas and responsibilities of volunteering. Students will be made aware of various service-oriented volunteer agencies and activities. They will choose a volunteer experience where both the agency involved and the student contract to perform definite and supervised services for a specific period of time.

EWE 220 Cooperative Work Experience I (Variable) 1-4 Hours

For career and transfer students. Specific learning objectives agreed upon by the student, the student's work supervisor and the college instructor shall be accomplished at the work site. One credit is required for the EWE seminar which focuses on topics such as resume writing, interviewing, and the psychology of work. Students who have met the prerequisite credit hours register for 1.00 credit hour for the seminar portion of CO-OP and 1.00 to 3.00 credit hours for the work portion of EWE 220.

May be taken four times for credit toward degree

EWE 270 Cooperative Work Experience II (Variable) 1-3 Hours

For select degree/certificate seeking second semester CO-OP students. Additional credit is earned for new educational objectives agreed upon by the student, the student's EWE work supervisor and college EWE instructor.

Electrical Engineering Technology (EET)

Engineering, Math and Physical Sciences Division,
Room T302, (847) 543-2044

EET 113 Solid State Electronics (3-2) 4 Hours

This course is an introduction to semiconductor devices and their applications. Operating principles and characteristics of diodes, transistors, JFETS, MOSFETs and thyristors are discussed. Transistor models using the h and r parameters are covered. Various transistor configurations and biasing techniques are studied. Device functionality and applications are discussed and range from power supplies, voltage regulators, small signal/power amplifiers, amplifier response analysis (Bode Plot) to operational amplifiers.

Prerequisite: MTH 122 and EET 175

Course fee

Typically offered fall only

Course Information and Descriptions

EET 115 Electronic Laboratory Techniques (1-2) 2 Hours

An introduction to electronic measurement techniques, the identification and testing of electronic components, and Ohm's law and power law. Lab safety concepts, proper use of basic laboratory equipment such as oscilloscopes, DMM, power supplies, frequency counter and signal generators are introduced. Additional topics include: soldering and desoldering of components, breadboarding, how to keep a lab notebook and schematic reading. The student will be expected to pursue and complete a laboratory project of his/her choice with the instructor's approval.

Corequisite: EET 170

Course fee

Typically offered fall and spring only

EET 130 Introduction to Renewable Energy Sources (3-2) 4 Hours

This course provides an overview of renewable (essentially carbon-free) energy sources with an emphasis on Solar, Wind and Geothermal technologies. Students will acquire an understanding of various renewable energy systems and their underlying physical and technological principles, economics, environmental impact and how these technologies can be integrated into an overall energy system.

Prerequisite: MTH 102 or equivalent with a grade of C or better and College Reading and Writing Readiness

Typically not offered every term

EET 170 DC Circuit Fundamentals (1.5-1) 2 Hours

Topics include definition of voltage, current, resistance, conductance, and power. Also includes Ohm's Law, Kirchhoff's Laws as applied to series, parallel and series-parallel circuits. Calculation of power dissipation, use of voltage and current dividers, recognition and use of Wheatstone Bridge circuits.

Prerequisite: College Reading and Writing Readiness

Recommended: MTH 117

Course fee

Typically offered fall and spring only

EET 173 DC Analysis-Network Theorems (1.5-1) 2 Hours

Introduction to network theorems and solutions, to include Thevenin's Theorem, Norton's Theorem, Mesh analysis, Nodal analysis, Superposition and other analysis techniques.

Prerequisite: EET 170

Corequisite: MTH 122

Course fee

Typically offered fall and spring only

EET 174 AC Fundamentals (1.5-1) 2 Hours

Introduction to AC circuit fundamentals. Study of circuitry consisting of AC sources, resistors, inductors, capacitors and transformers. Course material covers, reactance, impedance, vectors, current and voltage phase relationships, apparent and reactive power, complex notation. Q, resonance and filters are discussed.

Prerequisite: EET 170 and MTH 122

Corequisite: MTH 123

Course fee

Typically offered fall and spring only

EET 175 AC Analysis and Circuit Theorems (1.5-1) 2 Hours

AC network theorems and solutions, to include Thevenin's Theorem, Norton's Theorem, Max Power Transfer Theorem, Mesh analysis, Nodal analysis, superposition and other analysis techniques. Series and parallel resonance will also be included with discussion of passive filter operation. EET 175 is a continuation of EET 174 for the Electrical Engineering Technology AAS degree.

Prerequisite: EET 174

Corequisite: MTH 123

Course fee

Typically offered fall and spring only

EET 211 Advanced Solid State Electronics (3-2) 4 Hours

This is a continuation of EET 113 with an emphasis on the development of frequency response characteristics of operational amplifiers, open and closed loop response, negative and positive feedback, active filters, oscillators/timers, voltage regulators, basic op-amp circuits, data conversion circuits and control circuits.

Prerequisite: EET 113

Course fee

Typically offered spring only

EET 212 Electronic Communications Systems (2-3) 3 Hours

Principles of operation and design of electronics equipment including radio fundamentals, radio receivers, transmitters, antennas and transmission of RF energy. Digital communications will be covered.

Prerequisite: EET 113, EET 174 and EET 175

Course fee

Typically not offered every term

EET 216 Microprocessors I (3-2) 4 Hours

Introductory course in microprocessors dealing with hardware and software. The Pic micro controller will be used as the target processor. Hardware configuration including CPU, Memory, I/O, and Assembly language programming with the PIC 16F84 instruction set will be studied. This course also provides a means to learn about embedded Microcontroller-based programming techniques through the use of Microchip integrated MPLAB environment.

Prerequisite: EET 223 AND MCS 141 or CIT 134 or consent of instructor

Course fee

Typically offered spring only

EET 223 Introduction to Digital Electronics (3-2) 4 Hours

(Formerly EET 213) This course covers principles of operation, performance, and design of digital circuits and digital instrumentation. Number systems including binary; Boolean algebra and the application to digital logic; combinational and sequential circuits; digital logic application to electronic instrumentation; basic Hardware Description Language (VHDL) and lab work with CMOS & FPGAs (Field Programmable Gate Arrays) will be covered.

Prerequisite: MTH 122 or MTH 144 AND EET 115 (C or better) OR Department Consent

Course fee

Typically offered fall and spring only

EET 230 Electrical Machinery (2-3) 3 Hours

Principles of design and construction of many types of motors and generators including servos, synchros, motor and generator control circuits, and industrial application. Course oriented to troubleshooting and repair techniques. *Note:* ELC 114 is recommended.

Prerequisite: EET 170, EET 174 or ELC 172

Course fee

Typically offered fall only

EET 299 Special Topics in Electrical/Electronics Engineering (Variable) 1-4 Hours

This course will provide students with more information about specialized topics in areas of analog or digital electronics, telecommunications, industrial controls, system design software or related topics. *Note:* Topics will be identified for each section of the course. May be taken four times, but any topic only once for credit towards the degree.

Prerequisite: To be determined relative to topic
May be taken four times, but any topic only once
Typically not offered every term

Electrical Technology (ELC)

Engineering, Math and Physical Sciences Division,
 Room T302, (847) 543-2044

ELC 113 Basic Instrumentation and Shop Practice (1-2) 2 Hours

An introduction to electronic measurements, repair and construction techniques and the identification and testing of electronic components.

Note: Recommended preparation concurrent enrollment in EET 170 and ELC 172 or equivalent knowledge.

Course fee
Typically not offered every term

ELC 114 Motor and Machine Controls (2-3) 3 Hours

Describes control circuits and components used in industry with particular attention to motor controls. Material includes controller characteristics and applications.

Note: Recommended preparation EET 170 and ELC 172 or equivalent knowledge.

Course fee
Typically not offered every term

ELC 171 Programmable Logic Controllers (2-2) 3 Hours

In this course, students will learn what a Programmable Logic Controller is, how a PLC works, and how to install a PLC in an automated system. Students will also learn the basics of programming a PLC using a relay ladder logic and Boolean functions. Troubleshooting systems with PLC's will also be studied.

Note: Recommended preparation EET 170 and ELC 172 or equivalent knowledge.

Course fee
Typically offered fall and spring only

ELC 172 Applied AC Circuit Theory (1.5-1) 2 Hours

Fundamentals of AC circuit theory and application. Includes topics of capacitance, inductance, time constants, reactance, RLC AC circuits, transformers, relays, filters and mathematics as required. ELC 172 is a continuation of EET 170 for the Electrical/Electronic Maintenance Certificate.

Note: Recommended preparation EET 170 and MTH 114 or MTH 117 or equivalent knowledge.

Course fee
Typically offered fall and spring only

ELC 215 Power Transmission and Distribution (3-3) 4 Hours

Methods of generating, controlling transmitting, and distributing electrical power and utilization of electrical power by industry. *Note:* Recommended preparation EET 170 and ELC 172 or equivalent knowledge.

Course fee
Typically not offered every term

ELC 271 Advanced Programmable Controls (2-3) 3 Hours

This course will address application and interfacing aspects of programmable control not covered in the introductory course ELC 171. Topics included in this course cover information on data acquisition and data file manipulation, analog to digital and digital to analog interfacing, networking of PLC's, and touch panel interface operation.

Prerequisite: ELC 171 or Instructor Consent

ELC 276 Electrical Industrial Safety (2-0) 2 Hours

This course provides a study of the safety practices and procedures that are required in the electrical industry. The nature of electrical work places electricians in potentially harmful situations on a regular basis. Electricians must be aware of the proper safety precautions in order to avoid accidents which could lead to injury or even death. This course will include safety related to electrical shock, safety requirements in the use of power tools, safety in the working environment.

Typically not offered every term

Electrician Apprenticeship (EAP)

Engineering, Math and Physical Sciences Division,
 Room T302, (847) 543-2044

EAP 111 Electrician Apprenticeship Work Experience I (0-4) 2 Hours

This course provides a planned educational experience in the Electricians Apprenticeship program by placing the student in a supervised educational work experience. Specific learning objectives agreed upon by the student and the students work supervisor shall be accomplished through "on the job" experience and training.

This course is the first of a series of five work-based learning (apprenticeship) courses to be completed. The student will complete an EAP course in each of the five years of the apprenticeship.

Note: Requirements: Admission into the Local IBEW 150 Apprenticeship Program. Job placement with a registered journeyman electrician

EAP 112 Electrician Apprenticeship Work Experience II (0-4) 2 Hours

This course provides a planned educational experience in the Electricians Apprenticeship program by placing the student in a supervised educational work experience. Specific learning objectives agreed upon by the student and the students work supervisor shall be accomplished through "on the job" experience and training.

This course is the second in a series of five work-based learning (apprenticeship) courses to be completed. The student will complete an EAP course in each of the five years of the apprenticeship.

Note: Requirements: Admission into the Local IBEW 150 Apprenticeship Program. Job placement with a registered journeyman electrician

Course Information and Descriptions

EAP 113 Electrician Apprenticeship Work Experience III (0-4) 2 Hours

This course provides a planned educational experience in the Electricians Apprenticeship program by placing the student in a supervised educational work experience. Specific learning objectives agreed upon by the student and the students work supervisor shall be accomplished through "on the job" experience and training.

This course is the third in a series of five work-based learning (apprenticeship) courses to be completed. The student will complete an EAP course in each of the five years of the apprenticeship.

Note: Requirements: Admission into the Local IBEW 150 Apprenticeship Program. Job placement with a registered journeyman electrician

EAP 114 Electrician Apprenticeship Work Experience IV (0-4) 2 Hours

This course provides a planned educational experience in the Electricians Apprenticeship program by placing the student in a supervised educational work experience. Specific learning objectives agreed upon by the student and the students work supervisor shall be accomplished through "on the job" experience and training.

This course is the fourth in a series of five work-based learning (apprenticeship) courses to be completed. The student will complete an EAP course in each of the five years of the apprenticeship.

Note: Requirements: Admission into the Local IBEW 150 Apprenticeship Program. Job placement with a registered journeyman electrician

EAP 115 Electrician Apprenticeship Work Experience V (0-4) 2 Hours

This course provides a planned educational experience in the Electricians Apprenticeship program by placing the student in a supervised educational work experience. Specific learning objectives agreed upon by the student and the students work supervisor shall be accomplished through "on the job" experience and training.

This course is the fifth in a series of five work-based learning (apprenticeship) courses to be completed. The student will complete an EAP course in each of the five years of the apprenticeship.

Note: Requirements: Admission into the Local IBEW 150 Apprenticeship Program. Job placement with a registered journeyman electrician

Electronic Information Technology (EIT)

Engineering, Math and Physical Sciences Division,
Room T302, (847) 543-2044

EIT 110 Topics in Mathematics for Computer and Electronics Technicians (3-0) 3 Hours

Mathematics topics are studied which have direct application in the fields in electronics and computer technology. Topics include mathematics concepts required to understand and analyze electronics and computer problems.

Typically not offered every term

EIT 111 Digital and Network Fundamentals (3-2) 4 Hours

This is an introductory course in digital electronic concepts and networking fundamentals. The course will introduce basic Boolean Algebra including masking concepts. LAN network fundamentals will be studied including peer to peer networks using TCP/IP protocols and Ethernet media. Laboratories will include experiments in logic and small networks and peer to peer networks will be implemented.

Note: Completion of EET 170 is recommended, not required.

Course fee

Typically not offered every term

EIT 116 Fiber Optic Fundamentals (2.5-1) 3 Hours

This course is an introduction to the theory and application of fiber optics as a means of data transmission. This course will cover fiber optic cabling, connectors, splices and tools, power budgets, fiber optic design, installation and testing, and broadband applications. Students completing the course will have a solid foundation in fiber optic networking and will also be prepared to attempt industry supported examinations allowing them to become Certified Fiber Optic Technicians.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Typically not offered every term

EIT 210 Data and Network Communications (3-2) 4 Hours

This course will deal with the fundamental of data communications in network environments. Baseband transmission as well as encoded data transfer methods will be studied. Protocols will be investigated in detail including Ethernet and Sonet at the data transmission level. Frequency spectrum and bandwidth issues will be studied. Routers and routing will be introduced. Laboratories will deal with communication hardware and network interconnections.

Note: Completion of EIT 111 is recommended, not required.

Course fee

Typically not offered every term

EIT 230 Secure Wireless Networking (2-2) 3 Hours

This course will cover the basics of planning and implementing a wireless network, with special focus on using adequate data security techniques. Gateway security, including building gateways and firewalls, and authentication and encryption methods for wireless networks will be explored.

Note: Completion of EIT 111 and ELC 172 are recommended, not required.

Course fee

Typically not offered every term

EIT 250 Wireless Data Communications (2-2) 3 Hours

This course will deal with issues encountered with data communications in a wireless networked environment. Radio frequency technologies will be studied, along with data transmission, protocols, hardware and software installation and support, wireless device applications and security. *Note:* Technologies might include: WiMax, Mesh, EVDO, CDMA and others.

Prerequisite: EIT 230 (C or better)

Recommended: EIT 210 (C or better)

Typically not offered every term

EIT 299 Special Topics: Network Engineering (Variable) 1-4 Hours

Course withdrawn effective Spring 2016.

This course will provide students with more information about specialized topics in areas of computer networking, network and system administration, telecommunications and related fields. *Note:* Topics will be identified for each section of the course. *Prerequisite:* To be determined relative to topic. *May be taken four times, but any topic only once*
Typically not offered every term

Electronics Engineering Technology (ELT)

Engineering, Math and Physical Sciences Division,
Room T302, (847) 543-2044

ELT 111 Electronic Drafting (1-3) 2 Hours

Drawing of electronic components and wiring diagrams, with emphasis on national standards and codes. Pspice schematic capture and PC board software will be introduced.
Course fee
Typically not offered every term

ELT 116 Technical Programming (3-0) 3 Hours

This course will be taught using C++ as the programming language. Examples and programming problems will be drawn from the general body of technical problems.
Note: Recommended preparation MTH 117 or MTH 122 or equivalent knowledge.
Course fee
Typically not offered every term

ELT 117 Industrial Digital Electronics I (2-2) 3 Hours

An introduction to digital electronics with an emphasis on analysis and troubleshooting aspects of digital electronics. It is a part of the one year certificate maintenance program.
Note: Recommended preparation high school algebra or concurrent enrollment in MTH 114 and EET 170 or equivalent knowledge.
Course fee
Typically not offered every term

ELT 118 Industrial Digital Electronics II (2-2) 3 Hours

Continuation of ELT 117 Industrial Digital Electronics I. Emphasis will be on the troubleshooting aspects of digital electronics. This course is a part of the one-year certificate maintenance program.
Note: Recommended preparation EET 170, ELT 172, ELT 117 or equivalent.
Course fee
Typically not offered every term

ELT 151 PC Hardware Fundamentals (2-2) 3 Hours

This course will cover the basic components of a PC, including motherboards, memory, disk drives, cases and power supplies. Computers will be disassembled, reassembled and configured to operate.
Note: Recommended preparation CIT 120 and concurrent enrollment in EET 170 or equivalent knowledge.
Course fee
Typically offered fall and spring only

ELT 152 PC Peripherals and Troubleshooting (2-2) 3 Hours

This course will cover the common peripheral components of a PC, including modems, Sound cards, network interface cards (NIC), and printers. Additionally, troubleshooting of hardware components will be presented, including diagnostic hardware and software. Preventative maintenance issues will be explored.
Prerequisite: ELT 151
Course fee
Typically not offered every term

ELT 171 Industrial Control Systems (2-2) 3 Hours

A study of the electrical/electronic systems used in the control of machinery and processes in industry, and the electrical/electronic systems used to measure, monitor and control the factors involved in the manufacturing process. Emphasis will be on operation and troubleshooting of the electronics involved. Students will gain experience using instrumentation and measuring devices that simulate control situations.
Note: Recommended preparation EET 170 and ELC 172 or equivalent knowledge.
Course fee
Typically not offered every term

ELT 172 Applied Communications Circuits (2-2) 3 Hours

A survey of various communications systems. AM/FM radio systems as well as video communications systems will be included. The troubleshooting aspects of the various circuits will be emphasized.
Note: Recommended preparation EET 170 and ELC 172 or equivalent knowledge.
Course fee
Typically not offered every term

ELT 173 Applied Analog Circuits (2-2) 3 Hours

Introduction to the theory of operation of electronic devices used in amplifiers, oscillators, power supplies and control circuits.
Note: Recommended preparation EET 170, ELC 172 and ELC 113 or equivalent knowledge.
Course fee
Typically not offered every term

ELT 214 Microwave Systems and Measurements (2-3)3 Hours

Continuation of EET 212 Electronic Communications Systems. Systems of electronic application other than radio communication with emphasis on microwave circuitry, devices, and systems including microwave power, frequency, etc. with emphasis on use of specialized microwave test equipment.
Note: Recommended preparation EET 211 and MTH 211 or equivalent knowledge.
Course fee
Typically not offered every term

ELT 217 Microprocessors II (2-2) 3 Hours

Second course in microprocessor electronics and follows EET 216 Microprocessors I. Intended to be part of the Associates in Applied Science degree in Electronics. 80xxx series of microprocessors are covered with introductions to assembly language and C. Concentration is on control applications.
Note: Recommended preparation EET 216 or equivalent knowledge.
Course fee
Typically not offered every term

Course Information and Descriptions

ELT 271 Circuit Analysis Computer Techniques (3-0) 3 Hours

Passive and Active circuits will be analyzed using the evaluation version of Pspice. Circuit behavior will be studied and in some cases circuits will be modified to meet certain design criteria. DC, AC and transient analysis will be performed as well as spectral analysis using the Pspice FFT. This course is intended for presentation via Internet. Required preparation: AC and DC circuit courses and one calculus course.

Typically not offered every term

ELT 272 Circuit Analysis Techniques (3-0) 3 Hours

This course is intended to introduce the student to the use of calculus and transform techniques to circuit analysis. Solutions to first order equations will be done with calculus. Laplace transforms will be introduced and solutions to first and second order circuit will be covered. Circuit solutions using phasor techniques will be reviewed and Pspice will be used to support the class. This course is intended for Internet presentation. Recommended preparation: AC, DC circuit courses and one devices course including transistors.

Typically not offered every term

Emergency Medical Technology (EMT)

Biology and Health Sciences Division,
Room B210, (847) 543-2042

EMT 111 Emergency Medical Technician-Basic (5-4) 7 Hours

This course prepares students to take the licensure examination to become an EMT-B, including classroom instruction, practical demonstrations and testing, and clinical experience. The course is offered at associated hospitals and fire departments in Lake County.

Prerequisite: High school diploma or GED AND College Reading and Writing Readiness AND Basic Algebra Readiness.

Other: 18 years of age or older (at the time of licensure testing)

Course fee

EMT 114 Paramedic Clinical Practicum (0-16) 3 Hours

This course consists of approximately 250 hours of supervised, in-hospital, clinical experience and is offered at associated hospitals in Lake County.

Corequisites: EMT 131 and EMT 115

EMT 115 Paramedic Field Experience Practicum (0-16) 3 Hours

This course prepares students to take the licensing examination to become an EMT- Paramedic. The course consists of approximately 250 hours of supervised, ambulance, pre-hospital patient care experience which includes basic and advanced life support, observation and participation in patient assessment, management, immobilization, transport with ongoing assessment and treatment, and communication skills. Students are required to participate in a specific number of calls and/or hours on duty, depending on the agency, which may require more than the listed number of clinic hours. The course is offered at associated hospitals in Lake County.

Corequisites: EMT 131 and EMT 114

EMT 131 Introduction to Advanced Pre-hospital Care (3.5-1) 4 Hours

This is the first of five courses in Advanced Pre-hospital Care which prepare students to take the licensure examination to become EMT-Paramedics. Each course consists of classroom instruction and practical skills demonstration and testing. This introductory course will address the fundamentals of paramedic practice, including pathophysiology, pharmacology, medication administration and advanced airway management. The course is offered at associated hospitals in Lake County. This course is an approved program by the IDPH under the guidelines of the U.S. Department of Transportation. *Prerequisite:* BIO 111 OR BIO 124 OR BIO 244 and 245 (all C or better) and current Illinois licensure as an EMT-B or EMT-I *Corequisite:* EMT 114 and 115 & current CPR certification (Health Care Provider Level: American Heart Assc or American Red Cross)

EMT 132 Patient Assessment (1.5-1) 2 Hours

This is the second of five courses in Advanced Pre-hospital Care which prepare students to take the licensure examination to become EMT-Paramedics. Each course consists of classroom instruction and practical skills demonstration and testing. This course builds on assessment skills of the basic EMT with special emphasis on advanced patient assessment at the scene. It includes classroom instruction and practical skills demonstration and testing. The course is offered at associated hospitals in Lake County. This course is an approved program by the IDPH under the guidelines of the U.S. Department of Transportation.

Corequisite: EMT 131

EMT 133 Medical Emergencies (4.5-1) 5 Hours

This is the third of five courses in Advanced Pre-hospital Care which prepare students to take the licensure examination to become EMT-Paramedics. Each course consists of classroom instruction and practical skills demonstration and testing. This course will teach the student how to identify and treat many of the medical emergencies likely to be encountered in the pre-hospital setting, including topics in pulmonology, cardiology, infectious diseases, and behavioral disorders. It includes classroom instruction and practical skills demonstration and testing. The course is offered at associated hospitals in Lake County. This course is an approved program by the IDPH under the guidelines of the U.S. Department of Transportation. *Prerequisite:* EMT 132 (C or better)

EMT 134 Trauma Emergencies (2.5-1) 3 Hours

This is the fourth of five courses in Advanced Pre-hospital Care which prepare students to take the licensure examination to become EMT-Paramedics. Each course consists of classroom instruction and practical skills demonstration and testing. This course details the anatomy, physiology, and pathophysiology of trauma. It incorporates advanced pre-hospital care from the mechanism of injury analysis to shock/trauma resuscitation. The course is offered at associated hospitals in Lake County. This course is an approved program by the IDPH under the guidelines of the U.S. Department of Transportation. *Corequisite:* EMT 133

EMT 135 Special Considerations and Operations (5.5-1) 6 Hours

This is the fifth of five courses in Advanced Pre-hospital Care which prepare students to take the licensure examination to become EMT-Paramedics. Each course consists of classroom instruction and practical skills demonstration and testing. This course includes neonatal, pediatric, geriatric, home health care and specially challenged patients, and incident command, ambulance service, rescue, hazardous material, and crime scene operations. It includes classroom instruction and practical skills demonstration and testing. The course is offered at associated hospitals in Lake County. This course is an approved program by the IDPH under the guidelines of the U.S. Department of Transportation.
Corequisite: EMT 134

Emergency and Disaster Management (EDM)

Business and Social Sciences Division,
Room T302, (847) 543-2047

EDM 111 Introduction to Emergency Management (3-0) 3 Hours

This course introduces students to the field of emergency management. Students will be exposed to the terminology and definitions used in emergency and disaster management. Students will examine legal requirements, responsibilities, and laws pertaining to emergency management. An introduction to the incident command system is included.

Prerequisite: College Reading and Writing Readiness

EDM 112 Emergency Planning (3-0) 3 Hours

This course will examine the concepts of writing an emergency operations plan for use in public (government) and private (business) emergency response planning. Students will identify local hazards, analyze the hazard potential, and prepare a basic plan for use in government or business. Planning will encompass all-risk assessments as identified in EDM 111 (Introduction to Emergency Management). Students will develop an understanding of, and utilize, both the National Incident Management System (NIMS) and the National Fire Protection Association (NFPA) Standard 1600: Standard on Disaster/Emergency Management and Business Continuity Programs.

Prerequisite: College Reading and Writing Readiness

EDM 113 Professional Development In Emergency Management (3-0) 3 Hours

This course will enable students to develop their management skills, particularly those skills that apply to emergency management in both the government and private sectors. Students will develop and utilize principles and techniques used by emergency managers in the phases of planning, responding to, and recovering from disaster and emergency situations. Students will evaluate workplace security plans and initiatives for effectiveness, given a variety of sample policies. Students will learn to manage volunteer responders to an emergency event (spontaneous, invited, or uninvited) and how each category of volunteer worker can provide needed assistance or become a hindrance to the overall emergency situation.

Prerequisite: EDM 111 (C or better)

EDM 114 Communication in Emergency Management (3-0) 3 Hours

This course covers several different concepts in interpersonal communications for emergency managers, both those in the private sector as well as those in the public sector. Students will learn to improve their communication skills whether between workers in an Emergency Operations Center (EOC) or between the EOC and responders providing direct assistance in the field. Students will learn techniques used in the release of information to the media and how coordination of information is vital to the success of the operation being conducted. Students will also learn how information is transferred between multiple agencies and organizations that are involved in large-scale events, whether local, state, or federal agencies. Students will develop an understanding of how the International Organization for Standardization (ISO) prepares the private sector for communicating with public agencies involved in emergency response and how developing a cooperative relationship between the public and private sectors will result in an enhanced response to emergency and disaster events.

Prerequisite: EDM 111 (C or better)

EDM 211 Emergency and Disaster Response (3-0) 3 Hours

This course will examine the necessary components required for incident response and recovery. Topics will include rapid situation assessment, special population needs (elderly and persons with disabilities), debris removal and disposal, how to obtain outside help, and continuity of local government operations. The role of local government in disaster recovery will be examined. Emphasis will be made on understanding the impact the various Occupational Safety and Health Act (OSHA) standards have on emergency response, specifically the General Duty Clause, Confined Spaces, Hazardous Materials, and required protective equipment for workers.

Prerequisite: EDM 111 (C or better)

EDM 212 Terrorism and Homeland Security (3-0) 3 Hours

This course focuses on helping the student understand the issues relating to modern day terrorism and how government responds to such events. This course will also introduce students to disasters which often impact our country. Emphasis will be placed on helping students understand the concept of unified response and how multiple, diverse organizations will interact to respond and mitigate such events. Additional emphasis will involve an in-depth understanding of the National Incident Management System (NIMS) and how this system is used by emergency responders. Student groups will work to plan and solve issues related to disaster events of varying complexity.

Prerequisite: College Reading and Writing Readiness

Engineering (EGR)

Engineering, Math and Physical Sciences Division,
Room T302, (847) 543-2044

EGR 115 Applied Statics for Technology (3-0) 3 Hours

This course studies the analysis of forces on structural and mechanical systems. It covers resultants of force systems; algebraic and graphical conditions of equilibrium of force systems; analysis of forces acting on members of frames, trusses, etc; forces due to friction and properties of areas. This course is appropriate for students in engineering technology AAS degree programs.

Note: Students may not receive credit towards graduation for both EGR 115 and EGR 216.

Prerequisite: MTH 117 (C or better)

Corequisite: PHY 121

EGR 120 Introduction to Engineering (.5-1) 1 Hour

This introductory, freshman-level Engineering Transfer course introduces students to the different fields of engineering using case studies and guest speakers from the various engineering disciplines. Students are prepared for successful academic and professional careers by learning about the design process, teamwork, engineering ethics, academic and career planning, applying for internships, appropriate workplace behavior, study skills, and time management

Prerequisite: MTH 108 (C or better) AND College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100

EGR 121 Engineering Design Graphics (2-3) 3 Hours

This is an introductory course in the Engineering Transfer and Engineering Technology curriculum. The course emphasizes the use of graphical communication for engineers, designers and drafters to communicate technical ideas in the context of the engineering design process used in industry. Topics include technical sketching, multiview and pictorial drawings, section views, auxiliary views, dimensioning and tolerancing, the design process, 2D CAD, and 3D parametric solid modeling. A design project is included. *Note:* Previous experience in 2D CAD and 3D solid modeling software is recommended but not required for this course.

Prerequisite: MTH 104 or MTH 115 or MTH 117 (all C or better) or one year of High School Geometry or Consent of Instructor

Course fee

IAI: EGR 941, IND 911

EGR 125 Engineering Statics (3-0) 3 Hours

This course covers analysis of static structures for engineering transfer students. Topics include particle statics, general principles and force vectors, rigid body equilibrium, moments of inertia, distributed forces and centroids, analysis of structures, virtual work, and friction. Theory is applied to analyze engineering structures such as trusses, frames, and machines. This course is designed for students interested in the Engineering Transfer curriculum.

Note: Students may not receive credit towards graduation for both EGR 125 and EGR 221.

Prerequisite: MTH 145 (C or better)

Corequisite: PHY 123

IAI: EGR 942

EGR 215 Mechanics of Materials for Technology (2-2) 3 Hours

This course covers mechanical and physical properties of materials appropriate to the design of engineered structures including frames, machines and buildings. It includes analysis and design of structural joints, torsional shafts, beams and columns and analysis of structures with combined loading. This course is appropriate for students in engineering technology AAS programs.

Note: Students may not receive credit towards graduation for both EGR 215 and EGR 216.

Prerequisite: EGR 115 (C or better)

Course fee

EGR 216 Statics and Mechanics of Materials for Technology (5-1) 5 Hours

Analysis of forces on structural and mechanical systems: resultants of force systems; algebraic and graphical conditions of equilibrium of force systems; analysis of forces acting on members of frames, trusses, etc; forces due to friction and properties of areas.

Mechanical and physical properties of materials such as stress, strain, and modulus of elasticity appropriate to the design of engineered structures including frames, machines and buildings. Analysis and design of structural joints, torsional shafts, beams and columns. Analysis of structures with combined loading. Includes laboratory experiments/demonstrations.

Note: Students may not receive credit towards graduation for EGR 216 and EGR 115 or EGR 215.

Prerequisite: PHY 121 and MTH 117

Typically offered spring only

EGR 222 Engineering Mechanics of Materials (3-0) 3 Hours

This course is an engineering study of the elementary mechanics of deformable bodies/strength of materials. The course includes analysis of: the elastic and inelastic relationships between external forces acting on engineering structures and the stresses and deformations produced; tension and compression members; members subjected to torsion and to bending; buckling (columns) combined stresses; repeated loads (fatigue); energy loads and impact; and influences of the properties of materials. This course is designed for Engineering Transfer students.

Prerequisite: EGR 125 or EGR 221 (both C or better)

IAI: EGR 945

EGR 225 Engineering Dynamics (3-0) 3 Hours

This course introduces students to particle kinematics (rectilinear and curvilinear); Newton's laws; energy, work, and momentum methods; planar dynamics and rigid bodies; rigid body kinematics; impulse and momentum; and vibrations. Application to engineering structures and mechanical systems emphasized. This course is designed for students interested in the Engineering Transfer curriculum.

Note: Students may not receive credit towards graduation for both EGR 225 and EGR 221.

Prerequisite: EGR 125 (C or better) and PHY 123 (C or better)

Corequisite: MTH 246

IAI: EGR 943

EGR 260 Introduction to Circuit Analysis (3-2) 4 Hours

This course will introduce circuit analysis at the engineering level. It will include the standard analysis tools such as nodal analysis, mesh analysis, Thevenin's and Norton's theorems and superposition. Impedances are defined and AC steady state analysis is carried out as well as analysis of transients in simple circuits. LaPlace transform analysis is introduced as are bode plots and transfer functions. The course will also cover three phase circuits and transformers. Operational amplifiers are also introduced.

Note: For Electrical/Computer Engineering majors interested in Digital Circuits, see EET 223 (Introduction to Digital Electronics).

Prerequisite: MTH 146 (C or better)

Corequisite: PHY 124 and MTH 246 or MTH 227

Typically offered spring only

IAI: EGR 931L

EGR 299 Special Topics in Engineering (Variable) 1-3 Hours

This course addresses the in-depth study of special topics in engineering that do not have specific courses in the catalog. Course content will vary depending on the topic being studied. Topics may be drawn from any of the various engineering disciplines, including mechanical, electrical, civil, computer, biomedical, chemical, etc.

This course is repeatable up to three times, any topic only once, for a maximum of 6 hours toward AES degree completion.

May be taken four times for credit toward degree

English (ENG)

Communication Arts, Humanities and
Fine Arts Division, Room B210, (847) 543-2040

ENG 100 Success in Writing and Reading (1-0) 1 Hour

This course is designed for students who have not met the College Reading and Writing Readiness prerequisite, but whose academic proficiency test scores indicate that they are close to that achievement. Each section of English 100 is linked with a section of English 121 and the two courses are taught by the same instructor. In this class, students will work on developing, revising, and editing papers assigned in their English 121 class and on strategies for reading challenging course texts.

Corequisite: ENG 121 and Department Consent

ENG 104 Individual Topics in Writing and Reading (1-0) 1 Hour

English 104 is a module designed to help students develop their competencies in writing and/or reading. The instruction is self-paced and self-scheduled. Each student, with an assigned tutor and under the supervision of the writing Center Coordinator, will design an individualized program of work, which will consist of three to five "target areas." Working with a tutor, students will write three to five short papers and work through various specifically focused exercises and activities related to the target area that they have chosen. Students must attend at least 12 conferences with a tutor. For evaluation, students will submit a portfolio of their work, including a writing assignment reflecting upon their experiences and progress in the course.

ENG 108 Strategic Reading and Writing I (6-0) 6 Hours

This developmental course is designed to provide time-intensive experience with critical reading, writing, and thinking skills to prepare for college-level coursework.

Prerequisite: APT score of 80 or higher OR ELI 103 and ELI 104 (both C or better) OR ELI 107 OR College Reading and Writing Readiness

ENG 109 Strategic Reading and Writing II (3-0) 3 Hours

This developmental course is designed to provide experience with critical reading, writing, thinking, and research skills to prepare for college-level coursework.

Prerequisite: APT score of 122 or higher OR ENG 108/ELI 108 (C or better) OR ELI 103 and ELI 104 (both B or better) OR ELI 107 (C or better) OR College Reading and Writing Readiness

ENG 113 Technical Communication Practicum (3-0) 3 Hours

Technical Communication Practicum provides work simulation experience in a variety of writing areas according to the student's major occupational area. The purpose of the course is to allow development and evaluation of writing assignments taken from the student's supervised experiences to on-the-job simulation with the responsibilities of the technical writer.

Prerequisite: ENG 126

ENG 120 Technical Composition I (3-0) 3 Hours

A beginning college level writing course. Emphasis is on writing with conciseness, precision and objectivity. Specifically covered are business letters, memoranda, periodic reports, descriptions of mechanisms and processes, instructions and proposals. A variety of business and technical communication projects are completed, all based on practical situations in the students' fields of study. Graphic elements/unit on publishing technology.

Prerequisite: College Reading and Writing Readiness

ENG 121 English Composition I (3-0) 3 Hours

This course is designed to help students develop their competence in college-level writing and in the analysis of texts so they can enter the dialogue of the academic community. This course includes the analysis and practice of argument and the use of critical thinking to read, analyze, and produce college-level texts.

Prerequisite: College Reading and Writing Readiness

IAI: C1 900

ENG 122 English Composition II (3-0) 3 Hours

This course furthers the work done in English Composition I by providing students more experience as academic writers, readers, researchers and critical thinkers. To help students construct their own meaning while engaging with the texts of others, they will develop the ability to collect, evaluate, and incorporate varied sources in thoughtfully-written analyses and arguments. Students' work should demonstrate the ability to position themselves within the context of academic and societal conversations using a variety of texts, which may include literature, arguments on various issues, news articles, films, advertisements, and websites.

Prerequisite: ENG 121 (C or better)

IAI: C1 901R

Course Information and Descriptions

ENG 123 Mass Communications (3-0) 3 Hours

Mass Communications is designed to provide an overview of the history, nature, functions and responsibilities of the mass communications media from a global perspective with an emphasis on their continuous and evolving role in American society. The course introduces students to the different but converging media, the information they transmit, the entertainment they provide, the markets they seek and the audiences they serve. Students will explore the ethical, legal and business considerations that journalists, artists, management and ownership face in American society.

Prerequisite: College Reading and Writing Readiness

IAI: MC 911

ENG 124 Newswriting I (3-0) 3 Hours

This course is designed to introduce students to the fundamentals of gathering, analyzing, organizing, writing, and editing news for a mass audience reached by different but converging media. Students will be introduced to the techniques of reporting, including direct observation and interviewing as well as the use of online and hard-copy documents. Students also will develop journalistic reporting and writing skills transferable to a variety of platforms, with an emphasis on verifying information as well as writing to meet professional deadlines.

Prerequisite: College Reading and Writing Readiness

IAI: MC 919

ENG 126 Advanced Composition: Scientific and Technical Communications (3-0) 3 Hours

This course is a transferable advanced composition course stressing the writing process for students in scientific and technical majors. It covers writing concisely, precisely, and clearly for a variety of purposes and audiences. It includes a multi-source research paper, writing scientific and technical reports, writing abstracts and summaries of magazine articles, writing letters, proposals, resumes, instructions, and descriptions. Students will read, write, and think critically about a variety of issues in the scientific and technical discourse communities including the environment and the ethics of new technology.

Prerequisite: ENG 120 or ENG 121(either C or better)

IAI: C1 901R

ENG 127 Introduction to General Linguistics (3-0) 3 Hours

This introductory course will explore the origins of language, its internal structure and its function. This course will analyze language in terms of its phonology, morphology, grammar, syntax, semantics and pragmatics. In addition, the course will examine the application of linguistic theory to second language learning and teaching.

Prerequisite: College Reading and Writing Readiness

ENG 128 Linguistics and Society (3-0) 3 Hours

This course will introduce students to some of the important principles of linguistics, as well as to the complex nature of language acquisition and use within any given society. The course will discuss some of the unique characteristics of human languages, the various theories of first and second language acquisition, the interrelation between language and gender and language and ethnicity and the social and political ramifications of different language attitudes; in addition, the course will examine the communicative and social significance of different Speech Acts.

Corequisite: ELI 105 or College Reading and Writing Readiness

ENG 129 Women in Literature (3-0) 3 Hours

This course introduces students to the wealth of literature by and/or about women. Discussion of readings, films and other media enables students to analyze the portrayal of women in literature and to trace the historical development of writing by women. It will explore the significant historical conditions and contributions of this underrepresented group within the Western World.

Prerequisite: ENG120 or ENG 121 (C or better)

Fulfills the CLC I/M Education Requirement.

IAI: H3 911D

ENG 137 Document Design in Technical Writing (3-0) 3 Hours

This course will introduce the student to the elementary principles of document design in technical writing. In addition to reading about these principles, they will have the opportunity to read articles written by experts in the field that will apply to these principles. By the end of the course, the student will be able to design and write an instructional document for a general audience and justify the design they chose.

Prerequisite: College Reading and Writing Readiness

ENG 220 Introduction to Scripts for Screen (3-0) 3 Hours

This course will introduce students to the concepts, structure and format needed to develop reading scripts for TV and film. Students will complete several invention and writing exercises in this screenwriting genre. They will analyze professional and student scripts. The course emphasizes creative expression and in-class workshop methodology.

Prerequisite: ENG 121 (C or better)

ENG 222 Creative Writing (3-0) 3 Hours

This course is designed to introduce students to a variety of approaches, writing techniques and stages of the crafting process in the genres of prose fiction, creative nonfiction and poetry. Students will complete writing exercises in these genres. They will analyze professional prose and poetry. The course emphasizes creative expression and critique of student writing.

Prerequisite: College Reading and Writing Readiness

ENG 223 Early American Literature (3-0) 3 Hours

In this course, students will read and study selected writings of a number of major American writers from the colonial period up to 1900. Students will explore this literature in light of its social, historical, philosophical, aesthetic, and critical contexts. They also will examine the role of this literature in shaping American culture and defining the national identity.

Prerequisite: ENG 120 or ENG 121(either C or better)

IAI: H3 914

ENG 224 Creative Writing II (3-0) 3 Hours

This course is designed to focus on the creative process in one of three specific genres - prose fiction, prose creative nonfiction or poetry. The course will emphasize the creative process and the ability to critique and analyze texts in the topic genre in a workshop format. Class sessions will use the discussion of student and professional writing as the point of departure for an in-depth study of the topic genre. Individual conferences will supplement lectures and workshops to afford students a detailed response to their writing.

Prerequisite: ENG 121 (C or better)

ENG 225 Survey of British Literature I (3-0) 3 Hours

This course introduces students to the authors and texts that have greatly influenced the literature of English speakers. From the first English epic to the poems, prose, and drama of the Eighteenth Century, the works covered reflect the major artistic developments of Pre-Romantic British literature and provide a background to modern writing in the English language.

Prerequisite: ENG120 or ENG 121 (C or better)

IAI: H3 912

ENG 226 Survey of British Literature II (3-0) 3 Hours

This course introduces students to British and Anglophone literatures from the Romantic, Victorian, Modern, and Postmodern periods. Students will explore the philosophical, social, aesthetic, and critical contexts of selected literature from the nineteenth, twentieth, and twenty-first centuries. *Note:* ENG 225 and 226 are independent courses. ENG 225 is not a prerequisite for ENG 226.

Prerequisite: ENG120 or ENG 121 (C or better)

IAI: H3 913

ENG 227 Introduction to Shakespeare (3-0) 3 Hours

Introduction to Shakespeare offers an examination of the writer's works and their historical and literary background through readings and discussions of selected comedies, histories and tragedies. Videotapes of performances will be shown in class.

Prerequisite: ENG120 or ENG 121 (C or better)

IAI: H3 905

ENG 228 World Literature (3-0) 3 Hours

This course examines representative writers of European, Asian, African, Middle Eastern, and Latin American literature. It surveys the classics and the influential works from societies around the world, their periods and movements from ancient times to the present. It will introduce the study of the significant conditions and contributions of these underrepresented groups. Omitted or represented sparingly are British and North American writers, since other courses focus on these authors.

Prerequisite: ENG120 or ENG 121 (C or better)

Fulfills the CLC I/M Education Requirement.

IAI: H3 906

ENG 229 American Literature: 20th Century to Present (3-0) 3 Hours

This course introduces students to American literature in the 20th and 21st centuries and is designed to acquaint them with selected major writers of prose fiction, nonfiction, poetry, and drama. Students will explore this literature in light of its social, historical, philosophical, aesthetic, and critical contexts. They also will examine the role of this literature in shaping American culture and defining the national identity.

Prerequisite: ENG 120 or ENG 121(either C or better)

IAI: H3 915

ENG 241 Introduction to Poetry (3-0) 3 Hours

The course is designed to introduce students to a wide variety of English and American poetry, both traditional and modern. Emphasis will be on the relationship between meaning and form in individual poems, and class discussion will allow for student analysis, interpretation and critical evaluation.

Prerequisite: ENG 120 or ENG 121(either C or better)

IAI: H3 903

ENG 243 Introduction to Fiction (3-0) 3 Hours

The course is designed to introduce students to a wide variety of English, American, and Continental short stories, both traditional and modern. At least two longer short stories will be read, and at least one novel will be selected later in the course. Emphasis will be on the relationship between meaning and form in individual stories and the novel, and class discussion will allow for student analysis, interpretation and critical evaluation.

Prerequisite: ENG 120 or ENG 121(either C or better)

IAI: H3901

ENG 244 Mythology and Fairy Tales (3-0) 3 Hours

This course introduces students to the study of myths, legends, and fairy tales from various cultures. Students will consider Greek, Norse, and Hindu mythology as well as Grimm's fairy tales. The lasting power and influence of mythological themes and archetypal symbolism will be explored.

Prerequisite: ENG120 or ENG 121 (C or better)

Fulfills the CLC I/M Education Requirement.

IAI: H9 901

ENG 246 Latin American Writers (3-0) 3 Hours

This course introduces students to significant Latin American writers. Drawing upon poetry, short fiction, novels and memoirs in English, the course will present and discuss the significant conditions and contributions of people of this underrepresented culture. The assigned readings will be in English and will exemplify trends in Latin American literature.

Prerequisite: ENG120 or ENG 121 (C or better)

Fulfills the CLC I/M Education Requirement.

IAI: H3 908N

ENG 247 International Women Writers (3-0) 3 Hours

This course introduces students to the literary contributions of women writers outside of the United States, Britain, and Europe. Modern novels and stories, ancient to modern poems, and other media will give students windows to view the concerns, triumphs, dreams, politics, and family lives of women in international cultures. This course will introduce the study of the significant conditions and contributions of this underrepresented group.

Prerequisite: ENG120 or ENG 121 (C or better)

Fulfills the CLC I/M Education Requirement.

IAI: H3 911D

ENG 249 Children's Literature (3-0) 3 Hours

This course introduces students to significant works, authors and trends in literature written for children and young adults. Emphasis will be placed on identifying various literary genres, developing criteria for evaluation of texts as well as exploring multicultural works.

Prerequisite: ENG120 or ENG 121 (C or better)

IAI: H3 918

ENG 260 Introduction to Writing Center Theory and Practice (3-0) 3 Hours

This course is designed to introduce student tutors to the fundamental issues of theory and practice underlying writing center work. Topics will include practical strategies and techniques for effective tutoring in a variety of situations and with a diversity of writers as well as theoretical issues involving language, literacy, and difference.

Prerequisite: ENG 121

Course Information and Descriptions

ENG 261 Methods of Teaching English Language Learners (ELLs) (3-0) 3 Hours

This course will discuss approaches to teaching English Language Learners (ELLs). Techniques for needs assessment, syllabus design, selection of course materials and assessment will be introduced. Current methods of teaching academic content in English to ELLs will also be presented.

Prerequisite: College Reading and Writing Readiness

ENG 262 Theories of Teaching ELLs and Bilingual Education (3-0) 3 Hours

This course will introduce the prominent theories of second language acquisition and teaching with a special emphasis on the instructional models for teaching of English Language Learners (ELLs). In addition, the course will discuss the relationship between theory and practice and the relevance of theory to the language classroom.

Prerequisite: College Reading and Writing Readiness

ENG 263 Early American Minority Writers (3-0) 3 Hours

This course introduces students to the wealth of literature contributed by minority writers before 1920. For this course minority will be defined as groups who have not traditionally been represented in the American Literary Canon. Such groups include, but shall not be limited to, African Americans, American Indians, Asian Americans, Hispanic/Latino Americans, working class Americans, and gay/lesbian Americans. This course will explore the significant historical conditions and contributions of these underrepresented groups within the United States. All forms of literature will be covered--folktales, poetry, short stories, novels, plays, autobiographies, memoirs, and oral forms.

Prerequisite: ENG120 or ENG 121 (C or better)

Fulfills the CLC I/M Education Requirement.

ENG 264 Modern American Minority Writers (3-0) 3 Hours

This course introduces students to the wealth of literature contributed by minority writers after 1920. For this course, minority will be defined as groups who have not traditionally been represented in the American Literary Canon. Such groups include, but shall not be limited to, African Americans, American Indians, Asian Americans, Hispanic/Latino Americans, working class Americans, and gay/lesbian Americans. This course will explore the significant historical conditions and contributions of these underrepresented groups within the United States. All forms of literature will be covered--folktales, poetry, short stories, novels, plays, autobiographies, memoirs, and oral forms.

Prerequisite: ENG120 or ENG 121 (C or better)

Fulfills the CLC I/M Education Requirement.

ENG 265 Teaching Grammar to ELLs (3-0) 3 Hours

This course will begin with a brief historical perspective of transformational, structural and traditional methodologies used in teaching English Language Learners (ELLs). In addition, the course will focus on a descriptive analysis of English and some of the nuances of English grammar. Finally, the course will consider the role of grammar instruction in the English language classroom.

Prerequisite: College Reading and Writing Readiness

ENG 266 Professional Communication (3-0) 3 Hours

Professional Communication is a sophomore-level course designed for students who have completed their composition requirements and are interested in furthering their writing skills for a variety of purposes. Students will learn about technical writing, writing for publication, writing magazine articles, writing company newsletters, doing research in the sciences and social sciences, writing in the professions, writing reports for industry, the impact of technology on writing and publishing, document design, writing computer manuals and online documentation.

Prerequisite: ENG 121 or ENG 126

ENG 267 Teaching Pronunciation to ELLs (3-0) 3 Hours

This course will introduce students to the basic concepts in articulatory phonetics, including the physiology of articulation, phonetic characterization of individual speech sounds, stress at the word and sentence level, intonation patterns, rhythm and blending. Students will apply this knowledge in examining and developing methods and techniques used to teach pronunciation to English language learners (ELLs).

Prerequisite: College Reading and Writing Readiness

ENG 268 Assessment of ELLs (3-0) 3 Hours

This course will provide participants with a basic understanding of assessment concepts and terminology. Current assessment tools used with English Language Learners (ELLs) will be introduced. The course will also examine alternative assessments and techniques for evaluating and designing effective assessments for ELLs.

Prerequisite: College Reading and Writing Readiness

ENG 271 Teaching English to Speakers of Other Languages Practicum (1-12) 3 Hours

This course will include observation of experienced ESL teachers, as well as supervised teaching in an ESL setting. It will include evaluating course materials and planning and implementing of lesson plans that apply TESOL theory and methodology in the language classroom.

Prerequisite: ENG 127, ENG 128, ENG 261, ENG 262, ENG 265, ENG 267, ENG 268 and CMM 127 (all C or better) and consent of instructor

English Language Instruction (ELI)

Communication Arts, Humanities and
Fine Arts Division, Room B210, (847) 543-2040

ELI 100 Topics in Academic Enhancement for English Language Learners (Variable) 1-4 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course will help high- intermediate to advanced level English language learners to improve and practice specific language skills, such as pronunciation, vocabulary, or grammar, in an academic or professional context. *Note:* This course may be repeated.

Prerequisite: COMPASS ELI score of 180 or higher OR College Reading and Writing Readiness

May be taken four times for credit toward degree

ELI 101 Academic English-Beginning (6-0) 6 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course offers intensive academic language instruction at the beginning level to English language learners who want to pursue academic studies in American colleges and universities or who want to practice their careers in the United States. The course is divided into two sections: one focuses on Reading and Oral Skills and the other focuses on Writing and Grammar. However, both sections provide integrated practice and reinforcement for students in all skills--reading, writing, listening, speaking, grammar and vocabulary--as well as American culture and study skills. *Prerequisite:* COMPASS ELI score of 120 or higher; OR College Reading and Writing Readiness

ELI 102 Academic English-Intermediate (6-0) 6 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course offers intensive academic language instruction at the intermediate level to English language learners who want to pursue academic studies in American colleges and universities or who want to practice their careers in the United States. The course is divided into two sections: one focuses on Reading and Oral Skills and the other focuses on Writing and Grammar. However, both sections provide integrated practice and reinforcement for students in all skills--reading, writing, listening, speaking, grammar and vocabulary--as well as American culture and study skills. *Prerequisite:* Both sections (12 hours) of ELI 101 (C or better); OR COMPASS ELI score of 155 or higher; OR College Reading and Writing Readiness

ELI 103 Academic English - Advanced I (6-0) 6 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course offers intensive academic language instruction at the advanced level to English language learners who want to pursue academic studies in American colleges and universities or who want to practice their careers in the United States. The course focuses on Writing and Grammar. However, it provides integrated practice and reinforcement for students in all skills--reading, writing, listening, speaking, grammar and vocabulary--as well as American culture and study skills.

Note: ELI 103 and ELI 104 are independent courses. ELI 103 is NOT a prerequisite for ELI 104.

Prerequisite: 12 credit hours in ELI 102 with a grade of C or better; OR COMPASS ELI score of 200 or higher; OR College Reading and Writing Readiness

ELI 104 Academic English - Advanced II (6-0) 6 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course offers intensive academic language instruction at the advanced level to English language learners who want to pursue academic studies in American colleges and universities or who want to practice their careers in the United States. The course focuses on Reading and Oral Skills. However, it provides integrated practice and reinforcement for students in all skills--reading, writing, listening, speaking, grammar and vocabulary--as well as American culture and study skills.

Note: ELI 103 and ELI 104 are independent courses. ELI 103 is NOT a prerequisite for ELI 104.

Prerequisite: 12 credit hours in ELI 102 with a grade of C or better; OR COMPASS ELI score of 200 or higher; OR College Reading and Writing Readiness

ELI 105 Academic English for English Language Learners Transitional I (3-0) 3 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

Level 1 of a 3 level course in academic English for English Language Learners (ELLs) at the transitional level who want to pursue academic studies in American colleges and universities or who want to practice their careers in the United States. This course is for students simultaneously enrolled in another academic class, which is determined by the college. Students will improve all language skills - reading, writing, speaking and listening - while focusing on the content area of the other academic class. Emphasis is on listening and comprehending academic lectures; reading, summarizing, and discussing expository and academic readings; writing expository essays; and participating in classroom and panel discussions. *Prerequisite:* COMPASS ELI score of 241 or higher; OR ELI 103 and ELI 104 both C or better; OR College Reading and Writing Readiness

ELI 106 Academic English for English Language Learners Transitional II (3-0) 3 Hours

Level 2 of a 3 level course in academic English for English Language Learners (ELLs) at the transitional level who want to pursue academic studies in American colleges and universities or who want to practice their careers in the United States. This course is for students simultaneously enrolled in another academic class, which is determined by the college. Students will improve all language skills - reading, writing, speaking and listening - while focusing on the content area of the other academic class. Emphasis is note taking for academic lectures and readings; vocabulary enhancement and grammar usage; writing expository essays, reflective journals and reports; participating in debates, interviews and small group presentations

Prerequisite: ELI 105; OR Co-Enrolled in ELI 105; OR College Reading and Writing Readiness

ELI 107 Academic English for English Language Learners Transitional III (3-0) 3 Hours

Level 3 of a 3 level course in academic English for English Language Learners (ELLs) at the transitional level who want to pursue academic studies in American colleges and universities or who want to practice their careers in the United States. This course is for students simultaneously enrolled in another academic class, which is determined by the college. Students will improve all language skills - reading, writing, speaking and listening - while focusing on the content area of the other academic class. Emphasis is on preparing a formal presentation and reading and synthesizing materials for a written research project.

Prerequisite: ELI 106 OR Co-Enrolled in ELI 106 OR College Reading and Writing Readiness

ELI 108 Academic Reading and Writing for English Language Learners (6-0) 6 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course is designed for English language learners who have been educated in the US or who have lived for many years in the US but who still need to develop advanced academic reading and writing skills necessary to succeed in courses in American colleges and universities. This course will focus on necessary academic reading and writing skills as well as vocabulary enrichment and grammar practice that English language learners need to continue progress in the written forms of their second language.

Prerequisite: COMPASS ELI score of 210 or higher OR APT score of 80 or higher OR ELI 103 OR ELI 104 OR ELI 107 OR College Reading and Writing Readiness

Course Information and Descriptions

ELI 109 Academic Reading and Writing for English Language Learners II (3-0) 3 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course is designed for English language learners who have been educated in the US or who have lived for many years in the US but who still need to further enhance their academic reading and writing skills in order to succeed in courses in American colleges and universities. This course is also designed for advanced English Language Learners who have completed other ELI courses but still need additional ELI support in order to gain confidence in their reading and writing abilities. This course will focus on necessary academic reading and writing skills as well as vocabulary enrichment and grammar practice that English language learners need to continue progress in the written forms of their second language. Important study skills will also be practiced. There will be pronunciation practice of key vocabulary and group discussion on a regular basis. *Prerequisite:* Score on COMPASS ELI - 251 or higher, OR APT - 122 or higher; OR ELI 103 and ELI 104 (both B or better); OR ELI 107, ELI 108, OR ENG 108 (all C or better); OR College Reading and Writing Readiness

ELI 125 Introduction to American College Culture (Variable) 1-4 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course introduces college-level academic strategies and acculturation skills to English language learners with academic goals. Topics will include the organization of higher education systems in the US, the differences and navigation of US grading systems, Western learning and teaching styles, personal and academic support structures within the college, differences in academic requirements and expectations, appropriate classroom behavior and linguistic forms, and healthy and safe acclimation to the academic and social college environment.

Prerequisite: COMPASS ELI test score of 200 or higher OR APT score of 80 or higher OR College Reading and Writing Readiness

Corequisite: ELI 103 or ELI 104 or ELI 105 or ELI 106 or ELI 107 or ELI 108 or ELI 109

English as a Second Language (ESL)

Adult Basic Education, GED® and ESL Division Building 4, (847) 543-2021

Adult Education classes are intended for people who live in Lake County. They are not appropriate for students with B1, B2, F1, F2, J1 or J2 visas, nor are they appropriate for short-term visitors to the U.S.

In general, students must be at least 18 years old in order to enroll in adult education classes. However, 16-year-olds and 17-year-olds may register with an official Secondary School Reference Form signed by their local High School authorized representative. U.S. High School graduates and 16-year-olds must meet additional eligibility requirements. New students must attend an orientation session before attending classes.

The Adult Basic Education, GED and ESL Division provides several specific types of educational opportunities and is funded in part by grants from the federal government.

ESL 26 ESL: Academic Purposes: Level II: Speaking and Listening (3-0) 3 Hours

Students learning English at level 2 of English language proficiency will practice speaking and listening in English to prepare them for later academic oral work. Course content will help students to sharpen appropriate speaking and listening skills such as: clarification and repetition requests, following oral instructions, responding correctly to dictated materials and giving oral presentations.

ESL 27 ESL: Academic Purposes: Level II: Grammar (3-0) 3 Hours

Students learning English at level 2 of English language proficiency will learn English grammar and syntactic structures to help them in academic speaking, reading and writing. Course content will include singular and plural nouns and verbs, pronouns, adjectives and adverbs and present and present progressive verbs. Practice will include both written and oral activities.

ESL 28 ESL: Academic Purposes: Level II: Reading (3-0) 3 Hours

Students learning English at level 2 of English language proficiency will read in English to prepare for later academic reading assignments. Students will read short narrative, descriptive and explanatory passages. They will develop multiple comprehension strategies, such as finding the main idea, noticing chronological order and using picture dictionaries to clarify meaning of unfamiliar words.

ESL 29 ESL: Academic Purposes: Level II: Writing and Computer Skills (3-0) 3 Hours

Students learning English at level 2 of English language proficiency will write in English to prepare them for later academic written assignments. Students will practice writing a description and writing a personal topic. They will strengthen their writing by adding specific details, revisiting and composing multiple drafts. This course includes basic word processing skills for writing future college papers and using the Internet as a resource for language learning.

ESL 30 Beginning English as a Second Language Literacy (Variable) 3-6 Hours

This course is intended for students with no proficiency in English and/or very low literacy skills in their native language.

Course fee

May be taken four times for credit

ESL 31 Beginning English as a Second Language II (3-0) 3 Hours

**Course Modification effective Spring 2017. For details, refer to addendum.*

This course is a continuation of ESL 030 (Beginning ESL I). It is intended for students with no proficiency in English and/or very low literacy skills in their native language. This course will enable students to master the "survival" vocabulary most commonly encountered in their everyday life, and prepare them more adequately for ESL 040 (Beginning ESL).

Course fee

May be taken four times for credit

ESL 36 ESL: Academic Purposes: Level III: Speaking and Listening (Variable) 3-6 Hours

Students learning English at level 3 of English language proficiency will practice speaking and listening in English to prepare them for later academic oral work. Course content will help students to sharpen appropriate speaking and listening skills such as: following oral instructions, talking about present abilities, past experiences and future goals, managing conversations and giving short oral presentations.

Course fee

May be taken four times for credit

ESL 37 ESL: Academic Purposes: Level III: Grammar (Variable) 3-6 Hours

Students learning English at level 3 of English language proficiency will learn English grammar and syntactic structures to help them in academic speaking, reading and writing. Course content will include past and future verb tenses, forming questions, comparatives and superlatives and modal forms.

Course fee

May be taken four times for credit

ESL 38 ESL: Academic Purposes: Level III: Reading (3-0) 3 Hours

Students learning English at level 3 of English language proficiency will read in English to prepare for later academic reading assignments. Students will read short authentic and adapted selections and will develop multiple comprehension strategies, such as finding main ideas and details, identifying transition words and using a bilingual dictionary.

Course fee

May be taken four times for credit

ESL 39 ESL: Academic Purposes: Level III: Writing and Computer Skills (3-0) 3 Hours

Students learning English at level 3 of English language proficiency will write in English to prepare them for later academic written assignments. Students will practice writing about a process, narrating a past experiences and describing future goals. They will strengthen their writing by adding specific details, using paragraphs appropriately, revising and composing multiple drafts. This course includes basic word processing skills for writing future college papers and using the Internet as a resource for information and for language learning.

Course fee

May be taken four times for credit

ESL 40 Beginning English as a Second Language III (Variable) 3-6 Hours

This course is for students who have little or no knowledge of English. Students will learn to speak, read and write using present progressive, future and imperative verb forms. They will be able to use singular and plural nouns, pronouns, prepositions of place, possessives, time adverbs and descriptive adjectives. They will acquire basic vocabulary to describe themselves and their environment.

Course fee

May be taken four times for credit

ESL 41 Beginning English as a Second Language IV (3-0) 3 Hours

**Course Modification effective Spring 2017. For details, refer to addendum.*

This course, a continuation of Beginning ESL III, is for students who have little or no knowledge of English. Students will learn how to ask and answer basic information questions about themselves. They will practice using "be" and action verbs in several tenses. They will increase their vocabulary in the areas of occupations, places in the community, common actions, adjective opposites and family relationships. They will read short passages and write sentences using these structures and vocabulary items.

Course fee

May be taken four times for credit

ESL 42 Beginning English as a Second Language V (Variable) 3-6 Hours

This course is for students who have little knowledge of English. Students will learn to speak, read, and write using negative statements in present and future tenses, auxiliary verbs "can" and "have to", clothing vocabulary, colors, countries, nationality and languages, and why/because questions. They will concentrate on listening and speaking skills, with additional work on reading and writing.

Course fee

May be taken four times for credit

ESL 43 Beginning English as a Second Language VI (3-0) 3 Hours

**Course Modification effective Spring 2017. For details, refer to addendum.*

This course, a continuation of Beginning ESL V, is for students who have little knowledge of English. Students will strengthen their use of present and future tense verbs and begin learning to use the past tense. They will learn common regular and irregular verbs. They will acquire vocabulary in the areas of parts of the body, aches and pains, symptoms, and time problems and giving excuses. Listening and speaking will be stressed with additional work on reading and writing.

Course fee May be taken four times for credit

ESL 44 English as a Second Language - Writing Improvement I (Variable) 1.5-3 Hours

This course is for English-as-a-Second Language students from the upper beginning to the advanced level who want to write better in English. Students will learn spelling rules and work on improving their vocabulary, sentence structure and paragraph organization.

Course fee May be taken four times for credit

ESL 45 English as a Second Language - Conversation I (Variable) 1.5-3 Hours

This course is for English-as-a-Second Language students who already know some English grammar and have some knowledge of vocabulary but wish to improve their ability to speak and understand English in various social and business situations. American slang and usage will be taught.

Course fee

May be taken four times for credit

Course Information and Descriptions

ESL 46 ESL: Academic Purposes Level IV Speaking and Listening (Variable) 3-6 Hours

Students learning English at level 4 of English language proficiency will practice speaking and listening in English to prepare them for later academic oral work. Content will include academic topics through various oral formats, including pair work, group work, extended discussion, lectures, presentations, guest speakers, tapes, and movies.

Course fee

May be taken four times for credit

ESL 47 ESL: Academic Purposes Level IV Grammar (3-0) 3 Hours

Students learning English at level 4 of English language proficiency will learn English grammar and syntactic structures to help them in academic speaking, reading and writing. Covered structures include pronoun forms, irregular past forms, modals, questions, progressive forms, future, and participial adjectives. Practice includes both oral and written activities.

Course fee

May be taken four times for credit

ESL 48 ESL: Academic Purposes Level IV Reading (3-0) 3 Hours

Students learning English at level 4 of English language proficiency will read in English to prepare for later academic reading assignments. They will read authentic short stories and essays and adapted non-fiction articles, learn word forms and parts of speech, learn to use a monolingual dictionary, scan and skim texts for information, and use contextual clues to find meanings of new vocabulary. Practice includes both oral and written work related to texts and new vocabulary.

Course fee

May be taken four times for credit

ESL 49 ESL: Academic Purposes Level IV Writing (3-0) 3 Hours

Students learning English at level 4 of English language proficiency will write in English to prepare them for later academic writing assignments. They will practice narrative and expository forms through written exercises, journals, personal essays, and summaries. This course includes basic word processing and skills for writing college papers.

Course fee

May be taken four times for credit

ESL 50 Intermediate English as a Second Language I (Variable) 1-6 Hours

This course is for students who can already speak and write in the present and future and can describe themselves in their environment using basic vocabulary and structures. Students will learn to use regular and irregular past and present perfect verbs. They will practice communicating using infinitives, direct and indirect objects, comparative adjectives and more extensive vocabulary.

Course fee

May be taken four times for credit

ESL 51 Intermediate English as a Second Language II (3-0) 3 Hours

**Course Modification effective Spring 2017. For details, refer to addendum.*

This course, a continuation of Intermediate ESL I, is for students who know some English and who can speak and write using present and future tenses and basic vocabulary and structures. Students will work intensively on mastering verb use and learning irregular verb forms. Past tense will be reviewed and past continuous introduced. Students will also learn to use direct and indirect objects correctly and to use quantity words with nouns. Vocabulary areas will include weather, reading maps and giving directions, and giving compliments.

Course fee May be taken four times for credit

ESL 52 Intermediate English as a Second Language III (Variable) 3-6 Hours

This course is for students who already know some English and who can speak and write using present and future tenses and basic vocabulary and structures. Students will learn correct use of intensifiers, reflexive pronouns, negative words and comparative adverbs. They will learn the future tense of auxiliary verbs and gain vocabulary knowledge in the areas of accidents and emergencies, polite excuses, customer complaints and the automobile.

Course fee

May be taken four times for credit

ESL 53 Intermediate English as a Second Language IV (3-0) 3 Hours

**Course Modification effective Spring 2017. For details, refer to addendum.*

This course, a continuation of Intermediate ESL III, is for students who already know some English and who can speak, read, and write using present, past and future tenses and basic vocabulary and structures. Students will work intensively on correct formation and use of the present perfect tense, present perfect continuous, and future continuous verb phrases. They will learn the superlative form of common adjectives. They will learn vocabulary for giving information at a medical check-up and for restaurant conversations.

Course fee May be taken four times for credit

ESL 54 English as a Second Language - Writing Improvement II (Variable) 1.5-3 Hours

This course is for English-as-a-Second Language students from the mid-intermediate to the advanced level who want to write better in English. Students will learn to write more complex sentences, to use more appropriate vocabulary for particular writing tasks and to compose well-developed paragraphs and longer compositions.

Course fee

May be taken four times for credit

ESL 55 English as a Second Language - Conversation II (Variable) 1.5-3 Hours

This course is for English-as-a-Second Language students at the upper intermediate and advanced level who are already familiar with English grammar and vocabulary items but wish to improve their ability to speak and understand English in various social and business situations. American slang and usage will be taught.

Course fee

May be taken four times for credit

Course Information and Descriptions

ESL 56 ESL: Academic Purposes Level V Speaking and Listening (3-0) 3 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

English language learning students at level 5 of English language proficiency will speak and listen in English to prepare them for later academic oral work. They will practice speaking and listening about academic topics through a variety of oral formats including pair work, group work, extended discussion, lectures, presentations, guest speakers, tapes and movies.

Course fee May be taken four times for credit

ESL 57 ESL: Acad Prp: Academic Purposes Level V Grammar (3-0) 3 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

English language learning students a level 5 of English language proficiency will learn English grammar and syntactic structures to help them in academic speaking, reading, and writing. Covered structures include past participle forms, present perfect aspect, phrasal verbs, gerunds and infinitives, and pronoun references in direct and indirect speech. Practice includes both oral and written activities.

Course fee May be taken four times for credit

ESL 58 ESL: Academic Purposes Level V Academic Reading (3-0) 3 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

English language learning students at Level 5 of English Language proficiency will read in English to prepare for later academic reading assignments. They will read authentic short stories and adapted and non-adapted short non-fiction articles, and will interpret charts, tables, and non-prose information. There is emphasis on readings related to academic culture. Practice includes activities for vocabulary improvement and dictionary skills. Course includes an introduction to academic culture of higher education in the United States.

Course fee May be taken four times for credit

ESL 59 ESL: Academic Purposes Level V Writing (3-0) 3 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

English language learning students at level 5 of English Language proficiency will read in English to prepare for later academic reading assignments. They will read authentic short stories and adapted and non-adapted short non-fiction articles, and will interpret charts, tables, and non-prose information. There is emphasis on readings related to academic culture. Practice includes activities for vocabulary improvement and dictionary skills. Course includes an introduction to academic cultures of higher education in the United States.

Course fee May be taken four times for credit

ESL 60 High Advanced English as a Second Language I (Variable) 3-6 Hours

This course is for non-native speakers who are familiar with many of the essential grammatical structures and most verb tenses but need further skills in English. Students in this class will strengthen and refine their use of structures learned previously. They will learn to use passive voice, superlative adjectives and more specific vocabulary. They will become familiar with American slang, idioms and cultural patterns.

Course fee

May be taken four times for credit

ESL 61 High Advanced English as a Second Language II (3-0) 3 Hours

**Course Modification effective Spring 2017. For details, refer to addendum.*

This is a continuation of Advanced ESL I for non-native speakers who are familiar with many of the essential grammatical structures and most verb tenses but need further skill in English. Students will strengthen and refine their control of structures learned previously. They will learn to use all verb tenses more accurately. They will improve their mastery of English prepositions and two-word verbs. Aural comprehension of dialogs at normal speed will be emphasized. *Course fee May be taken four times for credit*

ESL 62 Advanced English as a Second Language III (3-0) 3 Hours

This course is for non-native speakers of English who are familiar with many of the essential grammatical structures and most verb tenses but need further skill in English. Students will strengthen and refine their control of structures learned previously. They will focus on accurate use of verb phrases, relative clauses and subject-verb agreement in speech and in writing. Listening comprehension and paragraph writing will also be stressed.

Course fee

ESL 63 Advanced English as a Second Language IV (3-0) 3 Hours

**Course Modification effective Spring 2017. For details, refer to addendum.*

This course, a continuation of Advanced ESL III, is for non-native speakers who are familiar with many of the essential grammatical structures and most verb tenses but need further skill in English. Students will strengthen and refine their control of structures learned previously. They will learn to use adverb clauses of time, cause, condition, result and comparison. They will work intensively on increasing their vocabulary and on learning to recognize prefixes and suffixes. They will work in reading on identifying main ideas and supporting details.

Course fee

ESL 70 English as a Second Language Study Skills I (Variable) 1-3 Hours

This class is for students who have achieved communicative competence but wish to refine listening, speaking, reading and writing skills. They will learn content in advanced areas relating to the writing skills GED test.

Course fee

May be taken four times for credit

ESL 71 English as a Second Language Study Skills II (Variable) 1-3 Hours

This class is for students who have achieved communicative competence but wish to refine listening, speaking, reading, and writing skills. They will learn content in advanced areas relating to the GED reading test.

Course fee

ESL 72 English as a Second Language Reading And Writing Skills (3-0) 3 Hours

This class is for students who are already able to communicate in English but wish to upgrade their reading and writing skills for educational, business or personal reasons. Students will improve their reading comprehension, expand their vocabulary, learn to make inferences and scan for information and learn to write more correct and complex sentences, paragraphs and longer compositions.

Course fee

Course Information and Descriptions

ESL 73 English as a Second Language Speaking and Listening Skills (3-0) 3 Hours

This course is for students who are already able to communicate in English but wish to improve their listening and speaking skills for business, educational or personal reasons. Students will learn to listen carefully, take notes and outline oral presentations, increase their speaking vocabulary and practice speaking in both informal discussions and more structured situations.

Course fee

ESL 80 English as a Second Language Academic Purposes Intermediate I (3-0) 3 Hours

This is the first portion of a course in intermediate English as a Second Language for students wishing to pursue academic studies in American colleges and universities. Students will improve their reading, writing, speaking and listening while focusing on a chosen content area. Emphasis will be on directions and sequencing in academic contexts.

Course fee

ESL 81 English as a Second Language Academic Purposes Intermediate II (3-0) 3 Hours

The second portion of a course in intermediate English as a Second Language is for students wishing to pursue academic studies in American colleges and universities. Students will improve their reading, writing, speaking and listening while focusing on a chosen content area introduced in English as a Second Language for Academic Purposes - Intermediate I. Emphasis will focus on series of directions and sequencing in academic contexts.

Course fee

ESL 82 English as a Second Language Academic Purposes Intermediate III (3-0) 3 Hours

The third portion of a course in intermediate English as a Second Language is for students wishing to pursue academic studies in American colleges and universities. Students will improve their reading, writing, speaking and listening while focusing on a chosen content area. Emphasis will be on American life and college academic culture.

Course fee

ESL 83 English as a Second Language Academic Purposes Intermediate IV (3-0) 3 Hours

This fourth portion of a course in intermediate English as a Second Language is for students wishing to pursue academic studies in American colleges and universities. Students will improve their reading, writing, speaking and listening while focusing on a chosen content area chosen in English as a Second Language for Academic Purposes-Intermediate III. Emphasis will focus on expressing comparisons.

Course fee

ESL 95 Citizenship I (Variable) 3-4 Hours

This course is designed to prepare people for the US Citizenship Immigration Services Naturalization test.

Course fee

May be taken four times for credit

Environmental Health and Safety (EHS)

Engineering, Math and Physical Sciences Division,
Room T302, (847) 543-2044

EHS 111 Environmental Compliance (3-0) 3 Hours **Course Modification effective Fall 2016. For details, refer to addendum.*

This course emphasizes Hazard Communication Standards required by law, including the worker and community. "Right-to-Know" law and the communication that must be available to emergency responders is addressed. Specific topics include safety data sheets (SDS), proper labeling of containers and placarding according to NFPA requirements, and the preparation of a written program for an industry to follow to provide a safe working environment for employees and safe living conditions for the community.

Prerequisite: APT score of 122 or higher, or Compass score of 251 or higher or ENG 108, ELI 108, or ELI 107 (all C or better), or ELI 103 AND ELI 104 (B or better), or College Reading and Writing Readiness AND Basic Algebra Readiness

EHS 113 Hazardous Materials Regulation (3-0) 3 Hours **Course Modification effective Fall 2016. For details, refer to addendum.*

This course offers a historical overview of occupational and environmental health issues. The history of environmental regulation and current trends will also be included. Students will study past and present legislation with an emphasis on the interpretation of the Department of Labor's Occupational Safety and Health Act (OSHA).

Prerequisite: APT score of 122 or higher, or Compass score of 251 or higher or ENG 108, ELI 108, or ELI 107 (all C or better), or ELI 103 AND ELI 104 (B or better), or College Reading and Writing Readiness AND Basic Algebra Readiness

EHS 115 Environmental Sampling Procedures (2-2) 3 Hours **Course Modification effective Fall 2016. For details, refer to addendum.*

This course emphasizes the practical aspects of environmental sampling. Students will be taught the basic principles of properly collecting, analyzing, and interpreting the results of air, aqueous, and solid environmental samples in a safe and efficient manner. Students will gain hands-on experience in the following areas: laboratory equipment decontamination, calibration and maintenance; field survey techniques; and sample collection and analysis. *Prerequisite:* APT score of 122 or higher, or Compass score of 251 or higher or ENG 108, ELI 108, or ELI 107 (all C or better), or ELI 103 AND ELI 104 (B or better), or College Reading and Writing Readiness AND Basic Algebra Readiness

EHS 117 Environmental Health (3-0) 3 Hours **Course Modification effective Fall 2016. For details, refer to addendum.*

This course is designed to introduce students to environmental health as it relates to the anticipation, recognition, evaluation, and control of hazards in the workplace. Emphasis is on chemical and physical hazards in occupationally related diseases. Historical basis and current legislation are discussed. In addition, the principles of epidemiology, industrial toxicology, exposure standard, and respiratory protection are addressed.

Prerequisite: APT score-122 or higher, or Compass score-251 or higher or ENG 108, ELI 108, or ELI 107 (all C or better), or ELI 103 AND ELI 104 (B or better), or College Reading and Writing Readiness AND Basic Algebra Readiness.

Corequisite: EHS 115

EHS 131 Introduction to Water Resources (3-0) 3 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course is an introduction to the science and policy related to managing fresh water resources. Topics include the hydrologic cycle, surface and groundwater hydrology, water quality, water use and water management, drinking water and wastewater treatment, water allocation laws, the economics of water use, environmental impacts of water use, and water use conflicts.

Prerequisite: APT score of 122 or higher, or Compass score of 251 or higher or ENG 108, ELI 108, or ELI 107 (all C or better), or ELI 103 AND ELI 104 (B or better), or College Reading and Writing Readiness AND Basic Algebra Readiness

EHS 133 Water Quality Analysis (2-2) 3 Hours

This course introduces students to multiple aspects of water sampling. Quality assurance regarding collection and field analysis along with preservation and transport to the laboratory will be emphasized. Laboratory instrumentation analysis using spectrographic and titrimetric methods along with quality control will be stressed.

Prerequisite: CHM 140 and EHS 115 (both C or better)

Fire Science Technology (FST)

Business and Social Sciences Division,
Room T302, (847) 543-2047

FST 111 Introduction to Fire Service (3-0) 3 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

An introductory course which discusses the history and philosophy of the fire service. Overviews all aspects of fire science technology; fire fighting, emergency medical, underwater rescue, hazardous materials, public education, fire investigations, and fire prevention. Major emphasis on orientation for people who are considering involvement in the fire service. Field trips are scheduled for the course.

Note: Individuals with greater than one year firefighter experience are not eligible for credit.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

FST 116 Fire Fighting Tactics and Strategy I (3-0) 3 Hours

An introduction to the basic principles and methods associated with the strategic and tactical responsibilities of the line officer on the fireground. Emphasizes size-up, fire operations, pre-fire planning, and basic engine and truck company operations. Recognized by the Office of the State Fire Marshal (OSFM) towards Fire Officer 1 & Tactics & Strategy 1.

Note: FST 111 and/or one year active experience in the fire service is recommended.

Prerequisite: FST 111

FST 117 Fire Fighting Tactics and Strategy II (3-0) 3 Hours

Continuation of FST 116, with advanced principles and methods associated with fireground strategies and tactics, required of the company officer and chief officer. The course emphasizes multi-company alarm assignments, sectorization of the fireground, handling disasters and major fire incidents. Student participation of assigned fire simulation exercises will be required. Recognized by the Office of the State Fire Marshal toward Fire Officer 2/Tactics & Strategy 2.

Prerequisite: FST 116

FST 118 Incident Command (3-0) 3 Hours

This course introduces students to the basic principles that firefighters, company officers and chief officer use when organizing and managing an emergency scene. This course will stress sectorization, scene safety, and scene management. Emergency fire, hazardous materials, underwater and medical scene management will be reviewed.

Prerequisite: FST 111 (C or better)

FST 119 Fire Apparatus Engineer (3-0) 3 Hours

A classroom and hands on course, designed for personnel who have or may have the responsibility as an apparatus engineer. This subject covers preventive maintenance, pumps and controls, water supply, pump testing, and hydraulics. The course is designed to meet the Office of the State Fire Marshal, and NFPA 1001 requirements, except for driving requirements that must be met by the individual department.

Prerequisite: FST 111

FST 130 Basic Operations Firefighter A (3-2) 4 Hours

This course focuses on the organization and structure of a fire agency, fire behavior, building construction, safety issues in the fire service, communication procedures and practices, self-contained breathing apparatus, fire extinguishers and fire extinguishing agents, and ropes and knots. The course will include weekly lectures and lab sessions that focus on developing and enhancing practical skills.

Students enrolled in this course will become active members of an assigned fire department. *Note:* This is the first of three courses that prepares students to sit for the Office of the Illinois State Fire Marshal's Basic Operations Firefighters certification examination.

Prerequisite: FST 111 (C or better)

Corequisite: EMT 111 and ENG 121 (both C or better)

Recommended: MTH 114 (C or better)

Course fee

FST 131 Basic Operations Firefighter B (3-2) 4 Hours

This course focuses on fire service ladders, hose and related appliances, nozzles and streams, water supply, forcible entry and ventilation. The course will include weekly lectures and lab sessions that focus on developing and enhancing practical skills. Students enrolled in this course will be active members of an assigned fire department. *Note:* This is the second of three courses that prepares students to sit for the Office of the Illinois State Fire Marshal's Basic Operations Firefighters certification examination.

Prerequisite: FST 130 (C or better)

Corequisite: PHY 120, Humanities OR Fine Arts elective, and CIT 119 OR CIT 120 (all C or better)

Course fee

FST 132 Basic Operations Firefighter C (3-2) 4 Hours

This course focuses on search and rescue, fire control, loss control, protecting evidence, fire detection, alarm, and suppression systems, prevention techniques, public education, wild land and ground cover firefighting, and firefighter safety and survival. The course will include weekly lectures and lab sessions that focus on developing and enhancing practical skills. Students enrolled in this course will be active members of an assigned fire department. *Note:* This is the third of three courses that prepares students to sit for the Office of the Illinois State Fire Marshal's Basic Operations Firefighters certification examination.

Prerequisite: FST 131 (C or better)

Corequisite: CMM 121 and PSY 121 (both C or better)

Course fee

Course Information and Descriptions

FST 173 Fire Instructor I (3-0) 3 Hours

This course is designed to meet the needs of those individuals who wish to learn the techniques of instructing in the fire service. It is structured to provide basic information about human relations in the classroom environment, methods of teaching, and the proper method of writing lesson plans. Areas covered include: Orientation and description of the instructor's job, roles and responsibilities of the fire service instructor, concepts of learning, human factors in learning, oral communications, methods of instruction, lesson plans, instructional materials, organizing the learning environment, testing and evaluation, records and reports, and practical application. This course is recognized by the office of the Fire Marshal towards certification of Instructor 1 and Officer 1.

Note: FST 111 and/or one year active service experience in the fire service is recommended.

Prerequisite: FST 111

FST 174 Fire Instructor II (3-0) 3 Hours

This course is a continuation of FST 173. Teaches advanced principles and techniques of instruction. This course is structured to provide information about human relationships in the teaching-learning environment, methods of lesson and course development. Materials covered will include performance objectives, instructional materials development, evaluation and references. Recognized by the Office of the State Fire Marshal towards Instructor 2/Officer 2.

Prerequisite: FST 173

FST 177 Fire Prevention Principles I (3-0) 3 Hours

The introductory course for the individual who will be involved in code enforcement. It will include: current laws, codes, ordinances, building construction, occupancies, hazards and causes, inspection techniques and investigations. Recognized by the Office of the State Fire Marshal towards Fire Officer 1/Fire Prevention Principles 1.

Prerequisite: FST 111

FST 192 Hazardous Materials First Responder (3-0) 3 Hours

This course is designed for firefighters and other persons who might encounter Hazardous Materials in the course of their occupations. This course will stress identification, site entry, isolation, evacuation, use of Materials Safety Data sheets, and how to obtain assistance at the hazardous materials scene. Practical applications and hands on experiences are required in this course. The course meets the requirements for Hazardous Materials First Responder Awareness, and Hazardous Materials First Responder Operations, of the State Fire Marshal Certification and OSHA 29 CFR 1910.

Prerequisite: FST 111

Course fee

FST 215 Fire Inspection Applications (3-0) 3 Hours

Study of public relations and inspection techniques and procedures. Covered are: evaluation of fire hazards, inspection techniques for various types of buildings, procedures for conducting inspections, report and record keeping procedures, various types of fire prevention campaigns, the training of fire inspectors, coordination of activities with other government agencies, arson investigation, and on-the-site field inspections.

Prerequisite: FST 214

FST 217 Fire Officer Communications (3-0) 3 Hours

Techniques of company officer communications and group dynamics. Acquaints the student with the principles of communications and the role of the company officer in both formal and informal communication processes. Recognized by the Office of the State Fire Marshal towards Fire Officer 1/ Management 2.

Note: Student orientation and pre-scheduled classroom meetings required.

Prerequisite: FST 111

FST 218 Fire Officer Supervision (3-0) 3 Hours

Introduction to objectives and techniques of fire company management. Acquaints the student with the role and function of the company officer. Discussion of management theories and practices; includes planning, organizing, staffing, directing and controlling. Recognized by the Office of the State Fire Marshal towards Fire Officer 1/ Management 1.

Prerequisite: FST 111

FST 273 Fire Science Business and Operations (3-0) 3 Hours

The advanced study of management principles and techniques used by mid-level officers. These studies will include: management of resources; personnel, money, facilities, and time; principles of delegation, problem solving and motivation. Recognized by the Office of the State Fire Marshal toward Fire Officer 2/ Management 3.

Prerequisite: FST 111

FST 274 Fire Administration and the Law (3-0) 3 Hours

Management principles and techniques used by future or current chief officers in the fire service. Acquaints the student to principles of public relations, labor relations, personnel management, and administrative liability, including: criminal and civil liability, disciplinary hearings, avoiding lawsuits, administrative investigations, and State and Federal Regulations. Recognized by the Office of the State Fire Marshal toward Fire Officer 2/ Management 4.

Prerequisite: FST 111

FST 279 Special Topics in the Fire Service (3-0) 3 Hours

This course will take a subject of topical interest such as rescue practices, water supply analysis or reporting systems and cover that subject in depth. Because topics will vary widely from year to year a student may seek approval to repeat this course once for credit.

May be taken twice for credit toward degree

French (FRN)

Communication Arts, Humanities and
Fine Arts Division, Room B210, (847) 543-2040

FRN 121 Beginning Conversational French I (4-0) 4 Hours

Fundamentals of language necessary for understanding, speaking, reading and writing of French. Practice in pronunciation from dialogues and pattern practices.

FRN 122 Beginning Conversational French II (4-0) 4 Hours

Fundamentals of language necessary for understanding, speaking, reading, and writing of French. Practice in pronunciation from dialogues and pattern practices. This is a continuation of FRN 121.

Prerequisite: FRN 121

FRN 221 Intermediate French I (4-0) 4 Hours

Review and further study of grammar concepts, continued aural-oral practice, simple conversation and selected readings with text analysis.

Prerequisite: FRN 122

FRN 222 Intermediate French II (4-0) 4 Hours

This course reviews and expands the use of French grammar by introducing more advanced structures into verbal and written communication. Films, material from newspapers and magazines, and from other media will enable students to use authentic materials that are culturally relevant to explore further the French-speaking world and its culture.

Prerequisite: FRN 221 (C or better)

Fulfills the CLC I/M Education Requirement.

IAI: H1 900

FRN 223 French Civilization I (3-0) 3 Hours

Composition and conversation based on contemporary writings emphasizing the social, political, economic and literary trends of modern France.

Prerequisite: FRN 222

IAI: H1 900

FRN 224 French Civilization II (3-0) 3 Hours

Study of France and its people through its language and political institutions as well as major trends in literature and art from the Gallo-Roman area to the present.

Prerequisite: FRN 223

IAI: H1 900

GXS 229 Sex, Gender, and Power (3-0) 3 Hours

This course will examine the major sociological concepts, theories, and research methods in relation to gender issues. It will explore the development of gender roles cross-culturally, as well as the consequences of dividing society along gender lines. Topics for discussion may include: gender role socialization, cross-cultural definitions of gender, underrepresentation on the basis of gender, gender differences in communication, gender issues in relation to the family, workplace, and schools, media images of men and women, and gender-based violence.

GXS 229 and SOC 229 are cross-listed.

Prerequisite: College Reading and Writing Readiness

Recommended: SOC 121

Fulfills the CLC I/M Education Requirement.

IAI: S7 904D

GXS 299 Special Topics in Gender and Sexuality Studies (Variable) 1-3 Hours

This course addresses the in-depth study of special topics in gender and sexuality that do not have specific courses in the catalogue. Course content will vary depending on the topic being studied and may include gendered topics in biology, psychology, sociology, anthropology, philosophy, political science, history, economics or literature. This course may be taken up to four times for a maximum of 6 credit hours towards degree completion.

Prerequisite: College Reading and Writing Readiness

Fulfills the CLC I/M Education Requirement.

May be taken four times, but any topic only once

Gender and Sexuality Studies (GXS)

Business and Social Sciences Division,
Room T302, (847) 543-2047

GXS 121 Introduction to Gender Studies (3-0) 3 Hours

This course provides an introduction to the interdisciplinary field of gender studies. It will explore the varied perspectives of gender and gender issues, including the biological, psychological, sociological, and anthropological approaches. Also included is a discussion of the philosophical, political, historical, and economic perspectives, as well as a literary analysis of gender. The course will also introduce students to potential career opportunities within the field.

Prerequisite: College Reading and Writing Readiness

Fulfills the CLC I/M Education Requirement.

IAI: S9 900

GXS 221 Theories of Feminism (3-0) 3 Hours

With an emphasis on the social science perspective, this course explains the theoretical nature of individual and institutional oppression of underrepresented groups, as well as promote greater economic, social, and political equality for men and women. The course will provide an in-depth analysis of classic and contemporary theories of feminism from a multidisciplinary, social science perspective. It will introduce students to the prominent feminist scholars, as well as offer a discussion of the feminist movement as the basis for social policy and social activism.

Prerequisite: GXS 121 (C or better)

Recommended: SWK 228

Fulfills the CLC I/M Education Requirement.

General Education Development (GED)

Adult Basic Education, GED® and ESL Division
Building 4, (847) 543-2021

Adult Education classes are intended for people who live in Lake County. They are not appropriate for students with B1, B2, F1, F2, J1 or J2 visas, nor are they appropriate for short-term visitors to the U.S.

In general, students must be at least 18 years old in order to enroll in adult education classes. However, 16-year-olds and 17-year-olds may register with an official Secondary School Reference Form signed by their local High School authorized representative. U.S. High School graduates and 16-year-olds must meet additional eligibility requirements. New students must attend an orientation session before attending classes.

The Adult Basic Education, GED and ESL Division provides several specific types of educational opportunities and is funded in part by grants from the federal government.

Course Information and Descriptions

- GED 10 Pre-GED I (Variable) 3-6 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This course is an individualized program in general language development and mathematics. Students progress at their own rates in reading comprehension, English grammar, spelling, and punctuation as well as mathematics. The program is designed to raise basic skills in mathematics, reading, and language to a level which will enable students to pursue the GED program.
Course fee May be taken four times for credit
- GED 11 GED Preparation II Low (Variable) 0.5-4 Hours**
This course is an individualized program in general language development and mathematics. Students will progress at their own rates through reading comprehension, English grammar, spelling, and punctuation as well as mathematics. The program is designed to raise basic skills in mathematics, reading and language to a level which will enable students to pursue the GED program.
Course fee May be taken four times for credit
- GED 12 GED Reading 1 Low (Variable) 0.5-4 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This course focuses on critical reading techniques. It provides information-processing skills that will be useful in GED preparation and in an academic or workplace environment.
Course fee May be taken four times for credit
- GED 13 Pre-GED Mathematics 1 (Variable) 0.5-6 Hours**
This mathematics course will cover real number system and charts/graphs with more than one variable.
Course fee May be taken four times for credit
- GED 14 GED Reading 2 Low (Variable) 0.5-4 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This course incorporates reading and analysis of informational selections to develop critical reading skills necessary for success on the GED exam.
Course fee May be taken four times for credit
- GED 15 Pre-GED Mathematics 2 (Variable) 0.5-4 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This mathematics course will cover dependent probability, functions and graphs of linear equations.
Course fee May be taken four times for credit
- GED 16 GED Reading 3 Low (Variable) 0.5-4 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This course introduces students to Social Studies texts, concepts and skills in preparation for the GED exam.
Course fee May be taken four times for credit
- GED 17 Pre-GED Mathematics 3 (Variable) 0.5-4 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This mathematics course will cover theorems of geometric figures and coordinate geometry.
Course fee May be taken four times for credit
- GED 18 GED Reading 4 Low (Variable) 0.5-4 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This course will emphasize the development of basic scientific skills. In addition, scientific vocabulary and reading comprehension will be addressed to assist students in preparing for the GED Science exam.
Course fee May be taken four times for credit
- GED 19 Pre-GED Mathematics 4 (Variable) 0.5-4 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This mathematics course will cover mathematical symbols their limitations, and measurement.
Course fee May be taken four times for credit
- GED 20 GED Preparation I (Variable) 3-6 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This course is a preparation for those who want to take the General Educational Development Examination (G.E.D.) to earn their high school equivalency certificate. It is for adults who have not completed high school.
Course fee May be taken four times for credit
- GED 21 GED Preparation II (3-0) 3 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This course is for those who need further instruction before attempting the General Educational Development Examination (G.E.D.) to earn their high school equivalency certificate.
Course fee May be taken four times for credit
- GED 22 GED Reading 1 High (Variable) 0.5-4 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This course broadens reading comprehension skills and builds vocabulary skills. It provides information-processing skills that are necessary in GED preparation and in an academic or workplace environment appropriate to the course level.
Course fee May be taken four times for credit
- GED 23 GED Algebra 1 (Variable) 0.5-4 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This mathematics course will cover the real number system, quantities, and structure in expressions.
Course fee May be taken four times for credit
- GED 24 GED Reading 2 High (Variable) 0.5-4 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This course broadens reading skills of complex informational texts. It provides information-processing skills that are necessary in GED preparation and in an academic or workplace environment appropriate to the course level.
Course fee May be taken four times for credit
- GED 25 GED Algebra 2 (Variable) 0.5-4 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This mathematics course will cover creating equations and arithmetic with polynomials and rational expressions.
Course fee
- GED 26 GED Reading 3 High (Variable) 0.5-4 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This course broadens reading skills in History and Social Studies. It provides information-processing skills that are necessary in GED preparation and in an academic or workplace environment appropriate to the course level.
Course fee May be taken four times for credit
- GED 27 GED Algebra 3 (Variable) 0.5-4 Hours**
**Course Modification effective Fall 2016. For details, refer to addendum.*
This mathematics course will cover reasoning with equations and inequalities.
Course fee

GED 28 GED Reading 4 (Variable) 0.5-4 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*
This course broadens reading skills in all five GED content areas. It provides information-processing skills that are necessary in GED preparation and in an academic or workplace environment appropriate to the course level.

Course fee

GED 29 GED Algebra 4 (Variable) 0.5-4 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*
This mathematics course will cover interpreting and building functions, as well as linear, quadratic and exponential models. *Course fee*

GED 33 GED Geometry 1 (Variable) 0.5-4 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*
This mathematics course will cover transformations in the plane and congruence in terms of rigid motions.

Course fee

GED 37 GED Geometry 3 (Variable) 0.5-4 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*
This mathematics course will cover similarity and right triangles.

Course fee

GED 39 GED Geometry 4 (Variable) 0.5-4 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*
This mathematics course will cover circles, geometric measurement and dimensions.

Course fee

Geography (GEG)

Engineering, Math and Physical Sciences Division,
Room T302, (847) 543-2044

GEG 120 Principles of Physical Geography (3-2) 4 Hours

This introductory physical science course examines the processes and agents that help to shape and change the environment in which humans live, as well as the spatial interrelationships that exist between the earth's heat and energy systems and weather, climate, biogeography (soils, vegetation), landforms, forces of erosion and human activities. The lab component requires students to apply the scientific method to a variety of problems/exercises related to physical geography. Some exercises may involve field work and local field trips. The lab exercises integrate map reading and interpretation skills.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Course fee

IAI: P1 909L

GEG 121 Physical Geography (3-0) 3 Hours

This introductory physical science course examines the processes and agents that help to shape and change the environment in which humans live. Emphasis is placed on the interrelationships that exist between the earth's heat and energy systems and the weather, climate, soils, vegetation, streams, oceans, landforms, and human activities.

Prerequisite: College Reading and Writing Readiness

IAI: P1 909

GEG 122 Cultural Geography (3-0) 3 Hours

This introductory social science survey course is designed to help students acquire geographic knowledge about human cultural trends and activities. A wide range of current and urgent world concerns such as population control, cultural differences, urbanization, economic livelihoods, and state and nation systems, are placed in a human-geographic context. The course will also assist students gain better geographic perceptions on current world affairs.

Prerequisite: College Reading and Writing Readiness

IAI: S4 900N

GEG 123 World Regional Geography (3-0) 3 Hours

This introductory social science course emphasizes the human and physical geography of the world's major regions. Each region is surveyed as to its location and component countries and peoples, world importance, distinctive physical and cultural characteristics, relations to other areas of the world, and the major problems and potentialities associated with each. Students will gain a better geographic perspective on current affairs and an enhanced appreciation of travel.

Prerequisite: College Reading and Writing Readiness

IAI: S4 900N

GEG 223 Geography of Latin America (3-0) 3 Hours

This introductory social science course is a survey of Latin America's cultural, economic, physical, political, and social geographies. It emphasizes problems and potentials of regional development and land use. GEG 223 is offered for elective credits.

Prerequisite: College Reading and Writing Readiness

GEG 240 Geographic Information Systems I (3-0) 3 Hours

This course is an introduction to the fundamentals of GIS and basic geographic concepts necessary for analyzing and utilizing spatial data. These concepts include map scale, projections, coordinate systems, methods of symbolizing map data, vector versus raster spatial analysis, air photos and satellite imagery in mapping. Uses of GIS discussed will include its applications in mapping, environmental studies, planning, management and business.

Prerequisite: College Reading and Writing Readiness

GEG 299 Special Topics: Geography (Variable) 1-3 Hours

This course addresses the in-depth study of special topics in geography, which do not have specific courses in the catalogue. Course content will vary depending on the topic being studied, but could include regional courses, field courses, study abroad programs, field work, directed readings or internships. This course is repeatable up to three times, any topic only once, for a maximum of 6 hours towards degree completion.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

May be taken four times for credit toward degree

German (GER)

Communication Arts, Humanities and
Fine Arts Division, Room B210, (847) 543-2040

GER 121 Beginning Conversational German I (4-0) 4 Hours

Fundamentals of language necessary for understanding, speaking, reading and writing of German. Practice in pronunciation from dialogues and pattern practices.

Course Information and Descriptions

GER 122 Beginning Conversational German II (4-0) 4 Hours

Fundamentals of language necessary for understanding, speaking, reading, and writing of German. Practice in pronunciation from dialogues and pattern practices. This is a continuation of GER 121.
Prerequisite: GER 121

GER 221 Intermediate German I (4-0) 4 Hours

Review and further study of grammar concepts, continued oral practice, simple conversation and selected readings. Laboratory practice encouraged.
Prerequisite: GER 122

GER 222 Intermediate German II (4-0) 4 Hours

This course reviews and expands the use of German grammar by introducing more advanced structures into verbal and written communication. Films, material from newspapers and magazines, and from other media will enable students to use authentic materials that are culturally relevant to explore further the German speaking world and its culture.

Prerequisite: GER 221 (C or better)

Fulfills the CLC I/M Education Requirement.

IAI: H1 900

GER 223 German Civilization I (3-0) 3 Hours

Composition and conversation based on readings in nineteenth and twentieth century German literature with emphasis on style.

Prerequisite: GER 222

IAI: H1 900

GER 224 German Civilization II (3-0) 3 Hours

Composition and conversation based on readings in nineteenth and twentieth century German literature with emphasis on style. A continuation of German 223.

Prerequisite: GER 223

IAI: H1 900

Heating and Air Conditioning (HVAC) Engineering Technology (HET)

Engineering, Math and Physical Sciences Division,
Room T302, (847) 543-2044

HET 110 Basic Refrigeration Systems (2-4) 4 Hours

This course introduces students to basic refrigeration theory and practice in Heating, Ventilation, Air-Conditioning and Refrigeration (HVACR). The function and operational characteristics of the mechanical refrigeration system including condensers, evaporators, compressors, refrigerant metering devices, sustainable energy sources and refrigerants are covered. The use and operation of service manifolds, leak detection, system evacuation and charging, test equipment, flaring, soldering and brazing skills are covered.

Note: The student will be required to purchase basic hand tools that will be used in this and other refrigeration and air conditioning courses.

Course fee

HET 111 HVACR Electricity I (2-4) 4 Hours

This course introduces students to basic AC and DC circuitry, the laws of electricity, wiring of basic HVACR equipment, and safety procedures with an emphasis placed on sustainable energy sources through the use of lectures, demonstrations, and lab experiences. The function and operational characteristics of various types of electric controls including thermostats, defrost controls, relays, and contactors are studied, along with capacitors, power distribution, motors, and protective devices. This course introduces the National Electrical Code, the use of meters, schematics, wiring diagrams, electrical troubleshooting, electrical service procedures and electrical test equipment. *Note:* Student will be required to purchase basic hand tools used in this and other HVACR courses.

Course fee

HET 119 HVACR Electricity II (2-4) 4 Hours

This course covers intermediate AC and DC circuitry, the laws of electricity, wiring of HVACR equipment, and safety procedures with an emphasis placed on sustainable energy sources. Through lectures, demonstrations, and lab experiences, students will learn about various types of residential and commercial heating and air-conditioning, commercial refrigeration electrical service, and installation and preventive maintenance techniques. The function and operational characteristics of various types of electric controls will be covered including thermostats, defrost controls, relays, contactors, capacitors, power distribution, motors, system malfunction diagnosis, corrective procedures, and protective devices. This course also introduces part-winding starts, Wye and Delta wound transformers, programmable controllers, Electronically Commutated Motors (ECM), and Variable Frequency Drive motors (VFD). The National Electrical Code is reinforced, as well as the use of meters, schematics, wiring diagrams, electrical troubleshooting, electrical service procedures, and electrical test equipment. *Note:* Students will be required to purchase basic hand tools used in this and other HVACR courses.

Prerequisite: HET 110 and HET 111

Course fee

HET 130 Heating I Residential Appliances (2-4) 4 Hours

This course introduces students to the basic principles, practices, operations, service and installation of residential heating equipment through the use of lectures, demonstrations, and lab experiences. The function and operational characteristics of residential heating equipment, its wiring, and safety procedures are studied. Electric controls such as thermostats, defrost controls, relays, and contactors are studied, as well as capacitors, power distribution, motors, protective devices, system malfunction diagnosis, corrective procedures, and the refrigerants used in residential heating. This course also introduces a basic understanding of load calculations, the installation and service of residential heating appliances, ventilation requirements, and piping techniques. This course reinforces the use and operation of electrical and mechanical test equipment, wiring diagrams and schematics, service manifolds, test equipment, flaring, soldering and brazing skills. *Note:* Student will be required to purchase basic hand tools used in this and other HVACR courses.

Prerequisite: HET 110 and HET 111

Course fee

HET 135 Plumbing and Pipefitting I (2-2) 3 Hours

This course introduces students to blueprint drawings and detail sheets; piping system standards and specifications; and trade math. Students will be exposed to advanced blueprint reading examples, as well as motorized equipment and above ground pipe installation.

Prerequisite: HET 110

Course fee

HET 136 Plumbing and Pipefitting II (2-2) 3 Hours

This course is a continuation of HET 135. The course also introduces students to pipe hangers and supports, identifying and installing valves, field routing and vessel trim, spring can supports, planning work activities and performing non-destructive examination testing.

Prerequisite: HET 135

Course fee

HET 150 Air Conditioning I Split-Systems (2-4) 4 Hours

This course introduces students to the basic principles, practices, operations, service and installation of split-system residential and commercial cooling equipment, as well as industrial refrigeration equipment. The function and operational characteristics of various types of air conditioning and refrigeration equipment, the wiring of split-system equipment, and safety procedures are also studied. Students will be exposed to topics such as electric controls such as thermostats, defrost controls, relays, and contactors, as well as capacitors, power distribution, motors, protective devices, system malfunction diagnosis, corrective procedures, and the refrigerants used in the split-system industry. This course reinforces the use and operation of electrical and mechanical test equipment, wiring diagrams and schematics, service manifolds, test equipment, flaring, soldering and brazing skills. *Note:* Student will be required to purchase basic hand tools used in this and other HVACR courses.

Prerequisite: HET 110 and HET 111

Course fee

Typically offered summer only

HET 155 HVAC/R Blueprint Reading (1-0) 1 Hour

This course introduces students to how blueprints are structured and the conventions that are used in making them and reading them for the HVAC/R field. These principles are then applied to detail drawings and assembly drawings of mechanical equipment found in the HVAC/R field. Special features of blueprints in applications ranging from sheet metal work through electrical and air conditioning work are addressed. This course concludes with information on how to sketch in the style of a blueprint to convey information simply and completely for the HVAC/R field.

HET 170 Refrigeration I Small Appliances (2-4) 4 Hours

This course introduces students to the service needs of the small refrigeration appliance industry. Through lectures, demonstrations, and lab experiences, students will learn how to service domestic refrigerators, freezers, and icemakers and to install and service water coolers, vending machines, and under-the-counter refrigeration units. The function and operational characteristics of various types of electric controls including thermostats, defrost controls, relays, and protective devices will be studied, as well as system malfunction diagnosis, corrective procedures, and the refrigerants used in the small refrigeration appliance industry. The course also reinforces the use and operation of electrical and mechanical test equipment, wiring diagrams and schematics, service manifolds, test equipment, flaring, soldering and brazing skills. *Note:* Student will be required to purchase basic hand tools used in this and other HVACR courses.

Prerequisite: HET 110 and HET 111

Course fee

HET 172 Refrigeration II Commercial Appliances (2-4) 4 Hours

This course introduces students to the basic principles, practices, operations, service, and installation of commercial refrigeration appliances. Students will learn how the product is cooled, desired temperature maintained, and proper humidity conditions controlled. The function and operational characteristics of various types of electric controls including thermostats, defrost controls, relays, and protective devices are studied, as well as system malfunction diagnosis, corrective procedures, and the refrigerants used in the commercial refrigeration appliance industry. This course also covers a basic understanding of commercial refrigeration appliances, multiple systems, load calculations of commercial refrigeration appliances, system accessories, and piping techniques. This course reinforces the use and operation of electrical and mechanical test equipment, wiring diagrams and schematics, service manifolds, test equipment, flaring, soldering and brazing skills. *Note:* Student will be required to purchase basic hand tools used in this and other HVACR courses.

Prerequisite: HET 110 and HET 111

Course fee

HET 190 EPA Certification Preparation (1-2) 2 Hours

This course introduces students to basic refrigeration, theory, and practice of the EPA mandated Section 608 Refrigeration Certification exam. The function and operational characteristics of the mechanical refrigeration system including condensers, evaporators, compressors, refrigerant metering devices, and sustainable energy sources refrigerants are covered, as well as material pertinent for students to pass the EPA exam. This course also introduces ozone depletion, the Clean Air Act, the Montreal Protocol, CFC and HCFC refrigerant replacements, recovery cylinders, shipping and transportation of refrigerants, system operational pressures, substitute refrigerant replacement, recharging techniques, refrigerant recovery and reclaiming, and basic system troubleshooting. This course reinforces the use and operation of service manifolds, leak detection, test equipment, flaring, soldering and brazing skills. *Note:* The student will be required to purchase basic hand tools that will be used in this and other refrigeration and air conditioning courses.

Corequisite: HET 110 or Consent of Instructor

Course fee

HET 191 HVACR Load Calculation (2-4) 4 Hours

This course introduces students to the standards for producing HVACR equipment sizing load calculations. The course details proper procedure required to complete a residential or commercial load calculation performed in accordance with the Air-Conditioning Contractors of America (ACCA) as required by national building codes and by most state and local jurisdictions. Residential HVAC appliances, commercial HVAC appliances, and commercial refrigeration appliances and their associated sub-systems are included. *Note:* Student will be required to purchase basic hand tools used in this and other HVACR courses.

Prerequisite: HET 110 and HET 111

Course fee

HET 192 HVACR Engineering Tech Practicum (0-15) 1 Hour

This course is a supervised work experience in the HET program. It incorporates on-the-job training in the greater Lake County area and provides students with an opportunity to demonstrate acquired skills and knowledge, as well as continue their development as professionals. Included will be group seminar sessions with other students and regular meetings with a CLC instructor and HVACR supervisor.

Prerequisite: HET 110 and HET 111

Course fee

Course Information and Descriptions

HET 193 Recertification Preparation (.5-0) 0.5 Hour

This course is designed for students whose certification has expired or for students who need to re-sit for the EPA Technician Certification Exam or the Industry Competency Exam. This course prepares students with a review of pertinent material prior to the administration of the exams.

Prerequisite: HET 110 and HET 111 or consent of instructor

Course fee

HET 194 NATE Certification Preparation (2-0) 2 Hours

This course prepares students to sit for the North American Technician Excellence (NATE) HVACR Exams. All pertinent material prior to the administration of the exams is reviewed.

Prerequisite: Consent of Instructor

Course fee

HET 195 Chicago Stationary Engineer Exam Preparation (1-0) 1 Hour

This course prepares students to sit for the Chicago Stationary Engineer Exam. Low pressure steam boilers and other pertinent material will be reviewed to help students prepare for the exam.

Corequisite: HET 110 and HET 119 or consent of instructor

Course fee

HET 219 HVACR Electricity III (2-4) 4 Hours

This course covers advanced AC and DC circuitry, the laws of electricity, wiring of HVACR equipment, and safety procedures with an emphasis placed on sustainable energy sources. Through lectures, demonstrations, and lab experiences, students will learn about various types of residential and commercial heating and air-conditioning, commercial refrigeration and electrical service, installation, preventive maintenance techniques, and direct digital controls. The operational characteristics of various types of electric controls including thermostats, defrost controls, relays, and contactors will be covered, as well as capacitors, power distribution, motors, system malfunction diagnosis, corrective procedures, and protective devices. Students will be introduced to part-winding start, Wye and Delta wound transformers, programmable controllers, Electronically Commutated motors (ECM), Variable Frequency Drive motors (VFD), National Electrical Code, the use of meters, schematics, wiring diagrams, electrical troubleshooting, electrical service procedures, and electrical test equipment. *Note:* Student will be required to purchase basic hand tools used in this and other HVACR courses.

Prerequisite: HET 119 (C or better) AND MTH 114 or higher (C or better) or appropriate score on Math Placement test or Math ACT score of 17 or higher AND College Reading and Writing Readiness

HET 230 Air Movement and Ventilation (2-4) 4 Hours

This course covers intermediate principles, practices, operations, and service of commercial HVAC equipment through the use of lectures, demonstrations, and lab experiences. The function and operational characteristics of various types of residential and commercial HVAC equipment, wiring, and safety procedures are studied, as well as proper methods and techniques involved in the design, sizing and balancing of complete ventilation systems. Electric controls including thermostats, sail switches, relays, contactors, flow switches, power distribution, motors, protective devices, system malfunction diagnosis, corrective procedures, and various fan systems used in the residential and commercial HVAC industry are covered. Air mixing properties, equipment servicing, a basic understanding of load calculations, ducting, fan laws, Indoor Air Quality (IAQ), and piping techniques for residential and commercial

HVAC equipment are introduced. This course reinforces ventilation requirements, the use and operation of electrical and mechanical test equipment, wiring diagrams and schematics, service manifolds, test equipment, flaring, soldering and brazing skills. *Note:* Student will be required to purchase basic hand tools used in this and other HVACR courses.

Prerequisite: HET 119 (C or better) AND MTH 114 or higher (C or better) or appropriate score on Math Placement test or Math ACT score of 17 or higher AND College Reading and Writing Readiness *Course fee*

HET 231 Heating II Hydronic Heating Systems (2-4) 4 Hours

This course introduces students to the basic principles, practices, operations, service and installation of residential and light commercial boilers through the use of lectures, demonstrations, and lab experiences. The function and operational characteristics of various types of residential and light commercial boilers, their wiring, and safety procedures are studied. Electric controls including thermostats, relays, and contactors are studied, as well as capacitors, power distribution, motors, protective devices, system malfunction diagnosis, corrective procedures, and residential and light commercial boilers. A basic understanding of load calculations and the installation and service of residential and light commercial boilers will be covered, as well as the operation, layout, selection, troubleshooting, venting requirements, and piping techniques. This course reinforces the use and operation of electrical and mechanical test equipment, wiring diagrams and schematics, service manifolds, test equipment, flaring, soldering and brazing skills. *Note:* Student will be required to purchase basic hand tools used in this and other HVACR courses.

Prerequisite: MTH 114 or higher or appropriate score on Math Placement test or Math ACT score of 17 or higher; AND minimum APT score of 122 or College Reading and Writing Readiness; OR Consent of Instructor *Course fee*

HET 250 Air Conditioning II Commercial HVAC Appliances (2-4) 4 Hours

This course covers intermediate principles, practices, operations, service and installation of commercial HVAC equipment through lectures, demonstrations, and lab experiences conducted on commercial HVAC equipment. The function and operational characteristics of various types of commercial HVAC equipment, its wiring, and safety procedures are studied. Electric controls including thermostats, defrost controls, relays, and contactors are studied, as well as capacitors, power distribution, motors, protective devices, system malfunction diagnosis, corrective procedures, and the refrigerants used in the commercial HVAC industry. This course also introduces hydronic heating, air mixing properties, installation and service, a basic understanding of load calculations, ducting, fan laws, and piping techniques for commercial HVAC equipment. This course also reinforces ventilation requirements, the use and operation of electrical and mechanical test equipment, wiring diagrams and schematics, service manifolds, test equipment, flaring, soldering and brazing skills. *Note:* Student will be required to purchase basic hand tools used in this and other HVACR courses.

Prerequisite: HET 150 AND MTH 114 or higher or appropriate score on Math Placement test or Math ACT score of 17 or higher; AND minimum APT score of 122 or College Reading and Writing Readiness; OR Consent of Instructor *Course fee*

HET 251 Sheet Metal Fabrication (1-0)

**Correction made. Refer to addendum for details.*

1 Hour

This course introduces students to methods of sheet metal fabrication. Content includes laying-out and fabricating sheet metal ducts and fittings used in heating and air conditioning installations. This course emphasizes reading blueprints common to the sheet metal trade, floor plans, elevations, section, detail and mechanical plans. It requires students to develop a layout of an air conditioning duct system and fittings. Fabrication of these parts, including proper use of hand-tools and shop equipment used to fabricate duct systems and fittings will be focus as a main competency. Some of the topics covered will include methods of measurements, layouts, tolerances, allowances for joints, and other fittings.

Prerequisite: HET 155 (C or better)

HET 252 Air Conditioning III Installation & Service (2-4)

4 Hours

This course covers various types of residential heating and air-conditioning service techniques and installation procedures, including equipment selection, layout, duct fabrication, piping techniques, troubleshooting, codes, preventive maintenance, multiple systems, and system accessories. Students will learn the techniques of the service and installation needs of the residential heating and air-conditioning industry through lectures, demonstrations, and lab experiences. The function and operational characteristics of various types of residential heating and air-conditioning equipment, its wiring, and safety procedures are studied. Electric controls including thermostats, defrost controls, relays, and contactors are studied, as well as capacitors, power distribution, motors, protective devices, system malfunction diagnosis, corrective procedures, and the refrigerants used in the residential heating and air-conditioning industry. Equipment selection, layout, duct fabrication, troubleshooting, codes, preventive maintenance, system balancing, component capacity, multiple systems, system accessories codes, and preventive maintenance concerning residential heating and air-conditioning appliances are also covered. This course reinforces load calculations, ventilation requirements, piping techniques, the use and operation of electrical and mechanical test equipment, wiring diagrams and schematics, service manifolds, test equipment, flaring, and soldering and brazing skills. *Note:* Student will be required to purchase basic hand tools used in this and other HVACR courses.

Prerequisite: MTH 114 or higher or appropriate score on Math Placement test or Math ACT score of 17 or higher; AND minimum APT score of 122 or College Reading and Writing Readiness; OR Consent of Instructor

Course fee

HET 272 Refrigeration III Commercial Appliance Installation (2-4)

4 Hours

This course covers various types of commercial refrigeration service techniques and installation procedures, such as piping techniques, codes, preventive maintenance, multiple systems, and system accessories. The function and operational characteristics of various types of electric controls including thermostats, defrost controls, relays, and protective devices are studied, as well as system malfunction diagnosis, corrective procedures, and the refrigerants used in the commercial refrigeration appliance industry. This course reinforces load calculations, the use and operation of electrical and mechanical test equipment, wiring diagrams and schematics, service manifolds, test equipment, flaring, and soldering and brazing skills. *Note:* Student will be required to purchase basic hand tools used in this and other HVACR courses.

Prerequisite: HET 172 AND MTH 114 or higher or appropriate score on Math Placement test or Math ACT score of 17 or higher; AND minimum APT score of 122 or College Reading and Writing Readiness; OR Consent of Instructor

Course fee

HET 273 Direct Digital Controls (2-4)

4 Hours

This course covers basic commercial control principles and offers students experiences and practice in the selection, installation, operation, and servicing of pneumatic and electronic automation control systems and components used in commercial buildings. Special emphasis will be placed on direct digital control systems (DDC) including troubleshooting, maintenance, and retrofitting. Students successfully completing this course will be eligible to sit for the Air-Conditioning and Refrigeration Institute (ARI) Industry Competency Exam in Light Commercial Air Conditioning and Heating.

Prerequisite: HET 119 (C or better) AND MTH 114 or higher (C or better) or appropriate score on Math Placement test or Math ACT score of 17 or higher AND College Reading and Writing Readiness

HET 290 Building Insulation (2-4)

4 Hours

This course covers heat flow, building science, building envelope, construction practices, material costs, moisture concerns, proper insulation techniques, and commercial and residential HVAC systems including equipment selection, layout, piping techniques, troubleshooting, codes, preventive maintenance, multiple systems, and system accessories. Students will also learn about building and piping insulating, and residential and commercial insulation codes.

Note: Student will be required to purchase basic hand tools used in this and other HVACR courses.

Prerequisite: HET 230 AND MTH 114 or higher or appropriate score on Math Placement test or Math ACT score of 17 or higher; AND minimum APT score of 122 or College Reading and Writing Readiness; OR Consent of Instructor

Course fee

HET 291 Energy Auditing (2-4)

4 Hours

This course covers building energy auditing and associated heating and air-conditioning equipment. The concepts of heat flow, energy audit software, building science, building envelope, construction practices, material costs, moisture concerns, proper insulation techniques, energy pricing, energy modeling, and commercial and residential HVAC systems including equipment selection, layout, piping techniques, troubleshooting, codes, preventive maintenance, multiple systems, and system accessories are covered. The function and operational characteristics of building construction, building materials, various types of commercial and residential heating and air-conditioning equipment, wiring, and safety procedures are studied. Electric controls, thermostats, power distribution, and protective devices are studied, as well as equipment selection, layout, duct design, troubleshooting, and commercial and residential energy usage codes. This course also reinforces load calculations, ventilation requirements, piping techniques, the use and operation of electrical/mechanical test equipment and service manifolds. *Note:* Student will be required to purchase basic hand tools used in this and other HVACR courses.

Prerequisite: HET 230 AND MTH 114 or higher or appropriate score on Math Placement test or Math ACT score of 17 or higher; AND minimum APT score of 122 or College Reading and Writing Readiness; OR Consent of Instructor

Course fee

HET 292 RESENT Exam Preparation (1-0)

1 Hour

This course provides a review of material required to prepare students to take the Residential Energy Services Network's (RESNET®) Quality Assurance Designee Trainer Exam.

Prerequisite: Consent of Instructor

Course fee

Course Information and Descriptions

HET 293 HVAC Codes (3-0) 3 Hours

This course covers the function of HVAC Mechanical Codes including Building Officials and Code Administrators (BOCA) Mechanical Codes, National Fire Protection Association (NFPA) codes, National Fuel Gas Codes, ASHRAE Standard Mechanical Refrigeration Codes, and National Electrical Codes. The course reinforces the requirements placed on contractors and installation personnel involved in the layout and installation of HVACR equipment. *Note:* The student will be required to purchase basic hand tools that will be used in this and other refrigeration and air conditioning courses.

Prerequisite: MTH 114 or higher or appropriate score on Math Placement test or Math ACT score of 17 or higher; AND minimum APT score of 122 or College Reading and Writing Readiness; OR Consent of Instructor

HET 294 Green Building/Energy Sustainability (3-0) 3 Hours

This course provides an introduction to "Green Building" within the LEED certification process. Other topics related to sustainability will be covered including conservation, insulation, weatherization, and renewable energy technologies such as wind, solar, and geothermal systems.

Prerequisite: MTH 114 or higher or appropriate score on Math Placement test or Math ACT score of 17 or higher; AND minimum APT score of 122 or College Reading and Writing Readiness; OR Consent of Instructor

Course fee

HET 295 HET Capstone (2-2) 3 Hours

This course engages students in a capstone experience consisting of a comprehensive heating, ventilation, air conditioning, or refrigeration (HVACR) lab assignment and research project on relevant HVACR topics. The projects offer students the opportunity to synthesize and put into practice the knowledge and skills acquired in all other courses in the HET Program.

Prerequisite: MTH 114 or higher or appropriate score on Math Placement test or Math ACT score of 17 or higher; AND minimum APT score of 122 or College Reading and Writing Readiness; OR Consent of Instructor

May be taken four times for credit toward degree

HET 299 Special Topics in HVACR (Variable) 0.5-4 Hours

This course addresses the in-depth study of special topics in HVACR that do not have specific courses in the catalog. Course content will vary depending on the topic being studied. Topics may include current issues in HVACR, new technologies in HVACR, or new information concerning sustainability. Topics will be identified for each section of the course.

Prerequisite: Consent of Instructor

Course fee

May be taken four times, but any topic only once

Health Care Bridge Program (BRGA)

Adult Basic Education, GED® and ESL Division Building 4, (847) 543-2021

Adult Education classes are intended for people who live in Lake County. They are not appropriate for students with B1, B2, F1, F2, J1 or J2 visas, nor are they appropriate for short-term visitors to the U.S.

In general, students must be at least 18 years old in order to enroll in adult education classes. However, 16-year-olds and 17-year-olds may register with an official Secondary School Reference Form signed by their local High School authorized representative. U.S. High School graduates and 16-year-olds must meet additional eligibility requirements. New students must attend an orientation session before attending classes.

The Adult Basic Education, GED and ESL Division provides several specific types of educational opportunities and is funded in part by grants from the federal government.

BRGA 50 Reading Improvement Health Care Bridge (Variable) 2-3 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course will focus on critical reading skills while preparing for the General Education Development exam and/or the college placement test using contextualized reading materials related to the health field. In addition, this course will prepare students to transition into college level allied health care course work. The course will allow students to apply critical inquiry and investigation skills, as well as develop questions and form hypotheses about health care topics and issues through contextualized readings. Topics will include career exploration of the health field and educational exploration by visiting college classes.

Course fee May be taken four times for credit

BRGA 51 Writing Improvement Health Care Bridge (3-0) 3 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This contextualized writing course focuses on the writing skills needed both for preparing for the GED and for entering into health care field or in college level health care course work. Students will be writing multiple draft essays, answering exams in brief essay writings, and developing mini research reports. Grammar is applied and focuses on editing and proofreading needed in academic writing skills. Topics for writing will be based on readings from current health care issues and discussions.

Course fee May be taken four times for credit

**New courses offered effective Spring 2017 (refer to addendum for details):
BRGA 40 Introduction to Manufacturing for ELLs
BRGA 44 Introduction to Math for Manufacturing
BRGA 45 Introduction to Manufacturing as a Career for ABE
BRGA 46 Exploring Manufacturing Careers at the College of Lake County*

BRGA 52 Social Studies Health Care Bridge (3-0) 3 Hours
**Course Modification effective Fall 2016. For details, refer to addendum.*
 This course will focus on critical reading skills in the social sciences while preparing for the General Education Development exam and/or the college placement test using contextualized reading materials related to the health field. In addition, this course will prepare students to transition into college level allied health care course work. The course will allow students to apply critical inquiry and investigation skills, as well as develop questions and form hypotheses about health care topics and issues through contextualized readings. It will use graphics in the form of charts and graphs to interpret data and predict outcomes. Topics will include career exploration of the health field and educational exploration by visiting college classes. *Course fee*
May be taken four times for credit

BRGA 53 Sciences for Health Care Bridge (3-0) 3 Hours
**Course Modification effective Fall 2016. For details, refer to addendum.*
 This course will focus on critical reading skills in the sciences while preparing for the General Education Development exam and/or the college placement test using contextualized reading materials related to the health field. In addition, this course will prepare students to transition into college level allied health care course work. The course will allow students to apply critical inquiry and investigation skills, as well as develop questions and form hypotheses about health care topics and issues through contextualized readings. It will use graphics in the form of charts and graphs to interpret data and predict outcomes. Topics will include career exploration of the health field and educational exploration by visiting college classes.
Course fee May be taken four times for credit

BRGA 54 Practical Mathematics Health Care Bridge (Variable) 2-5 Hours
 This is a contextualized course in mathematics designed to prepare students for health care occupations and college level allied health courses while preparing for the GED exam. The course will review whole numbers, common fractions, decimals, metrics, and basic algebra and geometry. In addition, it will review graphs and diagrams that are used in health care, and students will be asked to apply data, statistics and probability skills to solve the problems. Students will also learn how to solve word problems that apply to a variety of health care topics.
Course fee
May be taken four times for credit

BRGA 55 Job Readiness Health Care Bridge (3-0) 3 Hours
 The Job Readiness Class for Health Care Bridge focuses on preparing Adult Education students for careers in the field of health care and college level courses. This course will focus on career exploration, and standards and expectations for working in the allied health field and participating in college level courses. It will emphasize basic computer skills needed for work including the importance of data entry and the use of data trends for diagnosis. The course will focus on team activities requiring communication and listening effectively and developing critical thinking and problem solving skills for the work place.
Course fee
May be taken four times for credit

BRGA 56 Study Skills Health Care Bridge (Variable) 2-6 Hours
 Study Skills class for Health Care Bridge focuses on preparing Adult Education students for college level courses in the Allied Health Department. The course will focus on understanding how college courses are organized and what teacher's general expectations are. It will describe how to use a syllabus, how to plan homework assignments, and how to prepare for tests. Note taking from lectures and from texts will be included. Reading for content knowledge will be emphasized. In addition, it will cover various examination processes including essay exams, pop tests, and finals.
Course fee
May be taken four times for credit

Health Information Technology (HIT)

Biological and Health Sciences Division,
 Room B210, (847) 543-2042

HIT 111 Medical Terminology (3-0) 3 Hours
 This course introduces students to medical terminology used in the healthcare field. Emphasis is on word construction using prefixes, roots, and suffixes. Definitions, spelling, pronunciation, and abbreviations are also included.
Prerequisite: College Reading and Writing Readiness

HIT 113 Ethical and Legal Aspects of Medical Records (2-0) 2 Hours
 This course introduces students to legal and ethical issues applicable to health information. State and Federal laws on privacy, confidentiality, and release of information relative to the health record are studied.
Prerequisite: College Reading and Writing Readiness
Typically offered spring only

HIT 115 Fundamentals of Health Information Technology (2-2) 3 Hours
 This course introduces students to the healthcare delivery system, regulations and standards, and the health information department and profession. Health data content and structure as well as the application of techniques to ensure quality documentation for all types of healthcare facility records are also introduced.
Prerequisite: College Reading and Writing Readiness
Course fee
Typically offered fall only

HIT 117 Basic CPT Coding (2-2) 3 Hours
 This course introduces students to the theory, structure, and organization of the Current Procedural Terminology (CPT) coding system. Emphasis will be on the application of coding principles to accurately assign CPT codes to health records. The role of CPT codes in billing and reimbursement will be included.
Prerequisite: HIT 111 (C or better)
Corequisite: BIO 111 or BIO 245 (both C or better)
Course fee

Course Information and Descriptions

- HIT 119 Pharmacology (1-0) 1 Hour**
This course introduces students to pharmacology. Content includes terminology, drug classifications, therapeutic use, side effects, contraindications and interactions. Common dosage ranges and routes of administration will also be discussed.
Prerequisite: College Reading and Writing Readiness
- HIT 131 Basic ICD-10-CM Coding (2-2) 3 Hours**
This course introduces students to the ICD-10-CM classification system with an emphasis on the application of coding guidelines used to accurately assign diagnostic codes in all healthcare settings. The impact of proper code assignment and its relationship to billing and reimbursement will be addressed. ICD-9-CM will be discussed as a legacy system.
Prerequisite: HIT 111 (C or better)
Corequisite: BIO 111 or BIO 245 (both C or better)
Course fee
- HIT 132 Basic ICD-10-PCS Coding (1-2) 2 Hours**
This course introduces students to the ICD-10-PCS classification system with an emphasis on coding guidelines used to accurately assign procedure codes in the hospital setting. The impact of proper code assignment and its relationship to billing and reimbursement will be addressed. ICD-9-CM will be discussed as a legacy system.
Prerequisite: BIO 111 or BIO 245 AND HIT 111 (all C or better)
Course fee
Typically offered fall only
- HIT 171 Insurance Procedures for the Medical Office (3-0) 3 Hours**
This course introduces students to health records and insurance processing procedures in the medical office. Emphasizes the relationship between health information and billing procedures. Brief overview of hospital billing is included.
Prerequisite: College Reading and Writing Readiness
- HIT 172 Health Statistics and Registries (1-2) 2 Hours**
This course introduces students to the collection and reporting of medical statistical data. The functions and uses of registries, with emphasis on the Cancer Registry, are studied.
Prerequisite: HIT 115 (C or better) and admission into the HIT program
Course fee
Typically offered spring only, odd years only
- HIT 212 Professional Practice Experience in Health Information Technology I (1-15) 4 Hours**
This course is the first of a two semester sequence of supervised clinical experience in health facilities. *Note:* A satisfactory health screening, background check, and drug screen must be on file with the college prior to the clinical affiliation. The student will be responsible for his/her transportation to and from the health facility. The student must be enrolled in his/her final Fall semester in the HIT program. Assignments and schedules may vary by facility.
Prerequisites: HIT 113 and HIT 115 (both C or better), and admission into the HIT program
Course fee
Typically offered fall only
- HIT 213 Professional Practice Experience in Health Information Technology II (.5-7.5 hours) 2 Hours**
This course is the second of a two semester sequence of supervised clinical experience in various areas pertaining to health information. *Note:* A satisfactory health screening, background check, and drug screen must be on file with the college prior to the clinical affiliation. The student will be responsible for his/her transportation to and from the health facility. The student must be enrolled in his/her final Spring semester in the HIT program. Assignments and schedule may vary by facility.
Prerequisite: HIT 212 (C or better)
Corequisite: HIT 218 (C or better)
Course fee
Typically offered spring only
- HIT 215 Medical Science (2-2) 3 Hours**
This course introduces students to human conditions and diseases of all body systems. Emphasis is on etiology, manifestations, method of diagnosis, and treatment.
Prerequisite: HIT 111 (C or better)
Course fee
Typically offered fall only
- HIT 217 Health Information Systems and Data Literacy (2-2) 3 Hours**
This course introduces students to health information systems concepts including selection and implementation, data quality, storage and retrieval, and security and privacy. Electronic health record concepts and HIM applications are discussed.
Prerequisite: HIT 115 (C or better) and admission into the HIT program
Course fee
Typically offered spring only, even years only
- HIT 218 Seminar in Health Information Technology (2-0) 2 Hours**
This course requires students to apply the academic knowledge acquired in the HIT curriculum to specific challenges encountered in the health information management workplace. The focus is on critical thinking, problem-solving, teamwork, and ethics. It also includes a review of HIT content areas with strategies for preparing for the national exam. Additionally students will select a health information topic of interest, summarize a literature search in a written report, and present the substance of the study orally.
Corequisite: HIT 213 (C or better)
Typically offered spring only
- HIT 231 Leadership and Management in Health Information Management (1-2) 2 Hours**
This course introduces students to the basic principles of supervision as applied to the health information profession. The elements and concepts related to leadership and organizational management including human, financial, and physical resources are included.
Prerequisite: HIT 115 (C or better) and admission into the HIT program
Course fee
Typically offered spring only, odd years only

HIT 232 Quality Management and Healthcare Statistics (2-2) 3 Hours

This course introduces students to the principles of quality management. Content includes quality assessment and management, risk and utilization management, and credentialing. The collection, preparation, and analysis and interpretation of healthcare statistics are also introduced. The functions and uses of registries, with emphasis on the cancer registry, are studied.

Prerequisite: HIT 115 (C or better) and admission into the HIT program

Course fee

Typically offered spring only, odd years only

HIT 271 Advanced Coding (1-2) 2 Hours

This course explores the more complex areas of ICD and CPT coding introduced in previous coding courses. Students will apply coding principles and guidelines related to complex diagnoses and procedures. Coding from actual patient records is emphasized. The use of coding references and coding software is integrated into the course.

Prerequisite: HIT 117, HIT 131, HIT 132, and HIT 215 (all C or better)

Course fee

Typically offered spring only

HIT 272 Reimbursement Systems in Healthcare (2-0) 2 Hours

In this course students will learn the history, rationale, and methodology of the systems used by third-party payers to determine the reimbursement that health care providers will receive. Reimbursement concepts include fee-for-service, managed care, capitation systems, Diagnosis-Related Groups (DRGs), Resource Based Relative Value Scale (RBRVS), Ambulatory Payment Classifications (APCs) and related concepts. The use of the charge description master (chargemaster) in reimbursement will be discussed. The importance of compliance with regulations and the related issues of fraud and abuse will also be addressed.

Prerequisite: Completion of two coding courses (HIT 117, HIT 131, or HIT 132) (both C or better)

Corequisite: A third coding course (HIT 117, HIT 131, or HIT 132) (C or better)

Typically offered fall only

HIT 299 Special Topics: HIT (Variable) 1-3 Hours

This course is designed to meet the needs of students for specialized instruction in current health information technology topics. Course content will vary depending on the topic being studied.

Prerequisite: Will vary depending on topic. Consent of the department required.

May be taken three times, but any topic only once

Health and Wellness Promotion (HWP)

Biological and Health Sciences Division,
Room B210, (847) 543-2042

HWP 240 Contemporary Health Issues (3-0) 3 Hours

This course is a survey of issues related to holistic health as they pertain to personal growth and quality of life. Emphasis is placed upon behavioral changes and strategies for lifetime wellness.

Prerequisite: College Reading and Writing Readiness

HWP 257 Health and Wellness Practicum I (0-5) 1 Hour

This course will introduce students to the process of structured field observation. Opportunities will focus on careers in health and wellness promotion. Regular contact time with an instructor will also be provided.

Prerequisite: College Reading and Writing Readiness

Course fee

HWP 258 Health and Wellness Practicum II (0-5) 1 Hour

This course will introduce students to supervised competency-based practice in health and wellness. This on-the-job training in the greater Lake County area provides students with the opportunity to demonstrate acquired skills and knowledge and to continue to develop as a professional. Included will be group seminar sessions with other students and regular meetings with the CLC instructor/supervisor.

Prerequisite: HWP 257 (C or better) and Consent of Instructor

Course fee

HWP 260 Sport and Exercise Nutrition (3-0) 3 Hours

This course will introduce students to the relationship between fundamental nutrition principles and sport and exercise science. The efficacy of performance-based dietary supplements and related ethical issues will also be explored.

Prerequisite: College Reading and Writing Readiness

Recommended: HCM 175 (C or better)

HWP 290 Principles of Wellness Coaching (3-0) 3 Hours

This course will explore the six dimensions of contemporary health as they specifically apply to the wellness coaching continuum.

Theoretical coaching constructs will be introduced and practical application will be encouraged through a variety of class activities.

Prerequisite: College Reading and Writing Readiness

HWP 299 Special Topics: Health and Wellness Promotion (Variable) 1-4 Hours

This course is designed to provide students with an in-depth study of special topics in health and wellness. Course content and requirements will vary depending on the topic studied. Additionally, this course may be taken up to four times for credit toward degree.

Prerequisite: College Reading and Writing Readiness

May be taken four times, but any topic only once

History (HST)

Business and Social Sciences Division,
Room T302, (847) 543-2047

HST 121 History of Western Civilization to 1500 (3-0) 3 Hours

This course is an historical survey of the ancient civilizations of Egypt, Greece, and Rome, through the Middle Ages to the Renaissance. Emphasis is placed on cultural developments, political trends, and economic and social issues that have influenced the direction of Western Civilization.

Prerequisite: College Reading and Writing Readiness

Course fee

IAI: S2 902

Course Information and Descriptions

HST 122 History of Western Civilization From 1500 (3-0) 3 Hours

This course is an historical survey from absolutist monarchy through the French Revolution, Industrialization, and 20th century ideological conflicts and wars. Emphasis is placed on the shaping of contemporary ideas, values, institutions, and the impact of technology.

Prerequisite: College Reading and Writing Readiness

IAI: S2 903

HST 123 Modern Europe I (3-0) 3 Hours

This course surveys the making of the modern mind and the Age of Revolutions. Emphases are placed on the Age of Reason, French Revolution and growth of modern democracy, liberalism, socialism, and nationalism.

Prerequisite: College Reading and Writing Readiness

HST 124 Modern Europe II (3-0) 3 Hours

This course surveys Europe with its world impact in the 20th century. Emphases are placed on intellectual modernism, totalitarianism, world wars, ideologies in conflict and global national interaction.

Prerequisite: College Reading and Writing Readiness

HST 126 History/Non-Western World Since 1500 (3-0) 3 Hours

This course is a survey of the history of Contemporary Non-Western Civilization and examines the historical roots and modern history of the following areas: The Far East, Southeast Asia, the Sub-continent and the Middle East. The course will include historical origins of the nations covered but will focus on their history from the late 19th century to the present. This course fulfills the CLC International/Multicultural Education requirement.

Prerequisite: College Reading and Writing Readiness

Fulfills the CLC I/M Education Requirement.

IAI: S2 905N

HST 127 History of Chinese Culture and Society (3-0) 3 Hours

This course is intended to provide students with an introduction to Chinese culture by studying social and cultural awareness of contemporary Chinese reality with a global, historical context. History, geography, political and economic structure and function in the world are examined through social organization and cultural institutions. This course fulfills the CLC International/Multicultural Education requirement.

Prerequisite: College Reading and Writing Readiness

Fulfills the CLC I/M Education Requirement.

IAI: S2 914N

HST 128 Modern History of the Middle East (3-0) 3 Hours

This course will trace the history of the Middle East from the period of the Ottoman Empire to the Present. Students will study the influence of the Ottomans on the Middle East and how the decline of this once great empire paved the way for European penetration. In the process, they will critically examine how and why Europeans created new dynasties and nations in the post World War I & II periods and how these creations have contributed to the instability that now exists in the Middle East.

Prerequisite: College Reading and Writing Readiness

Fulfills the CLC I/M Education Requirement.

IAI: S2919N

HST 129 Women in History (3-0) 3 Hours

This course is an historical and humanistic survey of famous and obscure women from ancient times to the modern world. Its emphases are the status and treatment of women through the ages and factors that have defined and altered this status.

Prerequisite: College Reading and Writing Readiness

HST 221 United States History to 1876 (3-0) 3 Hours

This course is a survey of American history from the pre-Columbian era to the end of Reconstruction. The topics to be explored and examined are: Pre-Columbian Americans, the age of European exploration and colonization in the Americas, the rise of African slavery and the Atlantic trade, British Colonial America, the American move to Independence and the establishment of the United States, the Early Republic and the Age of Jackson, Westward Expansion and Sectionalism, and lastly the Civil War and Reconstruction.

Prerequisite: College Reading and Writing Readiness

IAI: S2 900

HST 222 United States History 1876 to Present (3-0) 3 Hours

This course is a continuation of HST 221 - US History to 1876. It is an interpretative survey of social, economic, political, diplomatic, and cultural developments of the United States since 1876. Topics covered include the impact of industrialism, urbanization and immigration, overseas expansion, World Wars I and II, economic growth and depressions, development of a consumer culture, modern culture and the arts, the Cold War, suburbanization, civil rights protests and progress, politics and the evolution of liberalism and conservatism, continued overseas conflicts and wars, and the emergence of an information economy/society.

Prerequisite: College Reading and Writing Readiness

IAI: S2 901

HST 223 American Popular Culture (3-0) 3 Hours

American Popular Culture is a survey of 20th century American culture and social history as reflected in popular movies, music, and general popular expression.

Prerequisite: College Reading and Writing Readiness

HST 225 American Labor History (3-0) 3 Hours

This course is a survey of American labor history from the colonial era to the present. Following a chronological approach, the course will cover the development of the system of labor in America, the factors affecting changes in the system, the emergence and growth of labor organizations, the role of labor organizations in the economic and political order, and the challenges confronting labor and labor organizations in a changing economic order.

Prerequisite: College Reading and Writing Readiness

HST 240 Afro-American History I (3-0) 3 Hours

This course surveys the African origins of African Americans, the African Diaspora, the role played in colonial America, slavery, the U.S. Civil War and Reconstruction. Emphasis is on the African Americans' contributions to America's development.

Prerequisite: College Reading and Writing Readiness

HST 241 Afro-American History II (3-0) 3 Hours

This course surveys the role of African Americans in the United States from the end of Reconstruction to the present. Emphasis is on the contributions to America's development and the problems encountered.

Prerequisite: College Reading and Writing Readiness

HST 242 History of Chicago (3-0) 3 Hours

This course is a historical survey of the Chicago region from the colonial era thru the present. The course will cover such topics as frontier expansion, ecological change, commerce, city planning, industrialization, labor conflict, the immigrant adjustment, neighborhoods, the political machine, the battle for municipal reform, rise of the ghetto, suburbanization, gentrification, the legacy of the Daley machines, and Chicago's contributions to culture and the arts.

Prerequisite: College Reading and Writing Readiness

HST 245 History of Latin America to 1825 (3-0) 3 Hours

This course provides an introduction to the formation of Latin American society during the colonial period, from the European conquest to the independence of the Iberian colonies. It examines the processes of conquest and colonization, the organization of the Spanish and Portuguese empires in America, and Indian and African resistance and accommodation, in comparative perspective.

Prerequisite: College Reading and Writing Readiness

Fulfills the CLC I/M Education Requirement.

IAI: S2910N

HST 246 History of Latin America from 1825 (3-0) 3 Hours

This course provides an introduction to Latin American history after independence, from the consolidation of the national states to the 1980s. By focusing on the cases of Argentina, Brazil, Cuba, and Mexico, within the broader regional context, it examines significant social, political, and economic developments of modern Latin America.

Prerequisite: College Reading and Writing Readiness

Fulfills the CLC I/M Education Requirement.

IAI: S2911N

HST 269 The History of the Second World War (3-0) 3 Hours

This course will examine the causes, course and end of the Second World War, studying the origins of the war in Europe and Asia; examining the effects of the war on belligerent, occupied, and neutral nations and regions globally as well as the effects of the war in various areas including society, politics and culture.

Prerequisite: College Reading and Writing Readiness

Fulfills the CLC I/M Education Requirement.

HST 299 Special Topics in History (Variable) 1-3 Hours

This course addresses the in-depth study of special topics in history, which do not have specific courses in the catalogue. Course content will vary depending on the topic being studied, but could include the History of Chicago or The History of the Modern Middle East.

Prerequisite: College Reading and Writing Readiness

May be taken four times, but any topic only once

Horticulture (HRT)

Biological and Health Sciences Division,
Room B210, (847) 543-2042

HRT 121 Introduction to Horticulture (3-0) 3 Hours

This course introduces students to basic plant taxonomy, terminology, anatomy, physiology and the functions/responses of plants. Professions working with the culture and use of plants and applications of plant science will be included.

Prerequisite: College Reading and Writing Readiness or concurrent enrollment in ENG 109 or ELI 109 or ENG 100 AND a score of 34 or higher on the Math Placement Test or Basic Algebra Readiness

IAI: AG 905

HRT 124 Introduction to Soils (2-4) 4 Hours

This course introduces students to the science and function of native and artificial soils as they relate to plants and the environment. Topics on formation, physical characteristics, nutrient content and availability, water movement, taxonomy and biota interactions are covered.

Corequisite: HRT 121 (C or better)

Recommended: CHM 140

Course fee

Typically offered fall and summer only

HRT 125 Tree and Shrub Identification (2-2) 3 Hours

This course covers the identification of deciduous and evergreen trees and shrubs by their common and botanic names. Emphasis is placed on trees and shrubs commonly used in the landscape and their key characteristics. Approximately 240 trees will be covered in this course.

Course fee

Typically offered fall only

HRT 126 Entomology (2-2) 3 Hours

This course introduces students to the importance of insects to humans. Topics include insect biology, principles of pest management, natural and applied insect control, and insect pests of vegetables, fruit, and ornamental plants. Laboratory includes observation, identification, and diagnosis of insect plant pests.

Prerequisite: College Reading and Writing Readiness

Corequisite: HRT 121 (C or better)

Course fee

Typically offered fall and summer only

HRT 127 Perennials, Annuals and Weeds (2-2) 3 Hours

This course covers the identification, care, and maintenance of herbaceous plants including perennials, annuals, ornamental grasses, vines, groundcovers and weeds. Approximately 600+ plants will be covered in this course. Students will review materials through photo and herbarium samples.

Course fee

Typically offered spring only

Course Information and Descriptions

- HRT 129 Plant Pathology (2-2) 3 Hours**
An introductory course in plant pathology covering the biology and management of agents causing disease and growing disorders. Students study these agents and the problems that they cause, along with possible management tools.
Prerequisite: College Reading and Writing Readiness
Corequisite: HRT 121 (C or better)
Course fee
Typically offered spring only
- HRT 140 Landscape Graphics (2-2) 3 Hours**
This course introduces students to the methods used to visually communicate existing and desired information to create a landscape design. The course also covers the process of gathering information about site constraints and client needs to develop these drawings.
Prerequisite: College Reading and Writing Readiness or concurrent enrollment in ENG 109 or ELI 109 or ENG 100 AND a score of 34 or higher on the Math Placement Test or Basic Algebra Readiness
Course fee
Typically offered fall only
- HRT 150 Landscape Maintenance (2-2) 3 Hours**
This course is designed for students interested in and/or presently working in the field of landscape care and maintenance. Included topics are pruning, fertilizing and planting of trees and shrubs, general turf care, and pest identification and control.
Prerequisite: College Reading and Writing Readiness or concurrent enrollment in ENG 109 or ELI 109 or ENG 100 AND a score of 34 or higher on the Math Placement Test or Basic Algebra Readiness
Course fee
Typically offered fall only
- HRT 160 Business Issues in Horticulture (3-0) 3 Hours**
This course addresses the fundamental business skills needed to run or manage a horticulture-related business. Issues including establishing wholesale accounts with growers, hiring and managing seasonal employees, creating client contracts and billing statements, responding to "requests for proposals" and the bidding process will be covered.
Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness
- HRT 165 Small Engine Repair and Maintenance (2-2) 3 Hours**
This course explores the proper use, maintenance, and basic repair of power equipment used in horticulture. Emphasis will be on two- and four-cycle engines used to operate such equipment.
Course fee
- HRT 184 Basic Floral Design (2-2) 3 Hours**
Course Withdrawn Effective Spring 2017
Introduces the principles of floral design including the care and use of floral materials and accessories. Identification, handling, and storage of cut flowers will be covered. In addition to construction of basic arrangements, the floral industry and working in a flower shop will be discussed.
Course fee *Typically offered fall only*
- HRT 185 Advanced Floral Design (2-2) 3 Hours**
Course Withdrawn Effective Spring 2017
Focuses on arrangements for special occasions such as weddings, funerals, and holidays. Customer relations will also be emphasized.
Prerequisite: HRT 184 (C or better)
Course fee
Typically offered spring only
- HRT 221 Plant Propagation (2-2) 3 Hours**
This course focuses on the techniques and procedures involved in propagating plants. Sexual and asexual methods are practiced along with environmental conditions needed to promote growth and development. Seed propagating and grafting will be included.
Prerequisite: College Reading and Writing Readiness AND HRT 121 (C or better)
Course fee
Typically offered spring only
- HRT 222 Greenhouse Crop Production and Management (2-2) 3 Hours**
This course covers the production of greenhouse crops, the cultural practices required for growth and the management of greenhouse production facilities. Seeding, watering, fertilization, containers, growing medias, temperature control, and insect and disease control will be covered. Bedding plants and pot crops will be grown throughout the semester.
Prerequisite: College Reading and Writing Readiness AND HRT 121 (C or better)
Recommended: BIO 222
Course fee
Typically offered spring only
- HRT 228 Nursery Production (2-2) 3 Hours**
This course addresses the principles and practices of nursery production and management, and how these have changed over recent years to reflect environmental sustainability in the green industry. Course will include production techniques for traditional nursery crops as well as native species, and will include fieldwork at nearby growing facilities.
Prerequisite: College Reading and Writing Readiness AND HRT 121 (C or better)
Course fee
Typically offered fall only
- HRT 229 Organic Growing and Sustainable Practices (3-0) 3 Hours**
This course explores the requirements for USDA organic certification, the growth in "organic" strategies for a variety of horticultural production areas, the expansion of small organic growing operations catering to local markets, and how sustainability concerns are changing the green industry.
Prerequisite: College Reading and Writing Readiness AND HRT 121 (C or better)
Typically offered fall only
- HRT 240 Landscape Design (2-2) 3 Hours**
This course introduces students to design concepts and practical approaches for residential landscape design. Students take a variety of design projects from concept through final presentation.
Prerequisite: College Reading and Writing Readiness AND HRT 140 (C or better)
Recommended: HRT 125 (C or better) OR HRT 127 (C or better)
Course fee
Typically offered spring only

HRT 245 Computer Landscape Design (2-2) 3 Hours

This course introduces students to the use of AutoCAD for site planning, and to landscape design module aids for the creation of landscape design plans. Emphasis is placed on practical application of software and hardware to develop working drawings for the landscape industry.

Prerequisite: College Reading and Writing Readiness AND HRT 140 (C or better)

Course fee

Typically offered spring only

HRT 260 Landscape Construction (2-2) 3 Hours

This course explores the practical, hands-on installation of landscape features. Project organization, job set up, and construction methods will be covered. Students will be assigned projects that will include design specifications and cost estimates. How to handle equipment and participation in actual construction tasks are included.

Prerequisite: College Reading and Writing Readiness or concurrent enrollment in ENG 109 or ELI 109 or ENG 100 AND a score of 34 or higher on the Math Placement Test or Basic Algebra Readiness

Course fee

Typically offered fall only

HRT 265 Urban Forestry Management (2-2) 3 Hours

This course covers the care and maintenance of trees in urban/suburban settings. Tree identification, care and pruning are covered, as well as special topics of concern to urban foresters like pollution and compaction tolerances, tree preservation ordinances, and invasive pests.

Prerequisite: College Reading and Writing Readiness

Corequisite: HRT 121 (C or better)

Recommended: HRT 125

Course fee

Typically offered spring only

HRT 280 Horticulture Practicum (Variable) 1-3 Hours

This course is a special project arranged by the HRT faculty member and student, and addresses a specific area of interest to the student. Lecture/lab ratio is variable depending upon the extent of project and time committed.

Prerequisite: Completion of at least 12 credit hours in Horticulture (C or better) and consent of instructor

HRT 282 Seminars in Horticulture (1-0) 1 Hour

This is a capstone course for horticulture majors. It addresses current environmental trends in the green industry by exploring the qualifications and credentials needed for various career specialties. Guest speakers include a range of representatives from green industry specialties as researched by the students. Additional topics include job readiness, resume preparation and interview skills.

Prerequisite: Completion of at least 12 credit hours in Horticulture (C or better)

HRT 285 Sustainable Landscapes (3-0) 3 Hours

This class will explore greenroof systems, living walls, gray water catchment systems, rain gardens, bioswales, water quality treatment with plants, phytoremediation (plants) and mycoremediation (fungi) techniques for treating contaminated soils, and a number of other approaches to create more sustainable landscapes and green infrastructure. Students will gain an understanding of how these approaches work, what is involved to design and build them, and how to assess construction materials and costs.

Prerequisite: College Reading and Writing Readiness AND a score of 34 or higher on the Math Placement Test or Basic Algebra Readiness

HRT 286 Natural Areas Management (2-4) 4 Hours

This course provides an overview of natural areas restoration and management issues for the Midwest region. Major plant communities for this region such as wetland, prairie, savanna and woodland will be addressed in terms of their ecology, key identifying features, management issues and restoration techniques. Field trips will expose students to all phases of restoration work, from initial construction to high-quality natural area. Field trips also will provide an opportunity for hands-on practice of various management techniques like prescribed burning and vegetation monitoring.

Prerequisite: BIO 120 AND BIO 126 or HRT 127 (all C or better)

Typically offered fall only

HRT 299 Selected Topics in Horticulture (Variable) 0.5-3 Hours

This course is designed to meet the needs of students for specialized instruction in horticulture topics. A maximum of six (6) credit hours of HRT 299 may be used as elective credit toward an A.A.S. degree or certificate in Horticulture; a topic may be taken only once.

Course fee

May be taken four times, but any topic only once

Hospitality and Culinary Management (HCM)

Business and Social Sciences Division,
Room T302, (847) 543-2047

HCM 110 Introduction to the Hospitality Industry (3-0) 3 Hours

This course prepares students for a career in the hospitality industry. The course provides an overview of the various segments in the industry including restaurant management, culinary arts, lodging, managed services, beverages, recreation and theme parks, gaming, and event management. Students are introduced to the various operational areas within the hospitality industry.

Prerequisite: College Reading and Writing Readiness or concurrent enrollment in ENG 109 or ELI 109 AND Basic Algebra Readiness or concurrent enrollment in MTH 114

HCM 111 Culinary Principles I (2-6) 5 Hours

This course introduces students to the principles of commercial food preparation with emphasis on the development of a basic foundation of culinary skills. Topics covered include the history of culinary arts, development of modern food service, classic and modern kitchen brigades, kitchen sanitation and safety, recipes and menus, professional kitchen tools and equipment, knife safety, flavors and flavorings, dairy products, mise en place, cooking principles, stock and sauce preparation, and soup identification and preparation.

Prerequisite: College Reading and Writing Readiness or concurrent enrollment in ENG 109 or ELI 109 AND Basic Algebra Readiness or concurrent enrollment in MTH 114

Corequisite: HCM 113

Course fee

Course Information and Descriptions

HCM 112 Culinary Principles II (2-6) 5 Hours

This course is a continuation of Culinary Principles I with emphasis on the development of a strong foundation in culinary skills. Topics covered include identification of vegetables used in food service operations and proper cooking methods, the range of vegetarian diets, identification and cookery of various starches, identification and preparation of salads and salad dressings, and the identification of the fruits used in food service operations, and sandwich preparation.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness AND HCM 111 (C or better)

Course fee

HCM 113 ServSafe: Food Service Sanitation (1-0) 1 Hour

This course introduces students to the principles and procedures of sanitation in food preparation and service. Topics include causes and prevention of food borne illnesses, health regulations and inspection procedures. The State of Illinois Sanitation Licensing Examination is given as part of this course. This course meets the requirements for the sanitation course for American Culinary Federation (ACF) initial certification and/or re-certification.

Note: BRING SERVSAFE BOOK TO FIRST CLASS - AVAILABLE AT CLC BOOKSTORE.

HCM 151 American Regional Cuisine (1-4) 3 Hours

This course explores the use of local ingredients in the preparation of traditional and contemporary American specialties. The major culinary regions of the US are identified, including the ingredients and cooking techniques used in each region. Students apply established culinary principles in the preparation of a variety of regional menus. Students will develop mental mise en place, professionalism, speed, total product utilization, and organizational and teamwork skills.

Prerequisite: HCM 111 and HCM 113 (both C or better)

Course fee

Typically not offered every term

HCM 152 European Cuisine (1-4) 3 Hours

This course explores the use of local ingredients in the preparation of traditional and contemporary European specialties. The major culinary regions of Europe are identified, including the ingredients and cooking techniques used in each region. Students will also learn and prepare various dishes from specific European countries. Students apply established culinary principles in the preparation of a variety of regional and country-specific menus. Students will develop mental mise en place, professionalism, speed, total product utilization, and organizational and teamwork skills.

Prerequisite: HCM 111 and HCM 113 (both C or better)

Course fee

Typically not offered every term

HCM 153 Latin American Cuisine (1-4) 3 Hours

This course explores the use of local ingredients in the preparation of traditional and contemporary Latin American specialties. The major culinary regions of Latin America are identified, including the ingredients and cooking techniques used in each region. Students will also learn and prepare various dishes from specific Latin American countries. Students apply established culinary principles in the preparation of a variety of regional and country-specific menus. Students will develop mental mise en place, professionalism, speed, total product utilization, and organizational and teamwork skills.

Prerequisite: HCM 111 and HCM 113 (both C or better)

Course fee

Typically not offered every term

HCM 154 Italian Regional Cuisine (1-4) 3 Hours

This course explores the use of local ingredients in the preparation of traditional and contemporary Italian specialties. The major culinary regions of Italy are identified, including the ingredients and cooking techniques used in each region. Students apply established culinary principles in the preparation of a variety of regional menus. Students will develop mental mise en place, professionalism, speed, total product utilization, and organizational and teamwork skills.

Prerequisite: HCM 111 and HCM 113 (both C or better)

Course fee

Typically not offered every term

HCM 155 French Regional Cuisine (1-4) 3 Hours

This course explores the use of local ingredients in the preparation of traditional and contemporary French specialties. The major culinary regions of France are identified, including the ingredients and cooking techniques used in each region. Students apply established culinary principles in the preparation of a variety of regional menus. Students will develop mental mise en place, professionalism, speed, total product utilization and organizational and teamwork skills.

Prerequisite: HCM 111 and HCM 113 (both C or better)

Course fee

Typically not offered every term

HCM 159 Culinary Arts Study Abroad (Variable) 1-3 Hours

This course will provide Hospitality and Culinary Management students with the opportunity to study and experience food, culture and the hospitality industry within a global context. Course topics, locations and credit hours will be identified by individual section. This course is repeatable up to three times, any topic only once, for a maximum of 9 hours toward degree completion.

Prerequisite: To be determined relative to topic

May be taken three times, but any topic only once

Typically not offered every term

HCM 170 Patisserie I (2-6) 5 Hours

This course covers the basic principles and ingredients used in bakeshop production. Topics covered include identification of equipment and tools used in the bakeshop, identification of ingredients used in the bakeshop, controlling the development of gluten, understanding the baking process and various mixing methods. This course introduces students to skills needed in a bakeshop and focuses on preparation of baked goods which include quick breads, pate a choux, tarts, pies and cookies.

Prerequisite: College Reading and Writing Readiness or concurrent enrollment in ENG 109 or ELI 109 AND Basic Algebra Readiness or concurrent enrollment in MTH 114

Corequisite: HCM 113

Course fee

HCM 171 Culinary Principles III (2-6) 5 Hours

This course emphasizes the principles of commercial food preparation along with continued focus on building a strong foundation in culinary skills. Topics covered include principles of meat cookery, including beef, veal, lamb and pork; and principles of poultry, game, fish and shellfish. Students will learn the composition and structure of meat, poultry, fish and shellfish, and will learn quality indicators when purchasing these products. Students will learn the proper cooking methods for various cuts of meat, poultry, fish and shellfish. This course incorporates a capstone project in which students provide a full meal for the public.

Prerequisite: HCM 112 (C or better)

Course fee

HCM 172 Patisserie II (2-6) 5 Hours

This course introduces students to the skills and competencies needed to be a professional pastry chef. The continuation of baking and pastry topics includes: custards, petits fours, mousses, cake preparation, plate presentation, basic chocolate work and recipe costing.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness AND HCM 170 (C or better)

Course fee

HCM 173 Patisserie III (2-6) 5 Hours

This course is a continuation of Patisserie II and introduces students to European and advanced pastries and a variety of tortes with new assembly and decorating techniques. Bavarians, individual cakes and desserts, frozen desserts, advanced pastries and confectionery are also included.

Prerequisite: HCM 172 (C or better)

Course fee

Typically offered fall only

HCM 174 Advanced Pastry (2-6) 5 Hours

In this advanced course students build on many of the skills and techniques learned in Patisserie I, II and III which include assembling cakes and individual pastries with multiple components and garnishes, advanced pastries, and confectionery. Gateaux, molded frozen desserts, chocolate work, modeling chocolate, marzipan and upscale plate presentations will be produced.

Prerequisite: HCM 173 (C or better)

Course fee

Typically offered spring only

HCM 175 Nutrition (3-0) 3 Hours

This course introduces students to the principles of nutrition and the application of these principles to the food service industry. Topics include fundamentals of food chemistry and nutrition for different age groups and the special needs of individuals. This course meets the requirements for the nutrition course for American Culinary Federation (ACF) initial certification and/or re-certification.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

HCM 176 Yeast Breads (1-4) 3 Hours

This course introduces the student to bread making skills and techniques. Specialty tools and equipment used in bread making will be discussed. Topics covered include ingredient identification and functions of ingredients, how to control gluten development and learning the use of pre-ferments in bread making. Students will produce European and Artisan breads, specialty breads and fabricate products from Danish and croissant dough.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness AND HCM 170 (C or better)

Course fee

Typically offered fall only

HCM 177 Advanced Yeast Breads (1-4) 3 Hours

This course introduces the student to advanced bread making skills and techniques. Specialty tools and equipment used in bread making will be discussed. Topics covered include ingredient identification and functions of ingredients, types of breads from different cultures, the various shapes of breads, and the variety of grains, classic breads, sourdoughs and rye breads. Students will produce European, Artisan and specialty breads from different cultures using a variety of grains and bread shapes.

Prerequisite: HCM 176 (C or better)

Typically offered spring only

HCM 178 Special Diets and Healthful Baking (2-4) 4 Hours

In this course students will focus on identifying and describing nutritional concerns associated with baked goods and desserts. Upon completion of this course, students will identify and describe allergy and food intolerance concerns and learn ways to modify or substitute alternative ingredients for fat, dairy, sugar, gluten and soy in baking formulas for people with specialized diets.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness AND HCM 170 (C or better)

Course fee

Typically offered spring only

HCM 179 Cake Decorating (2-4) 4 Hours

In this course students will work with a variety of fillings, frostings, icings and decorations to fill, ice and assemble special occasion cakes, cupcakes, and wedding cakes. Students will practice using pastry bags with an assortment of pastry tips to pipe classic and contemporary designs. Students will be introduced to rolled fondant and learn techniques with it.

Prerequisite: HCM 172 (C or better)

Typically offered fall only

HCM 185 Garde Manger (2-4) 4 Hours

This course introduces students to Garde Manger (the cold kitchen) and the practical applications of cold food preparation and presentation. Topics include cold sauces, plated appetizers, hors d'oeuvres, principles of plate presentation, buffet design, food art and sculpted centerpieces, garnishing, global garde manger, charcuterie, sausage making, smoking and curing.

Prerequisite: HCM 171 (C or better)

Course fee

Typically offered fall and spring only

HCM 212 Menu Marketing and Management (3-0) 3 Hours

This course examines the impact the menu has on the success of a foodservice operation. Topics covered include menu design and layout, costing-out recipes, determining menu prices, marketing and merchandising the menu, cost control, and the importance of menu analysis.

Prerequisite: HCM 111 or HCM 170 (either C or better)

Typically offered fall and spring only

HCM 213 Purchasing & Inventory Control (3-0) 3 Hours

This course addresses the principles and procedures of quantity purchasing and inventory control. Topics include basic steps in an organized purchasing system; developing standards for purchasing, cost controls and inventory systems; receiving and storage procedures; budgeting; record keeping for food, beverage, equipment and supplies; vendor relationships; legal factors; and storage requirements.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Typically offered fall and spring only

HCM 214 Hospitality Supervision (3-0) 3 Hours

This course introduces students to the skills and competencies needed to supervise staff in the hospitality industry. Emphasis is on recruiting, hiring, training, evaluating, motivating and team work performance. This course meets the requirements for the supervision course for American Culinary Federation (ACF) initial certification and/or re-certification.

Prerequisite: College Reading and Writing Readiness

Typically offered fall and spring only

Course Information and Descriptions

HCM 271 Hospitality Leadership (3-0) 3 Hours

This course introduces students to the principles and techniques required to competitively manage a successful hospitality operation in a rapidly changing environment. The roles, responsibilities and competencies required to perform successfully are presented. Competencies covered include planning, leading, organizing, and controlling to efficiently deliver quality products and services. Skills in creative problem solving and team building are addressed.

Prerequisite: 15 semester hours of HCM courses, one of which must be HCM 212, 213, or 273 (all C or better)

Typically offered fall only

HCM 272 Culinary & Hospitality Internship (1-10) 3 Hours

This course provides students with the opportunity to gain work experience in a professional hospitality setting. Students rotate through different departments or stations to obtain a well-rounded experience. Students meet for one hour per week with the instructor in the classroom and must complete a minimum of 150 hours at the internship site, under the supervision of a chef or manager.

Prerequisite: Fifteen credit hours of HCM courses and HCM Department consent

HCM 273 Controlling Hospitality Costs (3-0) 3 Hours

This course outlines the elements, procedures and process of controlling hospitality costs. Topics include menu, inventory, purchasing, receiving, food costs, waste, storage, budget, staff scheduling, payroll and benefits. The course also covers the components of analyzing market data and using historical numbers in budgeting.

Prerequisite: HCM 212 and HCM 213 (both C or better)

Typically offered fall and spring only

HCM 275 Contemporary Restaurant Principles (1-8) 5 Hours

This course provides students with the opportunity to further develop their skills in all facets of restaurant operations. Students will plan, organize, prepare and serve menu items typically featured in an upscale dining establishment specializing in Contemporary American Cuisine. Students will experience both front-of-the-house and back-of-the-house operations. Modern menu trends, flavor combinations, and plate presentation are emphasized, using locally-grown and produced ingredients when possible. Students will also learn basic service techniques, set-up and organization of the dining room, and service language.

Prerequisite: HCM 171 and HCM 212 (both C or better)

Typically offered fall and spring only

HCM 299 Selected Topics in Hospitality (Variable) 1-5 Hours

This course is designed to provide specialized instruction in a current or emerging culinary arts or hospitality management area. Course content will vary depending on the topic being studied. The course may be taken up to three times, but any topic only once, for a maximum of three credits toward a degree or certificate.

Course fee

May be taken three times, but any topic only once

Human Services Program (HUS)

Business and Social Sciences Division,
Room T302, (847) 543-2047

HUS 114 Human Services Supervision (3-0) 3 Hours

Designed to develop an understanding of the major functions of management in the human services area. Various methods of planning, organizing and directing are examined.

Prerequisite: College Reading and Writing Readiness

HUS 116 Principles of Foster Care (1-0) 1 Hour

For people who have received basic orientation for foster care from the agency for which they are fostering children. It seeks to acquaint new and experienced foster parents with basic concepts in fostering through formal presentations and learning from other class members.

Prerequisite: College Reading and Writing Readiness

HUS 117 Behavior Assessment (4-0) 4 Hours

Presents the idea of planned intervention to human systems utilizing verified principles of behavior change. Emphasis placed on the ways in which behavior is determined by factors in natural social situations. Research and the practical application of behavior change techniques are stressed.

Prerequisite: PSY 121 (C or better)

HUS 121 Health and Nutrition (3-0) 3 Hours

The course focuses on personal health needs of the individual, including nutrition, health, and safety issues with emphasis on meeting health/safety needs for children, adolescents, and adults in group settings. A healthy lifestyle, preventive health, and community health are examined.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

HUS 123 Introduction to Group Dynamics (3-0) 3 Hours

(Formerly HUS 113) This course introduces basic concepts and theories of group dynamics, including group development and functioning, communication patterns, leadership, and conflict management. Laboratory experiences provide opportunities for self-awareness through observations of group behavior, working within groups, and group leadership.

Prerequisite: College Reading and Writing Readiness

HUS 128 Introduction to Counseling Skills (2-2) 3 Hours

(Formerly HUS 118) This course provides the student with an introduction to the foundational theories and skills necessary in the counseling field and explores the dynamics of establishing positive relationships with people in need of human services. The counseling process and the issues of intervention, therapeutic interviewing, confidentiality, and empathic communication will be presented. This course includes a mandatory field experience of 40 hours with an HUS Department Chair pre-approved social service agency.

Prerequisite: College Reading and Writing Readiness

HUS 132 Trauma, Violence, and Prevention (3-0) 3 Hours

This course provides an introduction to the knowledge, skills, and values necessary for working in the area of trauma, victim services, advocacy and treatment, and violence prevention in contemporary society. Theoretical concepts will be introduced on the following topics: causes of trauma, types of trauma and violence, violence prevention, crisis intervention, stress management for client and provider, cultural competency, grief and loss, post-traumatic stress disorder, and victimization. Students will explore the problems and the social welfare agencies responding to the experiences of diverse populations in these areas.

Prerequisite: HUS 128 (formerly HUS 118) or HUS 140 (formerly HUX 170) (both C or better)

HUS 134 Gender-Based Violence (4-0) 4 Hours

This course will provide the student with an understanding and knowledge of the specialized areas of Domestic Violence and Sexual Assault and the content required of anyone who wishes to understand, work, or volunteer within these fields. Specific topics addressed will be rape trauma syndrome, post-traumatic stress disorder, cycle of violence, the impact to victims and their families, same-sex violence, confidentiality, mandated reporting to the Department of Children and Family Services, and interventions to support the healing process. This course consists of the equivalent of the two mandatory 40-hour trainings combined into one 60-hour training. Mandatory trainings are required prior to working directly with victims of either sexual assault or domestic violence. Upon completion of this course, students will earn certifications for volunteering or working in the Sexual Assault and Domestic Violence fields. This course is intended for students in any field and community members from all walks of life who want to learn to help others.

Prerequisite: College Reading and Writing Readiness or consent of department chair

Recommended: HUS 128 (formerly HUS 118) (C or better)

HUS 140 Drugs and Society (3-0) 3 Hours

(Formerly HUX 170) This course provides the student with an historical background of drugs of abuse and their impact on individuals and society. Topics addressed include an in-depth study of specific licit and illicit drugs and the pharmacological and behavioral effects within the major classifications of substances. Additional topics include laws and regulations, individual and societal problems, prevention strategies, and trends and statistics.

Prerequisite: College Reading and Writing Readiness

HUS 151 Addiction Counseling and Treatment I (3-0) 3 Hours

This course will provide an overview of addiction, including the addiction process, addictive disorders, treatment and recovery, relapse, self-help groups, and milieu management. Students will study theories of addiction, and gain an understanding of addiction as a brain disease and how drugs affect the physical, emotional, and social aspects of the person. Societal and cultural views of addiction will be discussed. In addition, this course will focus on assessment and treatment of families where one or more members have an addictive disorder. Topics in this area include codependency, survival strategies of family members, and family interaction patterns and communication processes. Intervention techniques will also be covered.

Prerequisite: HUS 123 (formerly HUS 113), HUS 128 (formerly HUS 118), and HUS 140 (formerly HUX 170) (all C or better)

HUS 152 Process Addictions/Impulse Disorders (2-0) 2 Hours

(Formerly HUX 172) This course will examine the addictive process as it is manifested in diverse social behaviors. Students will study similarities and differences of process/behavioral addictions, impulse control disorders, and compulsive behaviors. Focus will be on etiology, assessment, treatment, legal issues, and family issues. These various behaviors and disorders will include, but not be limited to the following: gambling, eating disorders, work, sex, compulsive buying, shoplifting, pyromania, and intermittent explosive disorder. The relationship of these disorders will be compared and contrasted with alcohol and other drug addictions.

Prerequisite: HUS 140 (formerly HUX 170) (C or better)

HUS 153 Diverse/Multicultural Populations (2-0) 2 Hours

(Formerly HUX 173) This course provides the students with an analysis of the different populations of clients in substance abuse treatment settings, including age, ethnicity, racial, cultural, gender, sexual minorities, people with disabilities, co-occurring disorders. Clients in criminal justice settings will also be addressed. For each population studied, differential addiction patterns will be explained, response to traditional treatment methods will be identified, and research data regarding treatment modes to accommodate the needs of diverse populations will be analyzed and applied.

Prerequisite: HUS 140 (formerly HUX 170) (C or better)

Fulfills the CLC I/M Education Requirement.

HUS 154 Ethics in Human Services (1-0) 1 Hour

(Formerly HUX 174) This course provides the student with an introduction to multiple ethical considerations in the counselor-client relationship. Topics considered will include personal values of professional staff, confidentiality, sexual and social contact with clients, self-determination, conflicts of interest, dual relationships, and more. Students will also consider application of agency policies, professional ethics, and the law.

Prerequisite: HUS 140 (formerly HUX 170) (C or better)

HUS 155 Pharmacology for Human Services (2-0) 2 Hours

(Formerly HUX 175) This course provides the student with an exploration of the neurobiological processes, including neurotransmission, an overview of the various elements of the nervous system, and the effects, mechanisms, and actions of classes of psychotropic drugs. Students will study the terms used in the medical and psychotherapy profession as described in the Diagnostic and Statistical Manual (DSM) and the International Classification of Disease (ICD). Abbreviations, spelling, and pronunciation are emphasized.

Prerequisite: HUS 140 (formerly HUX 170) (C or better)

HUS 157 Communicable Diseases and Substance Abuse (2-0) 2 Hours

(Formerly HUX 179) An interdisciplinary analysis of the biological, social and psychological aspects of communicable diseases and their relationship with substance use, abuse, and addiction. Specific topics include HIV/AIDS, STDs, hepatitis, and disease progression. Emphasis will be placed on myths versus realities. Risk assessment, risk reduction, psychological interventions, medical management and legal issues are included.

Prerequisite: HUS 140 (formerly HUX 170) (C or better)

Course Information and Descriptions

HUS 170 Human Services Practicum I (Variable) 1-4 Hours

This course is an onsite, unpaid supervised practicum experience working directly with clients, family members, and the community in a Human Services agency related to the student's program of study. To apply this course toward a certificate or degree, the student must complete a total of 300 hours of practicum and coursework. This is a variable credit course (1-4 credits), with 75 practicum hours required per credit. This course is repeatable for a maximum of four (4) credits or 300 practicum hours.

Prerequisite: HUS 274 (C or better), consent of Human Services Department Chair, and a minimum GPA of 2.40

May be taken four times for credit toward degree

HUS 171 Human Services Practicum II (Variable) 1-4 Hours

This course is a continuation of HUS 170. When appropriate, Practicum II will be performed in a different setting than Practicum I. The student will be expected to initiate a leadership role in therapeutic interventions with clients at a higher skill level than in Practicum I. To apply this course toward a certificate or degree, the student must complete a total of 300 hours of practicum and coursework. This is a variable credit course (1-4 credits), with 75 practicum hours required per credit. This course is repeatable for a maximum of four (4) credits or 300 practicum hours.

Prerequisite: HUS 170 (C or better), consent of Human Services Department Chair, and a minimum GPA of 2.50

May be taken four times for credit toward degree

HUS 210 Principles of Residential Care (3-0) 3 Hours

Methods and procedures used in residential care agencies, including program planning, activity management, and means of meeting needs of adolescents.

Prerequisite: HUS 223

HUS 213 Mental Retardation (3-0) 3 Hours

Reviews the basic theories regarding the diagnosis and treatment of mental retardation. Programs designed for the care and education of the mentally retarded are emphasized and present and future perspectives in the field of mental retardation are discussed.

Prerequisite: College Reading and Writing Readiness

HUS 217 Creative Activities II (2-2) 3 Hours

Creative activities used in the development of school-age children and adolescents in residential group care.

Prerequisite: College Reading and Writing Readiness

HUS 219 Human Services Internship (1-15) 4 Hours

This course is an on-site, unpaid supervised internship experience working directly with clients, family members, groups, and the community in community social service agencies. This course is a total of 250 hours, which includes 30 hours of supervision and a supervision seminar class.

Prerequisite: HUS 274 (C or better), approval of Department Chair, and a minimum GPA of 2.40

HUS 231 Adult Development and Aging (3-0) 3 Hours

This course integrates theory and research related to changes across periods of adulthood in areas such as: biological, cognitive, personality, mental health, social-emotional, etc. Students will gain an understanding of the aging process through the use of a lifespan model of adult development in a multicultural context.

Prerequisite: College Reading and Writing Readiness

HUS 232 Trauma Interventions (3-0) 3 Hours

This course is a continuation of HUS 132 and provides an overview of the impact of violence and trauma across the life span.

Therapeutic techniques, assessment, and interventions appropriate for working with victims of trauma at various developmental life stages and the specific issues, including gender, which relate to children, adolescents, young adults, adults, and older adults. Topics covered include resources available for referrals, working with resistant and reluctant clients, working with families, and group work with various types of trauma.

Prerequisite: HUS 132 (C or better)

Recommended: HUS 236 (C or better)

HUS 234 Child Maltreatment (3-0) 3 Hours

This course explores the etiologies and effects of child maltreatment as well as assessment and treatment strategies. Child maltreatment is approached from a strengths-based, family-centered perspective within a multi-disciplinary context noting issues of culture and diversity and the influence of digital and social media. Topic areas include child physical abuse, neglect, sexual abuse, psychological maltreatment, family violence, extrafamilial abuse, and consequences across the lifespan. Emphasis will be given to identification of child maltreatment, reporting procedures, interventions, treatment, prevention, and professional, legal, and agency interaction.

Prerequisite: College Reading and Writing Readiness

Recommended: HUS 128 or HUS 132 or SWK 121

HUS 236 Crisis Intervention (3-0) 3 Hours

This course will provide the student with an understanding of the history, theory, and models of crisis intervention. The student will gain knowledge regarding specific crises in the areas of loss, abuse, violence, crimes, developmental, health-related and others. The student will also acquire effective intervention skills and techniques to respond to individuals in specific crisis situations.

Prerequisite: HUS 128 (formerly HUS 118) (C or better)

Recommended: HUS 132 (C or better)

HUS 251 Addiction Counseling and Treatment II (4-0) 4 Hours

(Formerly HUX 171) This course will provide an overview of the treatment process from evaluation and intake through discharge, with an emphasis placed on interviewing skills, record keeping and documentation. Specific topics include screening, assessment, diagnosis, intake, treatment planning, case management, co-occurring disorders, discharge planning, and referral. The course encompasses a study of screening and assessment procedures used to gather information during the client intake process that form the basis for a multivariate diagnosis of addictive disorders as described in the current edition of the DSM. Screening and assessment instruments will be utilized with the Bio/Psycho/Social evaluation to formulate and support a Diagnostic Summary. The current ASAM Patient Placement Criteria will be utilized to match the client with the appropriate level of care and appropriate differential treatment plan.

Prerequisite: HUS 151 (C or better)

HUS 253 Advanced Addictions Counseling Skills (2-2) 3 Hours

(Formerly HUX 176 and HUX 177) This course is a study of the major theoretical approaches used in counseling alcoholism, substance abuse, and addictive disorders. Theories and principles of both group work and individual counseling in a variety of human service settings are explored. Students are expected to participate as both clients and counselors in role plays to apply this knowledge. Client problems that often coincide with addictive disorders will be addressed.

Prerequisite: HUS 151 (C or better)

HUS 274 Human Services Practicum Orientation (1-0) 1 Hour

This course prepares students for the practicum experience in the various Human Services Programs. Students will gain an understanding of the practicum process, required paperwork, ethical considerations, and the supervision requirements. In addition, students will prepare resumes, practice interviewing skills, develop professional demeanor, and begin the interview process with potential practicum sites.

Prerequisite: HUS 154 (formerly HUX 174), HUS 155 (formerly HUX 175), HUS 251 (formerly HUX 171), and HUS 253 (formerly HUX 176 & HUX 177) (all C or better)

HUS 275 Addiction Counseling Practicum I (Variable) 1-4 Hours

This course is an on-site, unpaid supervised practicum experience working directly with clients, family members, and groups in community treatment centers for substance use disorders and addictions. Experiences may include in-patient, out-patient and intensive out-patient models.

To apply this course toward a certificate or degree, the student must complete a total of 300 hours of practicum and coursework. This is a variable credit course (1-4 credits), with 75 practicum hours required per credit. This course is repeatable for a maximum of four (4) credits or 300 practicum hours.

Prerequisite: HUS 274 (C or better), and approval of Department Chair, and minimum GPA of 2.5

May be taken four times for credit toward degree

HUS 276 Addiction Counseling Practicum II (Variable) 1-4 Hours

This course is a continuation of Addiction Counseling Practicum I, HUS 275. When appropriate, Practicum II will be performed in a different setting than Practicum I. The student will be expected to initiate a leadership role in therapeutic intervention with clients at a higher skill level than in Practicum I. To apply this course toward a certificate or degree, the student must complete a total of 300 hours of practicum and coursework. This is a variable credit course (1-4 credits), with 75 practicum hours required per credit. This course is repeatable for a maximum of four (4) credits or 300 practicum hours.

Prerequisite: HUS 275 (C or better), approval of Department Chair, and a minimum GPA of 2.5

May be taken four times for credit toward degree

HUS 299 Special Topics in Human Services (Variable) 1-3 Hours

Special topics will be developed for the different Human Services Options. Topics developed will focus on a specific current issue in the areas of adult services or alcohol and substance abuse.

Note: A maximum of six (6) credit hours of HUS 299 may be used as elective credit toward an A.A.S. degree in Human Services.

Prerequisite: College Reading and Writing Readiness

May be taken four times, but any topic only once

Humanities (HUM)**Communication Arts, Humanities and Fine Arts Division, Room B210, (847) 543-2040****HUM 121 Humanities: Ancient Times to the Middle Ages (3-0) 3 Hours**

This interdisciplinary course introduces students to art, architecture, literature, philosophy, religion, myth, music, and dance of western (Europe; North, Latin, and South America) and non-western (Asia, Africa, India) civilizations from ancient period to the end of the 14th century.

Note: HUM 121 is not a prerequisite for HUM 122. Thus, students can take HUM 122 without taking HUM 121.

Prerequisite: College Reading and Writing Readiness

Fulfills the CLC I/M Education Requirement.

IAI: HF 902

HUM 122 Humanities: Renaissance to the Present (3-0) 3 Hours

This interdisciplinary course introduces students to art, architecture, literature, philosophy, religion, myth, music, and philosophy of western (Europe; North, Latin, and South America) and non-western (Asia, Africa, India) civilizations from the 15th century to the present.

Note: HUM 121 is not a prerequisite for HUM 122. Thus, students can take HUM 122 without taking HUM 121.

Prerequisite: College Reading and Writing Readiness

Fulfills the CLC I/M Education Requirement.

IAI: HF 903

HUM 123 Introduction to Film (3-0) 3 Hours

This is an introductory course on the historical, technical and aesthetic study of film. Students will learn how the film maker communicates to us through cinematography, mise-en-scene, editing, sound and narrative construction and will gain a historical perspective on the history of film art.

Prerequisite: College Reading and Writing Readiness

Course fee

IAI: F2 908

HUM 126 Introduction to the Performing Arts (3-0) 3 Hours

This course provides an introduction to current performing arts trends, inclusive of cultures, traditions and populations that are typically underrepresented in the study of performing arts. Theatre, music, opera, and dance will all be examined from the point of view of the educated audience member. Students will learn to better understand and evaluate the performing arts. Terminology, practitioners, organization, and a brief history of each discipline will be examined. This will be accomplished through lectures, videos, and by attending actual performances.

Prerequisite: College Reading and Writing Readiness

Fulfills the CLC I/M Education Requirement.

IAI: F9 900

HUM 127 Critical Thinking (3-0) 3 Hours

This course is an introduction to critical thinking skills (i.e., informal logic), including the following: problem solving, diagramming and evaluating arguments, constructing sound reasoning skills and habits, detecting fallacies, and reasoning from a variety of disciplines such as science, business, law, and the arts.

Prerequisite: College Reading and Writing Readiness

IAI: H4 906

Course Information and Descriptions

HUM 128 Introduction to Middle Eastern Civilizations (3-0) 3 Hours

This course provides a multi-media exploration of (1) the diverse philosophical and religious concepts and values in the Middle East, (2) the diverse expressions of these concepts and values in the art, architecture, craftsmanship, film, and literature produced by the cultures of North Africa, Egypt, Israel, Turkey, the Fertile Crescent, Arabian Peninsula, Iran, and Pakistan, and (3) the relation of these concepts and values to current philosophical issues in the Middle East regarding politics, economics, and gender. Comparisons will be made with Western philosophy, art, architecture, craftsmanship, film and literature.

Prerequisite: College Reading and Writing Readiness

Fulfills the CLC I/M Education Requirement.

IAI: H2 903N

HUM 129 Introduction to East Asian Civilization (3-0) 3 Hours

This course is an introduction to East Asian culture, past and present. Particularly, this course will focus on China, Japan, and Korea. Students will learn about representative works and significant developments in the arts, philosophy, religion, and literature in China, Japan, and Korea.

Prerequisite: College Reading and Writing Readiness

Fulfills the CLC I/M Education Requirement.

IAI: HF 904N

HUM 140 Introduction to International Film (3-0) 3 Hours

This is a survey course on the history and aesthetic appreciation of film as an international medium of entertainment, communication and persuasion. Through viewing and analysis of classic and contemporary films from Europe, Central and South America, Asia, the Middle East and Australia, the student will gain a global understanding of film. Films shown will be mostly narrative features by internationally recognized directors, but may also include avant-garde, documentary, animated and North American foreign-language films.

Prerequisite: College Reading and Writing Readiness

Course fee

Fulfills the CLC I/M Education Requirement.

IAI: F2 909

HUM 141 World Humanities of 20/21 Century (3-0) 3 Hours

This is an interdisciplinary and multicultural course which introduces students to the visual art, architecture, literature, philosophy/religion/myth, music, dance, and history of various non-Western cultures through selected works and a comparative examination of their values, motifs and aesthetics with those of Western cultural expression during the 20th and 21st centuries.

Prerequisite: College Reading and Writing Readiness

Fulfills the CLC I/M Education Requirement.

IAI: HF 904N

HUM 221 American Decades (3-0) 3 Hours

This course introduces students to the interdisciplinary study of American culture by examining the intercultural/multicultural ideas, processes, values, motifs, and traditions that have shaped our pluralistic society. American history, philosophy, literature, music, visual and performing arts will be studied. Emphasis will be placed on reflecting the diverse cultural constituency, and racial and ethnic minorities.

Prerequisite: College Reading and Writing Readiness

Fulfills the CLC I/M Education Requirement.

IAI: HF 906D

HUM 222 Film and Society (3-0) 3 Hours

This course will examine the evolution of American cinema and its relationship to society. The focus of the course is on the history of film and the social, economic and political pressures which have shaped its development. Periods of film history will include such eras as: Early "Silent" Cinema, "Classical" Hollywood of the 1930s/1940s, Post-War American Film, the "New American Cinema" of the 1960s/1970s, Postmodernism, and recent developments in Digital Filmmaking. Special attention will be paid toward important facets of the film industry such as the Auteur-Director, the Star system, as well as examples of important Genres (e.g. Musicals, Westerns, Horror, Detective, Science-Fiction, "Woman's Pictures", Social Problem films, etc).

Prerequisite: College Reading and Writing Readiness

Course fee

IAI: F2 908

HUM 226 Women and the Arts (3-0) 3 Hours

This interdisciplinary humanities course explores the depiction and contributions of women in the visual and performing arts throughout history. Current multicultural and global developments, the contrast of female and male creativity, social attitudes regarding women, and patronage of the arts will be investigated.

Prerequisite: College Reading and Writing Readiness

Fulfills the CLC I/M Education Requirement.

IAI: HF 907D

HUM 299 Special Topics in Humanities (Variable) 1-3 Hours

This course will address the in-depth study of special topics in Humanities which do not have specific courses in the catalog. Course content and requirements will vary depending on the topic being studied.

Prerequisite: College Reading and Writing Readiness

May be taken three times, but any topic only once

Industrial Electrician (ISE)

Engineering, Math and Physical Sciences Division,
Room T302, (847) 543-2044

ISE 110 Introduction to Industrial Electricity (1-2) 2 Hours

Introductory course in industrial electricity. Emphasis placed on fundamental principles and practices.

Prerequisite: MTH 114

Course fee

Typically not offered every term

ISE 111 Industrial Electrical Circuits I (2-2) 3 Hours

Introduces students to electrical fundamentals as related to direct current systems and applications.

Prerequisite: MTH 114

Course fee

Typically not offered every term

ISE 112 Industrial Electrical Circuits II (2-2) 3 Hours

Introduces students to electrical fundamentals as related to alternating current systems and applications.

Prerequisite: ISE 111

Course fee

Typically not offered every term

ISE 114 National Electrical Code (2-0) 2 Hours

Provides the student with the opportunity for study and interpretation of the National Electrical Code.

Note: Previous electrical experience/education is strongly recommended.

Typically not offered every term

ISE 117 Industrial Electronic Devices (2-2) 3 Hours

Introduces students to a wide variety of analog and digital circuits used in various electronic systems and devices used in the home and industry.

Prerequisite: MTH 115 and ELC 114

Course fee

Typically not offered every term

ISE 118 Power Distribution (2-2) 3 Hours

Electrical and electronic applications on industrial equipment including simple and automated welding control circuits, switching circuits, light and heat controls, speed and voltage regulators, large current polyphase rectifiers, temperature recorders and control, high speed light and register controls, automatic control of D.C. motors, closed loop servomechanisms, and electronic service instruments.

Prerequisite: MTH 115 and ELC 114

Course fee

Typically not offered every term

International Studies (SSI)

Business and Social Sciences Division,
Room T302, (847) 543-2047

SSI 121 Introduction to Global Studies (3-0) 3 Hours

This course explores globalization from the social, cultural, economic, and political dimensions. Through reading, research, writing about global experience and discussions of major social-scientific theories students examine and analyze the complexity of variety of our societies and the common features of their changing environments. The course addresses the historical context in which globalization emerged, including the rise of global institutions and the legacy of colonialism, the global economy and its impact on labor and financial markets, the media, the social and cultural movements, global politics, religion in the global context and the rise of global terrorism. The course also studies the global social issues and problems such as gender and the aggregation of global poverty.

Prerequisite: College Reading and Writing Readiness

Fulfills the CLC I/M Education Requirement.

SSI 124 International Studies in Social Science (Variable) 1-3 Hours

Students will travel with faculty to international/regional locations which may vary from year to year to study selected topics or current issues in the social or behavioral sciences (anthropology, sociology, psychology, geography, history, political science, and economics). The instructor will assist students in developing required activities or projects undertaken during the travel experience. These will include field trips, lectures, discussions or other appropriate activities. Credit is variable and arranged with the instructor. Students are responsible for the travel expenses, tuition, and fees.

Prerequisite: College Reading and Writing Readiness

May be taken three times, but any topic only once

Italian (ITL)

Communication Arts, Humanities and
Fine Arts Division, Room B210, (847) 543-2040

ITL 121 Beginning Italian I (4-0) 4 Hours

An introduction to the Italian language. The course develops basic skills in pronunciation, vocabulary, grammar, reading, listening comprehension, and oral and written communication within the context of Italian culture.

ITL 122 Beginning Italian II (4-0) 4 Hours

This course continues to develop the basic skills introduced in ITL 121: pronunciation, vocabulary, grammar, reading, listening comprehension, and oral and written communication within the context of Italian culture.

Prerequisite: ITL 121

ITL 221 Intermediate Italian I (4-0) 4 Hours

Continued development of basic skills introduced in ITL 121 and ITL 122. The course is a general review and expansion of beginning grammar, conversation, vocabulary development, readings and writing exercises which focus on life in Italy.

Prerequisite: ITL 122

ITL 222 Intermediate Italian II (4-0) 4 Hours

This course reviews and expands the use of Italian grammar by introducing more advanced structures into verbal and written communication. Films, material from newspapers and magazines, and from other media will enable students to use authentic materials that are culturally relevant to explore further the Italian speaking world and its culture.

Prerequisite: ITL 221 (C or better) or Consent of Instructor

Fulfills the CLC I/M Education Requirement.

IAI: HI 900

ITL 223 Italian Civilization I (3-0) 3 Hours

This is the first semester of a course designed to give the advanced student of Italian the opportunity to increase proficiency in the Italian language and knowledge of the Italian culture. A carefully selected series of readings and supplementary materials will provide the basis for the development of language and culture skills.

Prerequisite: ITL 222

IAI: HI 900

ITL 224 Italian Civilization II (3-0) 3 Hours

This is the second semester of a course designed to give the advanced student of Italian the opportunity to increase proficiency in the Italian language and knowledge of the Italian culture. A carefully selected series of readings and supplementary materials will provide the basis for the development of language and culture skills.

Prerequisite: ITL 223

Course Information and Descriptions

Japanese (JPN)

Communication Arts, Humanities and
Fine Arts Division, Room B210, (847) 543-2040

JPN 121 Beginning Japanese I (4-0) 4 Hours

This course develops basic skills in pronunciation, vocabulary, grammar, reading, listening, comprehension, and oral and written communication within the context of Japanese culture.

JPN 122 Beginning Japanese II (4-0) 4 Hours

This course continues to develop the basic skills introduced in JPN 121: pronunciation, vocabulary, grammar, reading and writing of Kana and Kanji, listening comprehension, and oral and written communication within the context of Japanese culture.

Prerequisite: JPN 121

JPN 221 Intermediate Japanese I (4-0) 4 Hours

Designed to continue the development of basic skills, this course is a general review and expansion of beginning grammar, along with conversation, vocabulary development, and reading and writing of Kana and Kanji within the context of Japanese culture.

Prerequisite: JPN 122

JPN 222 Intermediate Japanese II (4-0) 4 Hours

This course continues to expand the knowledge of Japanese grammar, with emphasis in verbal and written communication. Students will use various sentence patterns and speech styles with Kana and Kanji (additional 100 Kanji). Films, short videos, readings and materials from newspapers, magazines, and media are utilized so students explore the Japanese speaking world and cultures based on authentic materials. *Note:* Field trip attendance is required.

Prerequisite: JPN 221

Fulfills the CLC I/M Education Requirement.

IAI: H1 900

JPN 223 Japanese Civilization I (3-0) 3 Hours

This course is designed to give the advanced Japanese language and culture students more opportunity in reading and writing complex material with new Kanji. It is also designed to expand the students' knowledge of Japanese culture through articles and films. Communication skills will be gained through group discussions.

Prerequisite: JPN 222 or equivalent (C or better)

JPN 224 Japanese Civilization II (3-0) 3 Hours

This course is a continuation of Japanese Civilization I. Advanced Japanese language and culture students will continue to gain cultural enrichment through lively discussions, readings, and writing about Japan. This course will incorporate a broad variety of materials from literary works, films, articles, and media in order to provide students the opportunity to understand and apply the Japanese language.

Prerequisite: JPN 223 or equivalent (C or better)

Laser/Photonics/Optics (LPO)

Engineering, Math and Physical Sciences Division,
Room T302, (847) 543-2044

LPO 110 Introduction to Lasers, Photonics and Optics (2-2) 3 Hours

This course will introduce students to the field of photonics, including a variety of optics and photonics laboratory equipment. Additionally, lab safety skills as defined by the American National Standards Institute (ANSI) Z136.5 standard will be practiced. Students will be responsible for writing lab reports, performing related calculations, graphing data collected, logging that data in a lab notebook and completing reports in office software. Students will investigate the responsibilities of photonics technicians and potential careers in photonics by visiting area photonics companies.

Prerequisite: MTH 102 (C or better) or appropriate score on the math placement test AND College Reading and Writing Readiness or concurrent enrollment in ENG109 or ELI 109 or ENG 100

LPO 111 Fundamentals of Light and Lasers (3-2) 4 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

Topics covered include the nature and property of light, light sources, laser safety, geometrical and physical optics, and principles of lasers. Selected topics in math will be reviewed in conjunction with topics in photonics. Typical math topics embedded in this course include scientific notation, introductory algebra, geometry, trigonometry, exponents and logarithms.

Prerequisite: MTH 118 (C or better) or minimum Math ACT score of 25 or appropriate Math Placement Test. Language skills equivalent to ENG 108, ELI 107 or ELI 108 (C or better) OR a COMPASS ELI score of 251 OR 122 on the APT placement test.

LPO 112 Elements of Photonics (2-2) 3 Hours

This course covers the basic principles of lasers and other photonic devices used in fiber optics, imaging, display and storage applications.

Prerequisite: LPO 111 or consent of instructor

LPO 113 Photonics-Enabled Technologies (2-2) 3 Hours

The subject matter covered in this course includes topics such as laser welding; laser drilling, cutting and marking; test and measurement applications; forensic science and homeland security; and basic spectroscopy principles. Course topics have a strong manufacturing orientation.

Prerequisite: LPO 111 or consent of instructor

LPO 134 Introduction to Biophotonics (3-2) 4 Hours

This course covers the basic principles of biology crucial to the understanding of biological, biomedical, and ecological applications of photonics. Biophotonics has emerged from interdisciplinary research and applications of the biological, chemical, and physical sciences, and engineering. This course provides a broad overview of the countless applications of photonics in these fields.

Prerequisite: LPO 111 and LPO 112 (both C or better); and BIO 123 or BIO 161 (both C or better)

LPO 145 Photonic CAD Applications (2-2) 3 Hours

This course will introduce students to the use of computer aided design (CAD) in the field of photonics. Students will utilize a CAD program in the design of mechanical structures and optical assemblies as well as for lens design and ray-tracing of a light ray through the lens system.

Prerequisite: LPO 111 and CAD 170 (previously CAD 173) (both C or better)

LPO 211 Geometric and Wave Optics (1.5-3) 3 Hours

The course offers a more advanced look at many of the topics covered in Fundamentals of Light and Lasers (LPO 111). Topics include Imaging with multiple lenses, F-stops and apertures, Optical Systems, Matrix Optics, Fundamentals of fiber optics, Interference, Diffraction, Polarization, and Holography.

Prerequisite: LPO 111 (C or better)

LPO 212 Elements of Photonics II (2-2) 3 Hours

This course builds upon Elements of Photonics (LPO 112) and covers additional laser systems including excimer lasers, fiber lasers, diode lasers, dye lasers, and others. In lab students will experience advanced applications with hands-on laser optical systems and analysis.

Prerequisite: LPO 112 (C or better)

LPO 250 Laser and Electro-Optic Devices (1.5-3) 3 Hours

This course offers a more advanced look at many of the devices used in a photonics lab. Physical characteristics of photodetectors, such as response time and detectivity, will be measured and compared to published device specifications and further verified using computerized diagnostic equipment. Measuring the thermal effects of a laser by applying different types of photodetectors to optical systems will be explored. Students will further investigate other wave based energy using light to transmit digitized data.

Prerequisite: LPO 112 (C or better)

LPO 290 Laser, Photonics and Optics Capstone Proposal (.5-1) 1 Hour

This course will require students, or teams of students, to decide on a capstone project to be completed in LPO Project or Research Capstone (LPO 291). Proposed projects must be cleared with the instructor to verify that they meet program requirements and that they can be supported by the college. An outline of the project, a description of any lab setup, and a formal proposal will be documented. Students deciding to work in teams will include member responsibilities and timelines in their outlines.

Prerequisite: LPO 113 (C or better)

LPO 291 Laser, Photonics and Optics Project or Research Capstone (.5-5 hours) 3 Hours

This course will require students, or teams of students, to work on a capstone project. Students must complete the project under the guidance of the instructor to ensure the project, as proposed in LPO 290 and LPO 291 course requirements, are maintained. Students will create a log of the project with a timeline, a working model of any lab setup (or nonworking with an acceptable reason), and a CAD or similar drawing of optical apparatus. In addition a formal report for the course will be produced along with a poster for submittal to a conference.

Prerequisite: LPO 290 (C or better)

Latin-American Studies (LAT)

Communication Arts, Humanities and Fine Arts Division, Room B210, (847) 543-2040

LAT 121 Introduction to Latin American Studies (3-0) 3 Hours

This course will provide an overview of the Latin American and Caribbean people and their countries, from their origins to the present. Some of the areas examined are the political, cultural, historical, and ethnicity issues that affect these civilizations.

Prerequisite: College Reading and Writing Readiness
Fulfills the CLC I/M Education Requirement.

Liberal Arts and Science (LAS)

Educational Affairs Office, Room C206, (847) 543-2411

LAS 221 Sophomore Seminar (3-0) 3 Hours

An in-depth cross-disciplinary examination of selected topics arising from existing CLC transfer courses. Content varies.

Library Science (LSC)

Communication Arts, Humanities and Fine Arts Division, Room B210, (847) 543-2040

LSC 121 Research Skills for the Real World (1-0) 1 Hour

This course equips students to critically and ethically use information while in college and beyond. Students completing this course will recognize when their own knowledge and resources are not sufficient to meet their information needs. They will learn how to find, evaluate, and effectively utilize information in a variety of formats pertinent to their educational, professional, and life goals.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100

Course Information and Descriptions

Library Technical Assistant (LTA)

Communication Arts, Humanities and
Fine Arts Division, Room B210, (847) 543-2040

LTA 121 Introduction to Library Science (3-0) 3 Hours

This course introduces the fundamentals of the field of library science. Students gain knowledge of the ethics and values, governance structures, processes, services, personnel, and organizational models in libraries. It also explores the Library Technical Assistant career.

Prerequisite: College Reading and Writing Readiness

LTA 210 Library Materials (3-0) 3 Hours

This course examines library collection functions. It provides a solid background in the knowledge, skills, and resources necessary to develop, process, and maintain physical or virtual library collections.

Prerequisite: LTA 121 (C or better)

Typically offered fall only

LTA 212 Technology in Libraries (2-2) 3 Hours

This course introduces the basic technological skills and knowledge necessary for library work. It includes selection and evaluation of media, hardware, and software in all areas of the library. Students also investigate the library's role in access to information, technologies, and equipment.

Prerequisite: LTA 121 (C or better)

Typically offered summer only

LTA 214 Cataloging and Classification (3-0) 3 Hours

This course introduces the basic theories, practices, tools, and techniques of cataloging. It emphasizes descriptive cataloging of diverse types of materials. Students are also introduced to classification and subject cataloging.

Prerequisite: LTA 121 (C or better) or Consent of Instructor

Typically offered fall only

LTA 230 Library Public Services (3-0) 3 Hours

This course provides an overview of the principles and practices of providing public service to patrons in all types of libraries. It explores access services functions including circulation, interlibrary loan, reserves, collection maintenance, and library security. Students will also learn the basic concepts of user privacy, customer service, interpersonal relations, team work, and communication.

Prerequisite: LTA 121 (C or better)

Typically offered fall only

LTA 232 Reference and Information Services (3-0) 3 Hours

Print, electronic, and Internet reference sources are explored. The Reference Department is described in the context of public services. Interpersonal skills in working with patrons are emphasized.

Prerequisite: LTA 121

Typically offered spring only

LTA 234 Readers Advisory Services (3-0) 3 Hours

This course is an overview of the tools, principles, and practices of readers' advisory services. Students will learn how to assist users in identifying materials for viewing and listening, recommend titles of potential interest, and promote the library collection. Popular and classic fiction, non-fiction, and various media are covered. The focus is primarily on service to adults.

Prerequisite: LTA 121 (C or better)

Typically not offered every term

LTA 250 Introduction to Youth Services (3-0) 3 Hours

This course examines service to children from birth through age seventeen. It covers collection development, programming, readers' advisory and reference services, information literacy, and explores library programming and technology specifically for youth.

Prerequisite: LTA 121 (C or better) or Consent of Instructor

Typically not offered every term

LTA 252 Administration of the School Library Media Center (3-0) 3 Hours

An introduction to the mission of the school library or media center and the role of the Library Information Specialist. Library resources (print and electronic), collection development, reading promotion, information literacy and technology are all examined. School library standards, particularly in Illinois, and evaluation of services are explored.

Prerequisite: LTA 121 (C or better)

Typically not offered every term

LTA 274 Workplace and Supervisory Skills for the LTA (3-0) 3 Hours

This course provides an overview of the principles and practices of management, supervision, communication, and teamwork in the library workplace. It explores basic concepts including employment laws, leadership qualities, cooperation and collaboration, interpersonal relations, staff recruitment and evaluation, conflict resolution, budgeting, and marketing. Students will also gain an understanding of library policies and procedures, relationships with library governing boards, library vision, mission and goals, and leadership roles for LTAs.

Prerequisite: LTA 121 (C or better) or Consent of Instructor

Typically offered spring only

LTA 276 Supervised Field Practicum I (1-4) 3 Hours

This capstone course is for students pursuing the Certificate in the Library Technical Assistant program. Supervised observation and directed practice of paraprofessional experience in appropriate academic, special, school, or public libraries allows students to directly apply the theories learned during the course of the study. Required seminars allow for discussion of issues related to the library field, job seeking, and creation of a portfolio.

Prerequisite: LTA 210, LTA 212, LTA 214, LTA 230, LTA 232, LTA 274 (all C or better), and Consent of instructor.

LTA 278 Supervised Field Practicum II (1-6) 4 Hours

This capstone course is for students pursuing the Associate of Applied Science in the Library Technical Assistant program or for those in the certificate program who wish an expanded practicum experience. Supervised observation and directed practice of paraprofessional experience in appropriate academic, special, school, or public libraries allows students to directly apply the theories learned during the course of the study. Required seminars allow for discussion of issues related to the library field, job seeking, and creation of a portfolio.

Prerequisite: LTA 210, LTA 212, LTA 214, LTA 230, LTA 232, LTA 274 (all C or better), and Consent of instructor.

LT A 299 Special Topics Library Science (Variable) 1-3 Hours
 Special topics in the field of library science which are outside of the existing curriculum will be developed. Courses will provide an opportunity for in-depth study of topics pertinent to both technical and public services in public, school, academic, or special libraries.
May be taken four times, but any topic only once
Typically not offered every term

Machine Tool Trades (MTT)

Engineering, Math and Physical Sciences Division,
 Room T302, (847) 543-2044

MTT 110 Machine Trades Blueprint Reading (3-0) 3 Hours
 Designed to study the principles which are essential for visualization and training in the interpretation of blueprints and sketches of machine parts. Attention is given to representations of common machine processes, special forms of dimensioning, sections, auxiliary views, symbols, geometric tolerancing, machine sketching, surface finished and other drafting and design principles.

MTT 111 Machine Shop I (2-3) 3 Hours
 Designed as an introduction to machining and machine shop practices.
 Study topics include hand tools, speeds and feeds, measurement, Taps and Dies, cutoff machines and general safety. Student will learn to setup and operate traditional metal cutting machines such as Drilling, Turning, Milling and Grinding machines. Practical labs are included.
Course fee

MTT 112 Machining Principles (2-2) 3 Hours
 Theory and practices involved in the safety and operation of traditional metal cutting machine tools and their appropriate tooling. Student will be expected to do a practical setup and operation on a manual Mill, Lathe, and Drill press. Some CNC milling and Wire EDM applications are also included
Typically offered fall and spring only

MTT 113 Grinding Technology (2-2) 3 Hours
 Designed to provide the student with grinding theory and practice. Surface, cutter, sine plate, form and cutter grinding are included.
Course fee
Typically offered fall only

MTT 115 Introduction to Die Making (3-0) 3 Hours
 Presents the student with the basic fundamentals of die construction, function and die components.
Note: Machine shop skills and basic shop mathematics are strongly recommended.
Prerequisite: MTT 110
Course fee
Typically not offered every term

MTT 116 Introduction to Moldmaking (3-0) 3 Hours
 Designed to provide the student with basic fundamentals of mold construction and components.
Note: Machine shop skills and basic shop mathematics are strongly recommended.
Prerequisite: MTT 110
Course fee
Typically not offered every term

MTT 210 Machine Shop II (1-4) 3 Hours
 Designed as a continuation of material and information presented in Machine Shop I. Additional topics of study include advanced operations on the lathe and vertical milling machine, grinding, EDM, heat treating and materials usage.
Note: Shop math skills or MTH 115 is strongly recommended.
Prerequisite: MTT 111
Course fee
Typically offered spring only

MTT 211 Jig and Fixture Design (2-2) 3 Hours
 Designed to familiarize the student with the design fundamentals of drill jigs and milling, lathe, assembly, and grinding fixtures.
Prerequisites: MTT 110 and MTT 210
Course fee
Typically offered summer only

MTT 212 Precision Machining/NIMS Credentialing (1-4) 3 Hours
 Designed to provide a National Credentialing studies class, this course will give each student an opportunity to demonstrate hands-on competency and related theory based on NIMS (National Institute of Metalworking Skills) nationally validated standards. The credentials are awarded on satisfactory completion of both the performance testing (producing precision parts on the machines) and the online related theory exams. Lectures and homework will focus on practical procedures and written test preparation. The fees for NIMS registration and 5 National Credentialing Exams are reflected in the Lab fee.
Prerequisite: MTT 210 or consent of instructor
Course fee
Typically offered fall only

MTT 215 Die Making II (2-2) 3 Hours
 A continuation of Diemaking I. Students build a punch press die, sharpen the tools and manufacture a part in class.
Note: Students with Machine Shop experience may contact the department chair if interested in alternative methods of meeting the prerequisite.
Prerequisites: MTT 115
Course fee
Typically not offered every term

MTT 216 Moldmaking II (2-2) 3 Hours
 Designed for students to learn advanced mold components, moldmaking, advanced mold techniques and understanding of plastics. The nature of this course will range from basic knowledge of plastics to actually building a small mold and molding it.
Note: Students with Machine Shop experience may contact the department chair if interested in alternative methods of meeting the prerequisite.
Prerequisite: MTT 116
Course fee
Typically not offered every term

Massage Therapy (MAS)

Biological and Health Sciences Division,
Room B210, (847) 543-2042

MAS 110 Massage Structure and Functions I (2-0) 2 Hours

This course examines the anatomy and physiology of cells and tissues that underlie the normal functioning of the human body. Content includes an introduction to the principal bones and muscles, as well as their structure and functions at both a cellular and tissue level. Anatomic or physiological principles as related to practical application in therapeutic massage will be covered. Course also covers basic principles of pathology and the major pathological conditions likely to be encountered in massage therapy.

Prerequisite: BIO 111, MAS 119, and PED 228 (all C or better)

Corequisite: MAS 112

Course fee

MAS 112 Kinesiology and Palpation I (1-2) 2 Hours

Course examines the skeletal and muscular systems that underlie the normal functioning of the body. Content includes a study of the structure of each major joint of the body and how the surrounding musculature affects the support and function of those joints. Principles of kinesiology are geared toward practical applications in the field of massage therapy, including major pathological conditions likely to be encountered.

Prerequisite: BIO 111, MAS 119, and PED 228 (all C or better)

Corequisite: MAS 110

Course fee

MAS 114 Massage: Communication & Business I (3-0) 3 Hours

This course introduces students to interpersonal communication theories, and concepts of professional boundaries and ethical touch. This course also introduces students to business and legal practices of the massage therapy industry. Topics include tax information, licensing, liability insurance, and professionalism.

Prerequisite: BIO 111, MAS 119, and PED 228 (all C or better)

Corequisite: MAS 112

Course fee

MAS 116 Clinical Skills and Special Populations (2-2) 3 Hours

This course introduces the students to the basic aspects of the procedural process of assessing, treatment planning and documenting in a massage clinic. Case-based applications and case discussions are utilized during the course to enhance the student's critical thinking skills. This course examines basic massage techniques and procedures when working with special populations including, but not limited to, geriatric, pregnant, cancer, and HIV clients. Students will learn basic chair massage skills and will practice and demonstrate massage techniques.

Prerequisite: BIO 111, MAS 119, and PED 228 (all C or better)

Corequisite: MAS 114

Course fee

MAS 119 Introduction to Massage Therapy (.5-1) 1 Hour

This course is required to be accepted into the Massage Therapy Program. It offers students an introduction to therapeutic massage principles, theory, and techniques. Topics of discussion will include history, ethics, business, basic anatomical terminology and body mechanics. Students will learn basic Swedish massage techniques. Completion with a grade of "C" or better is required prior to admission to the Massage Therapy Program.

Note: Must be 18 years of age to enroll.

Course fee

MAS 131 Massage Therapy I: Swedish (1-2) 2 Hours

This course involves hands-on learning of basic Swedish massage techniques and strokes, including effleurage, friction, petrissage, tapotement, vibration, and joint movements. Content includes body mechanics, draping techniques, client intake, contraindications, and listening skills.

Prerequisite: BIO 111, MAS 119, and PED 228 (all C or better)

Corequisite: MAS 116

Course fee

MAS 132 Massage Therapy II: Integrative (1-2) 2 Hours

This course introduces students to the fundamentals of three massage modalities; Craniosacral Therapy, Foot Reflexology, and Polarity Therapy. The concept of the "Fascial Web" is also introduced.

Prerequisite: BIO 111, MAS 119, and PED 228 (all C or better)

Corequisite: MAS 131

Course fee

MAS 210 Massage Structure and Functions II (2-0) 2 Hours

This course examines the anatomy and physiology of tissues and organs that underlie the normal functioning of the body. Content focuses on the anatomical and physiological principles as related to therapeutic massage. This course also examines the impact of massage therapy on the normal functioning of body systems as well as principles of pathology and the major pathological conditions likely to be encountered in massage therapy.

Prerequisite: MAS 110, MAS 112, MAS 114, MAS 116, MAS 131, and MAS 132 (all C or better)

Corequisite: MAS 212

Course fee

MAS 212 Kinesiology and Palpation II (1-2) 2 Hours

This course continues an examination of the skeletal and muscular systems that underlie the normal functioning of the body. Content includes an introduction to the complexities of movement, and the directional terminology associated with that movement. Students build upon their knowledge of the skeletal system and the core muscles for movement and stability.

Prerequisite: MAS 110, MAS 112, MAS 114, MAS 116, MAS 131, and MAS 132 (all C or better)

Corequisite: MAS 210

Course fee

MAS 214 Massage: Communication and Business II (3-0) 3 Hours

This course covers more advanced communication techniques for managing the client-massage therapist relationship. Topics include effective listening, verbal and non-verbal communication, and professional boundaries. Comprehensive examination of professional ethics, and legal and regulatory considerations for a massage therapy business will also be covered.

Prerequisite: MAS 110, MAS 112, MAS 114, MAS 116, MAS 131, and MAS 132 (all C or better)

Corequisite: MAS 212

Course fee

MAS 233 Massage Therapy III: Rehabilitative (1-2) 2 Hours

This course combines two therapeutic modalities - Neuromuscular Therapy and Sports Massage Therapy. Content includes both functional assessment and corrective concepts.

Prerequisite: MAS 110, MAS 112, MAS 114, MAS 116, MAS 131, and MAS 132 (all C or better)

Corequisite: MAS 214

Course fee

MAS 234 Massage Therapy IV: Advanced Techniques (1-2) 2 Hours

This course involves hands-on learning of the fascial system and fascial web. Content includes therapeutic massage techniques and strokes, with an understanding of the connective tissue which supports the body. This course also serves as an introduction to Eastern healing theories emphasizing the practical application and function of Shiatsu and exploration of the twelve channels. This course blends didactic lecture with hands-on practice.

Prerequisite: MAS 110, MAS 112, MAS 114, MAS 116, MAS 131, and MAS 132 (all C or better)

Corequisite: MAS 233

Course fee

MAS 235 Therapeutic Massage Clinic (0-4) 1 Hour

In this course students perform full-body therapeutic massage sessions and 20 minute chair massage sessions on members of the community and the College. Students apply principles, techniques, and procedures to assess and treat clients in a professional massage setting. Students will serve as both the therapist and office assistant. Students will demonstrate client/therapist communication skills, apply both basic and advanced massage techniques, use proper safety and sanitation practices, practice proper draping skills and body mechanics, and record each session with proper documentation.

Prerequisite: MAS 110, MAS 112, MAS 114, MAS 116, MAS 131, and MAS 132 (all C or better)

Corequisite: MAS 234

Course fee

MAS 299 Special Topics: Therapeutic Massage (Variable) 1-4 Hours

This course covers a variety of current topics in Therapeutic Massage that are not typically covered in other massage therapy courses. Course content format will vary depending on the topic covered.

Prerequisite: MAS 132 (C or better) or Massage Therapy Licensure

Course fee

May be taken four times for credit toward degree

Math Computer Science (MCS)

Engineering, Math and Physical Sciences Division,
Room T302, (847) 543-2044

MCS 121 Computer Science Concepts (3-0) 3 Hours

An introduction to the field for majors and non-majors. The course previews the fundamental concepts and applications of computer science through a survey of topics including: algorithms and problem solving, computer organization, networking, databases, artificial intelligence, and graphics. Students will be exposed to a variety of common computer programming languages, application software, and tools through lab exercises and projects.

Prerequisite: MTH 102 (C or better) and College Reading and Writing Readiness

Course fee

MCS 140 Computer Programming for Engineers and Scientists (3-0) 3 Hours

This course is designed to fulfill the requirements established by the Association for Computing Machinery (ACM) for the CS1 course. It also is designed to meet the computer science requirements of engineering students with applications in math. This is a course in machine organization, algorithm development and programming style using the Java programming language. Applications include sorting and searching techniques, root solving procedures, and numerical integration. EXTENSIVE computer time commitment required. Previous programming experience is recommended. Students should not take both MCS 140 and MCS 141.

Prerequisite: MTH 145 (C or better) or MTH 224 (C or better) or concurrent enrollment in MTH 145 or MTH 224

Course fee

IAI: CS 911

MCS 141 Computer Science I (4-0) 4 Hours

The first in a sequence of courses for majors in Computer Science, this course introduces a disciplined approach to problem-solving, algorithm development and data abstraction. The course covers: branching, repetition and sequence control structures; object-oriented program design, testing and documentation using good programming style; and arrays, records, and files.

Note: Pre-engineering students should enroll in MCS 140. Students should not take both MCS 140 and MCS 141.

Prerequisites: MTH 108 or MTH 107 (both C or better) or an appropriate score on the Math Placement Test

IAI: CS 911

MCS 142 Computer Science II (3-0) 3 Hours

This course is designed to fulfill the requirements established by the Association for Computing Machinery (ACM) for the CS2 course. Using the Java computer language this course presents such topics as string processing, internal searching and sorting, recursion and data structures such as stacks, queues, linked lists, trees and graphs. *Note:* Extensive time commitment required in computer lab. Proficiency in a programming language is also recommended.

Prerequisite: MCS 140 (C or better) or MCS 141 (C or better) or CIT 137 (C or better) or CIT 141 (C or better)

Course fee

IAI: CS 912

Course Information and Descriptions

MCS 240 Computer Organization and Architecture (3-0) 3 Hours

This course is designed to fulfill the requirements established by the Association for Computing Machinery (ACM) for its Computer Organization and Architecture course. Topics include computer structure, machine language, assembly language principles, addressing techniques, macros, program segmentation and linkage. Extensive time commitment required in computer lab.

Prerequisite: MCS 142 (C or better)

Course fee

Mathematics (MTH)

Engineering, Math and Physical Sciences Division,
Room T302, (847) 543-2044

MTH 101 Elementary Concepts of Mathematics (Variable) 1-4 Hours

Basic principles of arithmetic: fractions, decimals, ratios, proportions, percent, very basic algebra, descriptive graphs and basic statistics from a calculator based perspective.

Note: This course does not apply to any associate degree or career certificate. For students required to complete MTH 115 or MTH 117, basic algebra readiness is better demonstrated by completing MTH 114. A specific graphing calculator is required for this course.

Contact the EMPS division office for a referral or additional information.

Prerequisite: Score of 34 or higher on the arithmetic portion of the Math Placement Test. A student who scores below 34 on the arithmetic portion of the Math Placement Test should meet with a counselor to discuss options.

MTH 102 Basic Algebra (4-0) 4 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This developmental course is the first course in the algebra sequence. Basic algebra topics include, but are not limited to: expressions, linear equations and functions with graphing, exponents, basic polynomial operations, and factoring. Modeling and problem solving will be introduced throughout the course.

Note: This course does not apply to any associate degree or career certificate program. A specific graphing calculator is required for the course. Contact the EMPS division office for details.

Prerequisite: MTH 101 (C or better) or Basic Algebra Readiness which includes an appropriate score on the Math Placement Test or Math ACT of 17 or higher.

MTH 104 Geometry (4-0) 4 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course covers the fundamental concepts of geometry for students who lack credit in one year of high school geometry with a grade of C or better or for students who need a review of the subject matter. The course includes the concepts of undefined terms, axioms and postulates, and theorems. Topics also include: construction, locus, and properties of lines, angles, polygons (with emphasis on triangles and quadrilaterals), and circles. The writing of proofs (deductive and indirect) and problem solving are integrated throughout the course. *Note:* This course does not apply to any associate degree or certificate.

Prerequisite: MTH 102 (C or better) or appropriate score on Math Placement Test or Math ACT of 22 or higher.

MTH 105 Preparatory Mathematics for General Education (6-0) 6 Hours

**Course Modification effective Spring 2017. For details, refer to addendum.*

This course focuses on developing mathematical maturity through problem solving, critical thinking, data analysis, and the writing and communication of mathematics. Students will develop conceptual and procedural tools that support the use of key mathematical concepts in a variety of contexts. Instruction will emphasize the connections between verbal, numerical, symbolic and graphical representation of the concepts being taught. Emphasis will be placed on modeling and problem solving, with techniques and manipulations covered in context. The three strands of the course are Algebra, functions, and modeling as they apply to linear, polynomial, rational, and

exponential expressions, equations, and functions. *Note:* This developmental course serves as a prerequisite for MTH 140, MTH 141, MTH 222, or MTH 108. This course does not apply to any associate degree or career certificate program. A specific graphing calculator is required for the course. Contact the EMPS division office for details.

Prerequisite: MTH 101 (C or better) or Basic Algebra Readiness which includes an appropriate score on the Math Placement Test or a Math ACT score of 17 or better.

MTH 106 Intermediate Algebra A (4-0) 4 Hours

This developmental course is primarily intended for students who intend on enrolling in MTH 140, MTH 141, or MTH 222. This course also serves as the first course for students in a yearlong option (MTH 106 and MTH 107) to master Intermediate Algebra. Intermediate Algebra A topics include, but are not limited to, systems of equations, exponential and logarithmic expressions; equations and functions that are quadratic, rational, and radical. Modeling and problem solving will be introduced throughout the course.

Note: This course does not apply to any associate degree or career certificate program. Successful completion (C or better) of both MTH 106 and MTH 107 is equivalent to successfully completing MTH 108 Intermediate Algebra. Credit will not be given in MTH 106 to those with prior credit in MTH 108. A specific graphing calculator is required for the course. Contact the EMPS division office for details.

Prerequisite: MTH 102 (C or better) or appropriate score on Math Placement Test or Math ACT of 22 or higher.

MTH 107 Intermediate Algebra B (3-0) 3 Hours

This developmental course is a continuation of MTH 106 Intermediate Algebra A. Intermediate Algebra B further develops the topics of MTH 106. Other Intermediate Algebra B topics include, but are not limited to, polynomial inequalities, inverses; equations and functions that are exponential and logarithmic. Modeling and problem solving will be introduced throughout the course.

Note: This course does not apply to any associate degree or career certificate program. Successful completion (C or better) of both MTH 106 and MTH 107 is equivalent to successfully completing MTH 108 Intermediate Algebra. Credit will not be given in MTH 107 to those with prior credit in MTH 108. A specific graphing calculator is required for the course. Contact the EMPS division office for details.

Prerequisite: MTH 106 (C or better)

MTH 108 Intermediate Algebra (5-0) 5 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This developmental course is the second course in the algebra sequence that further develops the concepts of basic algebra. Intermediate algebra topics include, but are not limited to: polynomial inequalities, systems of equations and inequalities; quadratic, rational, radical, exponential and logarithmic equations and functions. Modeling and problem solving will be introduced throughout the course.

Note: This course does not apply to any associate degree or career certificate program. A specific graphing calculator is required for the course. Contact the EMPS division office for details.

Prerequisite: MTH 102 or MTH 105 (C or better) or appropriate score on the Math Placement Test or Math ACT of 22 or higher.

MTH 114 Applied Mathematics I (3-0) 3 Hours

This course covers the basic principles of mathematics, with application to problems encountered in various industries. Review of fractions, decimals, ratios, proportions, and percent are covered. Introductory algebra, practical geometry, measuring systems, precision, accuracy, and scientific notation are also covered.

Note: For students required to complete MTH 115 or MTH 117, basic algebra readiness is better demonstrated by taking MTH 114. A specific calculator is required for this course. Contact EMPS division office for details.

Prerequisite: Score of 34 or higher on the arithmetic portion of the math placement test. A student who scores below 34 on the arithmetic portion of the math placement test should meet with a counselor to discuss options.

MTH 115 Applied Mathematics II (3-0) 3 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course introduces practical geometry, measurement of plane and solid figures, precision, accuracy, elementary right triangle trigonometry, law of cosines, and law of sines.

Note: A specific graphing calculator is required for this course. Contact the EMPS Division office for details.

Prerequisite: MTH 114 or MTH 102 (C or better) or appropriate score on the Math Placement Test or Math ACT of 22 or higher.

MTH 117 Technical Mathematics I (3-0) 3 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course covers college mathematics for students majoring in technology. It includes algebra, geometry and trigonometry.

Note: A specific graphing calculator is required for this course. Contact the EMPS division office for details.

Prerequisite: MTH 114 or MTH 102 (C or better) or appropriate score on the Math Placement Test or Math ACT of 22 or higher.

MTH 118 Technical Mathematics II (4-0) 4 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course is a continuation of MTH 117. Major topics are algebra, geometry, vectors, complex numbers, logarithms, matrices, inequalities and trigonometry. *Note:* A specific graphing calculator is required for this course. Contact the EMPS Division office for details.

Prerequisite: MTH 117 (C or better) or an appropriate score on the Math Placement Test or Math ACT of 25 or higher.

Typically offered spring only

MTH 121 Mathematics for Elementary Teaching I (3-0)3 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This is the first college-level math course in a two course sequence which is intended for students planning to major in elementary education. This course is not intended to offer teaching methods to future educators. Topics include problem solving, sets, logic, functions, numeration systems, real number system, number theory, probability and statistics. To fulfill the general education core curriculum math requirement the second course in the sequence, Math 221 (Mathematics for Elementary Teaching II), must also be completed. *Note:* A specific graphing calculator is required for this course. Contact the EMPS Division office for details. *Prerequisites:* MTH 104 (C or better) or one year of High School Geometry (C or better); AND MTH 108 or MTH 107 (both C or better), or appropriate score on Math Placement Test, or Math ACT of 25 or higher.

MTH 122 College Algebra (4-0) 4 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course is primarily intended for students who plan on taking MTH 127 Finite Mathematics, MTH 224 Calculus for Business and Social Sciences, or MTH 244 Discrete Mathematics. This course also serves as the first course for students planning to take the sequence of MTH 122 College Algebra and MTH 123 Trigonometry as a means of taking MTH 145 Calculus and Analytic Geometry I. College algebra topics include, but are not limited to: polynomial, rational, exponential, and logarithmic functions, graphs, and equations, systems of nonlinear equations and inequalities, matrices, conic sections, and sequences and series. Modeling and problem solving will be implemented throughout the course. *Note:* A specific graphing calculator is required for this course. Contact EMPS Division Office for details. Credit will not be given in MTH 122 to those with prior credit in MTH 144 Precalculus. This course will not meet the General Education Math Requirement for a transfer degree but may serve as a Math Requirement for a career degree. *Prerequisite:* MTH 104 (C or better) or one year of High School Geometry (C or better); AND MTH 108 or MTH 107 (both C or better), or appropriate score on Math Placement Test, or Math ACT of 25 or higher.

MTH 123 Trigonometry (3-0) 3 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course is primarily for students who intend to take MTH 145 Calculus and Analytic Geometry I. Trigonometry topics include, but are not limited to: trigonometric functions and their graphs, trigonometric identities and equations, and applications of trigonometry. Modeling and problem solving will be implemented throughout the course. *Note:* A specific graphing calculator is required for this course. Contact EMPS division office for details. *Prerequisite:* MTH 122 (C or better) or concurrent enrollment in MTH 122 or an appropriate score on the Math Placement Test or Math ACT of 28 or higher.

MTH 127 Finite Mathematics I (3-0) 3 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

Designed primarily for business, commerce or social science students of whom it may be required. Topics include set theory, elementary combinatorics, probability, matrix algebra, introduction to linear programming, and Markov chains. *Note:* Specific graphing calculator is required for this course. Contact the EMPS division office for details.

Prerequisite: MTH 122 (C or better) or appropriate score on the Math Placement Test or Math ACT of 28 or higher.

IAl: M1 906

Course Information and Descriptions

MTH 140 Contemporary Mathematics (3-0) 3 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course is designed to meet general education mathematics requirements for students who are not majoring in mathematics, science or business. The goal of this survey course is to develop competency in analytical reasoning, problem solving, and multi-step decision making as well as exposing students to some current trends in mathematical thought. The emphasis is on mathematical reasoning and the solving of real-life problems involving mathematics. The course covers three or four of the following topics in depth: graph theory, counting techniques and probability, topics in geometry, logic/set theory, linear programming, and game theory. This course is not intended as a prerequisite for any other mathematics course. *Note:* A specific graphing calculator is required for this course. Contact the EMPS division office for details.

Prerequisites: MTH 105 (C or better) –OR– MTH 106 (C or better) –OR– appropriate score on Math Placement Test –OR– [two years of HS Algebra (C or better) –AND– Basic Algebra Readiness] –OR– Math ACT of 22 or higher. **IAI: M1 904**

MTH 141 Quantitative Literacy (3-0) 3 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

Designed to meet general education mathematics requirements for students who are not majoring in mathematics, science or business. A conceptual understanding is developed in several areas including: representing and analyzing data through such statistical measures as central tendency, dispersion, normal distribution, and correlation and regression; using logical statements and arguments in a real-world context; estimating, approximating and judging the reasonableness of answers; graphing and using polynomial functions and systems of equations in the interpretation and solution of problems; and selecting and using appropriate approaches and tools in formulating and solving real-world problems. *Note:* A specific graphing calculator is required for this course. Contact the EMPS division office for details. This course meets the math requirement in the Associate of Arts and Associate of Fine Arts degrees only. May be used as elective credit only in all other degrees.

Prerequisites: MTH 105 (C or better) –OR– MTH 106 (C or better) –OR– appropriate score on Math Placement Test –OR– [two years of HS Algebra (C or better) –AND– Basic Algebra Readiness] –OR– Math ACT of 22 or higher. **IAI: M1 901**

MTH 144 Precalculus (5-0) 5 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course is primarily for students who intend to take MTH 145 Calculus and Analytic Geometry I. Precalculus topics include, but are not limited to: polynomial, rational, exponential, logarithmic, and trigonometric functions, graphs, and equations, trigonometric identities, applications of trigonometry, systems of nonlinear equations and inequalities, matrices, conic sections, and sequences and series. *Note:* Use of a specific graphing calculator will be integrated throughout the course. Contact EMPS Division Office for details. Students who earn a grade of C in MTH 108 or MTH 107 must complete the sequence of MTH 122 College Algebra and MTH 123 Trigonometry as a prerequisite for MTH 145 Calculus and Analytic Geometry I.

Prerequisites: MTH 104 (C or better) or one year of High School Geometry (C or better); AND MTH 108 or MTH 107 (both B or better), or appropriate score on Math Placement Test, or Math ACT of 25 or higher.

MTH 145 Calculus and Analytic Geometry I (5-0) 5 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course covers the calculus of algebraic and transcendental functions. Analytic geometry topics are limited to the line and circle. Calculus topics include limits, differentiation and integration of both algebraic and transcendental functions, including trigonometric functions, with applications. *Note:* A specific graphing calculator is required for this course. Contact the EMPS division office for details. *Prerequisite:* MTH 123 (C or better) or MTH 144 (C or better) or appropriate score on Math Placement Test or Math ACT of 28 or higher.

IAI: M1 900-1, MTH 901

MTH 146 Calculus and Analytic Geometry II (4-0) 4 Hours

This course is a continuation of MTH 145. Techniques of integration, applications of integration, differential equations, parametric equations, polar coordinates and infinite sequences and series will be covered. *Note:* A specific graphing calculator is required for this course. Contact the EMPS division office for details.

Prerequisite: MTH 145 (C or better)

IAI: M1 900-2, MTH 902

MTH 221 Mathematics for Elementary Teaching II (3-0) 3 Hours

This is the second college-level math course in a two course sequence which is intended for students planning to major in elementary education. This course is not intended to offer teaching methods to future educators. Topics include probability, statistics, modeling, plane and solid geometry, measurement, similarity and congruence, geometric constructions, area, volume, classroom manipulatives, and/or computer software.

Prerequisite: MTH 121 (C or better)

IAI: M1 903

MTH 222 Elementary Statistics (4-0) 4 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course covers the application of elementary principles of probability, descriptive statistics, an introduction to inferential statistics and elementary computer techniques. *Note:* A specific graphing calculator is required for this course. Contact the EMPS Division office for details.

Prerequisites: MTH 105 (C or better) –OR– MTH 106 (C or better) –OR– appropriate score on Math Placement Test –OR– Math ACT of 22 or higher.

IAI: M1 902, BUS 901

MTH 224 Calculus for Business and Social Science (4-0) 4 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course includes analytical geometry and calculus topics such as functions and their graphs, rectangular coordinate systems, limits, differentiation and integration of algebraic, logarithmic and exponential functions. Applications are included along with selected topics from multivariable calculus.

Note: A specific graphing calculator is required for this course. Contact the EMPS division office for details.

Prerequisite: MTH 122 (C or better) or MTH 144 (C or better) or appropriate score on Math Placement Test or Math ACT of 28 or higher.

IAI: M1 900-B

MTH 225 Introduction to Linear Algebra (3-0) 3 Hours

This is a first course in vectors, matrices, vector spaces and linear transformations and includes a substantial proof component. Applications of topics to problems arising in engineering and business are included. The course may be taken concurrently with, but should not replace, a course in multivariable calculus. A student should expect to take a more complete linear algebra course at a baccalaureate transfer institution. Computer software will be integrated as appropriate.

Note: A specific graphing calculator is required for this course. Contact the EMPS division office for more details.

Prerequisite: MTH 146 (C or better)

Typically offered spring only

IAI: MTH 911

MTH 227 Ordinary Differential Equations (3-0) 3 Hours

This is an introductory course that involves the solving of various ordinary linear and nonlinear differential equations of first and higher order and the solving of systems of differential equations. Methods include separation of variables, various substitution techniques, use of integrating factors, undetermined coefficients, and variation of parameters. Laplace transforms, infinite series, and selected numerical methods. Applications include simple harmonic motion, population growth and decay, cooling, L-R-C circuits, and mixing problems. Uniqueness and existence theorems are covered. It is intended for students of science, mathematics, and engineering that features modeling and graphical visualization as central themes.

Note: Computer software and graphing calculators are integrated into the course where appropriate.

Prerequisite: MTH 146 (C or better)

IAI: MTH 912

MTH 244 Discrete Mathematics (3-0) 3 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

Introduction to the mathematical analysis of finite collections and to the mathematical foundations of sequential machines, computer system design, data structures and algorithms. Topics include, but are not restricted to sets, counting, recursion, graph theory, trees, networks, Boolean algebras, automata, and formal grammars and languages. This course is a beginning course in the mathematics of computer science.

Note: Specific graphing calculator is required for this course. Contact the EMPS division office for details.

Prerequisite: MTH 122 (C or better) or appropriate score on Math Placement Test or Math ACT of 28 or higher.

Typically offered spring only

IAI: M1 905, CS 915

MTH 246 Calculus and Analytic Geometry III (4-0) 4 Hours

This course is a continuation of MTH 146. Topics include vectors in two and three dimensions, vector functions, multiple integrals, partial derivatives, and vector calculus. Solid analytic geometry topics include quadric surfaces, cylindrical and spherical coordinates and curves in 3-space.

Note: A specific graphing calculator is required for this course. Contact the EMPS Division office for details.

Prerequisite: MTH 146 (C or better)

IAI: M1 900-3, MTH 903

MTH 299 Special Topics in Mathematics (Variable) 1-3 Hours

This course addresses the in-depth study of special topics in mathematics that do not have specific courses in the catalog. Course content will vary depending on the topic being studied. Topics may include but are not limited to: mathematical statistics, real analysis, complex analysis, general topology, abstract algebra, combinatorics, set theory, mathematical logic etc. This course is repeatable up to three times, any topic only once, for a maximum of 6 hours towards degree completion.

May be taken four times, but any topic only once

Mechanical Engineering Technology (MET)

Engineering, Math and Physical Sciences Division,
Room T302, (847) 543-2044

MET 111 Manufacturing Processes (3-0) 3 Hours

This course introduces students to the processes, production procedures and materials used in manufacturing. Casting, machining, forging, rolling, treatment and production of engineering materials is also studied.

Prerequisite: College Reading and Writing Readiness

Course fee

IAI: IND 913

MET 112 Basic Metallurgy I (3-0) 3 Hours

This course introduces students to metals with emphasis on their physical and mechanical properties relating to applications including metal forming, heat treatment and surface treatment of carbon and alloy steels.

Prerequisite: College Reading and Writing Readiness

MET 113 Basic Metallurgy II (3-0) 3 Hours

This course is a continuation of MET 112 Basic Metallurgy I with emphasis on cast irons, nonferrous metals and their alloys. Foundry casting, machining, forming, welding and power metallurgy processes are also covered.

Prerequisite: MET 112

Typically offered even years only.

MET 115 Industrial Pneumatics and Hydraulics (3-0) 3 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course introduces students to the study of fluid power technology using liquid or compressed air as the transfer media. Complete hydraulic and pneumatic systems are studied including power sources, reservoirs, pumps, compressors, lines, valves and actuators.

Prerequisite: COMPASS ELI score of 200 or higher, APT score of 80 or higher, ELI 103 (C or better), ELI 104 (C or better), ELI 107 (C or better), or College Reading and Writing Readiness AND Basic Algebra Readiness.

Course Information and Descriptions

MET 116 Machine Components and Repair (2-2) 3 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course identifies basic machine components and demonstrates common machine component repair and replacement operations. Machine parts such as belts, gears, seals, bearings, and fasteners will be discussed and repaired.

Prerequisite: COMPASS ELI score of 200 or higher, APT score of 80 or higher, ELI 103 (C or better), ELI 104 (C or better), ELI 107 (C or better), or College Reading and Writing Readiness AND Basic Algebra Readiness. *Course fee*

MET 117 Pump Overhaul and Repair (2-2) 3 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course covers the processes needed to diagnose, troubleshoot, repair and maintain common types of centrifugal pumps. *Prerequisite:* COMPASS ELI score of 200 or higher, APT score of 80 or higher, ELI 103 (C or better), ELI 104 (C or better), ELI 107 (C or better), or College Reading and Writing Readiness AND Basic Algebra Readiness. *Course fee*

MET 118 Machinery's Handbook (3-0) 3 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course explores the intent, use, and application of the Machinery's Handbook. It applies the principles, concepts, and data in the Handbook to industrial related projects. Emphasis will be placed on chart usage and data retrieval from this handbook. *Prerequisite:* COMPASS ELI score of 200 or higher, APT score of 80 or higher, ELI 103 (C or better), ELI 104 (C or better), ELI 107 (C or better), or College Reading and Writing Readiness AND Basic Algebra Readiness.

MET 131 Introduction to Robotics (2-2) 3 Hours

This course is an introduction to the technology of robotics. Topics include definitions, classifications, components, hardware design, kinematics analysis, sensors and perception, navigation, control systems, and interface hardware.

Prerequisite: College Reading and Writing Readiness AND MTH 117 or MTH 122 or higher-level math course (all C or better) or an appropriate score on the Math Placement Test or Math ACT of 25 or higher.

Course fee

MET 212 Mechanisms (4-0) 4 Hours

This course introduces students to the study of motion, velocity, and acceleration as they pertain to the design of gears, linkages, and other mechanical assemblies which transmit or convert motion.

Prerequisite: College Reading and Writing Readiness and Basic Algebra Readiness

Recommended: PHY 111 OR MTH 117 or higher

MET 214 Mechanical Design and Drafting (2-2) 3 Hours

This course introduces students to the design and graphic representation of basic machine parts such as gears, cams, castings, stampings, the redesign of simple mechanisms, piping drawing, and welding representations.

Prerequisite: EGR 121 or CAD 117

Course fee

MET 215 Machine Design (5-0) 5 Hours

This is a capstone course that covers the application of empirical and analytical techniques used in the design of mechanical components. Combined states of stress using Mohr's Circle, design criteria (including maximum shear stress, Mises-Hencky strain energy, and fatigue) and the design and analysis of mechanical elements (including clutches, brakes, belts, chains, bearings, fasteners, gearing, springs and cams) are developed.

Prerequisite: EGR 215 or EGR 216 (both C or better)

Recommended: Prior completion of PHY 111 or higher level Physics AND MTH 117 or higher level Math

MET 216 Applied Finite Element Analysis (2-2) 3 Hours

This course is designed to explain how to apply finite element analysis to real-world problems. Students will be introduced to finite element analysis software and will learn the proper techniques of how it is used to test engineering designs for failure modes in the virtual environment.

Prerequisite: EGR 121 and EGR 216 or EGR 222 (all C or better)

MET 219 Plant Layout and Materials Handling (3-0) 3 Hours

This course examines the relationship between good plant layout and efficient materials handling. Selection and arrangement of production machinery, cost justification, product and process layout schemes, and techniques of making layouts is covered.

Prerequisite: College Reading and Writing Readiness and Basic Algebra Readiness

Recommended: MTH 117 (C or better)

MET 231 Mechatronics (2-2) 3 Hours

This course will provide students with technical knowledge related to industrial automation systems. Mechanical, electrical and electronic components, in terms of theory of operation and application, will be studied in detail. The use of microprocessors as primary control component will be the major topic of the second half of the course.

Prerequisite: MET 131 (C or better) or Consent of Instructor

Course fee

MET 299 Special Topics: Mechanical Engineering Technology (Variable) 1-4 Hours

This course provides students with additional information about specialized areas in mechanical engineering. Topics will be identified for each section of the course. This course is repeatable up to three times, any topic only once, for a maximum of 6 hours towards degree completion.

Prerequisite: To be determined relative to topic

May be taken four times, but any topic only once

Meteorology

Meteorology courses are listed under Earth Science.

Medical Assisting (MOA)

Biological and Health Sciences Division,
Room B210, (847) 543-2042

MOA 111 Clinical Medical Assisting I (2-4) 4 Hours

**Course Modification effective Spring 2017. For details, refer to addendum.*

This course introduces the students to the role of the Medical Assistant in the clinical area of the medical clinic, hospital or laboratory. Topics include medical ethics and law, asepsis, infection control, patient history and record management, vital signs, and administering medications.

Prerequisite: Basic Algebra Readiness, BIO 111 or BIO 244 and BIO 245 (all C or better)

Corequisites: HIT 111, HIT 119 and MOA 112 (C or better if already completed) *Course fee*

MOA 112 Basic Medical Office and Billing Procedures (3-2) 4 Hours

This course provides students with a foundation of knowledge and skills in the front office of a medical or dental office. It introduces students to health records, insurance processing procedures, and basic CPT and ICD-CM Coding. Some topics include: scheduling appointments, telephone techniques, bookkeeping and banking, completing health insurance forms, and assigning insurance codes. Students should be basic keyboard proficient.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Course fee

MOA 115 Insurance Coding for Medical Assistants (2-2) 3 Hours

This course introduces the theory, structure, and organization of the Current Procedural Terminology (CPT) and International Classification of Diseases (Current edition) Clinical Modification (ICD-CM) coding systems. Emphasis will be on the application of coding principles to accurately assign CPT and ICD-CM codes in billing and reimbursement will be included. This course is not designed for those who want to become medical coders in hospitals.

Prerequisites: HIT 111, BIO 111 or BIO 244 and BIO 245 (all C or better)

Corequisite: MOA 112 (C or better if already completed)

Course fee

MOA 211 Clinical Medical Assisting II (3-3) 4 Hours

This course provides the medical assisting student with skills beyond the basic introductory course. This will be an overview of advanced skills. Emphasis includes: assisting with medical specialties, electrocardiography, assisting with diagnostic imaging. Additional focus will be on surgical instrumentation and assisting with surgical procedures.

Prerequisite: BIO 111 or BIO 244 and BIO 245 AND HIT 111 , HIT 119 , MOA 111 and MOA 112 (all C or better)

Corequisite: MOA 115 or HIT 117 and HIT 131 (formerly HIT 118) AND PBT 110 and PBT 115 (all C or better)

Course fee

MOA 212 Medical Assisting Externship (0-12 hours) 3 Hours

This requires the medical assistant student to integrate and apply knowledge and skills from all previous medical assistant courses in actual patient care settings. Students will perform medical assistant administrative, clinical, and laboratory duties under the supervision of a mentor to effectively transition to the role of a medical assistant. The Medical Assistant Externship takes place during the final semester of the program.

Prerequisite: MOA 115 or HIT 117 and HIT 131 (formerly HIT 118) AND MOA 211 , PBT 110 , and PBT 115 (all C or better).

Course fee

MOA 299 Special Topics: MOA (Variable) 1-3 Hours

This course is designed to introduce students to specialized instruction in current medical assisting topics. This course will be utilized as a circumstantial elective for the AAS degree only. Course content will vary depending on the topic being studied. *Note:* Topics may include medical assisting issues, specialty practice research, certification review, etc. This course may be taken twice, any topic only once, for a maximum of four credit hours towards degree completion.

Prerequisite: To be determined relative to topic

Medical Imaging (MIM)

Biological and Health Sciences Division,
Room B210, (847) 543-2042

MIM 110 Introduction to Medical Imaging (3-0) 3 Hours

Provides the student with a basic understanding of the role of medical imaging in the health care delivery system. The student will develop basic skills in radiography and patient care.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Course fee

MIM 111 Radiographic Anatomy and Positioning I (4-2) 5 Hours

Includes a study of the radiographic anatomy, examination procedure, medical terminology and pathology for the chest, abdomen, ribs, pelvis, and upper and lower extremities. Students will learn how to read various types of technique charts and program the x ray units for correct exposures for these examinations.

Prerequisite: Admission to the Medical Imaging Program

Course fee

MIM 112 Principles of Radiographic Exposure (2-2) 3 Hours

Covers the factors that control the production of a radiographic image and provides a basic understanding of radiation protection.

Prerequisite: Admission to the Medical Imaging Program

Corequisite: MIM 110 and MIM 111 (C or better in both)

Course fee

Course Information and Descriptions

- MIM 113 Radiographic Anatomy and Positioning II (4-2) 3 Hours**
Includes a study of the radiographic anatomy, examination procedure, medical terminology, and pathology for the head and vertebral column. Students will learn how to read various types of technique charts and program the x ray units for correct exposures for these examinations.
Prerequisite: MIM 110, MIM 111, MIM 112 and MIM 170 (C or better in all)
Course fee
- MIM 114 Clinical Practice I (0-16) 3 Hours**
Supervised competency based clinical practice. Emphasis on routine chest, abdomen, upper and lower extremities.
Prerequisite: MIM 110 and MIM 111 and MIM 112 and MIM 170 (C or better in all)
Corequisite: MIM 113
Course fee
- MIM 115 Clinical Practice II (0-16) 3 Hours**
Supervised competency based clinical practice. Emphasis on routine examinations of the appendicular and axial skeleton.
Prerequisite: MIM 113 and MIM 114 (C or better)
Course fee
- MIM 116 Advanced Radiographic Procedures (1-0) 1 Hour**
Studies the special radiographic procedures routinely performed in the majority of radiology departments. Includes identification of the contrast agents, anatomical structures investigated, and examination procedures.
Prerequisite: MIM 113 and MIM 114 (C or better)
Corequisite: MIM 115
Course fee
- MIM 170 Introduction to the Clinical Education Center (0-8) 1 Hour**
This course is an introduction to the Medical Imaging department and clinical practice. The student will become familiar with the physical plant and protocols of the clinical education center where he/she will receive clinical experience. The course will include supervised performance of routine radiographic examinations of the chest, abdomen, and appendicular skeleton.
Prerequisite: Admission to the Medical Imaging Program
Corequisites: MIM 111 and MIM 112
Course fee
- MIM 175 Clinical Education Practicum (0-16) 3 Hours**
Supervised competency based clinical practice for those individuals returning to the Medical Imaging program.
Course fee
- MIM 210 Technical Aspects of Patient Care (2-0) 2 Hours**
Surveys physical patient assessment, specialty medical equipment, medical emergencies, and trauma radiography. Pharmacologic properties of contrast media and venipuncture principles are also emphasized.
Prerequisite: MIM 115 and MIM 116 (both C or better).
Course fee
- MIM 211 Imaging Equipment (5-2) 6 Hours**
Covers mechanical and electrical physics applied to x-ray equipment and factors affecting x-ray emission. Survey of digital vascular radiography and interventional procedures. Labs and discussions in principles of radiographic exposure and image evaluation are included.
Prerequisite: MIM 115 and MIM 116 (both C or better).
Course fee
- MIM 212 Clinical Practice III (0-18) 3 Hours**
Supervised clinical practice. Emphasis on routine special procedures, surgical, trauma, and mobile radiography. Observations and practice in vascular and interventional procedures are included.
Prerequisite: MIM 115 and MIM 116 (both C or better).
Course fee
- MIM 213 Medical Imaging Pathology (2-0) 2 Hours**
Includes etiology and processes of trauma and disease. The emphasis is placed on radiographic pathology of body systems. Pathology seen with computed tomography, ultrasound, and magnetic resonance imaging is discussed.
Prerequisite: MIM 116 (C or better)
Course fee
- MIM 214 Advanced Topics in Radiography (5-2) 6 Hours**
Surveys radiation therapy and nuclear medicine. Radiation biology, radiation regulations, radiation measurements, pediatric and geriatric radiography, and sensitometry and quality control are included. Labs and lectures include principles of radiographic exposure, quality control, and film critique.
Prerequisite: MIM 210, MIM 211, and MIM 212 (C or better in all)
Course fee
- MIM 215 Clinical Practice IV (0-18) 3 Hours**
Supervised competency based clinical practice. Emphasis continued on routine and vascular special procedures, surgical, trauma, and mobile radiography. Includes orientation rotations to advanced imaging modalities.
Prerequisite: MIM 210, MIM 211, and MIM 212 (C or better in all)
Course fee
- MIM 216 Computed Imaging (2-0) 2 Hours**
Introduces the student to computer design as it applies to radiology, including a survey into computed tomography and digital radiography functions and processing parameters. Discusses concepts from paradiologic modalities, including computed tomography, magnetic resonance imaging, cardiovascular/interventional radiography, diagnostic ultrasound, and nuclear medicine. Physics and imaging parameters of computed tomography and planar image techniques are emphasized. Case studies will be presented.
Prerequisite: MIM 210, MIM 211, and MIM 212 (C or better in all)
- MIM 217 Applied Radiation Biology (1-0) 1 Hour**
Surveys the somatic and genetic effects of ionizing radiation.
Prerequisite: MIM 116 (C or better)
- MIM 218 Survey of Radiology Administration (1-0) 1 Hour**
Surveys the structure and function of the radiology department and its relation to the hospital and the health care consumer.
Prerequisite: MIM 113 (C or better)

MIM 219 Radiography Seminar (2-0) 2 Hours

Review and discussion of radiographic principles, techniques, and methods. Emphasis is placed on the interdependence of theory and principles.

Prerequisite: MIM 211 and MIM 212 (both C or better)

MIM 251 MRI Physics & Instrumentation (3-0) 3 Hours

This course introduces the principles of magnetic resonance imaging. The course will focus on imaging sequences/parameters and their effects quality exams. Imaging hardware and production, quality assurance, and safety considerations are also presented.

Prerequisite: Admission to the MRI Program

MIM 252 CT Physics, Instrumentation, and Procedures I (3-0) 3 Hours

This course introduces the student to physical principles and image acquisition parameters of computed tomography, surveys instrumentation and digital processing parameters, and discusses scanning techniques as applied to single and multislice spiral CT. Contrast media, medical emergencies, and physical patient assessment as applied to CT are also discussed. Imaging protocols for the head, neck, chest, and abdomen are emphasized.

Prerequisite: Acceptance into the Computed Tomography Program or Approval by department chair.

MIM 253 MRI Procedures (2-0) 2 Hours

This course introduces MRI scanning procedures and application. Scanning parameters and patient care will be emphasized for examination of the head and neck, spine, thorax, abdomen/pelvis, musculoskeletal and advanced imaging procedures. Radiographic critiques and quality assurance will also be emphasized.

Prerequisite: Admission to the MRI Program

MIM 254 CT Physics, Instrumentation, and Procedures II (3-0) 3 Hours

This course introduces the student to the principles of single slice, multislice and volume scanning computed tomography. It will also cover CT fluoroscopy, angiography, and quality control. Other topics include patient care and assessment, medical emergencies, radiation protection, aseptic techniques and imaging procedures of the musculoskeletal and reproductive systems. Trauma imaging will also be discussed for the central nervous, respiratory, cardiovascular, digestive, urinary, musculoskeletal and reproductive systems.

Prerequisite: MIM 252 (C or better) and Acceptance into the CT program OR Approval by department chair

MIM 255 MRI Sectional Anatomy & Pathology (4-0) 4 Hours

This course introduces the students to cross sectional MRI anatomy and pathology. Emphasis is placed on the central nervous system, musculoskeletal system, neck, chest, abdomen and pelvis. The vascular system is also presented.

Prerequisite: Admission to the CT or MRI Program.

MIM 256 CT Sectional Anatomy and Pathology I (3-0) 3 Hours

This course introduces the students to cross sectional CT anatomy and pathology. Emphasis is placed on the skull, central nervous, soft tissue neck, respiratory, and digestive systems. Trauma imaging and pediatric specificities of these systems are also presented.

Prerequisite: Acceptance into the CT program or Approval by department chair.

MIM 258 CT Sectional Anatomy and Pathology II (3-0) 3 Hours

This course is a continuation of CT Sectional Anatomy and Pathology I (MIM 256). Emphasis is placed on the cross-sectional anatomy and pathology of the pelvis, vertebral column/spinal cord, reproductive, urinary, musculoskeletal, and cardiovascular/systemic vascular systems. Trauma imaging and pediatric specificities are also presented. Comprehensive reviews of all systemic anatomy and pathology are completed.

Prerequisite: MIM 256 (C or better) and Acceptance into the CT program OR Approval by department chair

MIM 271 Clinical Practice V (0-16) 3 Hours

Supervised competency based clinical practice. Emphasis continued on routine and non-routine radiographic procedures. Students will complete all competencies required by the American Registry of Radiologic Technologists.

Prerequisites: MIM 214, MIM 215, and MIM 216 (C or better in each)

Course fee

MIM 272 MRI Practicum (0-15) 3-6 Hours

This course introduces the student to supervised competency based clinical practice. Emphasis is placed on patient care, safety considerations, positioning and scanning parameters, MR imaging procedures, and non-imaging procedures.

Prerequisite: Admission to the MRI Program

Course fee

May be taken twice for credit toward degree

MIM 273 CT Practicum I (1-10) 2 Hours

This course introduces the student to supervised competency based clinical practice. Emphasis is placed on patient care, safety considerations, positioning and scanning parameters, CT imaging procedures, and non-imaging procedures.

Prerequisite: Acceptance into the CT program or Approval by department chair.

Course fee

MIM 274 CT Practicum II (1-10) 2 Hours

This course provides students continued supervised competency based clinical practice. Emphasis is placed on patient care, safety considerations, positioning and scanning parameters, CT imaging procedures, and non-imaging procedures.

Prerequisite: MIM 273 (C or better) and Acceptance into the CT Program OR Approval by department chair

Course fee

Music (MUS)

Communication Arts, Humanities and
Fine Arts Division, Room B210, (847) 543-2040

MUS 120 Vocal Ensembles (0-2) 1 Hour

Understanding and enjoyment of choral music. Student may choose the Gospel Choir, CLC Singers, or Choir of Lake County.

Note: The CLC Singers requires an audition.

Course fee

May be taken four times for credit toward degree

Course Information and Descriptions

- MUS 121 Voice Class I (1-1) 1 Hour**
Introduction to singing techniques beginning with group singing and gradually introducing solo singing. No vocal background is needed. For non-music majors.
Course fee
- MUS 122 Voice Class II (1-1) 1 Hour**
Introduction to singing techniques with emphasis on repertoire. A continuation of MUS 121.
Prerequisite: MUS 121
Course fee
- MUS 123 Wind Ensemble (0-2) 1 Hour**
Understanding and enjoyment of instrumental music through selected examples of standard instrumental ensemble literature of all periods.
Course fee
May be taken four times for credit toward degree
- MUS 124 Introduction to Music (3-0) 3 Hours**
A non-technical listening course emphasizing recognition and understanding of various styles of serious music, past and present.
IAI: F1 900
- MUS 127 Fundamentals of Music (2-0) 2 Hours**
Provides background to understand language of music of various style periods. Study of notation, rhythm, scales, intervals, chords, and musical terms using keyboard as an aid. Preparation for MUS 128 and a practical course for classroom teachers.
Note: Students should combine this course with Piano Class I (MUS 145, 1 credit hour).
- MUS 128 Theory of Music I (4-0) 4 Hours**
This course is a concentrated study of musical language including analysis, recognition, and writing of chords and harmonic progressions. Students without keyboard background should combine this course with Piano Class I (MUS 145, 1 credit hour).
Prerequisite: MUS 127 (C or better) or a passing score on the Music Theory Placement exam
- MUS 129 Theory of Music II (4-0) 4 Hours**
Written four-part harmony, analysis of form and harmony, dominant #7 chord and continuation of ear training. Continuation of MUS 128.
Prerequisite: MUS 128
- MUS 140 20th Century Music (3-0) 3 Hours**
A non-technical listening course emphasizing recognition and understanding of various styles of 20th century music including jazz and popular music. Emphasis placed on music through recordings, scores, and performance of representative works of each period. Comparison of styles and consideration of music in relation to other fine arts and to the general historical background.
- MUS 141 Applied Music-Voice I (Variable) 1-2 Hours**
This course is designed for the vocalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.
Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.
Course fee
May be taken 4 times for maximum of 4 hours toward degree
- MUS 142 Ear-training and Sight-singing I (0-2) 1 Hour**
This course introduces students to the development of listening skills and sight-singing, which is the ability to read and perform music at first sight. Through graduated written exercises, students will be expected to develop skills of aurally and visually recognizing, writing, and singing rhythms, intervals, and melodies.
Prerequisite: MUS 127 or consent of instructor
- MUS 143 Applied Music Piano I (Variable) 1-2 Hours**
This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.
Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.
Course fee
May be taken 4 times for maximum of 4 hours toward degree
- MUS 144 Applied Music-Jazz Piano I (Variable) 1-2 Hours**
This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.
Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.
Course fee
May be taken 4 times for maximum of 4 hours toward degree
- MUS 145 Piano Class I (1-1) 1 Hour**
An introduction to basic playing, keyboard chords, and music reading. Interpretation of various music styles is considered. For beginners or those who have not studied for a considerable time.
Note: Students should combine this course with Fundamentals of Music (MUS 127).
Course fee
- MUS 146 Piano Class II (1-1) 1 Hour**
A continuation of MUS 145. Provides additional opportunity for study and practice of more advanced compositions for piano.
Prerequisite: MUS 145
Course fee
- MUS 147 Guitar Class I (1-1) 1 Hour**
Introduction to the fundamentals of the guitar for development of playing skills, reading, improvisation and technique. Explores the use of music theory as it relates to the guitar in terms of keys, chord construction and progression. Emphasis on variety of songs and historical styles for repertoire development.
Note: MUS 127 Fundamentals of Music is strongly recommended as a companion course for students who need work in reading pitches and rhythms.
Course fee
- MUS 148 Guitar Class II (1-1) 1 Hour**
A continuation of MUS 147. It develops and advances skills learned and introduces new concepts and techniques.
Prerequisite: MUS 147
Course fee

MUS 149 Ear-training and Sight-singing II (0-2) 1 Hour

This course is a continuation of MUS 142 and provides further instruction in ear-training and sight-singing (reading, writing, and performing music at first sight). Students will be expected to build off the skills developed in MUS 142 leading to musical diction and advanced notation.

Prerequisite: MUS 142

MUS 160 Applied Music - Violin I (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 161 Applied Music-Viola I (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 162 Applied Music Cello I (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 163 Applied Music-String Bass I (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 164 Applied Music-Flute I (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 165 Applied Music-Oboe I (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 166 Applied Music-Clarinet I (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 167 Applied Music English Horn I (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 168 Applied Music-Bassoon I (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 169 Applied Music-Bass Clarinet I (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 180 Applied Music-Saxophone I (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

Course Information and Descriptions

MUS 181 Applied Music-Trumpet I (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 182 Applied Music-French Horn I (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 183 Applied Music Trombone I (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 184 Applied Music Baritone Horn I (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 185 Applied Music Tuba I (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 186 Applied Music-Percussion I (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 187 Applied Music-Guitar I (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 188 Applied Music-Electric Bass I (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 223 Jazz Ensemble (0-2) 1 Hour

Understanding and enjoyment of instrumental music through selected examples of standard instrumental ensemble literature of all periods.

Course fee

May be taken four times for credit toward degree

MUS 224 Music Literature (3-0) 3 Hours

The historical development of western music, including various musical styles and periods and the contribution of key composers in shaping the western musical tradition.

Prerequisite: MUS 128

IAI: F1 902

MUS 228 Theory of Music III (4-0) 4 Hours

Continuation of MUS 129. Advanced study of musical language including chromatic chords, seventh chords, and modulation.

Prerequisite: MUS 129

MUS 229 Theory of Music IV (4-0) 4 Hours

Continuation of MUS 228. Twentieth Century musical techniques are considered.

Prerequisite: MUS 228

MUS 241 Applied Music-Voice II (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 243 Applied Music-Piano II (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 244 Applied Music-Jazz Piano II (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 245 Piano Class III (1-1) 1 Hour

Continuation of MUS 146. More advanced keyboard techniques, use of pedals, improvisation and functional piano. Music reading of all periods.

Prerequisite: MUS 146

Course fee

MUS 246 Piano Class IV (1-1) 1 Hour

Continuation of MUS 245. The highest level of advancement in piano class. Increased skills in all piano techniques.

Prerequisite: MUS 245

Course fee

MUS 260 Applied Music Violin II (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 261 Applied Music Viola II (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 263 Applied Music-String Bass II (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 264 Applied Music-Flute II (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 266 Applied Music-Clarinet II (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 280 Applied Music-Saxophone II (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 281 Applied Music-Trumpet II (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 282 Applied Music French Horn II (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 283 Applied Music-Trombone II (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 286 Applied Music-Percussion II (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

Course Information and Descriptions

MUS 287 Applied Music-Guitar II (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 288 Applied Music-Electric Bass II (Variable) 1-2 Hours

This course is designed for the instrumentalist who is a beginner or advanced and intends to become seriously involved with music. This is a course of independent study on a private lesson basis.

Note: No more than 4 credit hours earned in MUS 141, MUS 143-144, MUS 160-169, MUS 180-188, MUS 241, MUS 243-244 and MUS 260-288 will count toward an associate degree in arts or science.

Course fee

May be taken 4 times for maximum of 4 hours toward degree

MUS 299 Special Topics in Music (Variable) 1-4 Hours

This course will address the in-depth study of special topics in music which do not have specific courses in the catalog. Course content and requirements will vary depending on the topic being studied.

May be taken four times, but any topic only once

Nanoscience Technology (NAN)

Engineering, Math and Physical Sciences Division,
Room T302, (847) 543-2044

NAN 120 Introduction to Nanoscience (3-0) 3 Hours

This course introduces students to the field of nanoscience and nanotechnology, the understanding and the capability to observe and manipulate systems at the molecular or atomic scale that is affecting all traditional sciences. It provides an introduction to the history, tools, materials, and current and emerging applications of nanotechnology.

Note: students may not receive credit towards a degree for both NAN 120 and NAN 121.

Prerequisites: MTH 102 (C or better) or an appropriate score on the Math Placement Test or Math ACT of 22 or higher - AND - College Reading and Writing Readiness

NAN 121 Introduction to Nanoscience with Lab (3-2) 4 Hours

This course introduces students to the field of nanoscience and nanotechnology, the understanding and the capability to observe and manipulate systems at the molecular or atomic scale that is affecting all traditional sciences. It provides an introduction to the history, tools, materials, and current and emerging applications of nanotechnology. The lab component helps reinforces the concepts and equip students with skills needed for this field.

Note: students may not receive credit towards a degree for both NAN 120 and NAN 121.

Prerequisites: MTH 102 (C or better) or an appropriate score on the Math Placement Test or Math ACT of 22 or higher - AND - College Reading and Writing Readiness

Course fee

NAN 122 Fundamentals of Nanoscience II (2-2) 3 Hours

This course covers nanoscience aspects as they relate to the fields of chemistry and physics. It emphasizes the impact of new developments in nanotechnology. Atomic structure, bonding, photonics, quantum effects, and wave/particle structure will be discussed with a focus on nanotechnology. Feasibility of implementation will be covered, as well as the development of a nanoscale understanding of properties such as color, magnetism, electrical forces, strength and rigidity.

Prerequisite: NAN 121 (C or better)

Course fee

Nursing (NUR)

Nursing Education, Room D208, (847) 543-2043

NUR 110 Nurse Assisting (6-3) 7 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course prepares students for employment as nurse assistants. Depending on the setting, nurse assistants provide direct patient care; transfer and transport patients, equipment supplies and specimens, and make observations regarding patients. Duties might include giving baths and back rubs; making beds; serving meals; helping patients in and out of bed; taking temperature, pulse, respiration, weight and blood pressure measurements; answering patients' call lights; taking appropriate action in emergencies; and performing other duties as directed by the nurse. While the majority of nurse assistants work in long term care facilities, many are employed in hospitals, home care, and other care settings. Upon successful completion of this course, the student will be eligible to take the state mandated written competency examination for Nurse Assistant Certification. *Note:* Background check and health requirement must be completed prior to enrolling in the course.

Prerequisite: One of the following (or higher): TABE-10.0, APT- 122, or COMPASS ELI-251; OR ELI 103 and 104 (B or better); OR ELI 107, ELI 108, or ENG 108 (all C or better); OR College Reading and Writing Readiness AND 16 years or older

Course fee

NUR 133 Foundational Concepts

of Nursing Practice (5-9) 8 Hours

This course introduces the nursing process and the nursing assessment of patients and families in various clinical settings within the health care system. There is a focus on physical assessment, therapeutic communication and the role of the professional nurse. Students will learn clinical decision making and develop critical thinking skills. The course introduces pharmacology, information technology in health care and introductory nursing skills required for safe and effective patient care. The course focuses on the adult population with special emphasis on the older adult.

Corequisite: BIO 245 (or BIO 124) and BIO 246 (both C or better if taken previously)

and acceptance into the Nursing program

Course fee

NUR 134 Medical Surgical Nursing (4-15) 9 Hours

This course builds upon NUR 133 and focuses on assessment of acute and chronic health problems. The course focuses on critical thinking, clinical decision making, and interventions for clients with moderate to severe acute and chronic illnesses in all populations of patients with special emphasis on the older adult. It provides the opportunity to work collaboratively with the healthcare team in patient care planning.

Prerequisite: NUR 133, BIO 246 and BIO 245 (all C or better)

Corequisite: PSY 220

Course fee

NUR 232 Mental Health Nursing (2-3) 3 Hours

This course expands the use of therapeutic communication in all populations. The course also focuses on utilization of the nursing process in providing safe care to individuals with acute and chronic mental health conditions.

Prerequisite: NUR 134 (C or better)

Course fee

NUR 233 Family-Centered Nursing Care (4-6) 6 Hours

This course focuses on nursing care of the family unit and its individual members in selective phases of the human life cycle. Specific concepts of health and illness of these individuals form the basis of planning and implementing culturally diverse age appropriate nursing care. The nurse develops this care through the use of the nursing process, critical thinking, and clinical decision making. Instructional methodologies include patient-centered clinical experiences and structured classroom student-teacher interactions.

Prerequisite: NUR 134 and PSY 220 (C or better)

Course fee

NUR 234 Complex Medical, Surgical, and Leadership Nursing (4-15) 9 Hours

This course builds upon previous nursing courses and focuses on assessment of individuals with multiple and complex health problems, leadership development and transition into practice. The course includes clinical decision making and care coordination for all patients with emphasis on the older adult. The course focuses upon application of the nursing process to a group of patients, delegation, collaboration, prioritizing and leadership skills. Nursing research and incorporating evidence into nursing practice will be addressed. A primary focus will be transition to practice as a registered nurse.

Prerequisite: NUR 232 and NUR 233 (C or better)

Course fee

Paralegal Studies (PLS)

Business and Social Sciences Division,
Room T302, (847) 543-2047

PLS 110 Introduction to Paralegal Studies (3-0) 3 Hours

This course provides an introduction to the paralegal profession. It includes the roles and professional responsibilities of the paralegal and outlines the fields and specializations within the practice of law. It provides an overview of the functions of the legal system and an introduction to legal research, writing, ethics, and the law library.

Prerequisite: College Reading and Writing Readiness

PLS 112 Legal Research and Writing I (3-0) 3 Hours

This course provides an integrated introduction to legal research and writing. Students will learn to use a law library, perform legal research, analyze legal problems, and communicate research findings in the proper written format. Students will learn to locate and use both primary and secondary legal research sources, including federal and state cases, digests, statutes, regulations, treatises, encyclopedias, law reviews, citators, and practice works. Students will be introduced to computer-based legal research tools.

Prerequisite: PLS 110 (C or better)

Typically offered fall and spring only

PLS 114 Litigation (3-0) 3 Hours

This course provides students with the knowledge and skills needed to effectively and ethically assist an attorney in litigation practice and procedure. Students will learn the principles of civil litigation in federal and state courts and will be introduced to the rules of procedure and discovery. The course addresses pre-trial practice, pretrial motions, trial preparations, basics of a civil trial, post-trial motions and appeals. The role of the paralegal during trials will also be addressed.

Prerequisite: PLS 110 (C or better)

Typically offered fall and spring only

PLS 116 Contract Law (3-0) 3 Hours

This course provides students with the knowledge and skills to define and evaluate contract law for application to specific situations. It includes an analysis of the law pertaining to contract formation, resolution of contract disputes and the impact of the Uniform Commercial Code on traditional contract theory. The course examines the types of contracts and discusses offer, acceptance and consideration. Guidelines for drafting a contract will be presented, and students will draft contracts.

Prerequisite: PLS 110 (C or better)

Typically offered spring and summer only

PLS 118 Real Property Law (3-0) 3 Hours

This course provides an introduction to Real Estate law and practice. Topics include property rights, types of land ownership, purchases and sales of real property, land use regulations, and issues in the landlord-tenant relationship. The course examines the role of the paralegal in relation to the supervising attorney and prepares the student to draft deeds, contracts, and leases.

Prerequisite: PLS 110 (C or better)

Typically offered fall and summer only

PLS 210 Tort Law (3-0) 3 Hours

This course provides an introduction to the broad area of civil wrongs and their appropriate remedies as well as tort law principles in the traditional areas of intentional torts, negligence, absolute liability, product liability, nuisance and commonly employed defenses. Students will acquire the knowledge and skills to define and evaluate tort law for application to specific situations.

Prerequisite: PLS 110 (C or better)

Typically offered fall only

PLS 211 Drafting Legal Documents (3-0) 3 Hours

This course provides an in-depth, hands on training in practical legal writing with a special focus on document preparation, transactional documents, use of form books and everyday law office writing, including the preparation, research, and drafting of pleadings, forms, and motions. This course will draw from many areas of law.

Prerequisite: PLS 110 (C or better) and PLS 112

Typically offered fall and spring only

Course Information and Descriptions

PLS 212 Business Law II/Corporate and Securities Law (3-0) 3 Hours

This course provides an overview of various forms of business structures; including sole proprietorships, partnerships and corporations as well as other forms of business. Additional topics covered include the Uniform Commercial Code (UCC), leases, secured transactions and the laws administered by the Securities and Exchange Commission. The student will learn how to draft documents that are important to these fields of law. BUS 222 and PLS 212 are cross-listed.

Prerequisite: PLS 110 (C or better) or BUS 221
Typically offered spring only

PLS 213 Employment and Labor Law (3-0) 3 Hours

This course provides students with the knowledge and skills needed to effectively and ethically assist an attorney in Employment and Labor Law practice and procedure. Students will receive an overview of the legal relationship between employers and employees, including the employment at will doctrine, employment contracts, federal and state anti-discrimination laws, the labor-management relations in the union setting, along with the laws applicable to pay, benefits and the federal and state employment laws for veterans and returning service members.

Prerequisite: PLS 110 (C or better)
Typically offered fall only, even years only

PLS 214 Administrative Agency Law (3-0) 3 Hours

This course presents basic concepts of administrative law and procedure in federal and state agencies, with emphasis on the paralegal role in the administrative process. Students will learn both formal and informal advocacy techniques, including representing clients before administrative bodies. Substantive topics will include administrative delegation of power, rule making, agency discretionary powers, remedies, and judicial review. Procedural topics include agency operation, adjudication, preparation for hearings, and administrative and judicial review.

Prerequisite: PLS 110 (C or better)
Typically offered spring only

PLS 215 Immigration Law (3-0) 3 Hours

This course provides students with the necessary knowledge and skills to function as effective and ethical immigration paralegals. Students will learn about the immigration system - who can come to the United States, who can stay, and who must leave - including a brief history of immigration law. This course also trains paralegals to work with clients to seek specific visas, including how to gather and present information and complete documentation required for the various visas. This course introduces and explores all significant aspects of the immigration and naturalization process.

Prerequisite: PLS 110 (C or better)
Typically offered fall only

PLS 216 Intellectual Property Law (3-0) 3 Hours

This course provides an overview of intellectual property law in the United States. The student will learn what is necessary to obtain a patent, a copyright, and a trademark, and what constitutes a trade secret. The student will learn to prepare applications for patent, copyright, and trademark protections with federal and state governments. The role of the paralegal in preparing for litigation involving intellectual property law will be covered.

Prerequisite: PLS 110 (C or better)
Typically offered fall only, odd years only

PLS 218 Bankruptcy Law (3-0) 3 Hours

This course provides an overview of Bankruptcy law and procedures. It covers commencement of a case, preparation of schedules, operating and liquidating procedures, adversary matters and litigation in bankruptcy court, debtors' and creditors' rights and obligations, and technical terminology. Proceedings under Chapters 7, 11, and 13 of the United States Bankruptcy Code are covered. The student will learn to draft the schedules needed for Chapter 7, 11, and 13 filings.

Prerequisite: PLS 110 (C or better)
Typically offered spring only

PLS 230 Family Law (3-0) 3 Hours

This course provides an introduction to fundamental common law and statutory concepts of family law with emphasis on the paralegal role in this area. Topics include formal and informal marriages, premarital agreements, separation, divorce, annulment, marital property, the parent-child relationship, child custody and support, adoption, guardianship, legal issues in alternative families, domestic relations court procedures, public records research, and the paralegal role in alternative dispute resolution/mediation processes.

Prerequisite: PLS 110 (C or better)
Typically offered spring and summer only

PLS 231 Health Care Law (3-0) 3 Hours

This course will introduce paralegal students to the legal aspects of health care in the United States. It will provide a general overview of the health care system in the United States. The legal underpinnings of health care will be examined, including a review of Federal and State statutes and regulations, court decisions, and a survey of other regulating authorities including the OIG for Health and Human Services and the US Food and Drug Administration. Issues to be examined include regulation of hospitals, physicians and other health providers and suppliers; information management and access to medical records; patient rights and responsibilities; health care ethics and professional liabilities; contractual, civil and criminal liability issues in health care; consumer medical issues and patient advocacy. This course will include a practical focus on the duties and tasks of a paralegal working in this field.

Prerequisite: PLS 110 and PLS 114 (both C or better)
Recommended: PLS 210 and PLS 214
Typically offered fall only, even years only

PLS 232 Probate Law (3-0) 3 Hours

This course provides an overview of post-mortem estate administration and the role of the probate paralegal. The course examines the entire process of administering a decedent's estate, from opening the estate and appointment of a fiduciary to filing of final account and distribution of assets. The differences between the use of a will (testate succession) to ensure the orderly transfer of a decedent's property and the failure to have a will (intestate succession) are highlighted. The student will learn how to gather information and prepare documents for testate and intestate estates.

Prerequisite: PLS 110 (C or better)
Typically offered spring only

PLS 233 Criminal Litigation (3-0) 3 Hours

This course provides students with the knowledge and skills needed to effectively and ethically assist an attorney in criminal law practice and procedure. Students will learn the principles of criminal litigation, the criminal court system, and will be introduced to the rules of criminal procedure, discovery, and corrections. The course addresses pre-trial investigation and practice, pretrial motions, trial preparations, basics of a criminal trial, post-trial motions, sentencing, and appeals. The role of the paralegal during pretrial preparation for hearings and trials will also be addressed.

Prerequisite: PLS 110 (C or better)

Typically offered fall and spring only

PLS 234 Elder Law (3-0) 3 Hours

This course provides students the opportunity to explore a wide range of elder law issues from a paralegal perspective. Students will learn the paralegal role, moral, and ethical considerations involved in assisting attorneys in areas of estate planning, trusts, housing, guardianship, health care and disability law, administrative rules and regulations regarding Medicare and Social Security, elder abuse, and age discrimination. Topics of discussion will also include guardianships, insurances, senior living facilities, and funeral planning. This course will also review elder law related forms such as Power of Attorney for Health Care and Power of Attorney for Property. Hands-on projects will be used to facilitate learning the paralegal role in this area of law.

Prerequisite: PLS 110 (C or better)

Typically offered fall only, odd years only

PLS 235 Law Office Technology (3-0) 3 Hours

This course is designed to sample computer software applications used within the law office and requires students to produce routine law office documents such as pleadings and correspondence. Students will gain practical experience with legal timekeeping and billing software, case management and docket control software, and litigation support software that includes E-filing and electronic discovery.

Prerequisite: PLS 110 (C or better) AND AOS 112 or CIT 119 or CIT 120

Course fee

Typically offered fall only

PLS 236 Alternative Dispute Resolution (3-0) 3 Hours

This course provides an overview of Alternative Dispute Resolution (ADR) mechanisms used in the American legal system such as negotiation, mediation, and arbitration. Students explore the various statutes, regulations and ethical standards applicable to alternative dispute resolution and learn the basic paralegal skills needed to assist attorneys who work with parties in conflict. Students will learn to apply ADR in the context of the judicial system to specific disputes in various industries and areas of practice with a focus on the specific role of the paralegal in ADR. Students will be expected to participate in various role play activities.

Prerequisite: PLS 110 and PLS 114 (both C or better)

Typically offered spring only, even years only

PLS 250 Internship in Paralegal Studies (1-10) 3 Hours

This course provides students with an opportunity to gain practical work experience under the supervision of an attorney or experienced paralegal in day-to-day, on-site law office work. The student must complete 120 hours of work at the internship site, which may be a private or public law office, corporate or government legal department, or other appropriate law-related setting. In addition to on-site work, the student will attend a one-hour/week internship seminar.

Prerequisites: PLS 110 and PLS 112 and PLS 114 (all C or better) and Consent of Instructor

Corequisite: PLS 251

Typically offered spring only

PLS 251 Paralegal Studies Capstone (3-0) 3 Hours

This capstone course provides students with the opportunity to integrate the theoretical knowledge and practical skills they have acquired through the program and apply them in a real-world setting. Students will complete a portfolio of work samples in preparation for seeking professional employment. Students will complete a minimum of 24 hours of service learning activities in an instructor-approved setting relating to the practice of law or complete a project consistent with the goals of the course. The course will introduce national standards for paralegal core competencies and allow students to assess their knowledge and skills prior to registering for a national certification exam.

Prerequisite: PLS 110, PLS 112, PLS 114 (all C or better) and completion of a minimum of two additional PLS courses.

Typically offered fall and spring only

PLS 299 Topics in Paralegal Studies (Variable) 1-3 Hours

This course is designed to allow students to study a topic or topics that are not a part of the existing curriculum. Topics identified will be current or emerging topics within the paralegal profession or topics that provide additional depth within a legal specialty area.

Prerequisite: To be determined relative to topic

May be taken twice for credit toward degree

Personal Development (PDS)

Counseling Center, Room C110, (847) 543-2060

PDS 120 Becoming A Successful College Student (Variable) 1-2 Hours

This course is designed to teach students attitudes and skills valuable for college success. Topics may include: goal setting, time management, memory development, note taking, textbook reading strategies, test-taking strategies, library use, college resources, motivation, and stress management.

Note: Involves extensive reading and homework assignments since intensive practice is required for mastery.

Prerequisite: College Reading and Writing Readiness OR Concurrent Enrollment in ENG 108 or ENG 109 or ELI 108 or ELI 109 or ENG 100

Course Information and Descriptions

PDS 121 Self-Empowerment (1-0) 1 Hour
**Course Modification effective Fall 2016. For details, refer to addendum.*
This course empowers students to become more aware of self by identifying personal strengths and values in order to resolve conflicts and set goals. Students will work in a structured setting to reinforce one another's positive attributes. With increased personal understanding, they are empowered to achieve appropriate goals. This seminar is especially valuable for students who seek more self-confidence and motivation to live a more fulfilled life at home, at work, in college--but most of all, within themselves. This course may not be audited.
Prerequisite: ELI Compass Test score of 210 or higher, OR APT score of 80 or higher; OR ELI 103 OR ELI 104 OR ELI 107 OR ELI 108 OR ELI 109 OR College Reading and Writing Readiness

PDS 122 Career Exploration (1-0) 1 Hour
**Course Modification effective Fall 2016. For details, refer to addendum.*
This course is designed to teach students how to engage in a comprehensive career planning process. The course focuses primarily on the exploration phase of this process. Students will use various assessments to understand their interests, values, personality traits, skills and experiences as related to career identification. Students will use information about the world of work, identify and examine career clusters or job families, occupational trends, education and training requirements and job search strategies. *Note:* Students are expected to synthesize what they have learned and develop a career plan at the end of the course.
Prerequisite: ELI Compass Test score of 210 or higher, OR APT score of 80 or higher; OR ELI 103 OR ELI 104 OR ELI 107 OR ELI 108 OR ELI 109 OR College Reading and Writing Readiness *Course fee*

PDS 123 Exploring Diversity and Human Relations (3-0) 3 Hours
The course will focus on how culture and other diversity topics affect interactions with others. Through an interactive format, the course will assist students to gain an increased awareness of, and an appreciation for, the dimensions related to their own culture and to the cultures of others. Students will have the opportunity to examine and analyze the impact of prejudice, discrimination, and privilege within self and between groups. The skills necessary for promoting positive human relations in a diverse society will be explored and developed.
Prerequisite: College Reading and Writing Readiness or consent of instructor
Fulfills the CLC I/M Education Requirement.

PDS 124 Transition to College (1-0) 1 Hour
**Course Modification effective Fall 2016. For details, refer to addendum.*
This course is designed to assist new students with their transition into college. Topics may include: college academic policies, college vocabulary, student and faculty expectations/roles, college organization/layout, college resources, use of educational technology, diversity, involvement in college activities/organizations, educational planning, and assessment of study skills.
Prerequisite: Score on ELI Compass Test-210 or higher OR APT-80 or higher OR ELI 103 OR ELI 104 OR ELI 107 OR ELI 108 OR ELI 109 OR College Reading and Writing Readiness
Corequisite: Enrollment in one other CLC course

Philosophy (PHI)

Communication Arts, Humanities and Fine Arts
Division, Room B210, (847) 543-2040

PHI 121 Introduction to Philosophy (3-0) 3 Hours
This course discusses the ideas of major philosophers concerning questions of human knowledge, logic, moral values, political and social philosophy, and religious beliefs. Attempts are made to get students to think out their own answers to these questions.
Prerequisite: College Reading and Writing Readiness
IAI: H4 900

PHI 122 Logic (3-0) 3 Hours
This course develops formal reasoning, including categorical and symbolic modes of analysis. It covers Venn diagrams, predicate logic, rules of inference and replacement. It introduces the inductive method and the problem of induction.
Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100
IAI: H4 906

PHI 123 Philosophy of Religion (3-0) 3 Hours
This course is a study of selected religious concepts, theories, and arguments. Topics may include the existence of God, conceptions of divinity, characterizations of the divine/human relationship, religious pluralism, the nature of good and evil, faith and reason, religion and morality, miracles, the afterlife, and the nature of religious experience. While not a survey of world religions, emphasis is given to engaging and evaluating ideas from a diverse range of thinkers of various religious and non-religious traditions.
Prerequisite: College Reading and Writing Readiness
IAI: H4 905

PHI 125 Introduction to Ethics (3-0) 3 Hours
In this course, students critically evaluate general moral theories, fundamental moral concepts, and contemporary moral issues such as animal rights and the environment, reproductive technology and abortion, euthanasia and assisted suicide, poverty and famine relief, war and peace, racism, sexism, and other injustices. Students work to develop and defend their own views on these matters, and to understand and evaluate others' views, by studying and applying moral theories such as virtue ethics, utilitarianism, deontology, and ethics of care. Throughout the course, students learn about moral concepts such as sound reasoning, autonomy, impartiality, utility, rights, responsibility, and justice. Specific attention is given to moral issues relevant to and philosophical contributions made by members of traditionally underrepresented groups.
Prerequisite: College Reading and Writing Readiness
Fulfills the CLC I/M Education Requirement.
IAI: H4 904

PHI 126 World Religions (3-0) 3 Hours
This course introduces students to the teachings, rituals, symbols, and cultures of living world religions. Religions such as Hinduism, Buddhism, Confucianism, Taoism, Shintoism, Judaism, Christianity, Islam, and the religions of Africa may be included. This course will help to broaden the student's understanding and appreciation of these belief systems.
Prerequisite: College Reading and Writing Readiness
Fulfills the CLC I/M Education Requirement.
IAI: H5 904N

PHI 128 Introduction to Social and Political Philosophy (3-0) 3 Hours

This course introduces students to social and political philosophies. Students will discuss and critically evaluate major social and political theories on justice, equality, liberty, law, order, rights, and duties. Contract theory, classic liberalism, Marxism, anarchism, cosmopolitanism, and virtue theory will also be covered. Students will learn to apply these theories practically to contemporary issues such as war and peace, human rights, racism, sexism, classism, gay rights, worker rights and global trade, immigration, education, free speech, prison, and political participation.

Prerequisite: College Reading and Writing Readiness
Fulfills the CLC I/M Education Requirement.

PHI 129 Philosophy of Gender (3-0) 3 Hours

This course provides an introduction to the influential philosophers who have addressed gender in their philosophical theories. The course explores issues such as the definition of sexism, gender essentialism and non-essentialism, gender and ethics, gender and epistemology, gender and post-modernism, gender and culture, and philosophical issues surrounding marriage the family and personal relationships. Both classical and contemporary philosophers will be studied, in addition, both male and female writers will be read on the topics.

Prerequisite: College Reading and Writing Readiness
Fulfills the CLC I/M Education Requirement.

PHI 221 Asian Philosophy (3-0) 3 Hours

This course introduces students to the influential ideas and thinkers of India, China, and Japan. Students will cover a wide range of philosophical theories regarding the self, reality, knowledge, and aesthetics.

Prerequisite: College Reading and Writing Readiness
Fulfills the CLC I/M Education Requirement.

IAI: H4 903N

PHI 299 Special Topics in Philosophy (Variable) 1-3 Hours

This course will address the in-depth study of special topics in Philosophy which do not have specific courses in the catalogue. Course content and requirements will vary depending on the topic being studied.

May be taken four times for credit toward degree

Phlebotomy Technician (PBT)

Biological and Health Sciences Division,
Room B210, (847) 543-2042

PBT 110 Introduction to Medical Lab Technology (1-2) 2 Hours

This course introduces students interested in phlebotomy to the roles of the medical laboratory personnel in the health care system. Topics include professionalism, communication, basic laboratory math, medical ethics, CLIA-waived testing, legal implications of laboratory testing, and educational preparation and certification of laboratory personnel.

Prerequisite: High school diploma or GED; College Reading and Writing Readiness; Basic Algebra Readiness; and attended a Phlebotomy Program Information Session (within 2 years)
Course fee

PBT 115 Phlebotomy Techniques (1-2) 2 Hours

This course focuses on the development of skills in performing phlebotomy procedures. Topics include proper use of equipment, current safety standards, medical and legal policies and regulations, interpersonal and communication skills, and correct specimen collection, transport, and preparation for laboratory testing.

Prerequisite: PBT 110 (C or better), and attendance of Phlebotomy Information Session (within 2 years).

Course fee

PBT 116 Clinical Phlebotomy (0-7) 2 Hours

This course provides the student with supervised clinical practice of current phlebotomy techniques. Students will develop skill in performing phlebotomy procedures in various health care settings. Includes proper use of equipment, current safety standards, medical and legal policies and regulations, interpersonal skills, and correct transport, collection, and preparation for laboratory testing.

Prerequisite: PBT 110, PBT 115 (both with C or better), and attendance of Phlebotomy Information Session (within 2 years).

Course fee

Physical Education (PED)

Biological and Health Sciences Division,
Room B210, (847) 543-2042

PED 121 Individual Activities (0-2) 1 Hour

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course provides instruction and participation in one of numerous athletic, fitness, and wellness activities. Choices may include Total Fitness, Strength Training, Aikido, Hapkido, Tai Chi, and various group exercise classes. Consult the class schedule for sports offered during a particular semester.

Note: No more than four credit hours earned in PED 121 and/or PED 127 counts toward an associate degree. Enrollment attempts beyond this limit will result in an error message indicating non-enrollment. See Center for Personal Enrichment for non-credit classes. *Prerequisite:* COMPASS ELI score of 210 or higher OR APT score of 80 or higher OR ELI 103 OR ELI 104 OR ELI 107 OR College Reading and Writing Readiness

Course fee

May be taken four times for credit toward degree

PED 123 Team Sports I (Variable) 0.5-1 Hour

Group instruction in a variety of team sports, including techniques of play, strategy, and rules. Provides group instruction and experience in a variety of team sports. Emphasis on participation. Sports offered include basketball, volleyball, softball, and baseball.

See class schedule for sports offered during a particular semester.

Note: No more than 1 cr hr earned in PED 123 will count towards an associate degree. Enrollment attempts beyond this limit will result in an error message indicating non-enrollment. See Center for Personal Enrichment for non-credit classes.

May be taken twice for credit toward degree

Course Information and Descriptions

PED 128 Introduction to Recreation (3-0) 3 Hours

This course is designed to introduce the student to the historical and philosophical aspects of recreation and the factors that influence use of leisure time. The nature, scope, and importance of recreational activities in a school and community setting are covered along with program development for the various age groups.

Note: Students will spend lab time in local park districts during the second half of the semester.

Prerequisite: College Reading and Writing Readiness

PED 220 Physical Education in the Elementary School (2-2) 3 Hours

Designed specifically for classroom teachers, teacher aides, and elementary physical education majors. Curriculum, materials, and progression of activities in elementary school physical education is discussed, demonstrated, and practiced.

Note: Students will spend lab time in local elementary schools during the second half of the semester.

Prerequisite: College Reading and Writing Readiness

PED 221 Introduction to Physical Education (3-0) 3 Hours

This course is an introduction to the professional field of physical education. An understanding of the role of physical education in the total education program. A study of the objectives of physical education with emphasis on physical fitness and social development.

Prerequisite: College Reading and Writing Readiness

PED 228 First Aid/CPR (2-0) 2 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course is designed to prepare citizen responders with the knowledge and skills necessary to respond to emergency and first-aid situations. First aid, CPR, and AED for adults, children, and infants are included in this course. Students will be eligible to take national certification exams upon successful completion of each respective content area.

Prerequisite: COMPASS ELI score of 210 or higher OR APT score of 80 or higher OR ELI 103 OR ELI 104 OR ELI 107 OR College Reading and Writing Readiness *Course fee*

PED 229 Experience in the Out-of-Doors (Variable) 1-3 Hours

Extends the classroom into the out-of-doors. Outdoor experiences are provided in a variety of natural areas through field trips. Instructional emphasis is placed on how to move through these areas with minimum environmental impact and how to live within them through various outdoor activities such as camping and hiking.

Note: No more than 3 credit hours may count toward an associate degree.

Course fee

May be taken twice, but any topic only once

PED 242 Philosophy of Coaching (Variable) 0.5-3 Hours

This course is a study of the essential elements of coaching men and women and boys and girls. It emphasizes the development and analysis of various coaching styles and philosophies, development of individual and team objectives, methods of coaching organization, and various motivational techniques. As such, the course will serve to prepare the student for all aspects of coaching aside from the technical aspects of the particular sport.

Prerequisite: College Reading and Writing Readiness

Course fee

May be taken four times, but any topic only once

PED 243 Theory and Practice of Fitness (1-2) 2 Hours

This course introduces students to basic scientific and applied concepts of fitness as well as provides regularly scheduled opportunities to develop their health and functional fitness capacities.

Prerequisite: College Reading and Writing Readiness

PED 270 Biomechanics and Kinesiology (3-0) 3 Hours

This course will introduce students to the science of musculoskeletal human movement. Fundamental biomechanical principles and functional movement capabilities of each major joint will be examined.

Prerequisite: College Reading and Writing Readiness

PED 271 Exercise Physiology (3-0) 3 Hours

This course will explore the study of human function as it relates to responses and adaptations resulting from physical activity and exercise. Systemic interactions and cellular changes during and after activity will be examined.

Prerequisite: College Reading and Writing Readiness

PED 272 Exercise Testing and Prescription (3-0) 3 Hours

This course will prepare students to screen, stratify risk, and assess health-related physical fitness. Principles of effective and meaningful exercise program design will also be explored.

Prerequisite: PED 270 and PED 271 (both C or better)

Physics (PHY)

Engineering, Math and Physical Sciences Division,
Room T302, (847) 543-2044

PHY 120 Practical Aspects of Physics (3-2) 4 Hours

This is a one semester lecture-discussion course supplemented with demonstrations and laboratory designed primarily for non-science students. It stresses some fundamental concepts in physics as applied to everyday situations. A verbal rather than a mathematical approach will be emphasized.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Course fee

Typically offered fall and spring only

IAI: P1 901L

PHY 121 General Physics I (4-2) 5 Hours

This is the first course in a two semester sequence designed for students in arts and sciences. Basic concepts of mechanics, waves and sound are developed through lectures, demonstrations and laboratory experience. Basic knowledge of algebra and geometry assumed.

Prerequisites: MTH 108 or MTH 107 (both C or better) or an appropriate score on the Math Placement Test or two years of High School Algebra or concurrent enrollment in MTH 117 - AND - College Reading and Writing Readiness

Course fee

IAI: P1 900L

PHY 122 General Physics II (4-2) 5 Hours

This is the second course in a two semester sequence. Basic concepts of heat, thermodynamics, electricity, magnetism, optics and modern physics are developed.

Prerequisite: PHY 121

Course fee

PHY 123 Physics for Science and Engineering I (4-2) 5 Hours

This is the first course in a three semester sequence designed for students in engineering, physics, mathematics and chemistry. Fundamental concepts of mechanics are developed through lecture, demonstration and laboratory experience. *Note:* MTH 146 is strongly recommended as a corequisite for this course and is a prerequisite for PHY 124 if you are planning to enroll in Physics for Science and Engineering II.

Prerequisite: MTH 145

Course fee

IAI: P2 900L

PHY 124 Physics for Science and Engineering II (4-2) 5 Hours

This is the second course in a three semester sequence. Fundamental concepts of heat, electricity, and magnetism are developed.

Prerequisite: PHY 123 and MTH 146

Course fee

PHY 221 Physics for Science and Engineering III (3-2) 4 Hours

This is the third course in a three semester sequence. Fundamental concepts of waves, sound, optics, and modern physics will be developed.

Prerequisite: PHY 124

Course fee

Typically offered summer only

Political Science (PSC)

Business and Social Sciences Division,
Room T302, (847) 543-2047

PSC 121 American National Politics (3-0) 3 Hours

This course is an introductory survey of American politics designed to help students better understand the U.S. political system. The focus of the course is on the system's key political actors, behaviors, processes and institutions. Empirically based explanations are offered to help students understand why these political factors are important to the system's operation, and what effect they have on both the electoral and policy making processes and their outcomes.

Prerequisite: College Reading and Writing Readiness

IAI: S5 900

PSC 122 State and Local Politics (3-0) 3 Hours

This course introduces students to state and local politics in the United States. It is designed to help students better understand the political institutions and processes of subnational governments. The course adopts a comparative political systems approach that focuses on the variation found among state and local governments. The purpose of the course is to understand why these differences exist, and what effect they have on both the electoral and policy making processes and their outcomes.

Prerequisite: College Reading and Writing Readiness

IAI: S5 902

PSC 221 Comparative Political Systems (3-0) 3 Hours

This course is a comparative study of national political systems found across the globe. Its primary focus is describing and explaining the conditions necessary and sufficient for a democracy. A three part classification scheme--Developed Democracies, Developing Democracies and Non-Democracies--is used to analyze the similarities and differences found both within and across the different political systems. A select group of countries from different regions in the world are studied to illustrate political, economic and social development as it relates to regime type.

Prerequisite: College Reading and Writing Readiness

Fulfills the CLC I/M Education Requirement.

IAI: S5 905

PSC 222 International Relations (3-0) 3 Hours

This course is a survey of world politics designed to better understand current political issues and events at the international or global level. The course uses a multiple perspective analysis approach emphasizing the different levels of analysis and paradigms relevant to international politics. While introducing students to the traditional security concerns of states, it also seeks to emphasize the growing importance of nonstate actors and nonsecurity issues in global politics.

Prerequisite: College Reading and Writing Readiness

Fulfills the CLC I/M Education Requirement.

IAI: S5 904

PSC 223 Political Campaigns and Elections (3-0) 3 Hours

This course covers the historical development and modern strategies of political parties and interest groups in campaigns and elections. Attention is given to an analysis of current elections at the national, state, and local levels.

Prerequisite: College Reading and Writing Readiness

Psychiatric Rehabilitation (PRS)

Business and Social Sciences Division,
Room T302, (847) 543-2047

PRS 111 Survey of Psychiatric Rehabilitation (3-0) 3 Hours

The course provides an overview of psychiatric disability and rehabilitation approaches to psychiatric treatment. Topics include: the State of Illinois mental health system and related services; case management, dual diagnosis of substance abuse/psychiatric disabilities; public policy issues and family/community support systems.

Prerequisite: College Reading and Writing Readiness

PRS 112 Psychiatric Rehabilitation Skills (3-0) 3 Hours

This course focuses on skills needed for serving individuals with severe mental illness. Components included are: interviewing and listening skills; step process for teaching skills; behavior modification principles; aggression management; client assessment and treatment planning; and crisis intervention techniques.

Prerequisite: PRS 111

Course Information and Descriptions

PRS 113 Health Skills for Psychiatric Rehabilitation (3-0) 3 Hours

This course examines three dimensions of wellness: physical wellness, emotional wellness, and environmental wellness. Other dimensions may be included. A multidimensional model is utilized based on the illness/wellness continuum. The focus is on skill development in self-responsibility to improve the quality of life and well being for those with severe mental illness.

Prerequisite: PRS 111

PRS 114 Vocational and Community Living Skills (3-0) 3 Hours

This course focuses on development of skills needed for working with community, state, and federal agencies that serve people with severe mental illness. Mediation, negotiation, job coaching, and job analysis skills are included. Practical applications of the Americans with Disabilities Act are explored. Community living skills will include the process of networking and benefits programs available at the local, state, and federal level.

Prerequisite: PRS 111

Psychology (PSY)

Business and Social Sciences Division,
Room T302, (847) 543-2047

PSY 121 Introduction to Psychology (3-0) 3 Hours

This course presents the basic concepts and theoretical perspectives for understanding psychology. The course encompasses factors affecting human behavior and mental processes and includes, but is not limited to, the history of psychology, research methodology, the brain and behavior, learning, memory, cognition, language, intelligence, development, personality, abnormal psychology, therapy and social psychology.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100

Note: For online sections, College Reading and Writing Readiness is required

IAI: S6 900

PSY 122 Industrial/Organizational Psychology (3-0) 3 Hours

This course provides an overview of Industrial/Organizational (I/O) Psychology, which is the application of psychological research and theory to explain human interactions with others at work. Individual, group, and organizational issues focused on the work environment are explored. Areas covered include personnel selection, performance management, motivation, job satisfaction, leadership, supervisory practices, and research on the work, worker and workplace.

Prerequisite: College Reading and Writing Readiness

PSY 220 Lifespan Development (3-0) 3 Hours

The course integrates theory and research as they relate to neurobiological, cognitive, social and emotional development of individuals in cultural context from conception throughout adulthood. The course emphasizes normal developmental stages and patterns of adjustment to differing life-time demands. Students will gain an understanding of hereditary and environmental factors on

development; prenatal development and the birth process; physical development; language and cognitive development; family relationships; friend and peer relations; school, college, and career experiences; self-identity; gender; sexuality and health and the aging process, as well as the research methods psychologists use to study development.

Prerequisite: PSY 121 (C or better)

IAI: S6 902

PSY 222 Child Growth and Development (3-0) 3 Hours

This course is designed to familiarize students with the development of the child from conception through adolescence. It includes discussions of the physical, cognitive, social-emotional, and moral development of children in cultural context. Emphasis is placed on the interrelationships among the physical, cognitive, social, and emotional domains and the mutual influences of these domains on development. Several theories of child development and methods of studying children are introduced.

Prerequisite: PSY 121 (C or better)

IAI: S6 903

PSY 223 Abnormal Psychology (3-0) 3 Hours

This course provides a systematic presentation of the concepts related to psychological disorders with specific emphasis given to diagnostic criteria, as described in the Diagnostic and Statistical Manual of Mental Disorders, theoretical perspectives, etiology, and treatment.

Prerequisite: PSY 121 (C or better)

IAI: PSY 905

PSY 224 Theories of Personality (3-0) 3 Hours

This course is designed to present the student with a survey of the major theories of personality. Theorists will be studied according to the following categories: 1) psychoanalytic; 2) humanistic and existential; 3) biological; 4) trait; 5) behavioral; 6) cognitive. Emerging perspectives will also be addressed. Several case studies will be presented for analysis.

Prerequisite: PSY 121 (C or better)

PSY 225 Social Psychology (3-0) 3 Hours

This course provides an introduction to the scientific study of individuals thinking, feeling, and behavior within their social environments. This course includes, but is not limited to: research methods, attitude formation and change, social cognition, interpersonal relations, group processes, and social influence.

Prerequisite: PSY 121 (C or better)

IAI: S8 900

PSY 226 Adolescent Development (3-0) 3 Hours

The course integrates theory and research as they relate to biological, cognitive, and social-emotional development of adolescents in cultural context. Students will gain an understanding of family relationships; friend and peer relations; school, college, and career experiences; self-identity; gender; and sexuality, as well as the research methods psychologists use to study development.

Prerequisite: PSY 121 (C or better)

IAI: S6 904

PSY 228 Human Sexuality (3-0) 3 Hours

This course provides an examination of the current knowledge and attitudes of the behavioral aspects of human sexuality with particular emphasis on personal, interpersonal, community, and societal influences on sexuality. Topics of interest include sexuality throughout the lifespan, sexual anatomy and physiology, gender roles and gender identity, contraception, pregnancy, birth, lifestyles, love and intimacy, abortion, sexual orientation, sexually transmitted diseases, dysfunction, power/coercion, and sale of sex.

PSY 228 and SWK 228 are cross-listed.

Prerequisite: PSY 121 (C or better)

PSY 229 Psychology of Women (3-0) 3 Hours

This course will examine the psychological perspective on women and femininity. Using classic and contemporary research from all areas of psychology, the course will explore the major concepts, theories, and research methods as they relate to women and gender development. Included is a cross-cultural discussion of the cognitive, physical, and social factors unique to women across the lifespan.

Prerequisite: PSY 121 (C or better)

Fulfills the CLC I/M Education Requirement.

PSY 240 Brain and Behavior (3-0) 3 Hours

This course examines the relationship between the brain and behavior by explaining the structure and function of the nervous system. Additional topics include, but are not limited to, the brain's role in learning, sensing, perceiving, communicating, sleeping, eating, emotions, sexual behavior, neurological disorders, traumatic injuries, mental disorders, and the research techniques used to study the brain.

Prerequisite: PSY 121 (C or better)

PSY 248 Psychology of the Criminal Mind (3-0) 3 Hours

This course exposes the student to the field of Criminal Psychology. The purpose of this course is to develop an understanding as to the origins of criminal behavior and the clinical and social implications of violent crime. The course will examine the etiology, nature, assessment, and behavior of individuals who commit crime with an emphasis on violent crimes. Included in this examination will be the role of the family and other social factors, media violence, and genetics. The basic rules of crime scene analysis and processing will also be discussed.

CRJ 248 and PSY 248 are cross-listed.

Prerequisite: PSY 121 C or better,

Recommended: CRJ 219

PSY 299 Special Topics in Psychology (Variable) 1-3 Hours

This course addresses the in-depth study of special topics in psychology that do not have specific courses in the catalogue. Course content will vary depending on the topic being studied, but could include Research Methods, Writing in Psychology, Domestic Violence, the Brain and Behavior, or Cultural Diversity. This course is repeatable up to three times for a maximum of 6 hours towards degree completion.

May be taken four times for credit toward degree

Russian (RUS)

Communication Arts, Humanities and
Fine Arts Division, Room B210, (847) 543-2040

RUS 121 Beginning Russian I (4-0) 4 Hours

This course will develop basic skills in pronunciation, vocabulary, grammar, reading, listening comprehension, and oral and written communication within the context of the Russian culture.

RUS 122 Beginning Russian II (4-0) 4 Hours

This course continues to develop the basic skills introduced in RUS 121: pronunciation, vocabulary, grammar, reading, listening comprehension, and oral and written communication within the context of Russian culture.

Prerequisite: RUS 121

RUS 221 Intermediate Russian I (4-0) 4 Hours

This course continues to develop the basic skills introduced in RUS 121 and 122. The course is a general review and expansion of beginning grammar, conversation, vocabulary development, readings and writing exercises which focus on life in the former U.S.S.R.

Prerequisite: RUS 122

RUS 222 Intermediate Russian II (4-0) 4 Hours

This course reviews and expands the use of Russian grammar by introducing more advanced structures into verbal and written communication. Films, material from newspapers and magazines, and from other media will enable students to use authentic materials that are culturally relevant to explore further the Russian speaking-world and its culture.

Prerequisite: RUS 221

Fulfills the CLC I/M Education Requirement.

IAI: H1 900

Science Electives (SCI)

Biological and Health Sciences Division,
Room B210, (847) 543-2042

SCI 120 Success in College Science Courses (2-2) 3 Hours

This course introduces students to science knowledge and skills necessary to allow for a seamless transition into discipline-specific science courses. This course is not meant to be a general education science course, but rather will prepare students to be more successful in future science lab courses. This course will count as a general elective and will not fulfill the general education science course requirement towards a degree or certificate.

Prerequisite: College Reading and Writing Readiness or concurrent enrollment in ENG 109 or ELI 109 AND Basic Algebra Readiness

Course Information and Descriptions

Sign Language (SGN)

Communication Arts, Humanities and
Fine Arts Division, Room B210, (847) 543-2040

SGN 121 American Sign Language I (4-0) 4 Hours

This course introduces students to a unique visual-gestural language by emphasizing recognition and production of American Sign Language signs with accurate nonmanual behaviors. It focuses on developing conversational fluency by using major language functions such as introducing oneself, exchanging information, and talking about families, activities, and occupations.

Prerequisite: College Reading and Writing Readiness

SGN 122 American Sign Language II (4-0) 4 Hours

This course focuses on the progression and fluency of conversational American Sign Language. Emphasis is on expanding vocabulary, fingerspelling, grammatical structures, and honing receptive and expressive skills. It introduces the importance and accurate use of classifiers and continues to concentrate on major language functions including telling locations, making suggestions and requests, and exchanging information.

Prerequisite: SGN 121 with a grade of C or better

Social Studies Topics (SST)

Business and Social Sciences Division,
Room T302, (847) 543-2047

SST 299 Special Topics in Social Sciences (3-0) 3 Hours

This course addresses the in-depth study of special topics in the social or behavioral sciences (anthropology, education, economics, history, political science, psychology, and sociology). Course content will vary depending on the topic being studied.

Prerequisite: College Reading and Writing Readiness
May be taken twice for credit toward degree

Social Work (SWK)

Business and Social Sciences Division,
Room T302, (847) 543-2047

SWK 121 Introduction to Social Work (3-0) 3 Hours

This course provides an introduction to the knowledge, skills, and values necessary for generalist social work in contemporary society. Social welfare services, policies, and their historical origins will be presented along with the unique experiences of diverse and at-risk populations affected by various social problems. It provides an overview of the range of public and private social services available for meeting these problems.

Prerequisite: College Reading and Writing Readiness

SWK 228 Human Sexuality (3-0) 3 Hours

This course provides an examination of the current knowledge and attitudes of the behavioral aspects of human sexuality with particular emphasis on personal, interpersonal, community, and societal influences on sexuality. Topics of interest include sexuality throughout the lifespan, sexual anatomy and physiology, gender roles and gender identity, contraception, pregnancy, birth, lifestyles, love and intimacy, abortion, sexual orientation, sexually transmitted diseases, dysfunction, power/coercion, and sale of sex.

PSY 228 and SWK 228 are cross-listed.

Prerequisite: PSY 121 (C or better)

Sociology (SOC)

Business and Social Sciences Division,
Room T302, (847) 543-2047

SOC 121 Introduction to Sociology (3-0) 3 Hours

This course is an introductory analysis and description of structure and dynamics of human behavior in our society. Students will apply the scientific method to the observation and conceptualization of social roles, status, and culture. Processes in socialization, intergroup and collective behavior, and specific analysis of major institutions and social changes are considered.

Prerequisite: College Reading and Writing Readiness

IAI: S7 900

SOC 222 Social Problems (3-0) 3 Hours

This course introduces students to sociological perspectives on contemporary social problems. It examines competing definitions of social problems and conceptualizations of how social problems develop over time. The major research methods and theoretical traditions sociologists use to study social problems are presented. The course also analyzes research about contemporary social problems and evaluates social policies aimed at combating these problems.

Prerequisite: College Reading and Writing Readiness

Recommended: SOC 121

IAI: S7 901

SOC 223 Deviance (3-0) 3 Hours

This course examines the sociological study of the origins, causes, and control of deviance and deviant behavior. It also considers deviance as a labeling process. Course emphasis is placed on individual and group deviance, resulting from societal norms and values. Some areas to be covered are: drug use, sexual deviance, criminal behavior, marginal deviance, and career deviance.

Prerequisite: College Reading and Writing Readiness

Recommended: SOC 121

SOC 224 Sociology of the Family (3-0) 3 Hours

This course provides an understanding of sociological concepts, theories, and research methods in relation to marriage and family issues. It explores the influence of contemporary society on family life and offers a historical analysis on how marriages and families have changed over time. The course also introduces students to a cross-cultural comparison of marriages and families throughout the world and diverse family forms. Special emphasis is placed on topics concerning home life such as: balancing work and family, parent and child relationships, dating, marriage and divorce.

Prerequisite: College Reading and Writing Readiness

Recommended: SOC 121

IAI: S7 902

SOC 225 Class, Race, and Gender (3-0) 3 Hours

This course uses various sociological perspectives to examine how class, race, and gender structure individual and group access to power, resources, opportunities, and prestige. It examines how these socially constructed categories provide identity and meaning that shape social interaction and institutional structure and practice. Classical and contemporary theoretical and empirical models demonstrate how the intersection of these major dimensions of inequality represent a source of opportunity and privilege, while simultaneously contributing to the reproduction of social inequality.

Prerequisite: College Reading and Writing Readiness

Recommended: SOC 121

Fulfills the CLC I/M Education Requirement.

IAI: S7 903D

SOC 229 Sex, Gender, and Power (3-0) 3 Hours

This course will examine the major sociological concepts, theories, and research methods in relation to gender issues. It will explore the development of gender roles cross-culturally, as well as the consequences of dividing society along gender lines. Topics for discussion may include: gender role socialization, cross-cultural definitions of gender, underrepresentation on the basis of gender, gender differences in communication, gender issues in relation to the family, workplace, and schools, media images of men and women, and gender-based violence.

GXS 229 and SOC 229 are cross-listed.

Prerequisite: College Reading and Writing Readiness

Recommended: SOC 121

Fulfills the CLC I/M Education Requirement.

IAI: S7 904D

SOC 299 Special Topics in Sociology (Variable) 1-3 Hours

This course addresses the in-depth study of special topics in sociology that do not have specific courses in the catalogue. Course content will vary depending on the topic being studied and may include topics in global inequity, race and gender, education, environment, and social change. This course may be taken up to four times for a maximum of 6 hours towards degree completion.

May be taken four times, but any topic only once

Spanish (SPA)

Communication Arts, Humanities and
Fine Arts Division, Room B210, (847) 543-2040

SPA 121 Beginning Conversational Spanish I (4-0) 4 Hours

This course introduces the fundamentals of language necessary for understanding, speaking, reading, and writing of Spanish. It will include practice in pronunciation from dialogues and pattern practices. This is the college level course.

SPA 122 Beginning Conversational Spanish II (4-0) 4 Hours

This course is a continuation of SPA 121. Emphasis will be placed on the development of oral comprehension and conversational ability. Instruction in the appreciation of the Spanish culture will be an integral part of the regular class activities.

Prerequisite: SPA 121 or Instructor Consent

SPA 123 Spanish for Spanish Speakers (3-0) 3 Hours

The goal of this course is to enhance the student's knowledge of his/her native language. This course is designed for those students who speak Spanish at home but have not had any or little formal education in the Spanish language. The course will be taught completely in Spanish and will replace SPA 121 or SPA122 for native and near native Spanish speakers. Attention also will be given to conventions of orthography.

Prerequisite: Native or near-native Spanish speaking ability

SPA 221 Intermediate Spanish I (4-0) 4 Hours

This course covers the continued development of oral comprehension and accurate control of sound system and syntax. It includes selected examples of cultural and contemporary writing to elicit an awareness of the similarities and differences of each culture (English-Spanish) and a fuller understanding of the value systems of the Hispanic societies.

Prerequisite: SPA 122

SPA 222 Intermediate Spanish II (4-0) 4 Hours

This course continues to expand the knowledge of Spanish grammar, with emphasis in verbal and written communication. Films, short videos, readings and materials from newspapers, magazines, and media are utilized so students explore the Spanish speaking world and cultures based on authentic materials.

Prerequisite: SPA 221

Fulfills the CLC I/M Education Requirement.

IAI: H1 900

SPA 223 Spanish Civilization I (3-0) 3 Hours

This course is designed to give the advanced student of Spanish the opportunity to increase his/her proficiency in the Spanish language, and to explore the Spanish speaking culture. A selection of readings from literary works, newspapers, magazines, and articles along with films, short videos, and music will provide the writing and conversational material needed to expand the student's knowledge of the culture and civilization of the Hispanic world.

Prerequisite: SPA 222

Fulfills the CLC I/M Education Requirement.

IAI: H1 900

SPA 224 Spanish Civilization II (3-0) 3 Hours

This course is the continuance of Spanish Civilization I. Students will continue to gain cultural enrichment through lively discussions, readings, and writing about the Hispanic world. This course will incorporate a broad variety of materials such as literary works, films, interviews, articles, and media in order to provide the students the opportunity to practice the Spanish language. Topics will be different from Spanish Civilization I.

Prerequisite: SPA 223

Fulfills the CLC I/M Education Requirement.

IAI: H1 900

Course Information and Descriptions

Spanish Adult Education (SAE)

Adult Basic Education, GED® and ESL Division
Building 4, (847) 543-2021

Adult Education classes are intended for people who live in Lake County. They are not appropriate for students with B1, B2, F1, F2, J1 or J2 visas, nor are they appropriate for short-term visitors to the U.S.

In general, students must be at least 18 years old in order to enroll in adult education classes. However, 16-year-olds and 17-year-olds may register with an official Secondary School Reference Form signed by their local High School authorized representative. U.S. High School graduates and 16-year-olds must meet additional eligibility requirements. New students must attend an orientation session before attending classes.

The Adult Basic Education, GED and ESL Division provides several specific types of educational opportunities and is funded in part by grants from the federal government.

SAE 20 GED Preparation in Spanish I
High (Variable) 0.5-6 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course is a preparation for those who want to take the General Educational Development Examination (G.E.D.) to earn their high school equivalency certificate. It is for adults who have not completed high school and is taught in Spanish.

Course fee May be taken four times for credit

SAE 21 GED Preparation in Spanish II
High (Variable) 0.5-4 Hours

**Course Modification effective Fall 2016. For details, refer to addendum.*

This course is for those who need further instruction before attempting the General Educational Development Examination (G.E.D.) to earn their high school equivalency certificate. This course is taught in Spanish.

Course fee

May be taken four times for credit

Surgical Technology (SRG)

Biological and Health Sciences Division,
Room B210, (847) 543-2042

SRG 110 Introduction to Surgical Technology (4-4) 6 Hours

This course introduces various types of healthcare institutions and their structures then focuses on the surgical technologist and other surgical team members and their roles within such institutions. It presents concepts of communication skills and ethical, moral, and legal responsibilities of the surgical team members. Sterilization, disinfection, asepsis, and surgical environment as they relate to various clinical roles and care of the patient will be discussed. It introduces basic surgical instruments, equipment and supplies. Focuses include processing and care of instruments, distribution of

supplies, and inventory control. In laboratory setting, emphasis is placed on principles and practices related to asepsis, surgical environment and identification and utilization of commonly used surgical instruments, equipment and supplies.

Prerequisites: BIO 111 OR BIO 244 and BIO 245 (all C or better), and admission to the Surgical Technology Program

Course fee

SRG 111 Principles of Practice and Introduction to Surgical Procedures (5-8) 7 Hours

This course introduces the student to the surgical technologist role. It presents concepts of general surgical patient care and basic case preparation and procedures. In both simulated and clinical laboratory settings, emphasis is placed on basic surgical procedures during pre-operative, intra-operative, and post-operative phases commonly performed in the operating room setting.

Prerequisite: SRG 110 (C or better)

Course fee

SRG 112 Surgical Procedures I (4-8) 6 Hours

This course focuses on theory and clinical procedures in general, rectal, obstetric and gynecologic, endoscopic, ear, nose and throat, head and neck, oral and maxillofacial surgeries. In both theory and clinical settings emphasis is placed on knowledge of relevant anatomy, pathology, diagnostic procedures and tests, special preoperative preparation, special instruments, supplies, drugs, special equipment, intraoperative preparation, surgical procedure, prognosis, and postoperative care and complications for surgeries addressed in this course.

Prerequisite: SRG 111 (C or better)

Course fee

SRG 113 Surgical Procedures II (4-8) 6 Hours

This course focuses on theory and clinical procedures in genitourinary, orthopedic, hand, plastic, neurologic, thoracic, cardiac, peripheral vascular, and general pediatric surgeries. In both theory and clinical settings, emphasis is placed on knowledge of relevant anatomy, pathology, diagnostic procedures and tests, special preoperative preparation, special instruments, supplies, and drugs, special equipment, intraoperative preparation, surgical procedure, prognosis, and postoperative care and complications for surgeries addressed in this course.

Prerequisite: SRG 112 (C or better)

Course fee

SRG 114 Surgical Procedures III (3-0) 3 Hours

This course focuses on theory and clinical procedures in ophthalmic, peripheral vascular, cardiac, and transplant specialties. In both theory and clinical settings, emphasis is placed on knowledge of relevant anatomy, pathology, diagnostic procedures and tests, special preoperative preparation, special instruments, supplies, and drugs, special equipment, intraoperative preparation, surgical procedure, prognosis, and postoperative care and complications for surgeries addressed in this course. It prepares students for the Surgical Technology National Certification Examination. The role and responsibilities of the surgical technologist, including using professional communication skills and incorporating critical thinking skills in clinical situations are discussed. Students are assisted with developing a professional image through discussion about professional expectations and responsibilities.

Prerequisite: SRG 113 (C or better)

Course fee

SRG 115 Surgical Technology Internship (1-8) 3 Hours

This course focuses on students' performance ability in the role of Surgical Technologist during select surgical procedures in general, orthopedic, gynecological, genitourinary, peripheral vascular and ophthalmic. It includes possible clinical experience in, major vascular, cardiac, transplant, trauma, and procurement surgeries.

Prerequisite: SRG 113 (C or better)

Course fee

SRG 117 Surgical Pharmacology (3-0) 3 Hours

Students enrolled in this course will be provided with an overview of basic pharmacology, emphasizing specific areas of pharmacology as they relate to surgery and anesthesia. Routes of administration and safe practices will also be discussed.

Note: This course should ONLY be taken by those students pursuing the Surgical Technology Certificate.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

SRG 118 Advanced Surgical Procedures (3-0) 3 Hours

This course focuses on theory and advanced procedures in general, genitourinary, gynecologic, orthopedic, plastic, neurologic, thoracic, cardiac, peripheral vascular, endoscopic and general pediatric surgeries. Emphasis is placed on knowledge of relevant anatomy, pathology, diagnostic procedures and tests, special preoperative preparation, special instruments, supplies, and drugs, special equipment, intraoperative preparation, surgical procedure, prognosis, and postoperative care and complications for surgeries addressed in this course. Utilization of advanced technologies, such as robotics, minimally invasive radiology and endoscopy in the various surgical procedures and specialties are discussed.

Prerequisite: Completion of the Surgical Technology Certificate Program

SRG 119 Essentials of Microbiology (2-0) 2 Hours

This course introduces students to microorganisms with an emphasis on pathogenic organisms such as bacteria, yeasts, molds and viruses. The role of microorganisms in causing infection and development of immunity will also be discussed.

Note: This course should ONLY be taken by those students pursuing the Surgical Technology Certificate.

Prerequisite: College Reading and Writing Readiness AND Basic Algebra Readiness

Course fee

Theatre (THE)

Communication Arts, Humanities and
Fine Arts Division, Room B210, (847) 543-2040

THE 121 Introduction to Theatre I (3-0) 3 Hours

This course presents a broad overview of live theatre. It will cover the various elements that make up theatre, the history of theatre, the theatre of the present, and the practitioners involved in the production of live theatre. Work on college productions is required.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100

IAI: F1 907

THE 123 Diversity in American Theatre (3-0) 3 Hours

This course will examine various dramatic expressions that reflect the experience and construction of racial and cultural identity in the United States. It will explore issues of diversity in contemporary U.S. society and introduce a sampling of dramatic literature which reflects this diversity. Specific focus will be given to African American Theatre, Hispanic Theatre, Asian American Theatre, Native American Theatre, feminist theatre, and gay and lesbian theatre.

Prerequisite: College Reading and Writing Readiness

Fulfills the CLC I/M Education Requirement.

IAI: F1909D

THE 125 Principles of Acting (3-0) 3 Hours

This course introduces students to the fundamental skills and concepts of acting. Concentration, observation, playing action and other basics are introduced through acting exercises, improvisations, and scene study. Major acting approaches, such as Cohen, Meisner, Stanislavski, and Shurtleff, will be used as the basis for helping the actor acquire craft to create believable characters.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100

IAI: TA 914

THE 126 Stagecraft (3-0) 3 Hours

This course provides training in methods of scene construction, tool use, property construction, painting, rigging and shifting, with elementary work in lighting practice and control. Practical methods will be taught as well as a survey of historical staging styles to give students an understanding of the evolution of theatre. 20-30 hours of work on college productions is required.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100

IAI: TA 911

THE 127 Theatre Practicum II (0-2) 1 Hour

This course involves supervised work on a production, either via a smaller acting role or backstage technical work like Props Master, running crew, etc.

Prerequisite: THE 125 or THE 126

May be taken three times for credit toward degree

THE 128 Introduction to Theatrical Costuming (3-0) 3 Hours

This course is an introduction to the principles and elements of costume design for the theatre. This course will cover design concepts, character analysis and the creation of theoretical costumes for a play. This is a project based class and students will develop beginning costume construction skills. No previous design, sewing or costume experience is required. Students will be required to work on some aspect of college theatre productions.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100

THE 129 Theatre Practicum (0-6) 3 Hours

This course is designed to give students an in-depth experience of the technical work involved in a theatre production. Students will learn how the elements of theatre proceed from the planning stage through the performance nights. Students will be expected to work on actual crews of a production.

Prerequisite: THE 125 or THE 126

May be taken three times for credit toward degree

THE 145 Voice for the Stage (3-0) 3 Hours

This course explores the demands of an actor's vocal life and provides techniques to strengthen the speaker's vocal instrument. Major voice production approaches, such as Linklater, Berry, and Rodenburg will be used to help the student develop a healthy expressive voice for the stage as well as for everyday communication.

Prerequisite: College Reading and Writing Readiness

THE 220 Creative Dramatics for the Classroom Teacher (3-0) 3 Hours

This course introduces the skills and techniques of the creative dramatics process to classroom teachers at the pre-school, grade school, junior high and high school levels for use in all curriculum areas. The format includes explanation, demonstration and discussion of the games, improvisational experiences, role play, storytelling, puppetry and other educational exercises used in the classroom setting. Major emphasis is placed on incorporating creative drama as a process to facilitate learning.

Prerequisite: College Reading and Writing Readiness

THE 223 Play Analysis for Production (3-0) 3 Hours

This course is an introductory exploration of the relationships between the dramatic text and the play in performance with special emphasis on basic terminology and methodology. Representative plays will be studied in their genre, historical and social contexts.

Prerequisite: College Reading and Writing Readiness

Typically offered fall only

THE 225 Acting II (3-0) 3 Hours

This course is a continuation of the study of acting, this course will concentrate on characterization, scene study and ensemble work. An introduction to acting styles and period drama will be included.

Prerequisite: THE 125

THE 226 Lighting for Stage and Studio (3-0) 3 Hours

This course will instruct the student in basic electricity, technology, and design of lighting for the stage; elements of studio lighting techniques will also be taught. Specifications and the use of instrumentation will be learned with a hands on approach. Special emphasis will be given to learning the operation of computer controlled lighting boards, as well as more basic manual lighting controllers. Lighting design theory will be explored and each student will complete two project designs.

THE 228 Directing I (3-0) 3 Hours

This course is an introduction to the principles, problems, procedures of directing for the stage. Will include historical background, script selection, interpretation, stage composition, blocking, rehearsal techniques and performance, and a workshop in which students will have the opportunity for practical application of the principles of directing.

Prerequisite: THE 125

THE 229 Stage Makeup (3-0) 3 Hours

Students will investigate the principles, techniques and materials of stage makeup and practical experience in their application.

Course fee

THE 299 Special Topics in Theatre (Variable) 1-3 Hours

This course addresses the in-depth study of special topics in Theatre, which do not have specific courses in the catalog. Course content and requirements will vary depending on the topic being studied.

Prerequisite: College Reading and Writing Readiness

May be taken four times, but any topic only once

Vocational Skills Training (VST)

Adult Basic Education, GED and ESL Division Building 4, (847) 543-2021

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In general, students must be at least 18 years old in order to enroll in adult education classes. However, 16-year-olds and 17-year-olds may register with an official Secondary School Reference Form signed by their local High School authorized representative. U.S. High School graduates and 16-year-olds must meet additional eligibility requirements. New students must attend an orientation session before attending classes.

The Adult Basic Education, GED and ESL Division provides several specific types of educational opportunities and is funded in part by grants from the federal government.

VST 717 Model Office I for ESL (Variable) 0.5-6 Hours

This course is a simulated work environment providing student "employees" with hands-on training necessary for English Language Learners to transition into unsubsidized employment or community college career training programs such as AOS and CIT. Beginning technical skills, basic office skills and on-the-job survival skills will be covered in the course.

Corequisite: ESL 50 or higher OR Department Consent

Course fee

May be taken four times for credit

VST 718 Model Office II for ESL (Variable) 0.5-6 Hours

This course is a simulated work environment course that provides hands-on training necessary for English Language Learners to transition into entry level unsubsidized employment or community college career training courses such as AOS and CIT. Beginning technical skills, basic office skills and on-the-job survival skills will be covered in this course.

Corequisite: ESL 50 or higher OR Department Consent

Course fee

May be taken four times for credit

VST 719 Model Office III for ESL (Variable) 0.5-6 Hours

This course is a continuation of Model Office I and II providing English Language Learners as student "employees" with hands-on training necessary for transition into unsubsidized employment or community college career training programs such as AOS and CIT. Technical skills, basic skills and on-the-job survival skills are covered in this course. Students will focus on Word Processing, PowerPoint, Excel or Publisher.

Corequisite: ESL 50 or higher OR Department Consent

Course fee

May be taken four times for credit

VST 720 Model Office-Level IIB (Variable) 0.5-8 Hours

This course is a continuation of VST 718 Model Office - Level IIA. The Model Office is a simulated work environment providing student "employees" with hands-on training necessary for transition into unsubsidized employment in an office environment. Technical skills, basic skills and on-the-job survival skills will be covered in this course.

Course fee

Water-Wastewater (WWW)

Engineering, Math and Physical Sciences Division,
Room T302, (847) 543-2044

WWW 111 Maintenance of Mechanical and Electrical Equipment (3-0) 3 Hours

Overview of equipment maintenance and repair, including preventive maintenance programs, record keeping, lubrication, troubleshooting, etc. Emphasis is placed on equipment encountered in water and wastewater operations.

Course fee

WWW 112 Fundamentals of Wastewater Treatment (3-0) 3 Hours

Wastewater-Includes basic theory and design for primary and secondary treatment facilities, review of water pollution regulations, sludge handling, disinfection, and review of mathematics for state certification tests.

Note: Completion of MTH 115 or higher is strongly recommended.

Course fee

WWW 113 Basic Waterworks Operations (3-0) 3 Hours

Potable Water-Includes water sources and quality, pumps and hydraulics, chlorination and fluoridation, distribution, certification, and operational reporting. Aids students in preparing for class "D" and "C" certification examination, which includes waterworks facilities that are limited to storage, distribution, and chemical addition to the water supply.

Note: Completion of MTH 115 is strongly recommended.

Course fee

WWW 114 Introduction to Water and Wastewater Analysis (2-2) 3 Hours

An introductory study of laboratory procedures used for the analysis of potable water, wastewater, industrial wastes, and surface and ground waters. Develops an understanding of the theory and laboratory techniques needed for evaluation of treatment methodology, operational practices, and laboratory certification. Special emphasis will be placed on the use of standard methods of analysis for compliance monitoring requirements.

Note: Completion of MTH 115 or higher is strongly recommended.

Course fee

WWW 299 Selected Topics in Water Wastewater (Variable) 1-3 Hours

Problems of individual interest in water supply or wastewater treatment technology. Advanced study in one or more technical areas such as treatment processes, design, water quality, process automation, laboratory instrumentation, or water/wastewater mathematics may be approved.

May be taken four times, but any topic only once

Welding (WLD)

Engineering, Math and Physical Sciences Division,
Room T302, (847) 543-2044

WLD 113 Welding Blueprint Reading (3-0) 3 Hours

This course will cover the study and development of blueprint reading skills as they apply to the metals/welding fabrication trades. Skill and proficiency in understanding the make-up and interpretation of prints will include the study of associated materials, processing, dimensioning, weld joint designs and symbols, as well as fundamental drawing abilities.

Note: Student must furnish basic required equipment.

Typically offered fall only

WLD 117 Applied Fabricating and Processing (2-2) 3 Hours

This course enables the student to study supplemental machining skills required in the weldment fabrication industry. Students will gain experience on various machine tools such as: drill press, horizontal saws, vertical saws, pedestal grinders, brake press, and shears. The identification of various types of ferrous and non ferrous structural materials will also be visited. Students will continue the study of welding blueprint reading as well as advanced measurement and layout procedures. Final inspection of both welds and weldment dimensions are stressed along with metal finishing processes and the heat treatment of ferrous alloys. *Note:* Student must furnish basic required equipment.

Prerequisite: WLD 113 and WLD 170, and one of the following: WLD 172 or WLD 175 or WLD 178

Course fee

Typically offered spring only

WLD 170 General Welding (2-2) 3 Hours

This course provides a general and basic knowledge of safety, operation, and the fundamentals of gas, shielded metal arc, gas tungsten and gas metal arc welding. Primary and essential skills in their safe and proper operation will be developed. Equipment set up, applications, tools, materials will be covered. Development of welding skills is secondary to the primary understanding of safety, and knowledge of welding processes application and associated equipment.

Note: Student must furnish basic required equipment.

Course fee

WLD 171 Gas Welding, Cutting, and Brazing (2-2) 3 Hours

This course will present welding theory, safety, care of equipment, skill development and application with the fuel-gas process. It covers fusion welding, brazing, and cutting processes with steel. Opportunity to practice and work with pipe, cast iron, aluminum, and soldering will be presented.

Note: Student must furnish basic required equipment.

Prerequisite: WLD 170

Course fee

Typically offered spring only

WLD 172 Shielded Metal Arc Welding (2-2) 3 Hours

This course covers the fundamental theory and practice of "stick" electrode welding in the flat and horizontal positions. Safety, equipment set-up and adjustment, materials preparation, and electrode selection are emphasized. Opportunity to work with a variety of material thicknesses, joint designs, and all common electrode types will be presented; as well as access to a large variety of machine types. Welding of steel and its alloys is emphasized, but opportunity is provided for study and practice of welding other metals.

Note: Student must furnish basic required equipment.

Prerequisite: WLD 170

Course fee

Typically offered fall only

WLD 174 Advanced Shielded Metal Arc Welding (2-2) 3 Hours

This is an advanced study in "stick" electrode welding theory and practices. It features the opportunity to develop out-of-position welding abilities on plate and pipe, study methods of weld testing, certification procedures, and welding of stainless steel, cast iron and aluminum with the SMAW process.

Note: Student must furnish basic required equipment.

Prerequisite: WLD 170 and WLD 172

Course fee

Typically offered spring only

WLD 175 Gas Metal Arc Welding (2-2) 3 Hours

This course provides the student with a thorough understanding of hazards and safety procedures used in gas metal arc welding. Students will be able to produce quality gas metal arc welds in the flat and horizontal positions on mild steel from 3/16 inch sheet to 1/2 inch plate using single and multiple pass techniques. Short circuit and spray transfer methods are introduced. Students will also learn to troubleshoot problems, apply corrective measures, and perform quality checks on the welds. American Welding Society techniques for visual inspection and mechanical testing will be used to determine quality of welds.

Note: Student must furnish basic required equipment.

Prerequisite: WLD 170

Course fee

Typically offered spring only

WLD 176 Welding Certification (2-2) 3 Hours

This course helps students prepare for and complete certification or qualification testing utilizing chosen welding processes. American Welding Society D1.1 standard structural welding code will be used, or those codes specified by a current or potential employer.

Note 1: Student must furnish basic required equipment.

Note 2: Student shall be responsible for the costs of any testing or lab reports performed by outside agents. Individuals or groups with special needs or requirements may enroll with the consent of the program coordinator.

Prerequisite: WLD 170 (C or better), and one or more of the following: WLD 174, WLD 175, WLD 178 (all C or better)

Recommended: WLD 171 (C or better)

Course fee

Typically offered fall only

WLD 178 Gas Tungsten Arc Welding (2-2) 3 Hours

This course will provide students with a thorough understanding of gas tungsten arc welding, arc characteristics, and safety procedures and hazards. Students will obtain the skills necessary to perform quality gas tungsten arc welds on steel and non ferrous alloys. Weld characteristics of mild steel and information on pulsed current GTAW will be included. Upon completion of the course, students will be able to use the gas tungsten arc welding process in the flat position to produce quality square groove and fillet welds on carbon steel.

Note: Student must furnish basic required equipment.

Prerequisite: WLD 170

Course fee

Typically offered fall only

WLD 179 Gas Tungsten Arc Welding II (2-2) 3 Hours

This course is a continuation of WLD 178 Gas Tungsten Arc Welding and will focus on the welding of stainless steel in the horizontal and overhead positions. Additionally, groove welds in both the 2G and 5G positions using mild steel filler rod on mild steel pipe and stainless steel filler rod on steel pipe will be studied. Thin wall stainless steel pipe and aluminum filler rod on aluminum pipe will also be examined.

Prerequisite: WLD 178

Course fee

Typically offered summer only

Continuing Education Courses

Professional Development offers a variety of continuing education courses with Vocational Training credit that prepare students to obtain skills to enhance their workforce competencies, prepare for licensure, license renewal or meet certification requirements. The course offerings vary each semester and are listed in the Workforce and Professional Development Institute (WPDI) schedule at www.cleillinois.edu/wpdi. Continuing Education Vocational Credits do not apply to any degree or certificate program offered at the college in the academic divisions. Vocational credits will not be added to a student's academic credit hours or included in the GPA. Students receive a grade of P (Pass) or N (No Pass). Call the department at (847) 543-2615 for additional information

Continuing Professional Development (847) 543-2615

PCDL 1	Truck Driver Training	10 hours
PCJI 1	Community Service Officer 1	3 hours
PCJI 2	Community Service Officer 2	1 hour
PCJI 3	Police Matron Basic	1 hour
PCJI 4	Police Matron Advanced	.5 hour
PCJI 5	Police Defensive Driving Course	1 hour
PCJI 8	Police Use of Force	.5 hour
PCTR 10	Microsoft Word: Level 1	.5 hour
PCTR 11	Microsoft Word: Level 2	.5 hour
PCTR 12	Microsoft Word: Level 3	.5 hour
PCTR 15	Microsoft Excel: Level 1	.5 hour
PCTR 16	Microsoft Excel: Level 2	.5 hour
PCTR 17	Microsoft Excel: Level 3	.5 hour
PCTR 20	Microsoft Access: Level 1	.5 hour
PCTR 21	Microsoft Access: Level 2	.5 hour
PCTR 22	Microsoft Access: Level 3	.5 hour
PCTR 30	PowerPoint: Level 1	.5 hour
PCTR 31	PowerPoint Level 2	.5 hour

Course Information and Descriptions

PCTR 35	Microsoft Publisher	.5 hour	PPRO 96	The Lean Process	.5 hours
PCTR 40	Adobe Photoshop: Level 1	.5 hour	PPRO 97	Lean Organization and Analysis	.5 hours
PCTR 41	Adobe Photoshop: Level 2	.5 hour	PPRO 98	Lean Essential Series	1.5 hours
PCTR 52	Graphic Design Basics	.5 hour	PPSI 5	Security Officer Basic	1.5 hours
PCTR 59	Cyber Security for Managers	1 hour	PPSI 6	Security Officer Firearm Training	1.5 hours
PCTR 60	Front Page: Level 1	.5 hour	PPSI 20	Private Investigation	1.5 hours
PCTR 61	Front Page: Level 2	.5 hour	PRLE 2	Broker Pre-Licensing Topics	5 hours
PCTR 65	Adobe Illustrator: Level 1	.5 hour	PRLE 3	Broker Pre-Licensing Principles	1 hour
PCTR 66	Adobe Illustrator: Level 2	.5 hour	PRLE 40	Home Inspection	4 hours
PCTR 70	Microsoft Project: Level 1	.5 hour	PSME 10	Social Media Marketing Interactive Content	1 hour
PCTR 71	Microsoft Project: Level 2	.5 hour	PSME 11	Social Media for Business	1 hour
PCTR 75	Adobe InDesign: Level 1	.5 hour	PSME 12	Social Media Management	.5 hours
PCTR 76	Adobe InDesign: Level 2	.5 hour	PSME 13	Social Media Marketing Workshop	.5 hours
PCTR 77	Adobe Acrobat Level 1	.5 hour	PSME 14	Social Media Marketing Series	3 hours
PCTR 78	Adobe Acrobat Level 2	.5 hour	PTCH 51	CSI for the Science Educator	3 hours
PCTR 80	Flash: Level 1	.5 hour	PTCH 60	Reading Fundamentals	1.5 hours
PCTR 85	Dreamweaver: Level 1	.5 hour	PTCH 61	Reading Fundamentals 3- Effective Evaluation & Assessment	2 hours
PHOS 10	Meeting and Event Management	2 hours	PTCH 62	Talented and Gifted Education	1.5 hours
PHOS 11	Advanced Meeting and Event Planning	1.5 hours	PTCH 63	Educational Assessment: Student Evaluation	1.5 hours
PHOS 12	Professional Wedding Planning	1 hour	PTCH 64	Behavior is Language	1.5 hours
PHRS 1	Human Resource Series	1 hour	PTCH 65	Social Emotional and Behavioral Issues	2 hours
PLNG 10	Spanish Interpreter-Legal	2 hours	PTCH 67	Understanding Agression	2 hours
PLNG 11	Spanish Interpreter-Education	2 hours	PTCH 68	Learning Disabilities	2 hours
PLNG 12	Spanish Interpreter-Medical I	2 hours	PTCH 69	Teaching Elementary Math Conceptually	2 hours
PLNG 13	Spanish Interpreter-Medical II	2 hours	PTEC 20	Basic Photovoltaics	.5 hours
PPRO 88	Project Management Series	2.5 hours	PTEC 21	Solar Domestic Hot Water Systems	.5 hours
PPRO 12	Basics of Supply Chain Management	1.5 hours	PTEC 22	Introduction to Wind Power	.5 hours
PPRO 37	Introduction to Social Media	1 hour	PTEC 40	NIMS Level 1 CNC Operator	10 hours
PPRO 38	Marketing Using Social Media	1 hour	PTEC 70	Private Pilot Ground School	3 hours
PPRO 39	Integrating Social Media Into your Organization	1 hour	PVET 1	Veterinary Assistant Training	7 hours
PPRO 40	Social Media Series	3 hours	VALH 07	EKG Interpretation	1 hour
PPRO 47	Supervisory and Leadership Training	2 hours	VALH 9	12-Lead ECG Interpretation	1 hour
PPRO 48	Business Coaching	2 hours	VALH 10	Special Topics: CNA Recertification	variable .5-3 hours
PPRO 54	Strategic Sales Certificate	2 hours	VALH 20	Current Nurse Practice Update	7 hours
PPRO 55	Value Based Selling	.5 hour	VALH 21	IV Therapy Basics	1 hour
PPRO 56	New Business Development	.5 hour	VALH 30	Special Topics: Dental Hygiene	variable .5-3 hours
PPRO 57	Time and Territory Management	.5 hour	VALH 40	Special Topics: Medical Imaging	variable .5-4 hours
PPRO 58	Sales Presentation Skills	.5 hour	VLAH 50	Special Topics: Health Information CE	variable .5-5 hours
PPRO 62	Business Research	3 hours	VALH 60	Special Topics: Surgical Technology CE	variable .5-6 hours
PPRO 65	Customer Service	.5 hour	VALH 70	Special Topics: Medical Lab CE	variable .5-7 hours
PPRO 66	Business Writing	.5 hour	VALH 80	Special Topics: Medical Assistant CE	variable .5-8 hours
PPRO 70	Presentation Skills	1 hour	VALH 85	Special Topics: Massage Therapy CE	variable .5-9 hours
PPRO 71	Conflict Management	.5 hour	VALH 90	Special Topics: Healthcare Professional CE	variable .5-10 hours
PPRO 72	Negotiating to Agreement	.5 hour	VALH 95	Pharmacy Technician Training	7 hours
PPRO 75	Time Management	.5 hour			
PPRO 76	Improving Email Promotions	1 hour			
PPRO 77	Boosting Your Website Traffic	1 hour			
PPRO 78	Online Advertising	1 hour			
PPRO 79	eMarketing Essentials Series	3 hours			
PPRO 80	Emerging Leader	.5 hour			
PPRO 81	Building Supervisory Foundations	.5 hour			
PPRO 85	Essentials of Project Management	1 hour			
PPRO 86	Advanced Project Management	1 hour			
PPRO 87	Project Management Professional (PMP) Exam Prep	.5 hours			
PPRO 88	Project Management Series	2.5 hours			
PPRO 90	Lean Six Sigma-Yellow Belt Certification	3 hours			
PPRO 91	Lean Six Sigma-Green Belt Certification	4 hours			
PPRO 95	Essentials of Lean	.5 hours			

Grayslake Campus

By far the largest College of Lake County site, the Grayslake campus (GLC) consists of 226.1 acres. About one-third of the campus is currently devoted to buildings and parking areas and another 20 percent is allocated for future building. Natural beauty is a distinct feature of the campus, and about one-third of the acreage will be permanently preserved as natural areas.

Buildings on the campus have been gradually constructed over the years with careful planning to offer students a rich and stimulating academic experience. Most of the buildings are connected, but a few, such as the P.E. Center (Building 7) and the Horticulture Building, stand alone.

Among the major features of the campus are:

A. Harold Anderson Campus Wing (A Wing), completed in 1974. This wing contains classrooms and faculty offices and currently houses the Social Sciences division office (A244, second floor). The A Wing also includes a court area where student can study and socialize.

Paul W. Brandel Campus Wing (B Wing), also completed in 1974. This wing contains classrooms and faculty offices and currently houses the Communication Arts, Fine Arts and Humanities division office (B210, second floor). The B Wing also includes computer laboratories and a court area where student can study and socialize.

The **Learning Resource Center** was completed in 1980 and serves as the cultural center of the college. It includes the John C. Murphy Memorial Library, an open computer lab, Testing Center, Tutoring Center, Coaching for Academic Success offices, Student Support Services offices, Office of Students with Disabilities and the Robert T. Wright Community Gallery of Art. The library offers more than 100,000 books, 400+ periodicals, access to more than 50 databases and numerous study areas. The Testing Center offers testing services to current and future students and the Tutoring Center provides tutoring for current students. The Office of Students with Disabilities supports students in their educational endeavors. The Art Gallery serves as a venue for exhibitions and juried competitions.

Physical Education Center (Building 7) was completed in 1971 with the gymnasium added in 1980. In 2001, the building was remodeled and the fitness center and locker rooms were upgraded and an aerobics room was added. The building houses the Athletics and Physical Activities department on the second floor. Intercollegiate athletic contests, intramurals and fitness classes are held in the P.E.C., as well as many in-house and external events. Outdoor athletic and recreation facilities include tennis courts, the Gene D. Hanson Baseball Field, intercollegiate softball and soccer fields and a multipurpose field.

Hours of Operation

These hours are generally maintained during the semester while classes are in session. There may be exceptions during summer session, breaks or holidays.

Bookstore - Grayslake

Monday-Thursday7:45 a.m. to 7 p.m.
Friday7:45 a.m. to 4:30 p.m.

Campus Store - Grayslake

Monday-Thursday7:45 a.m. to 8 p.m.
Friday7:45 a.m. to 4:30 p.m.

Library (spring and fall semesters)

Monday-Thursday8 a.m. to 9 p.m.
Friday8 a.m. to 4:30 p.m.
Saturday9 a.m. to 3 p.m.

Lakeshore Campus

Monday-Thursday7:30 a.m. to 10 p.m.
Friday7:30 a.m. to 4:30 p.m.
Saturday8 a.m. to 2 p.m.

Physical Education Center

Monday-Thursday8 a.m. to 9 p.m.
Friday8 a.m. to 4 p.m.
Saturday9 a.m. to 3 p.m.

Southlake Campus

Monday-Thursday7:30 a.m. to 10 p.m.
Friday7:30 a.m. to 4:30 p.m.
Saturday8 a.m. to 2 p.m.

Welcome and One-Stop Center:

Admissions

Monday-Thursday7:30 a.m. to 7:30 p.m.
Friday7:30 a.m. to 4:30 p.m.

Cashiers

Monday-Thursday7:30 a.m. to 7:30 p.m.
Friday7:30 a.m. to 4:30 p.m.

Financial Aid

Monday-Thursday7:30 a.m. to 7:30 p.m.
Friday7:30 a.m. to 4:30 p.m.

Records

Monday-Thursday7:30 a.m. to 7:30 p.m.
Friday7:30 a.m. to 4:30 p.m.

Science/Student Services Wing (C Wing), completed in 1987. This module houses facilities for the biology, chemistry and health information technology programs. Also located in this wing are the Biological and Health Sciences division office (C140) and student service areas including the Counseling Center (C110) and Student Activities Office (C101).

Multi-Use Instructional Building (D Wing), completed in 1996. The Multi-Use Instructional Building is known as the D Wing. It houses the Children's Learning Center and classrooms and faculty offices for the art, nursing education, digital media and human services programs.

The James Lumber Center for the Performing Arts (JLC), completed in 1997. The JLC houses CLC's instructional programs in music, dance and theatre and serves as a venue for performing and cultural arts programming serving the entire community. The facility includes three theatres: a 600-seat Mainstage Theatre used for music concerts and other major events; a 250-seat Studio Theatre, used for most other productions and a smaller Experimental Theatre used for student productions, and classes. The JLC also includes practice areas for dance, choir and instrumental students as well as classrooms and faculty offices.

Building E, completed in 1999. The center provides facilities for the Lake County Regional Superintendent and CLC offices.

The Technology Building, opened in 2005, is a state-of-the-art facility that houses the Business and Social Sciences and the Engineering, Math and Physical Sciences divisions (T302); the Workforce and Professional Development Institute (WPDI) (T302; and academic programs in a variety of business-, industrial- and manufacturing-related technology fields. The building has three floors plus a basement and includes 40 classrooms and computer laboratories, 18 discipline-specific laboratories and 27 faculty and administrative offices.

Food Service

Café Willow, formerly Lancers, a full service café, is now located on the first floor of the B Wing. Café menu includes a selection of daily menu offerings, grill favorites, pizza, sandwiches, soups, salads, drinks and desserts, all made fresh daily. Fresh and go salads, sandwiches and snack are available for students in a hurry. Café Willow is open daily, Monday through Friday, 7 a.m. through 8 p.m. and is closed on Saturday and Sunday.

Coffee Cart is located on the first floor of the Atrium next to the library. The menu includes hot and cold beverages and specialty coffee drinks. Fresh and go sandwiches, salads, pastries and snacks are also available. The Coffee Cart is open Monday through Thursday, 7 a.m. through 9 p.m., Friday, 7 a.m. through 4:30 p.m. and 7 a.m. through 12 p.m. on Saturdays during fall and spring semesters (Coffee Cart is closed on Saturday during summer session and between semesters).

Prairie, opened in 2012 and located in Room C001, is a CLC student-managed restaurant. Hospitality and Culinary Management students showcase their skills by preparing and serving lunch for the CLC community (while enrolled in classes). Students experience all facets of running a restaurant and prepare menu items that use locally grown and produced ingredients. Prairie provides the CLC community an opportunity to taste dishes that are typically served in upscale dining establishments.

Lakeshore Campus

The Lakeshore Campus (LSC), located at 33 N. Genesee St. in Waukegan, offers students a variety of educational opportunities including high quality classrooms and self-paced video instruction. The Lakeshore Campus provides educational programming including the completion of the Associate in Arts degree; transfer and career courses that lead to the Associate in Science and Associate in Applied Science degrees; adult education, continuing education, community service activities and career development courses.

The Lakeshore Campus also provides a broad range of support services, which include registration, payment of tuition and fees, testing services, academic advising, tutoring, academic coaching, a Library, a bookstore, child care, financial aid, counseling, faculty support and student life.

The Lakeshore Campus Library is located in N 214. Library hours for the fall and spring semesters are Monday through Thursday, 9 a.m. to 7 p.m. and Friday 10 a.m. to 2 p.m. Hours vary during the Summer Session. The Library houses a small print collection and offers access to a vast array of online resources. Laptop computers are available for student use. Materials from other campuses can be shipped to Lakeshore as needed. Faculty members may also arrange for library instruction sessions in their classes. A reference librarian is on site 44 hours per week or available remotely via email, phone and instant messaging. Library resources can be accessed through the library webpage at library.clcillinois.edu where there is a wide range of information for most student and faculty instructional and research needs. A CLC ID number is required to use many library resources from off-campus. To reach the Lakeshore Library call (847) 543-2139.

The Lakeshore Campus is open Monday through Thursday 7:30 a.m. to 10 p.m., Friday 7:30 a.m. to 4:30 p.m. and Saturday 8 a.m. to 2 p.m. For more information, call (847) 543-2191.

Parking

There are more than 400 free parking spaces in the College of Lake County parking garage adjacent to the Lakeshore Campus South Building that may be used by students. CLC students are required to obtain a parking permit from the Campus Police or at the reception desk in the South Building of the Lakeshore Campus before parking in the structure. The entrance to the garage is on Sheridan Road, and the entrance to the Lakeshore Campus from the garage is at the northwest corner of the garage at the rear of the South Building.
All parked vehicles must have a valid parking tag.

Textbooks

The bookstore hours are Monday through Thursday from 8 a.m. to 7 p.m. Textbooks are available at the Lakeshore Campus for students enrolled in courses at the Lakeshore Campus.

Facilities and Extension Locations

Southlake Campus

The Southlake Campus (SLC), located at 1120 S. Milwaukee Ave., Vernon Hills, offers close-to-home convenience for south Lake County residents. The Southlake Campus is located two miles south of Route 60 and just north of Route 45. An extension of Port Clinton Road through the college property provides two safe access and egress points to the college: Route 45 or Route 21.

In 2007 the college opened a modern 47,000+ square foot classroom building at Southlake, increasing instructional space four-fold and adding such features as a biology laboratory, four computer labs, a library, a testing and tutoring center, full-time and adjunct faculty offices and a conference area suitable for community and business meetings. In addition to the three-story glass and steel atrium that gives the campus its structural signature, Southlake also boasts the first public building green roofs in Lake County. In 2016, the college completed a 2,500 square foot addition to accommodate a state-of-the-art chemistry laboratory.

Credit offerings at Southlake include both day and evening courses that can be applied toward an Associate in Arts (A.A.) degree. Transfer and career courses that lead to Associate in Science (A.S.) and Associate in Applied Science (A.A.S.) degrees are also offered at the Southlake Campus. Courses leading to an A.A.S. degree in Health and Wellness Promotion are available. Certificate offerings at Southlake include the Massage Therapy Program, Wellness Coaching, Personal Training and Nurse Assisting. Southlake also offers the 75-hour Pharmacy Technician course. Courses in Nanoscience Technology are also offered at the Southlake Campus.

In addition, Southlake offers workplace training and skills development, non-credit personal enrichment and English as a Second Language. Other options include the Discovery and Quest programs for adults 50 and older and contract training for employers provided through the college's Workforce and Professional Development Institute.

Southlake's Campus and Student Support Center offers general campus information and assistance with admissions and registration. Academic, personal, transfer, financial aid and career counseling are also available by appointment. Drop-in advising is available during peak enrollment periods. The Center is located in V130 and is open Monday-Thursday 7:30 a.m. to 7:30 p.m., Friday 7:30 a.m. to 4:30 p.m. For more information, call (847) 543-6501.

The Library at Southlake is located in V106. Library hours are Monday through Thursday, 8 a.m. to 7 p.m. and Friday 8 a.m. to 4 p.m. Hours may vary during college breaks. The library houses a print collection and offers access to a vast array of online resources. A reference librarian is on site 20 hours per week or available remotely via email, phone and instant messaging. For more information, call (847) 543-6533.

The Testing Center, located in V212, administers a variety of exams to meet different academic needs: Academic Proficiency Test (APT) for CLC course placement; CLEP and DSST for college credit by exam; CLC classroom make-up exams, exams for CLC online courses; exams for distance learning and online courses from other colleges; surveys and interest inventories for academic and career counseling, and others. Testing Center hours are Monday-Thursday 8 a.m. to 8 p.m.; Friday 8 a.m. to 4 p.m.; Saturday 9 a.m. to 1 p.m. Hours may vary during college breaks. Testing is done primarily by appointment. For more information, call (847) 543-6544.

The Tutoring Center is located in V212. Tutoring is available for math and science courses as well as writing for any course. Academic coaching is also available for students enrolled in pre-college courses at CLC. Tutoring Center hours are Monday-Thursday from 9 a.m. to 7 p.m. Hours may vary during college breaks. For more information, call (847) 543-6542.

The Southlake Bookstore is located on the first floor of the V building, V134. The bookstore hours are Monday-Thursday 8:30 a.m. to 8:30 p.m., Friday 8:30 a.m. to 1:30 p.m. The bookstore is open on Saturdays the week before and after the beginning of the semester. Hours may vary during college breaks. For more information, call (847) 543-6530.

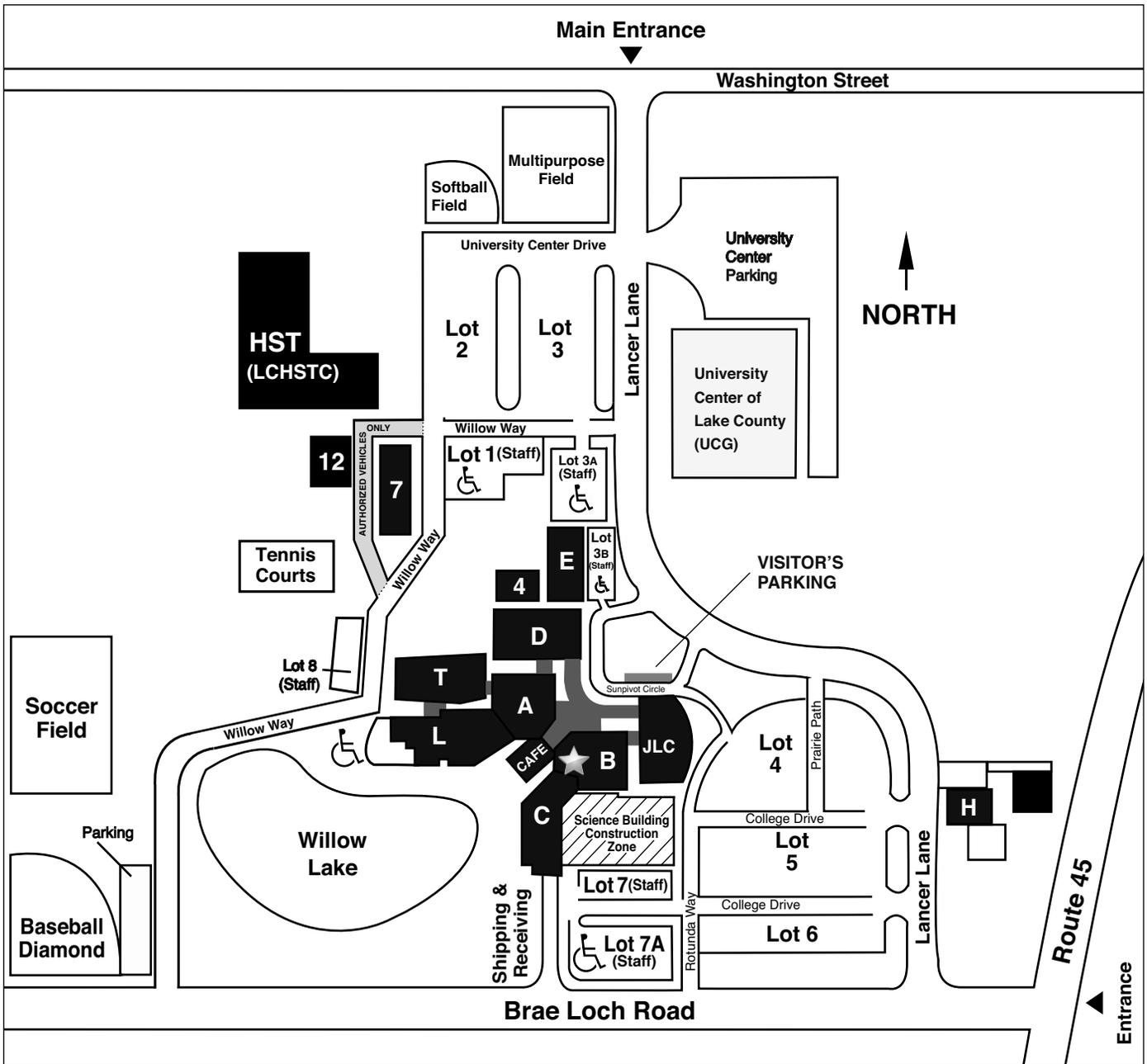
The Southlake Campus is open Monday through Thursday 7:30 a.m. to 10 p.m., Friday 7:30 a.m. to 4:30 p.m. and Saturday 8 a.m. to 2 p.m. For more information, call (847) 543-6501.

Great Lakes Center

The College of Lake County maintains an office at Great Lakes Naval Base (GTLK) to give service members, their families and members of the surrounding community an opportunity to work towards an associate degree. Late afternoon and evening courses are offered in both the traditional 16-week and a condensed eight-week format. This allows students to complete many of the general education requirements for graduation. Services offered at the Great Lakes Center include: registration (in-person only), advisement and textbook purchase for on-site classes. Book sales are available the first week of each term. In addition, all the facilities and services of the main campus are open to Great Lakes students. All non-military personnel (students and instructors) are required to obtain a base pass prior to the start of class to gain entrance to the Naval Base. The Great Lakes Center is located at the Lifelong Learning Center located in Building 617, room 209. Classes are currently held in building 617 on the second floor. Office hours are 8 a.m. to 4:30 p.m. Monday through Friday but may be subject to change. For more information call (847) 543-2972.

Grayslake Campus

19351 W. Washington St., Grayslake IL 60030



Buildings

- A, B, & C** - Administrative/Faculty Offices and Classrooms
- D** - Administrative/Faculty Offices, Classrooms and Children's Learning Center
- H** - Horticulture
- JLC** - James Lumber Center for the Performing Arts Theatres, Classrooms, Offices and Box Office
- L** - Library/Learning Resource Center
- T** - Technology Wing
- ★ - Welcome and One-Stop Center

- 4** - Adult Education
- 7** - Physical Education Center
- 12** - Automotive Collision Repair
- HST** - Lake County High Schools Technology Campus

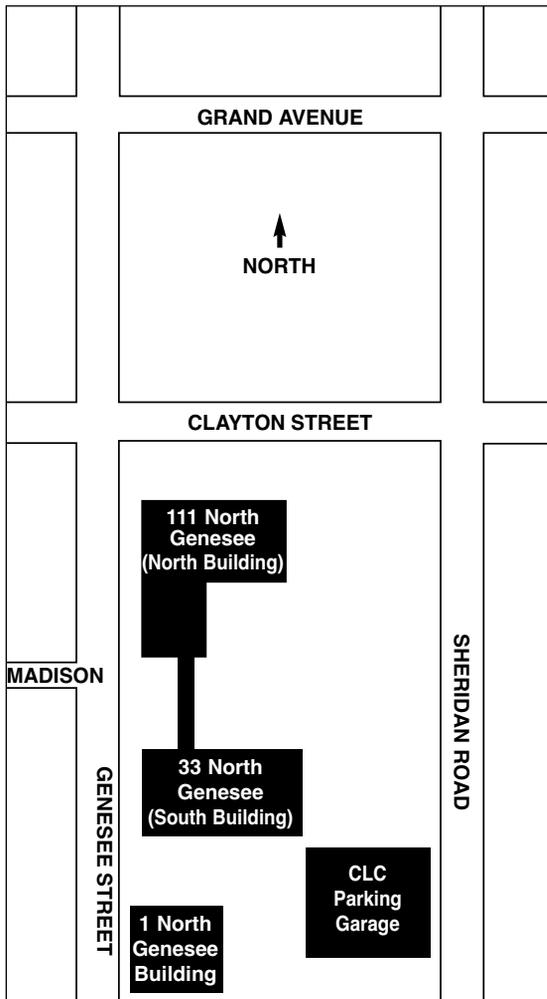
Parking

- Student and Visitor** - Lots 2, 3, 4, 5 and 6
- Staff** - Lots 1, 7, 7a, 3a, 3b and 8
- Visitor** - Circle Drive and Lot 7

Facilities and Extension Locations

Lakeshore Campus

1 N., 33 N. and 111 N. Genesee St.
Waukegan, IL 60085

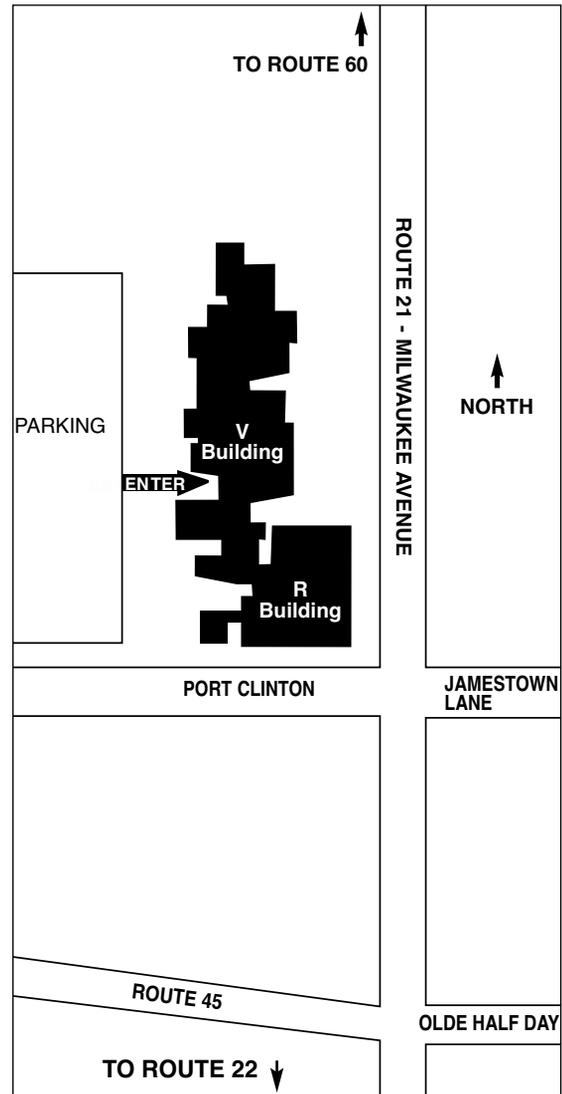


Buildings

- **111 North Genesee (North Building)**
 - Classrooms
 - Community Development
 - Computer Labs
 - Dental Hygiene Clinic
 - Library, Testing Center and Tutoring Center
 - Student Services Center
- **33 North Genesee (South Building)**
 - Administration
 - Bookstore
 - CLC Police Department
 - Childcare
 - Classrooms
- **1 North Genesee**
 - Adult Education
 - Classrooms

Southlake Campus

1120 S. Milwaukee Ave.
Vernon Hills, IL 60061



Buildings

- **Building V**
 - Campus and Student Support Center
 - Bookstore
 - Classrooms and Computer Labs
 - Conference Area
 - Glass Enclosed Atrium
 - Open Computer Lab
 - Discovery! Center for Personal Enrichment
 - Library
 - Testing Center and Tutoring Center
 - CLC Police Department
 - Green Roofing
- **Building R**
 - Classrooms
 - Center for Health and Wellness Promotion

Full Time Faculty, Professional, Specialist and Administrative Staff

Adams-Soller, Nedra

Communications
B.S., Eastern Michigan University
M.A., Eastern Michigan University

Aguilar, Lisa

Laboratory Coordinator
B.F.A., University of Utah
Licensed Massage Therapist,
National Holistic Institute

Aguilera, Sandra

Laboratory Specialist
A.A., College of Lake County

Aguinaldo, Teresa

Dean, Student Life
B.A., University of Missouri, Columbia
M.A., University of Missouri, Columbia

Aichele, Kimberly

Dental Hygiene
B.S.Ed., Ohio State University
M.A., University of Illinois, Springfield

Aiossa, Elizabeth

English
B.A., Roosevelt University
M.F.A., Roosevelt University

Alfano, John

Manager
A.A., College of Lake County

Allen, Lori

English
B.A., University of Akron
M.A., University of Akron

Allen, M. Scott

Heating and Air Conditioning
Engineering Technology
A.A.S., William Rainey Harper College
B.A., Concordia University
M.Ed., University of Illinois,
Urbana-Champaign

Allison, Stephanie

Business Analyst
B.S., Kent State University
M.B.A., University of Phoenix

Alonso, Javier

Criminal Justice
B.A., Northeastern Illinois University
M.A., Northeastern Illinois University

Alpert, Valerie

Dance
B.F.A., University of Illinois,
Urbana-Champaign
M.F.A., Ohio State University
Ph.D., Texas Woman's University

Ameji, Anjum

Professional Academic Advisor
B.A., Smith College

Anderson, Ellen

Health Information Technology
B.S., University of Illinois,
Urbana-Champaign
M.A.Ed., National Louis University

Andrews, Jeffrey

Mathematics
B.A., Augustana College
M.A., Eastern Illinois University
M.Ed., University of Illinois,
Urbana-Champaign

Ardito III, Frank

Physical Education
B.S., University of Illinois, Chicago
M.S., University of Illinois, Chicago
Ed.D., Loyola University, Chicago

Argoudelis, Patricia

Assistant Director
B.B.A., Western Michigan University

Audi, Ahmad

Nanotechnology/Chemistry
B.S., Lebanese American University
Ph.D., Kansas State University

Aykroid, David

Director
A.A.S., College of Lake County
B.S., Devry Institute of Technology

Babik, Richard

Lead Software Developer
B.S., Illinois State University

Baldwin, Alphonso

Dean, Lakeshore Campus
A.S., Highland Park Community College
B.S., Madonna University
M.S., Central Michigan University
M.A., Morehead State University
Ph.D., University of Alabama, Birmingham

Bantner, Jennifer

Professional Academic Advisor
B.A., Dartmouth College
M.B.A., Columbia Southern University

Barrientos, Lamont

Academic Operations Manager
Communication Arts, Humanities
and Fine Arts
B.S., University of Nebraska, Omaha

Barta, Ann

Curriculum Coordinator
B.S., Illinois State University

Bataz, Francisco

Academic Success Coach
A.A., College of Lake County
B.A., Northeastern Illinois University
M.A., Northeastern Illinois University

Bates, Ben

Laboratory Specialist
B.F.A., Kansas City Art Institute
M.F.A., Southern Illinois University, Edwardsville

Behling, Erika

Librarian
B.A., University of Wisconsin, Parkside
M.L.I.S., University of Texas, Austin
M.M., Northwestern University

Beintema, Mark

Mathematics
B.S., University of Wyoming
M.S., University of Wyoming
Ph.D., University of South Carolina

Belec-Olander, Ruth

Certified Nursing Assistant
B.S.N., Loyola University, Chicago
M.N., Marquette University

Bell, Dona

Database Support Administrator
A.A.S., Western Iowa Tech
Community College
B.A., DePaul University

Bell, Stephen

Executive Director
B.S., Rhode Island University
M.A.E., School of the Art Institute
of Chicago

Benjamin, Nora

Psychology
B.A., University of Iowa
M.A., Loyola University, Chicago
Ph.D., Loyola University, Chicago

Benning, Hannah

Library Services Specialist
B.A., Knox College

Berek, Jessica

Senior Program Coordinator
B.A., Augustana College
M.P.A., University of Texas, Arlington

Bernstein, Patricia

Testing Specialist
B.A., Augustana College

Bershanskaya, Aleksandra

Manager
B.A., Lake Forest College

Betka, Rokšana

Manager, Student Services
B.S., Dominican University
M.A., Elmhurst College

Full Time Faculty, Professional, Specialist and Administrative Staff

Black, Kelly

Reading
B.A., Michigan State University
M.Ed., DePaul University

Black, Lamar

Career Program Coordinator
M.B.A., Keller Graduate School
of Management

Blanchard, Robert

Student Services Specialist
B.S., University of Illinois,
Urbana-Champaign
M.A., Northern Illinois University

Bochantin, Joseph

Veteran Student Services Coordinator
B.S., Northeastern Illinois University

Bolton, David

Art
B.F.A., University of Evansville
M.F.A., School of The Art Institute
of Chicago

Boyke, David

Physics
A.S., College of Lake County
B.S., University of Wisconsin, Whitewater
M.S., Northeastern Illinois University

Boyke, Kimberely

Mathematics
A.A., University of Maryland University College
B.A., University of Maryland University College
B.S., Kansas State University
M.S., Kansas State University

Branson, Nicholas

Assistant Director, Institutional Effectiveness,
Planning and Research
B.A., Loyola University, Chicago
M.A., University of Chicago

Bravi, Diana

Accountant
A.A., College of Lake County
B.P.S., Roosevelt University

Breen, Nathan

English
B.A., Boston College
M.A., Miami University
Ph.D., University of Illinois,
Urbana-Champaign

Brinser, Karen

Student Services Coordinator
B.A., Pennsylvania State University
M.A.T., National Louis University

Brisbois, Frank

Director, Small Business Development/
International Trade Center
B.A., Loras College

Bronner, Gwethalyn

Executive Director, James Lumber Center
for the Performing Arts
B.S., Northwestern University
M.A., School of The Art Institute
of Chicago

Brown, Wendy

Anthropology/Sociology
B.A., Northern Illinois University
M.A., Temple University
M.S., University of Leicester, England

Bruellman, Jill

ESL/TESOL/TESL
B.A., Indiana University, Bloomington
M.A., Northeastern Illinois University

Brueske, Shari

Psychology
B.A., Augustana College
M.A., Northern Illinois University
Ph.D., Loyola University, Chicago

Buckner, Mary

Nursing
B.S.N., University of Iowa
M.S., Northern Illinois University

Bulla, John

Project Manager
B.S., University of Florida, Gainesville
M.S., Naval Postgraduate School

Burns, Tamaura

Student Services Specialist
B.S., Southern Illinois University, Carbondale

Burruss, Andrea

Counselor
B.S.Ed., Northern Illinois University
M.S., National Louis University

Cahill, Claudia

Nursing Labs Coordinator
A.A.S., Triton College
B.S., Concordia University

Campbell, Tracey

Business Analyst
B.S., Austin Peay State University

Carlson, Donna

Mathematics
B.S., University of Illinois,
Urbana-Champaign
M.S., University of Illinois,
Urbana-Champaign

Carpenter, Christina

Dean, Counseling/Advising/Transfer
A.A., State Fair Community College
B.S., University of Central Missouri
M.S., University of Central Missouri
Ph.D., Iowa State University

Carrillo, Armando

Laboratory Specialist
B.S., University of Wisconsin, Parkside

Carter, Michelle

Librarian
A.A., College of Lake County
B.A., University of Wisconsin, Parkside
M.A., Northern Illinois University

Cartwright, Kelly

Biology
B.S., Purdue University
M.S., Kansas State University

Carver, Mary Lynn

Adult Basic Education/GED
B.A., University of Akron
M.A.Ed., National Louis University

Cash, Amanda

English
B.A., Lake Forest College
M.A., University of Illinois,
Urbana-Champaign

Cashmore, Jason

Biology
A.S., College of Lake County
B.S., University of Illinois,
Urbana-Champaign
M.S., University of Illinois,
Urbana-Champaign

Casper, Natalia

Mathematics
B.S., Marquette University
M.S., Marquette University

Cavazos, Octavio

Automotive Collision Repair
A.A.S., College of Lake County
B.S., Southern Illinois University, Carbondale
M.S.Ed., Southern Illinois University, Carbondale

Chen, Changyi

Computer Information Technology
M.S., Pennsylvania State University
Ph.D., Pennsylvania State University

Chernaik, Anne

Librarian
B.A., Oberlin College
M.S., Syracuse University

Chessman, Nolan

English
B.A., Columbia College, Chicago
M.F.A., Washington University

Chittal, Pandurang (Jay)

Accounting
M.S., Illinois Institute of Technology
M.A.S., Northern Illinois University

Full Time Faculty, Professional, Specialist and Administrative Staff

Chmara, Joel

Communications
B.S., Northern Arizona University
M.S., Illinois State University

Chronowski, Patricia

Enrollment Services Specialist
B.A., North Park College

Chu, Shanti

Philosophy
B.A., Marquette University
M.A., Miami University

Clark, Patricia

Business Administration/Management
B.S., University of Illinois,
Urbana-Champaign
M.S., Northern Illinois University

Coleman, Lucille

Nursing
B.S.N., Alverno College
M.S., DePaul University
Ed.D., Northern Illinois University

Collins, Crandall

Employee Relations Manager
B.A., Western Illinois University
M.A.T., National Louis University

Colton, Cathy

English
B.A., Northeastern Illinois University
M.A., University of Illinois, Chicago
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The College of Lake County welcomes students from diverse educational backgrounds and provides a wide range of learning opportunities. An individual will be admitted to the college by completing and submitting the ***Student Admission Form***. Applicants planning to take college-level courses must demonstrate college-level proficiency in English language and basic algebra readiness. Following admission, the Office of Admissions will assess incoming students for Reading and Writing Readiness and Basic Algebra Readiness. Additional requirements apply to the following students:

- **International Students** must meet additional requirements and should contact the International Student Specialist at (847) 543-2733.
- **Students under age 18 or who are currently attending high school** must submit the ***Secondary School Reference Form*** in addition to the ***Student Admission Form***.
- **Transfer students** seeking a CLC degree must submit a ***Request for Evaluation of College Transcript Form*** and official transcript(s) from prior college(s).

All forms including the Student Admission Form are available online at www.clcillinois.edu/apply.

Admission to the college, however, does not ensure entrance into all programs of study or courses. Specific programs may have admission criteria which may include, but are not limited to, age, evidence of language and mathematics skills and level of education. The college reserves the right to limit enrollment because of space or budget restrictions, to establish selective admission requirements, and to give preference to residents of Community College District #532.

Prerequisites

There are several types of prerequisites that may apply to courses, and these must be met prior to enrolling. Students who attempt to enroll without having met a prerequisite will see an error message “Requisites not met,” and should check the course description for more information.

Academic Proficiency Prerequisites in English and basic algebra are required to take many college classes. There are a number of ways for students to demonstrate they are proficient and these are described below under Academic Proficiency.

Placement Test Prerequisites are used to determine a student’s appropriate beginning course level for math, computer information technology, administrative office systems, English as a Second Language and adult basic education. Tests are available free of charge at the Testing Center. Call (847) 543-2076 for details.

Course Prerequisites are required when the student should have specific knowledge or skills in order to benefit from the course. **Course Corequisites** are required when the student should be enrolled in multiple courses at the same time (unless the corequisite was completed in a prior term).

Official Transcripts

An official transcript is one that is sent directly from a prior institution to the Records Office. If your name has changed, please request that your new name is on the transcript.

Proficiencies are listed on next page.

Academic Proficiency Prerequisites

College Reading and Writing Readiness and Basic Algebra Readiness requirements are assessed by the Office of Admissions.

College Reading and Writing Readiness

Incoming students will be assessed for English language proficiency as demonstrated by meeting any one of the following:

- a. High school transcript showing top one-third rank in class after six semesters.
- b. CLC Academic Proficiency Test, Language Skills: Score of 153 or above.
- c. American College Test (ACT), Reading: Score of 17 or above, and English: Score of 17 or above.
- d. Scholastic Aptitude Test (SAT), Evidence-Based Reading score of 450 or above and Writing Score of 450 or above (prior to March 1, 2016 Critical Reading Score of 450 or above; March 1, 2015 Verbal Score of 450 or above).
- e. General Educational Development (GED) 2014: CLC Academic Proficiency Test or COMPASS ELI required. GED (prior to 2014) transcript, Reading and Writing Skills: Score of 550 or above.
- f. Test of English as a Foreign Language (TOEFL), Computer-based test: Score of 197 or above, Paper-based test: Score of 527 or above, or Internet-based score of 71 or above.
- g. International English Language Testing System (IELTS) Academic Format: score of 6.0 or above.
- h. Evidence of an associate or higher degree from a regionally accredited, degree-granting U.S. college or university.
- i. Transcript from a regionally accredited, degree-granting U.S. college or university listing at least 30 semester hours of credit with no grade below C.
- j. Transcript from a regionally accredited, degree-granting U.S. college or university listing credit equivalent to ENG 108 with a grade of A or credit equivalent to ENG 109 with a grade of C or better.
- k. Successful completion of CLC ENG 108 with a grade of A or ENG 109 with a grade of C or higher.
- l. Successful completion of both CLC ELI 103 AND 104 with a grade of A; or ELI 107 with a grade of C or higher.
- m. Successful completion of CLC ELI 108 with a grade of A, or ELI 109 with a grade of C or higher.
- n. COMPASS ELI score of 278 or better.
- o. Partnership for Assessment of Readiness for College and Careers (PARCC) ELA III score of 5.

Basic Algebra Readiness

Incoming students will be assessed for Basic Algebra Readiness as demonstrated by meeting any one of the following:

- a. High school transcript showing top one-third rank in class after six semesters.
- b. CLC Math Placement Test, arithmetic section, Math: Score of 56 or above.
- c. American College Test (ACT), Math: Score of 17 or above.
- d. Scholastic Aptitude Test (SAT), Math Score of 450 or above).
- e. General Educational Development (GED) transcript, Mathematics: Score of 145 or above for test taken January 1, 2014 or later; score of 550 or above for test taken before January 2014.
- f. Test Assessing Secondary Completion (TASC) transcript, Mathematics content area score of 500 or above.
- g. High School Equivalency Test (HiSET) transcript, Mathematics subtest score of 8 or above.
- h. Evidence of an associate or higher degree from a regionally accredited, degree-granting U.S. college or university.
- i. Transcript from a regionally accredited, degree-granting U.S. college or university listing credit equivalent to MTH 101(with a grade of C or better) or higher level courses at CLC
- j. Completion of either CLC MTH 101 or MTH 114 with a grade of C or better.
- k. Partnership for Assessment of Readiness for College and Careers (PARCC) Algebra II score of 4 or higher; or Math III score of 4 or higher.

Basic Algebra Readiness **does not** meet the prerequisite for college-level math courses. Please refer to math course descriptions for complete requirements.

Apply to CLC online at www.elcillinois.edu/apply

Entrance Requirements for Developmental Courses

English

Students scoring below an 80 on the Academic Proficiency Test will be **REQUIRED** to see a counselor before registering for classes and may not be eligible to register for developmental English courses. Students may be eligible to register for courses that do not require language proficiency but will need to see a counselor prior to registration.

Mathematics

Students scoring below a 34 on the arithmetic portion of the Math Placement Test will be **REQUIRED** to see a counselor before registering for classes and may not be eligible to register for developmental math courses. Students may be eligible to register for courses that do not require Basic Algebra Readiness but will need to see a counselor prior to registration.

Retest Options

Students scoring below the minimum proficiency scores may be eligible to retest in an effort to demonstrate math or language ability. Students should see a counselor for a detailed explanation of retest options.

Residence Status

Students are classified at the time of admission to the college for purposes of tuition assessment and enrollment reporting according to resident status as listed below:

In-District Illinois Resident Student:

1. A student who is 18 years of age or older and who has lived in Community College District #532 in some capacity other than as a student at a post-secondary education institution or a correctional institution for at least thirty (30) days prior to the first day of the semester of enrollment at CLC.
2. An unemancipated student under 18 who has at least one parent, step-parent or court-appointed guardian who meets the above criteria.
3. There are some communities within Lake County that CLC only serves a portion of its residents. If you reside on a community college border, your property tax bill or voter registration card will identify your community college.

Out-of-District Illinois Resident Student:

1. A person who resides in Illinois but is not a resident of Community College District #532 as defined above.
2. Includes residents of the Barrington, Illinois public high school district.

Out-of-State Student:

1. A person who is not a resident of the state of Illinois.
2. International students and other non-immigrant aliens.

Proof of Illinois Resident Status:

Evidence of district residency shall be based on ownership and/or occupancy of a dwelling in Community College District #532 and may be verified by displaying one of the following:

- Illinois driver's license or ID card issued by Illinois Secretary of State Office
- an Illinois voter ID card

OR

By displaying two of the following, which must display the student's name and current address:

- lease
- mortgage or home purchase contract
- auto registration
- tax bill
- paycheck stub
- official mail of current bill statements such as cell phone, utility, credit card, auto insurance

Contact Information

Main number: (847) 543-2000

19351 West Washington Street - Grayslake, Illinois 60030-1198

Questions regarding any specific aspect of CLC programs should be referred to the office most directly responsible. All written correspondence should be sent to the college at 19351 W. Washington St., Grayslake, IL 60030-1198. Telephone inquiries should go to the number listed with each office.

Questions on:	Call:	Office Location
Accommodations for Students with Disabilities	(847) 543-2055	L112
Admissions	(847) 543-2061	B Wing
Adult Education	(847) 543-2021	Building 4
Advisement	(847) 543-2067	C Wing
Athletics and Physical Activities	(847) 543-2046	Building 7
Biological and Health Sciences division	(847) 543-2042	B210
Bookstore	(847) 543-2086	B Wing
Business and Social Sciences division	(847) 543-2047	T302
Career and Placement	(847) 543-2059	C Wing
Career Programs.....	(847) 543-2422	C206
Chargebacks and Joint Educational Agreements	(847) 543-2410	C206
Coaching for Academic Success	(847) 543-2072	L123
Communication Arts, Humanities and Fine Arts division.....	(847) 543-2040	B210
Center for Personal Enrichment.....	(847) 543-2022	T317
Coaching for Academic Success	(847) 543-2072	Library
Cooperative Education.....	(847) 543-2058	B Wing
Counseling	(847) 543-2060	C Wing
Educational Guarantees	(847) 543-2060	C Wing
Engineering, Mathematics and Physical Sciences division.....	(847) 543-2044	T302
Extension Services	(847) 543-2653	Building 4
Financial Aid	(847) 543-2062	B Wing
Health Center	(847) 543-2064	A149
Human Resources	(847) 543-2065	T102
International Education	(847) 543-2741	D119
International Students	(847) 543-2733	E Building
Library (Murphy Library)	(847) 543-2070	Library
Nursing Education	(847) 543-2043	D208
Public Relations and Marketing.....	(847) 543-2094	A216
Registration	(847) 543-2061	B Wing
Student Activities	(847) 543-2280	Grayslake Campus
Testing Center	(847) 543-2076	Library
Title IX	(847) 543-2288	Grayslake Campus
Tuition Payment.....	(847) 543-2230	B Wing
Tutoring Center	(847) 543-2072	Library
Veteran's Information.....	(847) 543-2063	B Wing
Welcome and One-Stop Center	(847) 543-2000	B Wing
Workforce and Professional Development Institute	(847) 543-2615	T317

Other Locations:

Lakeshore Campus	(847) 543-2191	33 N. Genesee St., Waukegan, IL 60085
Great Lakes Center.....	(847) 689-0199	Building 619, Room 209, Great Lakes, IL 60088
Southlake Campus	(847) 543-6501	1120 S. Milwaukee Ave., Vernon Hills, IL 60061

Cancellation of Classes

Closings will be posted on the CLC website: www.clcillinois.edu

If CLC classes are cancelled because of weather or other factors, the cancellation will be announced on these radio and television stations:

WGN	720 AM	CBS-TV	Channel 2
WBBM	780 AM	NBC-TV	Channel 5
WLIP	1050 AM	ABC-TV	Channel 7
WKRS	1220 AM	WGN-TV	Channel 9
WIIL	95.1 FM	WFLD-TV	Channel 32
WXLC	102.3 FM	CLTV-TV	Channel 39
WZSR	105.5 FM		

Announcements of day class cancellations will begin by 6 a.m.
 Announcements of evening class (those beginning 4 p.m. or later) cancellations will begin by 3 p.m. An automated message will be placed on the telephone system during hours when the switchboard is closed. ***The switchboard gets very busy if many students call.***
 Please call only if it is impossible to listen to one of these stations.
In any case, use your good judgment!

Grayslake Campus

19351 W. Washington St., Grayslake, IL 60030

Lakeshore Campus

33 N. Genesee St., Waukegan, IL 60085

Southlake Campus

1120 S. Milwaukee Ave., Vernon Hills, IL 60061

www.clcillinois.edu



New Courses

BRGA 40 Introduction to Manufacturing for ELLs (Variable) 0.5-6 Hours

(Effective Spring 2017)

This course is an exploratory introduction to manufacturing careers. It is for English Language Learners at the High Intermediate or Low Advanced levels of ESL that are interested in transitioning to one of the following career programs: Heating Refrigeration and Air Conditioning, Mechatronics, Welding, Automotive Technician, Automotive Collision Repair, or Computerized Numerical Control. In this course, students will improve their English Language Skills while learning about these various careers.

Corequisite: ESL 50 or ESL 52

May be taken four times for credit

BRGA 44 Introduction to Math for Manufacturing (Variable) 0.5-6 Hours

(Effective Spring 2017)

This course provides an introduction to common applications of mathematics within manufacturing. Students are given opportunities to develop proficiency in arithmetic calculations and to apply mathematical principles for effective on-the-job training applications. The use of mathematical principles and operations as they relate to machine control and repair/fabrication methods is emphasized.

Prerequisite: ABE 40 and a score of 7.0 or higher on a standardized testing instrument and teacher recommendation.

May be taken four times for credit

BRGA 45 Introduction to Manufacturing as a Career for ABE (Variable) 0.5-6 Hours

(Effective Spring 2017)

This course will focus on building the basic reading, vocabulary, measurement and computer skills needed for students interested in entering a manufacturing career cluster course of study. The course will allow students to explore a variety of manufacturing careers through investigation of contextualized readings and activities about topics related to the manufacturing sector.

Prerequisite: ABE 40 or students must achieve a 7.0 on the high intermediate level of the current NRS standardized testing instrument.

Recommended: Teacher recommendation from an ABE 40 or higher level class will also be considered.

May be taken four times for credit

BRGA 46 Exploring Manufacturing Careers at the College of Lake County (Variable) 0.5-6 Hours

(Effective Spring 2017)

This course will assist students in examining the components of manufacturing career choices – especially those offered at the College of Lake County. The focus is on manufacturing career awareness, planning skills, decision-making processes and a self-assessment instrument to help identify manufacturing career options. In-depth exploration of the programs included in the college's manufacturing careers will provide a foundation for transition to the manufacturing program of choice at the college.

Prerequisite: ABE 40 or admission is determined by a 7.0 or higher on a high intermediate standardized test instrument.

May be taken four times for credit

CAP 111 Construction Apprenticeship Work Experience I (1-6) 3 Hours

(Effective Fall 2016)

This course provides a planned educational experience in the Chicago Regional Council of Carpenter's (CRCC) Apprenticeship program by placing the student in a supervised educational work experience. Specific learning objectives are accomplished through a combination of classroom, shop, and "on the job" experience and training. This course is the first of a series of four work-based learning (apprenticeship) courses to be completed. The student will complete one CAP course in each of the four years of the apprenticeship. Students providing a CRCC transcript documenting completion of the first year's apprenticeship coursework and work experience will receive transfer credit for this course, which serves as a technical elective in the Construction Management Technology program.

Note: Requirements: Admission into the CRCC Apprenticeship Program. Job placement with a registered journeyman carpenter.

CAP 112 Construction Apprenticeship Work Experience II (1-6) 3 Hours

(Effective Fall 2016)

This course provides a planned educational experience in the Chicago Regional Council of Carpenter's (CRCC) Apprenticeship program by placing the student in a supervised educational work experience. Specific learning objectives are accomplished through a combination of classroom, shop, and "on the job" experience and training. This course is the second of a series of four work-based learning (apprenticeship) courses to be completed. The student will complete one CAP course in each of the four years of the apprenticeship. Students providing a CRCC transcript documenting completion of the second year's apprenticeship coursework and work experience will receive transfer credit for this course, which serves as a technical elective in the Construction Management Technology program.

Note: Requirements: Admission into the CRCC Apprenticeship Program. Job placement with a registered journeyman carpenter.

CAP 113 Construction Apprenticeship Work Experience III (1-6) 3 Hours

(Effective Fall 2016)

This course provides a planned educational experience in the Chicago Regional Council of Carpenter's (CRCC) Apprenticeship program by placing the student in a supervised educational work experience. Specific learning objectives are accomplished through a combination of classroom, shop, and "on the job" experience and training. This course is the third of a series of four work-based learning (apprenticeship) courses to be completed. The student will complete one CAP course in each of the four years of the apprenticeship. Students providing a CRCC transcript documenting completion of the third year's apprenticeship coursework and work experience will receive transfer credit for this course, which serves as a technical elective in the Construction Management Technology program.

Note: Requirements: Admission into the CRCC Apprenticeship Program. Job placement with a registered journeyman carpenter.

**CAP 114 Construction Apprenticeship
Work Experience IV (1-6) 3 Hours**

(Effective Fall 2016)

This course provides a planned educational experience in the Chicago Regional Council of Carpenter's (CRCC) Apprenticeship program by placing the student in a supervised educational work experience. Specific learning objectives are accomplished through a combination of classroom, shop, and "on the job" experience and training. This course is the fourth of a series of four work-based learning (apprenticeship) courses to be completed. The student will complete one CAP course in each of the four years of the apprenticeship. Students providing a CRCC transcript documenting completion of the fourth year's apprenticeship coursework and work experience will receive transfer credit for this course, which serves as a technical elective in the Construction Management Technology program.

Note: Requirements: Admission into the CRCC Apprenticeship Program. Job placement with a registered journeyman carpenter.

DNC 160 Teaching Methods I (3-0) 3 Hours
(Effective Spring 2017)

This course offers a philosophical and practical foundation for teaching movement-based arts across a variety of genres and ages. Students will be introduced to different educational philosophies while gaining practical skills for effective and safe teaching practices. Course topics include the development of a teaching philosophy, creating lesson plans with goals and objectives, classroom organization and management, basic alignment & kinesiology, technological modifications & enhancements for learning, as well as the impact of social, cultural, and psychological theories in relation to learning. Practical classroom teaching skills will also be studied & practiced; including verbal and hands-on cueing for correcting misalignment, teaching to different communities, the use of live and recorded music, and other topics that develop the confidence and wisdom of the movement teacher.

Recommended: Completion of advanced technique level.

ECE 242 Math Activities for Young Children (3-0) 3 Hours
(Effective Spring 2017)

This course incorporates theories, research, and pedagogy as it relates to the emergence and development of mathematical concepts, knowledge, and skill development in young children. Includes review of basic mathematical concepts and terminology for teacher preparation in early childhood education. Emphasis is on the exploration of principles, methods, and developmentally appropriate materials within the early childhood classroom. Students learn and demonstrate how to promote children's emerging math skills and concepts through hands-on discovery and play. Includes planning, preparation, and assessment techniques for relevant early childhood math curriculum.

Prerequisite: ECE 121 AND ECE 124 or EDU 124 (all C or better)

Recommended: Basic Algebra Readiness

Course Modifications

ABE 11 Literacy 2 (Variable) 0.5-6 Hours
(Title, Description and Credit Hour Change Effective Fall 2016)

This course is designed to raise students' basic literacy skills in reading, writing and arithmetic by using a variety of learning strategies to engage students in learning tasks and problem solving. Students will develop a personal word bank with everyday survival words, personal life/work words and the first 100 words on the Fry list of instant vocabulary.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE 0.0–1.9) OR consent of Instructor or department chair.

Course fee

ABE 13 Beginning Mathematics 1 (Variable) 0.5-6 Hours
(Description and Credit Hour Change Effective Fall 2016)

This course introduces students to whole numbers 0-100. Students will develop and apply number sense to read, write, compare and order whole numbers 0-100.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE pretest levels from 0–1.9) OR consent of instructor or department chair.

Course fee

May be taken four times for credit

ABE 15 Beginning Mathematics 2 (Variable) 0.5-6 Hours
(Description and Credit Hour Change Effective Fall 2016)

This course introduces students to addition and subtraction of whole numbers and introductory concepts of measurements. Students will solve word problem involving addition and subtraction. Students will read, record and use measurements.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE pretest levels from 0–1.9) OR consent of instructor or department chair.

Course fee

May be taken four times for credit

ABE 17 Beginning Mathematics 3 (Variable) 0.5-6 Hours
(Description and Credit Hour Change Effective Fall 2016)

This course introduces students to geometric properties. Students will specify locations and describe spatial relationships.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE pretest levels from 0–1.9) OR consent of instructor or department chair.

Course fee

May be taken four times for credit

ABE 19 Beginning Mathematics 4 (Variable) 0.5-6 Hours
(Description and Credit Hour Change Effective Fall 2016)

This course introduces students to surveys and graphs. Students will collect, organize, and record data.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE pretest levels from 0–1.9) or consent of instructor or department chair.

Course fee

May be taken four times for credit

- ABE 20 Beginning ABE 1 (Variable) 0.5-6 Hours**
(Title, Description Credit Hour Change Effective Fall 2016)
 This course is an individualized program of instruction for students with emerging reading, writing, language, arithmetic and life skills development. Students will progress and master the basic skills at their own rate. Students' needs determine level and kinds of materials used.
Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE 2.0 - 3.9) OR consent of instructor or department chair.
Course fee
May be taken four times for credit
- ABE 21 Beginning ABE 2 (Variable) 0.5-6 Hours**
(Title and Credit Hour Change Effective Fall 2016)
 This course will review, teach and maintain basic skills in reading, writing, math and life skills. Students will progress at their own rate. Students' needs determine level and kinds of materials.
Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE 2.0 - 3.9) OR consent of instructor or department chair.
Course fee
May be taken four times for credit
- ABE 22 Basic Reading 1 (Variable) 0.5-6 Hours**
(Credit Hour Change Effective Fall 2016)
 This reading class teaches syllable patterns, phonemes, vocabulary and reading comprehension strategies.
Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE 0.0–1.9) OR consent of instructor or department chair.
Course fee
May be taken four times for credit
- ABE 23 Basic Mathematics 1 (Variable) 0.5-6 Hours**
(Description Change Effective Fall 2016)
 This mathematics course introduces students to basic number concepts, mathematical language, and whole number topics (0-100,000). Students will develop and apply number sense to read, write, compare and order whole numbers 0-100,000.
Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE pretest levels from 2.0 - 3.9) OR consent of instructor or department chair.
Course fee
May be taken four times for credit
- ABE 24 Basic Reading 2 (Variable) 0.5-6 Hours**
(Credit Hour Change Effective Fall 2016)
 This course is a reading class that includes development of basic decoding skills, vocabulary, fluency and comprehension.
Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE 2.0 - 3.9) OR consent of instructor or department chair.
Course fee
May be taken four times for credit
- ABE 25 Basic Mathematics 2 (Variable) 0.5-6 Hours**
(Description and Credit Hour Change Effective Fall 2016)
 This mathematics course introduces students to fractions and pictorial representation. Students will demonstrate an understanding of fractions as part of a whole to match fractions to a pictorial representation.
Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE pretest levels from 2.0 - 3.9) OR consent of instructor or department chair.
Course fee
May be taken four times for credit
- ABE 26 Basic Reading 3 (Variable) 0.5-6 Hours**
(Credit Hour Change Effective Fall 2016)
 This basic reading class teaches syllable patterns, phonemes, vocabulary and reading comprehension strategies.
Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE 2.0 - 3.9) OR consent of instructor or department chair.
Course fee
May be taken four times for credit
- ABE 27 Basic Mathematics 3 (Variable) 0.5-6 Hours**
(Description and Credit Hour Change Effective Fall 2016)
 This mathematics course introduces geometry and rounding of whole numbers. Students will demonstrate an understanding of the concepts of area and relate area to multiplication and to addition.
Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE pretest levels from 2.0 - 3.9) OR consent of instructor or department chair.
Course fee
May be taken four times for credit
- ABE 28 Basic Reading 4 (Variable) 0.5-6 Hours**
(Credit Hour Change Effective Fall 2016)
 This basic reading class teaches syllable patterns, phonemes, vocabulary and reading comprehension strategies.
Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE 2.0 - 3.9) OR consent of instructor or department chair.
Course fee
May be taken four times for credit
- ABE 29 Basic Mathematics 4 (Variable) 0.5-6 Hours**
(Description and Credit Hour Change Effective Fall 2016)
 This mathematics course introduces multiplication and division facts (0-12) and simple probability. Students will calculate products and quotients of whole numbers.
Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE pretest levels from 2.0 - 3.9) OR consent of instructor or department chair.
Course fee
May be taken four times for credit
- ABE 30 Intermediate ABE 1 (Variable) 0.5-6 Hours**
(Title and Credit Hour Change Effective Fall 2016)
 This course is for students who want to progress and master the basic skills in a group learning situation. Course instruction will include reading, language development, writing and mathematics. Students may progress at their own rate.
Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE 4.0 - 5.9) or consent of instructor and/or department chair.
Course fee
May be taken four times for credit
- ABE 31 Intermediate ABE 2 (Variable) 0.5-6 Hours**
(Title and Credit Hour Change Effective Fall 2016)
 This course will include intermediate reading, language development, writing and mathematics skills.
Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE 4.0 - 5.9) or consent of instructor and/or department chair.
Course fee
May be taken four times for credit

ABE 32 Intermediate Reading 1 (Variable) 0.5-6 Hours
(Credit Hour Change Effective Fall 2016)

This course covers intermediate basic reading comprehension strategies, vocabulary, fluency and decoding skills.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE 4.0 - 5.9) OR consent of instructor or department chair.

Course fee

May be taken four times for credit

ABE 33 Intermediate Mathematics 1 (Variable) 0.5-6 Hours
(Description Change Effective Fall 2016)

This mathematics course introduces students to basic numeracy concepts of decimals and conversions of fractions, decimals and percents. Students will represent, order and compare decimals, fractions, and mixed numbers from the thousandth place to millions place.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE pretest levels from 4.0 - 5.9) OR consent of instructor or department chair.

Course fee

May be taken four times for credit

ABE 34 Intermediate Reading 2 (Variable) 0.5-6 Hours
(Credit Hour Change Effective Fall 2016)

This course covers intermediate basic reading comprehension strategies, vocabulary, fluency and decoding skills.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE 3.0 - 5.9) OR consent of instructor or department chair.

Course fee

May be taken four times for credit

ABE 35 Intermediate Mathematics 2 (Variable) 0.5-6 Hours
(Credit Hour and Description Change Effective Fall 2016)

This mathematics course will introduce students to multiplication and division of multi-digit numbers and order of operations. Students will identify, understand and use math operation symbols and their order of operation.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE pretest levels from 4.0 - 5.9) OR consent of instructor or department chair.

Course fee

May be taken four times for credit

ABE 36 Intermediate Reading 3 (Variable) 0.5-6 Hours
(Credit Hour Change Effective Fall 2016)

This course is an intermediate basic reading class that develops decoding skills, vocabulary, fluency and comprehension.

Prerequisite: Students will be tested with a standardized assessment (e.g. TABE 4.0-5.9) OR consent of instructor or department chair.

Course fee

May be taken four times for credit

ABE 37 Intermediate Mathematics 3 (Variable) 0.5-6 Hours
(Description and Credit Hour Change Effective Fall 2016)

This mathematics course will introduce students to the four basic math operations with decimals, and coordinate graphing of points. Students will perform the four basic math operations with decimals and use two dimensional coordinate grids to represent points.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE pretest levels from 4.0 - 5.9) OR consent of instructor or department chair.

Course fee

May be taken four times for credit

ABE 39 Intermediate Mathematics 4 (Variable) 0.5-6 Hours
(Description and Credit Hour Change Effective Fall 2016)

This mathematics course will introduce students to measurements, angles, interpretation of complex graphs and charts and the four basic math operations with fractions. Students will solve problems involving measurement, analyze data from complex graphs and charts and demonstrate strategies for adding, subtracting, multiplying and dividing fractions.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE pretest levels from 4.0 - 5.9) OR consent of instructor or department chair.

Course fee

May be taken four times for credit

ABE 40 High Intermediate ABE 1 (Variable) 0.5-6 Hours
(Title, Credit Hour, and Description Change Effective Fall 2016)

This course focuses on instruction in reading, language development mathematics, as well as problem-solving skills. Real-life applications including work-related skills will be covered.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE 6.0 - 8.9) or consent of instructor and/or department chair.

Course fee

May be taken four times for credit

ABE 41 High Intermediate ABE 2 (Variable) 0.5-6 Hours
(Title, Credit Hour, and Description Change Effective Fall 2016)

This course is designed to teach and review advanced basic reading, writing, mathematics, and problem-solving skills. Real-life applications including work-related skills will be covered.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE 6.0 - 8.9) or consent of instructor or department chair.

Course fee

May be taken four times for credit

ABE 42 High Intermediate Reading 1 (Variable) 0.5-6 Hours
(Title and Credit Hour Change Effective Fall 2016)

This course teaches advanced basic reading comprehension strategies, vocabulary, fluency and decoding skills.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE 6.0 - 8.9) OR consent of instructor or department chair.

Course fee

May be taken four times for credit

ABE 43 High Intermediate Mathematics 1 (Variable) 0.5-6 Hours
(Description Change Effective Fall 2016)

This mathematics course will introduce students to positive and negative integers, application of number properties and a continuation of graphic representation. Students will apply number properties, compute with positive and negative integers and analyze visual data.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE pretest levels from 6.0 - 8.9) OR consent of instructor or department chair.

Course fee

May be taken four times for credit

- ABE 44 High Intermediate Reading 2 (Variable) 0.5-6 Hours**
(Title and Credit Hour Change Effective Fall 2016)
 This course teaches advanced basic reading comprehension strategies, vocabulary, fluency and decoding skills.
Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE 6.0-8.9) OR consent of Instructor or department chair.
Course fee
May be taken four times for credit
- ABE 45 High Intermediate Mathematics 2 (Variable) 0.5-6 Hours**
(Description and Credit Hour Change Effective Fall 2016)
 This mathematics course will introduce students to exponents, radicals, functions and 3-dimensional geometric figures. Students will evaluate exponents, square roots and absolute value of whole numbers.
Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE pretest levels from 6.0 - 8.9) OR consent of instructor or department chair.
Course fee
May be taken four times for credit
- ABE 46 High Intermediate Reading 3 (Variable) 0.5-6 Hours**
(Title and Credit Hour Change Effective Fall 2016)
 This course teaches advanced basic reading comprehension strategies, vocabulary, fluency and decoding skills.
Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE 6.0-8.9) OR consent of instructor or department chair.
Course fee
May be taken four times for credit
- ABE 47 High Intermediate Mathematics 3 (Variable) 0.5-6 Hours**
(Credit Hour and Description Change Effective Fall 2016)
 This mathematics course will introduce students to problems involving ratio, proportion and percentages. Students will solve problems involving ratio, proportion and percentages.
Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE pretest levels from 6.0 - 8.9) OR consent of instructor or department chair.
Course fee
May be taken four times for credit
- ABE 48 High Intermediate Reading 4 (Variable) 0.5-6 Hours**
(Title and Credit Hour Change Effective Fall 2016)
 This course teaches advanced basic reading comprehension strategies, vocabulary, fluency and decoding skills.
Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE 6.0-8.9) OR consent of instructor or department chair.
Course fee
- ABE 49 High Intermediate Mathematics 4 (Variable) 0.5-6 Hours**
(Credit Hour and Description Change Effective Fall 2016)
 This mathematics course will introduce students to algebraic expressions, equations, statistics and probabilities. Students will solve real-life and mathematical problems using numerical and algebraic expressions.
Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE pretest levels from 6.0 - 8.9) OR consent of instructor or department chair.
Course fee
- ARM 111 Fundamentals of High Tech Manufacturing I (1-0) 1 Hour**
(Prerequisite Change Effective Fall 2016)
 This course will cover Occupational Safety and Health Administration (OSHA) safety standards, industrial hazards, personal protective equipment, fire and emergency response, Lockout/Tagout (LOTO), and ergonomics.
Prerequisite: ELI Accuplacer score of 221 or higher, APT score of 80 or higher, ELI 103 (C or better), ELI 104 (C or better), ELI 107 (C or better), or College Reading and Writing Readiness AND Basic Algebra Readiness.
- ARM 112 Fundamentals of High Tech Manufacturing II (1-0) 1 Hour**
(Prerequisite Change Effective Fall 2016)
 This course will cover basic manufacturing and production, basic measurement devices, manufacturing efficiency techniques and industrial supply chain systems.
Corequisite: ARM 111 (C or better) or consent of department
- ARM 113 Fundamentals of High Tech Manufacturing III (1-0) 1 Hour**
(Prerequisite Change Effective Fall 2016)
 This course will cover simple machines, basic electrical and fluid power systems, basic troubleshooting and problem solving techniques, and basic preventive and total productive maintenance.
Corequisite: ARM 112 (C or better) or consent of department
- ARM 114 Fundamentals of High Tech Manufacturing IV (1-0) 1 Hour**
(Prerequisite Change Effective Fall 2016)
 This course will cover troubleshooting and problem solving techniques specific to quality control in manufacturing environments.
Corequisite: ARM 113 (C or better) or consent of department
- ARM 116 Mechatronics Graphics I (.5-1) 1 Hour**
(Prerequisite Change Effective Fall 2016)
 This course covers the role of technical drawings in industry, examples of different types of technical drawings, measurements using rulers, calipers and micrometers, and introduction to sketching techniques and to 3-view drawings.
Prerequisite: ELI Accuplacer score of 221 or higher, APT score of 80 or higher, ELI 103 (C or better), ELI 104 (C or better), ELI 107 (C or better), or College Reading and Writing Readiness AND Basic Algebra Readiness.
Course fee
- ARM 117 Mechatronics Graphics II (.5-1) 1 Hour**
(Prerequisite Change Effective Fall 2016)
 This course continues coverage of 3-view visualization and sketching techniques. It also covers introduction to special views, dimensioning techniques and drawing layout.
Corequisite: ARM 116 (C or better) or consent of department
Course fee
- ARM 118 Mechatronics Graphics III (.5-1) 1 Hour**
(Prerequisite Change Effective Fall 2016)
 This course will cover tolerancing, Computer Aided Design (CAD) terminology and basic object drawing, modification of existing CAD drawings and CAD dimensioning.
Corequisite: ARM 117 (C or better) or consent of department
Course fee

- ARM 119 Mechatronics Graphics IV (.5-1) 1 Hour**
(Prerequisite Change Effective Fall 2016)
 This course will cover drafting standards, basic electrical symbols and schematics, basic fluids symbols and schematics, technical documentation and the use of embedded Computer Aided Design (CAD) package objects to create schematic drawings.
Corequisite: ARM 118 (C or better) or consent of department
Course fee
- ARM 131 Robot Design and Construction I (.5-1) 1 Hour**
(Prerequisite Change Effective Fall 2016)
 This course will cover the history and development of robots, types of robots, robot components, and basic robot physics. The course will also touch on technical sketching as applied to robot design.
Prerequisite: ELI Accuplacer score of 221 or higher, APT score of 80 or higher, ELI 103 (C or better), ELI 104 (C or better), ELI 107 (C or better), or College Reading and Writing Readiness AND Basic Algebra Readiness.
Course fee
- ARM 132 Robot Design and Construction II (.5-1) 1 Hour**
(Prerequisite Change Effective Fall 2016)
 This course will cover spur, bevel and worm gears, gear trains, mobile chassis design, wheel configurations, DC and AC motors, servo and stepper motors, and power supplies as applied to mobile robots.
Corequisite: ARM 131 (C or better) or consent of department
Course fee
- ARM 133 Robot Design and Construction III (.5-1) 1 Hour**
(Prerequisite Change Effective Fall 2016)
 This course will cover microcontrollers, digital and analog signals, sensors, friction and bearings as applied to mobile robots along with the design and construction of robotic arms.
Corequisite: ARM 132 (C or better) or consent of department
Course fee
- ARM 134 Robot Design and Construction IV (.5-1) 1 Hour**
(Prerequisite Change Effective Fall 2016)
 This course will cover robot programming in "C" to include variables, basic programming structures, for and while loops, if-else statements. A final robot project will be required.
Corequisite: ARM 133 (C or better) or consent of department
Course fee
- ARM 151 Mechanical Systems I (.5-1) 1 Hour**
(Prerequisite Change Effective Fall 2016)
 This course covers basic safety protocol, the role of mechanical components in complex mechatronic systems, the flow of energy in a mechatronic system, calculation of force, accelerations, speed, torque, etc. and basic maintenance and systems-level troubleshooting.
Prerequisite: ELI Accuplacer score of 221 or higher, APT score of 80 or higher, ELI 103 (C or better), ELI 104 (C or better), ELI 107 (C or better), or College Reading and Writing Readiness AND Basic Algebra Readiness.
Course fee
- ARM 152 Mechanical Systems II (.5-1) 1 Hour**
(Prerequisite Change Effective Fall 2016)
 This course covers gears and gear drives, chain and sprocket systems, power transmission, pulley drives, synchronous drives, lubrication requirements of mechanical components, analyzing technical data sheets, and basic troubleshooting.
Corequisite: ARM 151 (C or better) or consent of department
Course fee
- ARM 153 Mechanical Systems III (.5-1) 1 Hour**
(Prerequisite Change Effective Fall 2016)
 This course will cover mechanical shafts, couplings and bearings, lubrication, preventative and predictive maintenance of shafts, couplings, bushings, seals and bearings, alignment and troubleshooting.
Corequisite: ARM 152 (C or better) or consent of department
Course fee
- ARM 154 Mechanical Systems IV (.5-1) 1 Hour**
(Prerequisite Change Effective Fall 2016)
 This course will cover clutches and brakes, linear motion technology, flexible elements and troubleshooting the mechanical components in a complete mechatronic system.
Corequisite: ARM 153 (C or better) or consent of department
Course fee
- ARM 156 Electrical Systems I (.5-1) 1 Hour**
(Prerequisite Change Effective Fall 2016)
 This course will cover the basic electrical components in a mechatronic system. Topics covered will include electrical safety; current, voltage, resistance and power in AC and DC circuits; principles of resistance, inductance, capacitance, impedance, frequency, magnetism and transformers; basic function of AC/DC power supplies; operation of multimeters, oscilloscopes, frequency counters, wiggys, logic probes and amp clamps.
Prerequisite: ELI Accuplacer score of 221 or higher, APT score of 80 or higher, ELI 103 (C or better), ELI 104 (C or better), ELI 107 (C or better), or College Reading and Writing Readiness AND Basic Algebra Readiness.
Course fee
- ARM 157 Electrical Systems II (.5-1) 1 Hour**
(Prerequisite Change Effective Fall 2016)
 This course will cover fundamentals of parallel circuits, balancing bridges, reed switches, current dividers, voltage dividers, relays, indicators, solenoids and troubleshooting.
Corequisite: ARM 156 (C or better) or consent of department
Course fee
- ARM 158 Electrical Systems III (.5-1) 1 Hour**
(Prerequisite Change Effective Fall 2016)
 This course will cover electromagnetism; switches; photoelectric, capacitive, and inductive sensors; DC motor and generator introduction; AC motor and circuitry introduction; waveforms; instrumentation, and troubleshooting techniques.
Corequisite: ARM 157 (C or better) or consent of department
Course fee
- ARM 159 Electrical Systems IV (.5-1) 1 Hour**
(Prerequisite Change Effective Fall 2016)
 This course will cover capacitors, inductors, diodes, transistors, wiring diagrams, DC power supplies, transformers, complete mechatronic systems and systems troubleshooting.
Corequisite: ARM 18 (C or better) or consent of department
Course fee

<p>ARM 171 Automation I (.5-1) 1 Hour <i>(Prerequisite Change Effective Fall 2016)</i> This course will cover electrical safety, fundamentals of DC motor operations, starting methods for DC motors, speed control, and troubleshooting DC motors, introduction to Programmable Logic Controllers (PLCs) and PLC terminology, hardware components and general classification of PLCs. <i>Prerequisite:</i> ELI Accuplacer score of 221 or higher, APT score of 80 or higher, ELI 103 (C or better), ELI 104 (C or better), ELI 107 (C or better), or College Reading and Writing Readiness AND Basic Algebra Readiness. <i>Course fee</i></p>	<p>ARM 191 Pneumatics and Hydraulics I (.5-1) 1 Hour <i>(Prerequisite Change Effective Fall 2016)</i> This course will cover basic safety rules and standards when working with mechatronic systems, introduction to fluid power, basic principles of hydraulics, fluid power components, hydraulic fluids and basic principles of pneumatics. <i>Prerequisite:</i> ELI Accuplacer score of 221 or higher, APT score of 80 or higher, ELI 103 (C or better), ELI 104 (C or better), ELI 107 (C or better), or College Reading and Writing Readiness AND Basic Algebra Readiness. <i>Course fee</i></p>
<p>ARM 172 Automation II (.5-1) 1 Hour <i>(Prerequisite Change Effective Fall 2016)</i> This course will cover fundamentals of AC motors, intro to 3-phase distribution, transformers, PLC architecture, peripheral support devices, analog and digital circuit structures, and Boolean algebra. <i>Corequisite:</i> ARM 171 (C or better) or consent of department <i>Course fee</i></p>	<p>ARM 192 Pneumatics and Hydraulics II (.5-1) 1 Hour <i>(Prerequisite Change Effective Fall 2016)</i> This course will continue coverage of basic pneumatics and will also cover power supplies, vacuum pumps, circuit diagrams and system tracing, pneumatic components, and system operation and troubleshooting. <i>Corequisite:</i> ARM 191 (C or better) or consent of department <i>Course fee</i></p>
<p>ARM 173 Automation III (.5-1) 1 Hour <i>(Prerequisite Change Effective Fall 2016)</i> This course covers AC induction motors, AC motor starting methods, AC motor speed control, and PLC input/output module devices and symbols. <i>Corequisite:</i> ARM 172 (C or better) or consent of department <i>Course fee</i></p>	<p>ARM 193 Pneumatics and Hydraulics III (.5-1) 1 Hour <i>(Prerequisite Change Effective Fall 2016)</i> This course will cover electronic controls, hydraulic cylinders and directional control valves, technical documentation, measurements and adjustments on a fluid system, troubleshooting and predictive/preventative maintenance. <i>Corequisite:</i> ARM 192 (C or better) or consent of department <i>Course fee</i></p>
<p>ARM 174 Automation IV (.5-1) 1 Hour <i>(Prerequisite Change Effective Fall 2016)</i> This course will cover regenerative braking, National Electrical code (NEC) standards for installation and overload protection of motors, relay logic and ladder logic diagrams, circuit diagrams, scan time, and fundamentals of PLC programming. <i>Corequisite:</i> ARM 173 (C or better) or consent of department <i>Course fee</i></p>	<p>ARM 194 Pneumatics and Hydraulics IV (.5-1) 1 Hour <i>(Prerequisite Change Effective Fall 2016)</i> This course covers pressure control valves, flow control, speed control, mobile hydraulic systems and complete fluids troubleshooting in a mechatronics system. <i>Corequisite:</i> ARM 193 (C or better) or consent of department <i>Course fee</i></p>
<p>ARM 176 Automation VI (.5-1) 1 Hour <i>(Prerequisite Change Effective Fall 2016)</i> This is course will cover PLC data manipulation instruction, closed loop systems, arithmetic functions, and technical limits in implementation and how to overcome and improve them. <i>Corequisite:</i> ARM 175 (C or better) or consent of department <i>Course fee</i></p>	<p>AUT 278 Hybrid and Alternate Fuels <i>(Course Withdrawn Effective Summer 2016)</i></p>
<p>ARM 177 Automation VII (.5-1) 1 Hour <i>(Prerequisite Change Effective Fall 2016)</i> This course will cover PLC timers, counters, and subroutines. <i>Corequisite:</i> ARM 176 (C or better) or consent of department <i>Course fee</i></p>	<p>BRGA 50 Reading Improvement Healthcare Bridge (Variable) 0.5-6 Hours <i>(Description, Credit Hour and Corequisite Change Effective Fall 2016)</i> This course will focus on critical reading skills while preparing for the General Education Development exam and/or the college placement test using contextualized reading materials related to the health field. In addition, this course will prepare students to transition into college entry level allied healthcare coursework. The course will allow students to apply critical inquiry and investigation skills, as well as develop questions and form hypotheses about health care topics and issues through contextualized readings. Topics will include career exploration of the health field, Wellness and Complementary Medicine and Ethics in Healthcare. <i>Corequisite:</i> Must be enrolled in or previously enrolled in ESL 52, or 60, or ABE 38, or ABE 40 or GED 10 or GED 20. Must have a 6.0 or higher on the Test of Adult Basic Education (TABE) Level D and Department Consent. <i>Course fee</i> <i>May be taken four times for credit</i></p>
<p>ARM 178 Automation VIII (.5-1) 1 Hour <i>(Prerequisite Change Effective Fall 2016)</i> This course will cover identification of PLC logic and hardware faults and symptoms, isolating and correcting a fault, and troubleshooting procedures for closed loop systems. <i>Corequisite:</i> ARM 177 (C or better) or consent of instructor <i>Course fee</i></p>	

**BRGA 51 Writing Improvement Healthcare
Bridge (Variable) 0.5-6 Hours**

(Description, Credit Hour and Corequisite Change Effective Fall 2016)

This contextualized writing course focuses on writing skills for the GED exam and for entering into the healthcare field or in college level health care coursework. Students will be writing multiple draft essays, answering exams in brief essay writings, and developing mini research reports. Grammar is applied and focuses on editing and proofreading needed in academic writing. Topics for writing will be based on readings from current health care issues and discussions.

Corequisite: Must be enrolled in or previously enrolled in ESL 52, or 60, or ABE 38, or ABE 40 or GED 10 or GED 20. Must have a 6.0 or higher on the Test of Adult Basic Education (TABE) Level D and Department Consent.

Course fee

May be taken four times for credit

**BRGA 52 Social Sciences Healthcare
Bridge (Variable) 0.5-6 Hours**

(Title, Description, Credit Hour and Corequisite Change Effective Fall 2016)

This course will focus on critical reading skills in the social sciences while preparing for the General Education Development exam and/or the college placement test using contextualized reading materials related to the healthcare field. In addition, this course will prepare students to transition into college entry level allied healthcare coursework. The course will allow students to apply critical inquiry and investigative skills, as well as develop questions and form hypotheses about various social science healthcare topics; Discussions and case studies will be reviewed through contextualized readings. Graphics will be used to predict outcomes to improve visual literacy skills.

Corequisite: Must be enrolled in or previously enrolled in ESL 52, or 60, or ABE 38, or ABE 40 or GED 10 or GED 20. Must have a 6.0 or higher on the Test of Adult Basic Education (TABE) Level D and Department Consent.

Course fee

May be taken four times for credit

**BRGA 53 General Science Health Care
Bridge (Variable) 0.5-6 Hours**

(Title, Description, Credit Hours, Corequisite Change Effective Fall 2016)

This course will focus on critical reading skills in the general sciences with a major focus on Life Science, while preparing students for the General Education Development exam and/or the college placement test using contextualized reading materials. In addition, this course will prepare students to transition into college entry-level allied healthcare coursework.

Corequisite: Must be enrolled in or previously enrolled in ESL 52, or 60, or ABE 38, or ABE 40 or GED 10 or GED 20. Must have a 6.0 or higher on the Test of Adult Basic Education (TABE) Level D and Department Consent.

Course fee

May be taken four times for credit

CRJ 124 Introduction to Corrections (3-0) 3 Hours

(Title Change Effective Spring 2017)

This course examines the history, philosophy, and administration of corrections in America. An emphasis will be placed on philosophies of punishment, sentencing strategies, the prison community, alternatives to incarceration, and various reform efforts. Critical issues facing corrections will be examined.

Prerequisite: College Reading and Writing Readiness

Typically offered fall and spring only

IAI: CRJ 911

**EIT 299 Special Topics: Network Engineering
(Course Withdrawn Effective Spring 2016)**

**ELI 100 Topics in Academic Enhancement for English
Language Learners (Variable) 1-4 Hours**

(Prerequisite Change Effective Fall 2016)

This course will help high- intermediate to advanced level English language learners to improve and practice specific language skills, such as pronunciation, vocabulary, or grammar, in an academic or professional context. *Note:* This course may be repeated.

Prerequisite: ELI Accuplacer score of 199 or higher OR College Reading and Writing Readiness

May be taken four times for credit toward degree

ELI 101 Academic English-Beginning (6-0) 6 Hours

(Prerequisite Change Effective Fall 2016)

This course offers intensive academic language instruction at the beginning level to English language learners who want to pursue academic studies in American colleges and universities or who want to practice their careers in the United States. The course is divided into two sections: one focuses on Reading and Oral Skills and the other focuses on Writing and Grammar. However, both sections provide integrated practice and reinforcement for students in all skills--reading, writing, listening, speaking, grammar and vocabulary--as well as American culture and study skills.

Prerequisite: ELI Accuplacer score of 120 or higher; OR College Reading and Writing Readiness

ELI 102 Academic English-Intermediate (6-0) 6 Hours

(Prerequisite Change Effective Fall 2016)

This course offers intensive academic language instruction at the intermediate level to English language learners who want to pursue academic studies in American colleges and universities or who want to practice their careers in the United States. The course is divided into two sections: one focuses on Reading and Oral Skills and the other focuses on Writing and Grammar. However, both sections provide integrated practice and reinforcement for students in all skills--reading, writing, listening, speaking, grammar and vocabulary--as well as American culture and study skills.

Prerequisite: Both sections (12 hours) of ELI 101 (C or better); OR ELI Accuplacer score of 171 or higher; OR College Reading and Writing Readiness

- ELI 103 Academic English - Advanced I (6-0) 6 Hours**
(Prerequisite Change Effective Fall 2016)
 This course offers intensive academic language instruction at the advanced level to English language learners who want to pursue academic studies in American colleges and universities or who want to practice their careers in the United States. The course focuses on Writing and Grammar. However, it provides integrated practice and reinforcement for students in all skills--reading, writing, listening, speaking, grammar and vocabulary--as well as American culture and study skills.
Note: ELI 103 and ELI 104 are independent courses. ELI 103 is NOT a prerequisite for ELI 104.
Prerequisite: 12 credit hours in ELI 102 with a grade of C or better; OR ELI Accuplacer score of 221 or higher; OR College Reading and Writing Readiness
- ELI 104 Academic English - Advanced II (6-0) 6 Hours**
(Prerequisite Change Effective Fall 2016)
 This course offers intensive academic language instruction at the advanced level to English language learners who want to pursue academic studies in American colleges and universities or who want to practice their careers in the United States. The course focuses on Reading and Oral Skills. However, it provides integrated practice and reinforcement for students in all skills--reading, writing, listening, speaking, grammar and vocabulary--as well as American culture and study skills.
Note: ELI 103 and ELI 104 are independent courses. ELI 103 is NOT a prerequisite for ELI 104.
Prerequisite: 12 credit hours in ELI 102 with a grade of C or better; OR ELI Accuplacer score of 221 or higher; OR College Reading and Writing Readiness
- ELI 105 Academic English for English Language Learners Transitional I (3-0) 3 Hours**
(Prerequisite Change Effective Fall 2016)
 Level 1 of a 3 level course in academic English for English Language Learners (ELLs) at the transitional level who want to pursue academic studies in American colleges and universities or who want to practice their careers in the United States. This course is for students simultaneously enrolled in another academic class, which is determined by the college. Students will improve all language skills - reading, writing, speaking and listening - while focusing on the content area of the other academic class. Emphasis is on listening and comprehending academic lectures; reading, summarizing, and discussing expository and academic readings; writing expository essays; and participating in classroom and panel discussions.
Prerequisite: ELI Accuplacer score of 270 or higher; OR ELI 103 and ELI 104 both C or better; OR College Reading and Writing Readiness
- ELI 108 Academic Reading and Writing for English Language Learners (6-0) 6 Hours**
(Prerequisite Change Effective Fall 2016)
 This course is designed for English language learners who have been educated in the US or who have lived for many years in the US but who still need to develop advanced academic reading and writing skills necessary to succeed in courses in American colleges and universities. This course will focus on necessary academic reading and writing skills as well as vocabulary enrichment and grammar practice that English language learners need to continue progress in the written forms of their second language.
Prerequisite: ELI Accuplacer score of 235 or higher OR APT score of 80 or higher OR ELI 103 (C or better) OR ELI 104 (C or better) OR ELI 107 OR College Reading and Writing Readiness
- ELI 109 Academic Reading and Writing for English Language Learners II (3-0) 3 Hours**
(Prerequisite Change Effective Fall 2016)
 This course is designed for English language learners who have been educated in the US or who have lived for many years in the US but who still need to further enhance their academic reading and writing skills in order to succeed in courses in American colleges and universities. This course is also designed for advanced English Language Learners who have completed other ELI courses but still need additional ELI support in order to gain confidence in their reading and writing abilities. This course will focus on necessary academic reading and writing skills as well as vocabulary enrichment and grammar practice that English language learners need to continue progress in the written forms of their second language. Important study skills will also be practiced. There will be pronunciation practice of key vocabulary and group discussion on a regular basis.
Prerequisite: ELI Accuplacer score of 285 or higher, OR APT - 122 or higher; OR ELI 103 and ELI 104 (both B or better); OR ELI 107, ELI 108, OR ENG 108 (all C or better); OR College Reading and Writing Readiness
- ELI 125 Introduction to American College Culture (Variable) 1-4 Hours**
(Prerequisite Change Effective Fall 2016)
 This course introduces college-level academic strategies and acculturation skills to English language learners with academic goals. Topics will include the organization of higher education systems in the US, the differences and navigation of US grading systems, Western learning and teaching styles, personal and academic support structures within the college, differences in academic requirements and expectations, appropriate classroom behavior and linguistic forms, and healthy and safe acclimation to the academic and social college environment.
Prerequisite: ELI Accuplacer test score of 221 or higher OR APT score of 80 or higher OR College Reading and Writing Readiness
Corequisite: ELI 103 or ELI 104 or ELI 105 or ELI 106 or ELI 107 or ELI 108 or ELI 109
- ESL 31 Beginning ESL Literacy Level 1.2 (Variable) 0.5-6 Hours**
(Title, Description and Credit Hour Change Effective Spring 2017)
 This course is a continuation of English as a Second Language Beginning Literacy Level 1.1. It is for students who have a fundamental knowledge of English. This course continues to focus on reading, writing, listening and speaking in everyday situations, and looks to reinforce and strengthen students' skills while addressing civics and community resources, workplace skills and employment, basic banking needs and some American culture.
Recommended: Students should be placed using the scores on the state mandated placement test for ESL Literacy level or by teacher recommendation.
Course fee
 May be taken four times for credit

ESL 41 Beginning ESL Level 2.2 (Variable) 0.5-6 Hours
(Title, Description and Credit Hour Change Effective Spring 2017)

This course is a continuation of Beginning Level 2.1. This course is intended for English as Second Language learners who are just starting to communicate in English. The focus of this course is to improve and extend the student's overall skills in reading, writing, listening and speaking by working on basic grammatical structures, and extending the student's general knowledge of survival skills through reading and writing.

Prerequisite: Student should have the appropriate score on the state mandated ESL exam and/or teacher recommendation.

Course fee

May be taken four times for credit

ESL 43 High Beginning ESL Level 3.2 (Variable) 0.5-6 Hours
(Title, Description and Credit Hour Change Effective Spring 2017)

This course is a continuation of High Beginning Level 3.1. This course is for students who are able to ask and answer simple questions related to survival needs and basic social situations. They should have some control of very basic grammar structures, intonation and speaking pace and rhythm; and also be able to use basic reading strategies to read adapted reading materials as well as write simple notes, messages and short paragraphs using present tense and past tense with correct punctuation.

Prerequisite: Student should have the appropriate score on the state mandated ESL exam and/or teacher recommendation.

Course fee

May be taken four times for credit

ESL 51 Intermediate ESL Level 4.2 (Variable) 0.5-6 Hours
(Title, Description and Credit Hour Change Effective Spring 2017)

This course is a continuation of Intermediate Level 4.1. It is for students who can express basic needs and can engage in basic social conversations. Students are also able to monitor spoken comprehension using listening strategies and can decipher new words in context. Students can use reading strategies and context clues to interpret and hold a basic discussion about familiar topics and combine new and prior knowledge in a variety of text. This course extends the students' basic knowledge of speaking, listening, reading and writing through a variety of life skill and workplace topics.

Prerequisite: Appropriate score on the state mandated ESL test and/or teacher recommendation.

Course fee

May be taken four times for credit

ESL 53 High Intermediate ESL Level 5.2 (Variable) 0.5-6 Hours
(Title, Description and Credit Hour Change Effective Spring 2017)

This course is a continuation of High Intermediate Level 5.1. It is for students who have a basic command of spoken English. The student should be able to comprehend basic medical terms and forms, complete simple job applications and follow basic oral instructions. The student should also be able to write basic instructions and simple paragraphs about daily activities and personal issues and should be capable of working with basic computer software and following basic technology instructions. This course will extend students speaking, listening, reading and writing skills based on a variety of life skill topics.

Prerequisite: Appropriate score on the state mandated ESL test and/or teacher recommendation.

Course fee

May be taken four times for credit

ESL 56 Listening and Speaking for Intensive Low Advanced ESL (Variable) 0.5-6 Hours
(Title, Description and Credit Hour Change Effective Fall 2016)

This course is for English language learners at level 5 of English language proficiency; students will speak and listen in English in order to prepare them for the workforce, life skills and transition into a variety of college programs and certificates. Appropriate score on the ESL placement test or Department Consent required.

Course fee

May be taken four times for credit

ESL 57 Grammar for Intensive Low Advanced ESL (Variable) 0.5-6 Hours
(Title, Description and Credit Hour Change Effective Fall 2016)

Students will learn English grammar and structures to help them in speaking and writing at the low advanced level to prepare for workforce, life skills and transition into a variety of college programs. Structures covered in class include introductions to past participle forms, present perfect aspect, gerunds and infinitives, and pronoun reference in direct and indirect speech. Practice includes both oral and written activities. Appropriate score on the ESL placement test or Department Consent required.

Course fee

May be taken four times for credit

ESL 58 Reading for Intensive Low Advanced ESL (Variable) 0.5-6 Hours
(Title, Description and Credit Hours Change Effective Fall 2016)

Students at the low advanced level of English language proficiency will read in English to prepare for workforce, life skills and transition into a variety of college programs. Emphasis is placed upon readings related to American culture. Practice includes activities for vocabulary improvement and dictionary skills.

Prerequisite: Appropriate score on the ESL placement test or department consent.

Course fee

May be taken four times for credit

ESL 59 Writing for Intensive Low Advanced ESL (Variable) 0.5-6 Hours
(Title, Description and Credit Hours Change Effective Fall 2016)

Students at the low advanced level of English language proficiency will write in English to prepare for various types of written assignments found in workplace and college preparatory settings. Appropriate score on the ESL placement test or Department Consent required.

Course fee

May be taken four times for credit

ESL 61 Low Advanced ESL 6.2 (Variable) 0.5-6 Hours
(Title, Description and Credit Hour Change Effective Spring 2017)

This is a continuation of Advanced Level 6.1. This course is for students who can hold a conversation in English on everyday subjects and on new subjects with new vocabulary; they can clarify general meaning by rewording and summarizing content. They also have a good grasp of English grammar and grammar rules. In this course, students will practice reading, writing, speaking and listening in English from a variety of text, adapted and authentic.

Prerequisite: Student should have the appropriate score on the state mandated ESL exam and/or teacher recommendation.

Course fee

May be taken four times for credit

ESL 63 Advanced ESL Level 7.2 (Variable) 0.5-6 Hours
(Title, Description and Credit Hour Change Effective Spring 2017)

This course is a continuation of Advanced Level ESL 7.1. It is a course for English Language Learners who are familiar with many of the essential grammatical structures and most verb tenses, but who need further skills in speaking, reading and writing English. Students will strengthen and refine their control of speaking, reading and writing skills through a variety of topics based on American culture and cultural issues.

Prerequisite: Appropriate score on the state mandated ESL exam and/or teacher recommendation.

Course fee

May be taken four times for credit toward degree

EHS 111 Environmental Compliance (3-0) 3 Hours
(Prerequisite Change Effective Fall 2016)

This course emphasizes Hazard Communication Standards required by law, including the worker and community. "Right-to-Know" law and the communication that must be available to emergency responders is addressed. Specific topics include safety data sheets (SDS), proper labeling of containers and placarding according to NFPA requirements, and the preparation of a written program for an industry to follow to provide a safe working environment for employees and safe living conditions for the community.

Prerequisite: APT score of 122 or higher, or ELI Accuplacer score of 285 or higher or ENG 108, ELI 108, or ELI 107 (all C or better), or ELI 103 AND ELI 104 (B or better), or College Reading and Writing Readiness AND Basic Algebra Readiness

EHS 113 Hazardous Materials Regulation (3-0) 3 Hours
(Prerequisite Change Effective Fall 2016)

This course offers a historical overview of occupational and environmental health issues. The history of environmental regulation and current trends will also be included. Students will study past and present legislation with an emphasis on the interpretation of the Department of Labor's Occupational Safety and Health Act (OSHA).

Prerequisite: APT score of 122 or higher, or ELI Accuplacer score of 285 or higher or ENG 108, ELI 108, or ELI 107 (all C or better), or ELI 103 AND ELI 104 (B or better), or College Reading and Writing Readiness AND Basic Algebra Readiness

EHS 115 Environmental Sampling Procedures (2-2) 3 Hours
(Prerequisite Change Effective Fall 2016)

This course emphasizes the practical aspects of environmental sampling. Students will be taught the basic principles of properly collecting, analyzing, and interpreting the results of air, aqueous, and solid environmental samples in a safe and efficient manner. Students will gain hands-on experience in the following areas: laboratory equipment decontamination, calibration and maintenance; field survey techniques; and sample collection and analysis.

Prerequisite: APT score of 122 or higher, or ELI Accuplacer score of 285 or higher or ENG 108, ELI 108, or ELI 107 (all C or better), or ELI 103 AND ELI 104 (B or better), or College Reading and Writing Readiness AND Basic Algebra Readiness

EHS 117 Environmental Health (3-0) 3 Hours
(Prerequisite Change Effective Fall 2016)

This course is designed to introduce students to environmental health as it relates to the anticipation, recognition, evaluation, and control of hazards in the workplace. Emphasis is on chemical and physical hazards in occupationally related diseases. Historical basis and current legislation are discussed. In addition, the principles of epidemiology, industrial toxicology, exposure standard, and respiratory protection are addressed.

Prerequisite: APT score-122 or higher, or Accuplacer score-285 or higher or ENG 108, ELI 108, or ELI 107 (all C or better), or ELI 103 AND ELI 104 (B or better), or College Reading and Writing Readiness AND Basic Algebra Readiness.

Corequisite: EHS 115

EHS 131 Introduction to Water Resources (3-0) 3 Hours
(Prerequisite Change Effective Fall 2016)

This course is an introduction to the science and policy related to managing fresh water resources. Topics include the hydrologic cycle, surface and groundwater hydrology, water quality, water use and water management, drinking water and wastewater treatment, water allocation laws, the economics of water use, environmental impacts of water use, and water use conflicts.

Prerequisite: APT score of 122 or higher, or ELI Accuplacer score of 285 or higher or ENG 108, ELI 108, or ELI 107 (all C or better), or ELI 103 AND ELI 104 (B or better), or College Reading and Writing Readiness AND Basic Algebra Readiness

FST 111 Introduction to Fire Service (3-0) 3 Hours
(Description and Prerequisite Change Effective Fall 2016)

This course introduces students to the history and philosophy of the fire service. An overview of all aspects of fire science technology: fire fighting, emergency medical, underwater rescue, hazardous materials, public education, fire investigations, and fire prevention will be provided. This course provides an orientation for people who are considering involvement in the fire service. Field trips are scheduled for the course.

Note: Individuals with greater than one year firefighter experience are not eligible for credit.

Prerequisite: College Reading and Writing Readiness OR concurrent enrollment in ENG 109 or ELI 109 or ENG 100 -AND- Basic Algebra Readiness

GED 10 Pre-GED 1 (Variable) 0.5-6 Hours
(Title Change Effective Fall 2016)

This course is an individualized program in general language development and mathematics. Students progress at their own rates in reading comprehension, English grammar, spelling, and punctuation as well as mathematics. The program is designed to raise basic skills in mathematics, reading and language to a level which will enable students to pursue the GED Programs.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE 9.0–10.9) or consent of instructor and/or department chair.

Course fee

May be taken four times for credit

GED 12 Pre-GED Reading 1 (Variable) 0.5-6 Hours
(Title, Credit Hour and Description Change Effective Fall 2016)

This course focuses on critical reading techniques. It provides information-processing skills that will be useful in GED preparation and in an academic or workplace environment.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE 9.0-10.9) OR consent of instructor or department chair.

Course fee

May be taken four times for credit

GED 14 Pre-GED Reading 2 (Variable) 0.5-6 Hours
(Title and Credit Hour Change Effective Fall 2016)

This course incorporates reading and analysis of informational selections to develop critical reading skills necessary for success on the GED exam.

Prerequisite: Students will be tested with a standardized assessment (e.g. TABE 9.0-10.9).

Course fee

May be taken four times for credit

GED 15 Pre-GED Mathematics 2 (Variable) 0.5-6 Hours
(Title and Credit Hour Change Effective Fall 2016)

This mathematics course will cover dependent probability, functions and graphs of linear equations.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE pretest levels from 9.0–10.9) OR consent of instructor or department chair.

Course fee

May be taken four times for credit

GED 16 Pre-GED Reading 3 (Variable) 0.5-6 Hours
(Title and Credit Hour Change Effective Fall 2016)

This course introduces students to Social Studies texts, concepts and skills in preparation for the GED exam.

Prerequisite: Students will be pre- and post-tested with a standardized assessment (e.g. TABE 9.0-10.9) OR consent of instructor or department chair.

Course fee

May be taken four times for credit

GED 17 Pre-GED Mathematics 3 (Variable) 0.5-6 Hours
(Credit Hour Change Effective Fall 2016)

This mathematics course will cover theorems of geometric figures and coordinate geometry.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE pretest levels from 9.0–10.9) OR consent of instructor or department chair.

Course fee

May be taken four times for credit

GED 18 Pre-GED Reading 4 (Variable) 0.5-6 Hours
(Title, Credit Hour, and Description Change Effective Fall 2016)

This course will emphasize the development of basic scientific skills. In addition, scientific vocabulary and reading comprehension will be addressed to assist students in preparing for the GED Science exam.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE 9.0-10.9) OR consent of instructor or department chair.

Course fee

May be taken four times for credit

GED 19 Pre-GED Mathematics 4 (Variable) 0.5-6 Hours
(Credit Hour Change Effective Fall 2016)

This mathematics course will cover mathematical symbols, their limitations, and measurement.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE pretest levels from 9.0–10.9) OR consent of Instructor or department chair.

Course fee

May be taken four times for credit

GED 20 GED Preparation 1 (Variable) 0.5-6 Hours
(Title and Credit Hour Change Effective Fall 2016)

This course is a preparation for those who want to take the General Educational Development Examination (G.E.D.) to earn their high school equivalency certificate. It is for adults who have not completed high school.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE pretest levels from 11.0-12.9) or consent of instructor and/or department chair.

Course fee

May be taken four times for credit

GED 21 GED Preparation 2 (Variable) 0.5-6 Hours
(Title and Credit Hour Change Effective Fall 2016)

This course is for those who need further instruction before attempting the General Educational Development Examination (G.E.D.) to earn their high school equivalency certificate.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE 11.0-12.9) or consent of instructor and/or department chair.

Course fee

May be taken four times for credit

GED 22 GED Reading 1 (Variable) 0.5-6 Hours
(Title and Credit Hour Change Effective Fall 2016)

This course broadens reading comprehension skills and builds vocabulary skills. It provides information-processing skills that are necessary in GED preparation and in an academic or workplace environment appropriate to the course level.

Prerequisite: Mandatory placement with a standardized assessment (e.g. TABE 11.0-12.9)

Course fee

May be taken four times for credit

GED 23 GED Algebra 1 (Variable) 0.5-6 Hours
(Credit Hour Change Effective Fall 2016)

This mathematics course will cover the real number system, quantities, and structure in expressions.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE pretest levels from 9.0-10.9) OR consent of instructor or department chair.

Course fee

May be taken four times for credit

GED 24 GED Reading 2 (Variable) 0.5-6 Hours
(Title and Credit Hour Change Effective Fall 2016)

This course broadens reading skills of complex informational texts. It provides information-processing skills that are necessary in GED preparation and in an academic or workplace environment appropriate to the course level.

Prerequisite: Mandatory placement with a standardized assessment (e.g. TABE 11.0-12.9) OR consent of instructor or department chair.

Course fee

May be taken four times for credit

GED 25 GED Algebra 2 (Variable) 0.5-6 Hours
(Credit Hour Change Effective Fall 2016)

This mathematics course will cover creating equations, arithmetic with polynomials and rational expressions.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE pretest levels from 9.0-10.9) OR consent of instructor or department chair.

Course fee

- GED 26 GED Reading 3 (Variable) 0.5-6 Hours**
(Title and Credit Hour Change Effective Fall 2016)
 This course broadens reading skills in History and Social Studies. It provides information-processing skills that are necessary in GED preparation and in an academic or workplace environment appropriate to the course level.
Prerequisite: Mandatory placement with a standardized assessment (e.g. TABE 11.0-12.9) OR consent of instructor or department chair.
Course fee
May be taken four times for credit
- GED 27 GED Algebra 3 (Variable) 0.5-6 Hours**
(Credit Hour Change Effective Fall 2016)
 This mathematics course will cover reasoning with equations and inequalities.
Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE pretest levels from 9.0-10.9) OR consent of instructor or department chair.
Course fee
- GED 28 GED Reading 4 (Variable) 0.5-6 Hours**
(Description and Credit Hour Change Effective Fall 2016)
 This course broadens reading skills in science and technical subjects. It provides information-processing skills that are necessary in GED preparation and in an academic or workplace environment appropriate to the course level.
Prerequisite: Mandatory placement with a standardized assessment (e.g. TABE 11.0-12.9) OR consent of instructor or department chair.
Course fee
- GED 29 GED Algebra 4 (Variable) 0.5-6 Hours**
(Credit Hour Change Effective Fall 2016)
 This mathematics course will cover interpreting and building functions, as well as linear, quadratic and exponential models.
Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE pretest levels from 9.0-10.9) OR consent of instructor or department chair.
Course fee
- GED 33 GED Geometry 1 (Variable) 0.5-6 Hours**
(Credit Hour Change Effective Fall 2016)
 This mathematics course will introduce students to transformations in the plane and congruence in terms of rigid motions. Students will experiment with transformations in the plane.
Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE 9.0–10.9) or consent of instructor or department chair.
Course fee
- GED 35 GED Geometry 2 (Variable) 0.5-6 Hours**
(Credit Hour Change Effective Fall 2016)
 This mathematics course will cover geometric theorems, geometric constructions and geometric properties with equations.
Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE pretest levels from 9.0-10.9) OR consent of instructor or department chair.
- GED 37 GED Geometry 3 (Variable) 0.5-6 Hours**
(Credit Hour Change Effective Fall 2016)
 This mathematics course will introduce students to similarity and right triangles. Students will prove theorems involving similarity.
Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE pretest levels from 9.0-10.9) OR consent of instructor or department chair.
Course fee
- GED 39 GED Geometry 4 (Variable) 0.5-6 Hours**
(Credit Hour Change Effective Fall 2016)
 This mathematics course will cover circles, geometric measurement and dimensions.
Recommended: Must be placed into class using a mandatory assessment (e.g. TABE 9.0–10.9) or consent of instructor or department chair.
Course fee
- HET 251 Sheet Metal Fabrication (0-2) 1 Hour**
(Lecture/Lab Hours Corrected)
- HRT 184 Basic Floral Design**
(Course Withdrawn Effective Spring 2017)
- HRT 185 Advanced Floral Design**
(Course Withdrawn Effective Spring 2017)
- LPO 111 Fundamentals of Light and Lasers (3-2) 4 Hours**
(Prerequisite Change Effective Fall 2016)
 Topics covered include the nature and property of light, light sources, laser safety, geometrical and physical optics, and principles of lasers. Selected topics in math will be reviewed in conjunction with topics in photonics. Typical math topics embedded in this course include scientific notation, introductory algebra, geometry, trigonometry, exponents and logarithms.
Prerequisite: MTH 118 (C or better) or minimum Math ACT score of 25 or appropriate Math Placement Test. Language skills equivalent to ENG 108, ELI 107 or ELI 108 (C or better) OR a ELI Accuplacer score of 285 or higher OR 122 on the APT placement test.
- MTH 102 Basic Algebra (4-0) 4 Hours**
(Prerequisite Change Effective Fall 2016)
 This developmental course is the first course in the algebra sequence. Basic algebra topics include, but are not limited to: expressions, linear equations and functions with graphing, exponents, basic polynomial operations, and factoring. Modeling and problem solving will be introduced throughout the course.
Note: This course does not apply to any associate degree or career certificate program. A specific graphing calculator is required for the course. Contact the EMPS division office for details.
Prerequisite: MTH 101 (C or better) or Basic Algebra Readiness which includes an appropriate score on the CLC Math Placement Test, Math ACT, or Math SAT.
- MTH 104 Geometry (4-0) 4 Hours**
(Prerequisite Change Effective Fall 2016)
 This course covers the fundamental concepts of geometry for students who lack credit in one year of high school geometry with a grade of C or better or for students who need a review of the subject matter. The course includes the concepts of undefined terms, axioms and postulates, and theorems. Topics also include: construction, locus, and properties of lines, angles, polygons (with emphasis on triangles and quadrilaterals), and circles. The writing of proofs (deductive and indirect) and problem solving are integrated throughout the course. *Note:* This course does not apply to any associate degree or certificate.
Prerequisite: MTH 102 (C or better) or appropriate score on CLC Math Placement Test, Math ACT, or Math SAT.

MTH 105 Preparatory Mathematics for General Education (5-0) 5 Hours***(Prerequisite Change Effective Fall 2016, Credit Hour Change Effective Spring 2017)***

This course focuses on developing mathematical maturity through problem solving, critical thinking, data analysis, and the writing and communication of mathematics. Students will develop conceptual and procedural tools that support the use of key mathematical concepts in a variety of contexts. Instruction will emphasize the connections between verbal, numerical, symbolic and graphical representation of the concepts being taught. Emphasis will be placed on modeling and problem solving, with techniques and manipulations covered in context. The three strands of the course are Algebra, functions, and modeling as they apply to linear, polynomial, rational, and exponential expressions, equations, and functions.

Note: This developmental course serves as a prerequisite for MTH 140, MTH 141, MTH 222, or MTH 108. This course does not apply to any associate degree or career certificate program. A specific graphing calculator is required for the course. Contact the EMPS division office for details.

Prerequisite: MTH 101 (C or better) or Basic Algebra Readiness which includes an appropriate score on the CLC Math Placement Test, Math ACT, or Math SAT.

MTH 108 Intermediate Algebra (5-0) 5 Hours***(Prerequisite Change Effective Fall 2016)***

This developmental course is the second course in the algebra sequence that further develops the concepts of basic algebra.

Intermediate algebra topics include, but are not limited to: polynomial inequalities, systems of equations and inequalities; quadratic, rational, radical, exponential and logarithmic equations and functions. Modeling and problem solving will be introduced throughout the course.

Note: This course does not apply to any associate degree or career certificate program. A specific graphing calculator is required for the course. Contact the EMPS division office for details.

Prerequisite: MTH 102 or MTH 105 (C or better) or appropriate score on the CLC Math Placement Test, Math ACT, or Math SAT.

MTH 115 Applied Mathematics II (3-0) 3 Hours***(Prerequisite Change Effective Fall 2016)***

This course introduces practical geometry, measurement of plane and solid figures, precision, accuracy, elementary right triangle trigonometry, law of cosines, and law of sines.

Note: A specific graphing calculator is required for this course. Contact the EMPS Division office for details.

Prerequisite: MTH 114 or MTH 102 (C or better) or appropriate score on the CLC Math Placement Test, Math ACT, or Math SAT.

MTH 117 Technical Mathematics I (3-0) 3 Hours***(Prerequisite Change Effective Fall 2016)***

This course covers college mathematics for students majoring in technology. It includes algebra, geometry and trigonometry.

Note: A specific graphing calculator is required for this course. Contact the EMPS division office for details.

Prerequisite: MTH 114 or MTH 102 (C or better) or appropriate score on the CLC Math Placement Test, Math ACT, or Math SAT.

MTH 118 Technical Mathematics II (4-0) 4 Hours***(Prerequisite Change Effective Fall 2016)***

This course is a continuation of MTH 117. Major topics are algebra, geometry, vectors, complex numbers, logarithms, matrices, inequalities and trigonometry. *Note:* A specific graphing calculator is required for this course. Contact the EMPS Division office for details.

Prerequisite: MTH 117 (C or better) or an appropriate score on the CLC Math Placement Test, Math ACT, or Math SAT.

Typically offered spring only

MTH 121 Mathematics for Elementary Teaching I (3-0) 3 Hours***(Prerequisite Change Effective Fall 2016)***

This is the first college-level math course in a two course sequence which is intended for students planning to major in elementary education. This course is not intended to offer teaching methods to future educators. Topics include problem solving, sets, logic, functions, numeration systems, real number system, number theory, probability and statistics. To fulfill the general education core curriculum math requirement the second course in the sequence, Math 221 (Mathematics for Elementary Teaching II), must also be completed. *Note:* A specific graphing calculator is required for this course. Contact the EMPS Division office for details.

Prerequisite: MTH 104 (C or better) or one year of High School Geometry (C or better); AND MTH 108 or MTH 107 (both C or better) or appropriate score on CLC Math Placement Test, Math ACT, or Math SAT.

MTH 122 College Algebra (4-0) 4 Hours***(Prerequisite Change Effective Fall 2016)***

This course is primarily intended for students who plan on taking MTH 127 Finite Mathematics, MTH 224 Calculus for Business and Social Sciences, or MTH 244 Discrete Mathematics. This course also serves as the first course for students planning to take the sequence of MTH 122 College Algebra and MTH 123 Trigonometry as a means of taking MTH 145 Calculus and Analytic Geometry I.

College algebra topics include, but are not limited to: polynomial, rational, exponential, and logarithmic functions, graphs, and equations, systems of nonlinear equations and inequalities, matrices, conic sections, and sequences and series. Modeling and problem solving will be implemented throughout the course. *Note:* A specific graphing calculator is required for this course. Contact EMPS Division Office for details. Credit will not be given in MTH 122 to those with prior credit in MTH 144 Precalculus. This course will not meet the General Education Math Requirement for a transfer degree but may serve as a Math Requirement for a career degree.

Prerequisite: MTH 104 (C or better) or one year of High School Geometry (C or better); AND MTH 108 or MTH 107 (both C or better) or appropriate score on CLC Math Placement Test, Math ACT, or Math SAT.

MTH 123 Trigonometry (3-0) 3 Hours***(Prerequisite Change Effective Fall 2016)***

This course is primarily for students who intend to take MTH 145 Calculus and Analytic Geometry I. Trigonometry topics include, but are not limited to: trigonometric functions and their graphs, trigonometric identities and equations, and applications of trigonometry. Modeling and problem solving will be implemented throughout the course. *Note:* A specific graphing calculator is required for this course. Contact EMPS division office for details.

Prerequisite: MTH 122 (C or better) or concurrent enrollment in MTH 122 or an appropriate score on the CLC Math Placement Test, Math ACT, or Math SAT.

MTH 127 Finite Mathematics I (3-0) 3 Hours
(Prerequisite Change Effective Fall 2016)

Designed primarily for business, commerce or social science students of whom it may be required. Topics include set theory, elementary combinatorics, probability, matrix algebra, introduction to linear programming, and Markov chains. *Note:* Specific graphing calculator is required for this course. Contact the EMPS division office for details.

Prerequisite: MTH 122 (C or better) or appropriate score on the CLC Math Placement Test, Math ACT, or Math SAT.

IAI: MI 906

MTH 140 Contemporary Mathematics (3-0) 3 Hours
(Prerequisite Change Effective Fall 2016)

This course is designed to meet general education mathematics requirements for students who are not majoring in mathematics, science or business. The goal of this survey course is to develop competency in analytical reasoning, problem solving, and multi-step decision making as well as exposing students to some current trends in mathematical thought. The emphasis is on mathematical reasoning and the solving of real-life problems involving mathematics. The course covers three or four of the following topics in depth: graph theory, counting techniques and probability, topics in geometry, logic/set theory, linear programming, and game theory. This course is not intended as a prerequisite for any other mathematics course.

Note: A specific graphing calculator is required for this course. Contact the EMPS division office for details.

Prerequisite: MTH 105 (C or better) –OR– MTH 106 (C or better) –OR– [two years of HS Algebra (C or better) –AND– Basic Algebra Readiness] –OR– appropriate score on CLC Math Placement Test, Math ACT or Math SAT.

IAI: MI 904

MTH 141 Quantitative Literacy (3-0) 3 Hours
(Prerequisite Change Effective Fall 2016)

Designed to meet general education mathematics requirements for students who are not majoring in mathematics, science or business. A conceptual understanding is developed in several areas including: representing and analyzing data through such statistical measures as central tendency, dispersion, normal distribution, and correlation and regression; using logical statements and arguments in a real-world context; estimating, approximating and judging the reasonableness of answers; graphing and using polynomial functions and systems of equations in the interpretation and solution of problems; and selecting and using appropriate approaches and tools in formulating and solving real-world problems. *Note:* A specific graphing calculator is required for this course. Contact the EMPS division office for details. This course meets the math requirement in the Associate of Arts and Associate of Fine Arts degrees only. May be used as elective credit only in all other degrees.

Prerequisite: MTH 105 (C or better) –OR– MTH 106 (C or better) –OR– [two years of HS Algebra (C or better) –AND– Basic Algebra Readiness] –OR– appropriate score on CLC Math Placement Test, Math ACT or Math SAT.

IAI: MI 901

MTH 144 Precalculus (5-0) 5 Hours
(Prerequisite Change Effective Fall 2016)

This course is primarily for students who intend to take MTH 145 Calculus and Analytic Geometry I. Precalculus topics include, but are not limited to: polynomial, rational, exponential, logarithmic, and trigonometric functions, graphs, and equations, trigonometric identities, applications of trigonometry, systems of nonlinear equations and inequalities, matrices, conic sections, and sequences and series.

Note: Use of a specific graphing calculator will be integrated throughout the course. Contact EMPS Division Office for details.

Students who earn a grade of C in MTH 108 or MTH 107 must complete the sequence of MTH 122 College Algebra and MTH 123 Trigonometry as a prerequisite for MTH 145 Calculus and Analytic Geometry I.

Prerequisite: MTH 104 (C or better) or one year of High School Geometry (C or better); AND MTH 108 or MTH 107 (both B or better) or appropriate score on CLC Math Placement Test, Math ACT, or Math SAT.

MTH 145 Calculus and Analytic Geometry I (5-0) 5 Hours
(Prerequisite Change Effective Fall 2016)

This course covers the calculus of algebraic and transcendental functions. Analytic geometry topics are limited to the line and circle. Calculus topics include limits, differentiation and integration of both algebraic and transcendental functions, including trigonometric functions, with applications. *Note:* A specific graphing calculator is required for this course. Contact the EMPS division office for details.

Prerequisite: MTH 123 (C or better) or MTH 144 (C or better) or appropriate score on CLC Math Placement Test, Math ACT, or Math SAT.

IAI: MI 900-I, MTH 901

MTH 222 Elementary Statistics (4-0) 4 Hours
(Prerequisite Change Effective Fall 2016)

This course covers the application of elementary principles of probability, descriptive statistics, an introduction to inferential statistics and elementary computer techniques. *Note:* A specific graphing calculator is required for this course. Contact the EMPS Division office for details.

Prerequisites: MTH 105 (C or better) –OR– MTH 106 (C or better) –OR– appropriate score on CLC Math Placement Test, Math ACT, or Math SAT.

IAI: MI 902, BUS 901

MTH 224 Calculus for Business and Social Science (4-0) 4 Hours
(Prerequisite Change Effective Fall 2016)

This course includes analytical geometry and calculus topics such as functions and their graphs, rectangular coordinate systems, limits, differentiation and integration of algebraic, logarithmic and exponential functions. Applications are included along with selected topics from multivariable calculus.

Note: A specific graphing calculator is required for this course. Contact the EMPS division office for details.

Prerequisite: MTH 122 (C or better) or MTH 144 (C or better) or appropriate score on CLC Math Placement Test, Math ACT, or Math SAT.

IAI: MI 900-B

MTH 244 Discrete Mathematics (3-0) 3 Hours***(Prerequisite Change Effective Fall 2016)***

Introduction to the mathematical analysis of finite collections and to the mathematical foundations of sequential machines, computer system design, data structures and algorithms. Topics include, but are not restricted to sets, counting, recursion, graph theory, trees, networks, Boolean algebras, automata, and formal grammars and languages. This course is a beginning course in the mathematics of computer science.

Note: Specific graphing calculator is required for this course. Contact the EMPS division office for details.

Prerequisite: MTH 122 (C or better) or appropriate score on CLC Math Placement Test, Math ACT, or Math SAT.

Typically offered spring only

IAI: MI 905, CS 915

MET 115 Industrial Pneumatics and Hydraulics (3-0) 3 Hours***(Prerequisite Change Effective Fall 2016)***

This course introduces students to the study of fluid power technology using liquid or compressed air as the transfer media. Complete hydraulic and pneumatic systems are studied including power sources, reservoirs, pumps, compressors, lines, valves and actuators.

Prerequisite: ELI Accuplacer score of 221 or higher, APT score of 80 or higher, ELI 103 (C or better), ELI 104 (C or better), ELI 107 (C or better), or College Reading and Writing Readiness AND Basic Algebra Readiness.

MET 116 Machine Components and Repair (2-2) 3 Hours***(Prerequisite Change Effective Fall 2016)***

This course identifies basic machine components and demonstrates common machine component repair and replacement operations. Machine parts such as belts, gears, seals, bearings, and fasteners will be discussed and repaired.

Prerequisite: ELI Accuplacer score of 221 or higher, APT score of 80 or higher, ELI 103 (C or better), ELI 104 (C or better), ELI 107 (C or better), or College Reading and Writing Readiness AND Basic Algebra Readiness.

Course fee

MET 117 Pump Overhaul and Repair (2-2) 3 Hours***(Prerequisite Change Effective Fall 2016)***

This course covers the processes needed to diagnose, troubleshoot, repair and maintain common types of centrifugal pumps.

Prerequisite: ELI Accuplacer score of 221 or higher, APT score of 80 or higher, ELI 103 (C or better), ELI 104 (C or better), ELI 107 (C or better), or College Reading and Writing Readiness AND Basic Algebra Readiness.

Course fee

MET 118 Machinery's Handbook (3-0) 3 Hours***(Prerequisite Change Effective Fall 2016)***

This course explores the intent, use, and application of the Machinery's Handbook. It applies the principles, concepts, and data in the Handbook to industrial related projects. Emphasis will be placed on chart usage and data retrieval from this handbook.

Prerequisite: ELI Accuplacer score of 221 or higher, APT score of 80 or higher, ELI 103 (C or better), ELI 104 (C or better), ELI 107 (C or better), or College Reading and Writing Readiness AND Basic Algebra Readiness.

MOA 111 Clinical Medical Assisting I (3-3) 4 Hours***(Lecture/Lab Hour Change Effective Spring 2017)***

This course introduces the students to the role of the Medical Assistant in the clinical area of the medical clinic, hospital or laboratory. Topics include medical ethics and law, asepsis, infection control, patient history and record management, vital signs, and administering medications.

Prerequisite: Basic Algebra Readiness, BIO 111 or BIO 244 and BIO 245 (all C or better)

Corequisites: HIT 111, HIT 119 and MOA 112 (C or better if already completed)

Course fee

NUR 110 Nurse Assisting (6-3) 7 Hours***(Prerequisite Change Effective Fall 2016)***

This course prepares students for employment as nurse assistants. Depending on the setting, nurse assistants provide direct patient care; transfer and transport patients, equipment supplies and specimens, and make observations regarding patients. Duties might include giving baths and back rubs; making beds; serving meals; helping patients in and out of bed; taking temperature, pulse, respiration, weight and blood pressure measurements; answering patients' call lights; taking appropriate action in emergencies; and performing other duties as directed by the nurse. While the majority of nurse assistants work in long term care facilities, many are employed in hospitals, home care, and other care settings. Upon successful completion of this course, the student will be eligible to take the state mandated written competency examination for Nurse Assistant Certification. *Note:* Background check and health requirement must be completed prior to enrolling in the course.

Prerequisite: One of the following (or higher): TABE-10.0, APT-122, or ELI Accuplacer-285; OR ELI 103 and 104 (B or better); OR ELI 107, ELI 108, or ENG 108 (all C or better); OR College Reading and Writing Readiness AND 16 years or older

Course fee

PDS 121 Self-Empowerment (1-0) 1 Hour***(Prerequisite Change Effective Fall 2016)***

This course empowers students to become more aware of self by identifying personal strengths and values in order to resolve conflicts and set goals. Students will work in a structured setting to reinforce one another's positive attributes. With increased personal understanding, they are empowered to achieve appropriate goals.

This seminar is especially valuable for students who seek more self-confidence and motivation to live a more fulfilled life at home, at work, in college--but most of all, within themselves. This course may not be audited.

Prerequisite: ELI Accuplacer score of 235 or higher, OR APT score of 80 or higher; OR ELI 103 OR ELI 104 OR ELI 107 OR ELI 108 OR ELI 109 OR College Reading and Writing Readiness

PDS 122 Career Exploration (1-0) 1 Hour***(Prerequisite Change Effective Fall 2016)***

This course is designed to teach students how to engage in a comprehensive career planning process. The course focuses primarily on the exploration phase of this process. Students will use various assessments to understand their interests, values, personality traits, skills and experiences as related to career identification. Students will use information about the world of work, identify and examine career clusters or job families, occupational trends, education and training requirements and job search strategies.

Note: Students are expected to synthesize what they have learned and develop a career plan at the end of the course.

Prerequisite: ELI Accuplacer score of 235 or higher, OR APT score of 80 or higher; OR ELI 103 OR ELI 104 OR ELI 107 OR ELI 108 OR ELI 109 OR College Reading and Writing Readiness

Course fee

PDS 124 Transition to College (1-0) 1 Hour***(Prerequisite Change Effective Fall 2016)***

This course is designed to assist new students with their transition into college. Topics may include: college academic policies, college vocabulary, student and faculty expectations/roles, college organization/layout, college resources, use of educational technology, diversity, involvement in college activities/organizations, educational planning, and assessment of study skills.

Prerequisite: Score on ELI Accuplacer-235 or higher OR APT-80 or higher OR ELI 103 OR ELI 104 OR ELI 107 OR ELI 108 OR ELI 109 OR College Reading and Writing Readiness

Corequisite: Enrollment in one other CLC course

PED 121 Individual Activities (0-2) 1 Hour***(Prerequisite Change Effective Fall 2016)***

This course provides instruction and participation in one of numerous athletic, fitness, and wellness activities. Choices may include Total Fitness, Strength Training, Aikido, Hapkido, Tai Chi, and various group exercise classes. Consult the class schedule for sports offered during a particular semester.

Note: No more than four credit hours earned in PED 121 and/or PED 127 counts toward an associate degree. Enrollment attempts beyond this limit will result in an error message indicating non-enrollment. See Center for Personal Enrichment for non-credit classes.

Prerequisite: ELI Accuplacer score of 235 or higher OR APT score of 80 or higher OR ELI 103 OR ELI 104 OR ELI 107 OR College Reading and Writing Readiness

Course fee

May be taken four times for credit toward degree

PED 228 First Aid/CPR (2-0) 2 Hours

This course is designed to prepare citizen responders with the knowledge and skills necessary to respond to emergency and first-aid situations. First aid, CPR, and AED for adults, children, and infants are included in this course. Students will be eligible to take national certification exams upon successful completion of each respective content area.

Prerequisite: ELI Accuplacer score of 235 or higher OR APT score of 80 or higher OR ELI 103 OR ELI 104 OR ELI 107 OR College Reading and Writing Readiness

Course fee

SAE 13 Pre-GED Mathematics 1 in Spanish (Variable) 0.5-6 Hours***(Description Change Effective Fall 2016)***

This mathematics course will cover the real number system and charts and graphs with more than one variable. This course will be taught in Spanish.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE Espanol pretest levels from 9.0–10.9) OR consent of instructor or department chair.

Course fee

May be taken four times for credit

SAE 15 Pre-GED Mathematics 2 in Spanish (Variable) 0.5-6 Hours***(Description and Credit Hour Change Effective Fall 2016)***

This mathematics course will cover probability, linear functions, and graphs of linear equations. This course will be taught in Spanish.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE Espanol pretest levels from 9.0–10.9) OR consent of instructor or department chair.

Course fee

May be taken four times for credit

SAE 19 Pre-GED Mathematics 4 in Spanish (Variable) 0.5-6 Hours***(Description and Credit Hour Change Effective Fall 2016)***

This mathematics course will introduce students to mathematical symbols, their limitations and measurement. Students will use inequality symbols in equations and expressions to represent situations in story problems. This course will be taught in Spanish.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE Espanol pretest levels from 9.0–10.9) OR consent of instructor or department chair.

Course fee

May be taken four times for credit

SAE 20 GED Preparation in Spanish I (Variable) 0.5-6 Hours***(Title Change Effective Fall 2016)***

This course is a preparation for those who want to take the General Educational Development Examination (G.E.D.) to earn their high school equivalency certificate. It is for adults who have not completed high school. This course will be taught in Spanish.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE Espanol pretest levels from 11.0-12.9) or consent of instructor and/or department chair.

Course fee

May be taken four times for credit

SAE 21 GED Preparation in Spanish 2 (Variable) 0.5-6 Hours***(Title, Credit Hour and Description Change Effective Fall 2016)***

This course is for those who need further instruction before attempting the General Educational Development Examination (G.E.D.) to earn their high school equivalency certificate. This course will be taught in Spanish.

Prerequisite: Must be placed into class using a mandatory assessment (e.g. TABE 11.0-12.9) or consent of instructor and/or department chair.

Course fee

May be taken four times for credit

New Programs

Infant/Toddler Level II - Illinois Gateways To Opportunity Credential (Certificate) Plan 25EG

(Effective Fall 2016)

Illinois Gateways to Opportunity Infant/Toddler Credentials Levels 2–4 are for child care professionals working with children birth to age 8 who have specific levels of training, education and experience. An Entitled Institution is a college or university who has aligned their coursework with credential requirements. The College of Lake County’s Early Childhood Education Department has Entitled Institution status to award Levels II through IV credentials to students who have completed the required courses for each type and level of credential. The following courses are required to obtain and be awarded the Level II Infant/Toddler Illinois Gateways to Opportunity Credential.

Note: It is not necessary to earn the Level I Gateways Credential before pursuing the Levels II and III Credentials and Certificates, but *you must earn the Level II ECE Certificate/Credential (Plan 25EI) before you earn the Level II Infant/Toddler Certificate (PLAN 25EG)*. (There is a two-course difference).

Certificate Requirements:

ECE	117	Creative Activities for Infants and Toddlers	3
ECE	121	Introduction to Early Childhood Education	3
ECE	124	Child Development for Educators	3
ECE	141	Health, Safety, and Nutrition	3
ECE	214	Group Care of Infants & Toddlers	3
ECE	223	Child, Family, and Community	3

Total Hours for Certificate18

Infant/Toddler Level III - Illinois Gateways To Opportunity Credential (Certificate) Plan 25EH

(Effective Fall 2016)

Illinois Gateways to Opportunity Infant/Toddler Credentials Levels 2–4 are for child care professionals working with children birth to age 8 who have specific levels of training, education and experience. An Entitled Institution is a college or university who has aligned their coursework with

credential requirements. The College of Lake County's Early Childhood Education Department has Entitled Institution status to award Levels II through IV credentials to students who have completed the required courses for each type and level of credential. The following courses are required to obtain and be awarded the Level III Infant/Toddler Illinois Gateways to Opportunity Credential.

Certificate Requirements:

ECE	117	Creative Activities for Infants and Toddlers	3
ECE	121	Introduction to Early Childhood Education	3
ECE	124	Child Development for Educators	3
ECE	141	Health, Safety, and Nutrition	3
ECE	214	Group Care of Infants & Toddlers	3
ECE	220	Observation & Assessment.....	3
ECE	223	Child, Family, and Community	3
ECE	242	Math Activities for Young Children	3
ENG	120	Technical Composition I <i>or</i>	
ENG	121	English Composition I	3
CMM	121	Fundamentals of Speech <i>or</i>	
PSY	121	Introduction to Psychology	3

Total Hours for Certificate30

Early Childhood - Level II - Gateways To Opportunity Credential (Certificate) Plan 25EI

(Effective Fall 2016)

Illinois Gateways to Opportunity Early Childhood Credentials Levels 2–4 are for child care professionals working with children birth to age 8 who have specific levels of training, education and experience. An Entitled Institution is a college or university who has aligned their coursework with credential requirements. The College of Lake County's Early Childhood Education Department has Entitled Institution status to award Levels II through IV credentials to students who have completed the required courses for each type and level of credential. The following courses are required to obtain and be awarded the Level II Early Childhood Illinois Gateways to Opportunity Credential.

Certificate Requirements:

ECE	116	Creative Activities	3
ECE	121	Introduction to Early Childhood Education	3
ECE	124	Child Development for Educators	3
ECE	141	Health, Safety, and Nutrition	3
ECE	220	Observation & Assessment.....	3
ECE	223	Child, Family, and Community	3

Total Hours for Certificate18

Early Childhood - Level III - Gateways To Opportunity Credential (Certificate) Plan 25EJ

(Effective Fall 2016)

Illinois Gateways to Opportunity Early Childhood Credentials Levels 2–4 are for child care professionals working with children birth to age 8 who have specific levels of training, education and experience. An Entitled Institution is a college or university who has aligned their coursework with credential requirements. The College of Lake County's Early Childhood Education Department has Entitled Institution status to award Levels II through IV credentials to students who have completed the required courses for each type and level of credential. The following courses are required to obtain and be awarded the Level III Early Childhood Illinois Gateways to Opportunity Credential.

Certificate Requirements:

ECE 116	Creative Activities	3
ECE 121	Introduction to Early Childhood Education	3
ECE 124	Child Development for Educators	3
ECE 141	Health, Safety, and Nutrition	3
ECE 220	Observation & Assessment.....	3
ECE 223	Child, Family, and Community	3
ECE 241	Guidance and Social Development	3
ECE 242	Math Activities for Young Children.....	3
ENG 120	Technical Composition I <i>or</i>	
ENG 121	English Composition I	3
CMM 121	Fundamentals of Speech <i>or</i>	
PSY 121	Introduction to Psychology	3

Total Hours for Certificate30

**ECE Course Rotation Guide
Effective Fall 2017**

Fall	Spring	Summer *
ECE 116	ECE 117	ECE 116 or ECE 117
ECE 121	ECE 121	ECE 121
ECE 124	ECE 124	ECE 124
ECE 133	ECE 141	ECE 132
ECE 214	ECE 215	ECE 141
ECE 223	ECE 220	ECE 233 or ECE 241
ECE 229	ECE 229	
ECE 241	ECE 231	
	ECE 233	
	ECE 242	
ECE 250, 251, 252, 253, 254	ECE 250, 251, 252, 253, 254	
Practicum Courses (Require approval from Department Chair)	Practicum Courses (Require approval from Department Chair)	* Varies (Check schedule or contact ECE Department Chair)
	ECE 270	

Correction

Page 13 Admission of International Students (Replacement)

International students are defined as any individual admitted into the U.S. on an F-1 student visa or issued the Form I-20 Certificate of Eligibility approved for study at CLC.

International students must be at least 17 years old and have completed the equivalent of an American high school education (12 years of formal education).

International students must enroll in a minimum of 12 credit hours each semester.

Application deadlines are: July 1 for fall semester, November 1 for spring semester and April 1 for summer session (transfer students only).

- To apply, the following must be submitted:
- Completed International Student Application
 - Official, certified, English translated copy of secondary school record, indicating completion
 - Credit evaluation of college/university transcript for transfer, if applicable
 - Evidence of sufficient financial support, including original bank letter and affidavit of support, as necessary
 - Copy of passport
 - A TOEFL exam is not required for English language training. Students who submit an official minimum score of TOEFL 71 Internet based or IELTS 6.0 Academic Format will qualify for regular academic classes.
 - Completed International Student Transfer In Form, if transferring from another U.S. institution

For further information about admission requirements, contact the international recruiter at (847) 543-2399.

Program Modifications

**Construction Management Technology
(Associate in Applied Science) Plan 24BA**
(Program Inactive for New Enrollment Effective Spring 2017)

**Construction Management Technology
(Certificate) Plan 24BF**
(Program Inactive for New Enrollment Effective Summer 2017)

**Emergency and Disaster Management
(Certificate) Plan 25EM**
(Program Inactive for New Enrollment Effective Spring 2017)

Family Child Care (Certificate) Plan 25EE
(Program Inactive for New Enrollment Effective Summer 2017)

Floral Design (Certificate) Plan 21HI
(Program Inactive for New Enrollment Effective Spring 2017)

Infant-Toddler Specialist (Certificate) Plan 25EC
(Program Inactive for New Enrollment Effective Summer 2017)

Pre-Civil Engineer Technician (Certificate) Plan 24VI
(Program Inactive for New Enrollment Effective Spring 2017)

School-Aged Child Care (Certificate) Plan 25ED
(Program Inactive for New Enrollment Effective Summer 2017)

Associate in General Studies

**Associate in General Studies
Plan 10AC**
Counseling, Advising, and Transfer Center
Room A124, (847) 543-2060

(Description and Course Changes Effective Spring 2017)

The Associate in General Studies (A.G.S.) is a highly individualized degree that combines both liberal arts and sciences and occupational education coursework. It is an alternative degree for students who are undecided about future education or career goals or who need a 60 credit hour degree comprising 21 credit hours in general education coursework and 39 credit hours in program electives. Because of the individualized nature of this degree, students are required to meet with a counselor for assistance in choosing courses that will satisfy their academic goals. The A.G.S. is not designed for transfer to a four-year college or university. The general education requirements for the A.G.S. do not fulfill the IAI (Illinois Articulation Initiative) General Education Core Curriculum guidelines. Students can use some credits earned toward their A.G.S. degree to transfer, but should be aware that transfer options for the degree as a whole are limited. Students must meet with a Counselor to determine

the appropriateness of the A.G.S. degree option and must complete a Plan of Study before their decision to pursue the A.G.S. degree is formalized. The official plan must be signed by the student and the Counselor, reviewed and signed by an additional Counselor, and then filed in the Counseling, Advising, and Transfer Center. A copy will be forwarded to the CLC Office of Registrar and Records.

Requirements:

Communication - 6 credit hours

Two courses including one course in Communication and one in English.

CMM 111	Communication Skills	3
CMM 121	Fundamentals of Speech	3
CMM 122	Business/Professional Speaking	3
CMM 123	Dynamics/Small Group Discuss	3
CMM 124	Oral Interpretation	3
CMM 125	Communication and Gender	3
CMM 127	Intercultural Communication	3
CMM 128	Interviewing Practices	3
CMM 129	Argumentation and Debate.....	3
ENG 120	Technical Composition I	3
ENG 121	English Composition I	3
ENG 122	English Composition II	3
ENG 126	Advanced Composition: Scientific/Technical	3

Social and Behavioral Sciences - 6 credit hours

Any ANT course		
Any ECO course		
GEG 122	Cultural Geography	3
GEG 123	World Regional Geography	3
Any GXS course		
Any HST course		
Any PSC course		
Any PSY course		
Any SOC course		

Science or Mathematics - 6 credit hours

AOS 122	Business Mathematics	3
Any BIO course		
Any CHM course		
Any ESC course		
Any GEG course, with the exception of GEG 122 and GEG 123		
Any MTH course, with the exception of any developmental MTH courses (MTH 101, MTH 102, MTH 104, MTH 105, MTH 106, MTH 107, or MTH 108)		
Any PHY course		
Any SCI course		

(Continued)

Humanities and Fine Arts - 3 credit hours

- Any ARA course
- Any ART course
- Any ASI course
- Any CHI course
- Any DNC course
- Any ENG course, with the exception of ENG 120, 121, 122, and 126, and any developmental ENG courses (ENG 100, 104, 108, or 109)
- Any FRN course
- Any GER course
- Any HUM course
- Any ITL course
- Any JPN course
- Any MUS course
- Any PHI course
- Any RUS course
- Any SPA course
- Any THE course

Area of Concentration/Elective Requirements - 39 credit hours

Because of the individualized nature of this degree, students are required to meet with a counselor for assistance in choosing mutually agreed upon courses that will satisfy their academic goals. Students with previous academic, career, and life experiences are encouraged to investigate the options of proficiency credit to substitute their acquired knowledge for prerequisites, course and/or degree requirements. Any Emergency Medical Technology (EMT) courses (with the exception of EMT 111) cannot be used to satisfy degree requirements. The following courses cannot be used to satisfy degree requirements and do not count in the grade point average (GPA): 1. Courses with a middle digit of 0: (e.g. ENG 108, ENG 109, and MTH 101); 2. Adult Education courses with a department prefix of ABE, ADE, BRGA, ELI (with the exception of ELI 125), ESL, GED, or VST

Total A.G.S. Degree.....60

Early Childhood Education

Business and Social Sciences Division,
Room T302, (847) 543-2047

Early Childhood Education (Associate in Applied Science) Plan 25EA

(Credit Hour and Course Changes Effective Fall 2016)

The Associate of Applied Science Degree program in Early Childhood Education prepares students for careers working with young children. Graduates of the program are DCFS-qualified to be lead teachers and directors in early childhood centers and school-age programs. Public school Pre-K programs may employ A.A.S. degree graduates as assistant teachers. Many of the required courses may transfer to four-year institutions with related programs. To complete an A.A.S., students must meet the General Requirements on page xx. In addition, students should select the General Education electives from the requirements listed on page 114. All course prerequisites must be met. ECE 121, ECE 124, ECE 214, ECE 220, ECE 250, and EDU 242 may require daytime field observation or classroom experience hours, a current Illinois State Police criminal background check and/or current medical documentation. Check individual catalog course descriptions and catalog information or contact the Early Childhood Education Department Chair for further guidance. After completion of this A.A.S. degree program, interested students will need to complete applications for the Illinois Gateways to Opportunity to qualify and receive the Level 4 Infant/Toddler Credential and the Level 4 ECE Credential. See Department Chair for more information.

First Semester	15
ENG 120 Technical Composition I <i>or</i>	
ENG 121 English Composition I	3
PSY 121 Introduction to Psychology	3
ECE 116 Creative Activities	3
+ ECE 121 Introduction to Early Childhood Education.....	3
+ ECE 124 Child Development for Educators	3
Second Semester	15
CMM 121 Fundamentals of Speech	3
Humanities or Fine Arts Elective	3
BIO 140 Environmental Biology Without Lab <i>or</i>	
BIO 149 Genetics and Society <i>or</i>	
CHM 140 Chemistry For a Changing World <i>or</i>	
ESC 123 Introduction to Meteorology <i>or</i>	
ESC 124 Oceanography <i>or</i>	
ESC 141 Introduction to Astronomy <i>or</i>	
ESC 224 Environmental Geology <i>or</i>	
GEG 121 Physical Geography	3
ECE 117 Creative Activities for Infants and Toddlers	3
ECE 141 Health, Safety, and Nutrition	3

Third Semester	15
+ ECE 214 Group Care of Infants and Toddlers.....	3
ECE 223 Child, Family, and Community	3
ECE 229 Language Development and Early Literacy	3
ECE 241 Guidance and Social Development	3
ECE	3
Fourth Semester	15
ECE 215 Music Activities for Young Children	3
+ ECE 220 Observation and Assessment	3
ECE 233 Young Children with Special Needs	3
ECE 242 Math Activities for Young Children.....	3
ECE	3

Early Childhood Education Electives - 6 Hours

Select 6 - 8 hours from the following. Students wishing to apply for the Illinois Gateways to Opportunity Level 4 Infant-Toddler and ECE entitled credentials must choose ECE 250, ECE 251, ECE 252, and ECE 253 as electives.

ECE 132 Professional Ethics in ECE	1
ECE 133 Family Child Care Management	3
ECE 231 School-Age Programming	3
ECE 250 ECE Practicum I - Infants and Toddlers* <i>and</i>	
ECE 251 Curriculum Development I*	2
ECE 252 ECE Practicum II - Preschool* <i>and</i>	
ECE 253 Curriculum Development II*	2
ECE 270 Administration of ECE Programs	3
ECE 299 Special Topics in Early Childhood Education	1-3
EDU 222 The Exceptional Child	3
EDU 223 Technology in the Classroom.....	3
EDU 224 Diversity in Schools and Society	3
EDU 225 Educational Psychology	3
EDU 242 Observation/Clinical Experience	1
EDU 299 Special Topics in Education	1-3

Total A.A.S. Degree.....60

For students wishing to obtain a teaching credential in the State of Illinois, a grade of C or above is compulsory for all coursework required for the teaching credential. This includes courses in the major, all education courses, and required general electives. This is effective for those applying for teacher certification as of 2012 (Illinois State Board of Education).

*A.A.S. in ECE students who desire to earn the Illinois Gateways to Opportunity ECE Credential—Level 4 and the Illinois Gateways to Opportunity Infant/Toddler Credential—Level 4 must complete these four courses as electives. Upon successful completion of this program, students may complete an application with INCCRRA/ Gateways to Opportunity to receive these credentials. See Department Chair for more details.

A.A.S. Continued

ECE 250 and ECE 252 each require 150 hours of classroom work in a NAEYC accredited early childhood center. These courses also require all course prerequisites (see course descriptions in catalog), as well as a current criminal clearance and DCFS mandated medical requirements. Completion of two practicums and relevant curriculum courses will require an additional semester to complete.

ECE 251 and ECE 253 must be taken concurrently (in an online format) with the coordinating practicum course.

Illinois Gateways to Opportunity awards entitlement status to higher education institutions that align their coursework with credential requirements. Students who complete the required courses may meet Gateways credential component requirements, and have up to two years to apply to receive their credential(s). Visit www.ilgateways.com/en/gateways-to-opportunity-credentials.

+ ECE 121, ECE 124, ECE 214, ECE 220, ECE 250, ECE 252, EDU 124 and EDU 242 may require daytime field observation and/or experience hours, current Illinois State Police criminal background check, and/or current medical documentation. Check individual catalog descriptions for more information or contact the ECE Department Chair.

Family Child Care (Certificate) Plan 25EE

(Title and Course Changes Effective Fall 2016)

This certificate program is designed to provide individuals with the knowledge and skills required to successfully operate a family-based child care facility/program. Emphasis is placed on teaching practices necessary to plan and deliver developmentally appropriate programming, environments and interactions to young children.

Required Courses - 18 Hours

ENG	120	Technical Composition I <i>or</i>	
ENG	121	English Composition I	3
ECE	116	Creative Activities	3
ECE	121	Introduction to Early Childhood Education	3
ECE	124	Child Development for Educators	3
ECE	133	Family Child Care Management	3
ECE	141	Health, Safety and Nutrition	3

Electives - 6 Hours

Select 6 hours from the list below:

ECE	117	Creative Activities for Infants and Toddlers	3
ECE	214	Group Care of Infants and Toddlers.....	3
ECE	220	Observation and Assessment	3
ECE	223	Child, Family and Community.....	3
ECE	229	Language Development and Early Literacy.....	3
EDU	233	Young Children with Special Needs	3
ECE	241	Guidance and Social Development	3
ECE	299	Special Topics in Early Childhood Education.....	3

Total Hours for Certificate24

Phlebotomy Technician

Biological and Health Sciences Division, Room B210,
(847) 543-2042

Phlebotomy Technician (Certificate) Plan 21MP

(Description Change Effective Fall 2016)

This certificate program prepares students for entry level competencies as phlebotomists in hospitals, clinics, blood banks, and other health care settings. Students will develop skills in performing phlebotomy procedures during on-campus training followed by a clinical practicum during which students spend eight (8) hours a day, five days a week for three weeks (120 hours) at a clinical site during the daytime shift. Students must demonstrate English Language and Basic Algebra Readiness prior to enrolling in PBT 110. In addition, if a student has a CLC GPA, it must be 2.0 or higher. Students must have health insurance and satisfy phlebotomy health requirements and have minimum essential functions prior to beginning PBT 116 - Phlebotomy Clinical. This program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) 5600 N. River Road, Suite 720, Rosemont, IL 60018-5119; web: <http://www.naacls.org>; phone (773) 714-8880; fax: (773) 714-8886; e-mail: info@naacls.org. Graduates of this program are eligible for registry by nationally recognized certifying agencies. A student must maintain at least a grade of "C" in each course to continue the program and obtain a phlebotomy certificate. Students will be required to comply with clinical site requirements, which may include "Criminal Background Check" and drug testing. To receive the Phlebotomy Certificate, a student must be a high school graduate or the equivalent and at least 18 years old, receive a minimum grade of "C" in the following PBT courses, and must maintain an overall CLC GPA of 2.0 or higher.

Required Coursework

PBT	110	Introduction to Medical Laboratory Technology	2
PBT	115	Phlebotomy Techniques	2
PBT	116	Phlebotomy Clinical	2

Total Hours for Certificate6

Secondary Education

Associate in Arts

Plan 13AB

Business and Social Sciences Division,
Room T302, (847) 543-2047

(Course Change Effective January 1, 2017)

The following courses are **recommended** for students who have not decided upon a specific four-year college or university. Once a transfer school is selected, students should meet with a counselor or advisor to determine courses at CLC which will also meet the transfer requirements. If a specific course is not recommended, please select from the appropriate category outlined in the general education requirements for the Associate in Arts degree on pages 54-55.

First Semester	16
ENG 121 English Composition I.....	3
MTH 222 Elementary Statistics	4
PSY 121 Introduction to Psychology	3
ART 121 Introduction to Art <i>or</i>	
MUS 124 Introduction to Music	3
EDU 121 Introduction to Teaching (elective)	3
Second Semester	16
ENG 122 English Composition II	3
EDU 124 Child Development for Educators (elective).....	3
BIO 123 Principles of Biology.....	4
Humanities Elective	3
Concentration/Elective	3
Third Semester	15
CMM 121 Fundamentals of Speech	3
ESC 123 Introduction to Meteorology <i>or</i>	
GEG 121 Physical Geography.....	3
HST 221 U.S. History to 1876 <i>or</i>	
HST 222 U.S. History 1876 to Present.....	3
(Note: Some transfer schools require both HST 221 and HST 222. Check with your transfer school)	
Concentration/ Elective	3
Concentration/ Elective	3
Fourth Semester	15
PSC 121 American National Politics	3
Humanities or Fine Arts Elective (with I/M designation*, if needed)	3
Concentration/Elective	3
Concentration/Elective	3
Concentration/Elective	3

Concentration/Electives

A secondary teaching credential requires a major at a 4 year college or university. Examples include but are not limited to: English, Math, Biology, Chemistry, Physics, History, a Foreign

Language, and Business.) Students planning to transfer should verify 4 year college requirements as they differ from college to college. Students interested in Music Education or the Associate in Arts in Teaching Math should consult the respective department at CLC.

Recommended Education Courses	12
EDU 121 Introduction to Teaching	3
EDU 124 Child Development for Educators.....	3
EDU 222 Exceptional Children.....	
EDU 223 Technology In The Classroom	3
EDU 224 Diversity in the Schools I/M.....	3
EDU 225 Educational Psychology	3
EDU 242 Observation/Clinical Experience.....	1
EDU 299 Special Topics in Education	1
EDU 999 Preparing for the TAP or ACT+ Writing.....	1-3

*EDU 224—Diversity in the Schools is recommended for the Secondary Education Concentration/Elective to satisfy the I/M requirement.

**Many four year colleges require a foreign language. To fulfill the humanities requirement, a student must take a foreign language with a course number of 222. (This is an intermediate level foreign language class requiring several semesters of beginning level foreign language courses before the intermediate course can be taken.)

Any additional electives should be taken in a particular subject area that meets requirements for a secondary teaching credential and will transfer to a four year college of your choice. Consult the four year institution requirements for different majors that lead to a credential in secondary education.

A passing score on the Illinois Test of Academic Proficiency (formerly the Illinois Test of Basic Skills) or a current ACT plus Writing test with a score of 22 or higher is required for admission to a four-year college or university school of education. One of these tests should be taken by recent high school graduates after completing 15-30 credit hours of college work. Older students should take the test after completing 40-45 college credit hours. It is recommended that you take ENG 121 and MTH 121 before taking either of these tests. There is a 3-credit test preparation course, EDU 999, offered by the CLC Education department which will help you review for either test. It is strongly recommended that you complete this preparation course.

For all those students wishing to obtain a teaching credential in the state of Illinois, a grade of C or above is compulsory for all coursework that is required for the teaching credential. This would include courses in your major, all education courses, and required general electives. (Effective 2012, Illinois State Board of Education)

For more information on recommended courses or program specific advising, contact the following faculty members or the Business and Social Sciences Division at (847) 543-2047.

Kathy Johnston / Michelle Proctor

Students are **strongly encouraged** to meet with a counselor or advisor to identify coursework that will meet both CLC and transfer requirements.

^ See page 50 for College Requirements / © A grade of C or better is required for all English course requirements. / * See pages 54-66 for Course Selections

Associate in Arts (13AB)

(Effective January 1, 2017, IAI duplication restriction removed.)

Students may obtain an Associate in Arts degree from the College of Lake County by successfully meeting college requirements and the course requirements outlined below.

The College of Lake County is a participant in the Illinois Articulation Initiative (IAI), a major statewide cooperative agreement that eases the transfer process of the completed Illinois General Education Core Curriculum among participating institutions.

Communication - 9 credit hours

A grade of C or better is required for both ENG courses.

- CMM 121 Fundamentals of Speech (3) **C2 900**
- ENG 121 English Composition I (3) **C1 900**
- ENG 122 English Composition II (3) **C1 901 R or**
- ENG 126 Advanced Composition: Scientific and Technical Communications (3) **C1 901 R**

Social and Behavioral Science - 9 credit hours

Select courses from at least two different disciplines i.e. different prefixes.

- ANT 121+ Introduction to Anthropology (3) **S1 900N**
- ANT 221+ Cultural Anthropology (3) **S1 901N**
- ANT 222 Introduction to Physical Anthropology (3) **S1 902**
- ANT 224 Introduction to Archaeology (3) **S1 903**
- ANT 228+ Cross-Cultural Relationships (3) **S1 904D**
- ECO 221 Principles of Macroeconomics (3) **S3 901**
- ECO 222 Principles of Microeconomics (3) **S3 902**
- GEG 122 Cultural Geography (3) **S4 900N**
- GEG 123 World Regional Geography (3) **S4 900N**
- GXS 121+ Introduction to Gender Studies (3) **S9 900**
- GXS 229+ Sex, Gender, and Power (3) **S7 904D**
- HST 121 History of Western Civilization I (3) **S2 902**
- HST 122 History of Western Civilization II (3) **S2 903**
- HST 126+ History of Contemp. Non-Western Civilization (3) **S2 905N**
- HST 127+ History of Chinese Culture and Society (3) **S2 914N**
- HST 221 United States History to 1876 (3) **S2 900**
- HST 222 United States History 1876 to Present (3) **S2 901**
- HST 245+ History of Latin America to 1825 (3) **S2 910N**
- HST 246+ History of Latin America from 1825 (3) **S2 911N**
- PSC 121 American National Politics (3) **S5 900**
- PSC 122 State and Local Politics (3) **S5 902**
- PSC 221+ Comparative Political Systems (3) **S5 905**
- PSC 222+ International Relations (3) **S5 904N**
- PSY 121 Introduction to Psychology (3) **S6 900**
- PSY 220 Lifespan Development (3) **S6 902**
- PSY 222 Child Growth and Development (3) **S6 903**
- PSY 225 Social Psychology (3) **S8 900**
- PSY 226 Adolescent Psychology (3) **S6 904**

- SOC 121 Introduction to Sociology (3) **S7 900**
- SOC 222 Social Problems (3) **S7 901**
- SOC 224 Sociology of the Family (3) **S7 902**
- SOC 225+ Class, Race, and Gender (3) **S7 903D**
- SOC 229+ Sex, Gender, and Power (3) **S7 904D**

Physical and Life Sciences - 7 credit hours

One course must be selected from Physical Science and one course from Life Science. At least one course must be a laboratory science course (L).

Physical Science

- CHM 120L (LAB) Chemical Concepts (4) **P1 902L**
- CHM 121L (LAB) General Chemistry I (5) **P1 902L**
- CHM 140 Chemistry for a Changing World (3) **P1 903**
- CHM 142L (LAB) Chemistry for a Changing World (4) **P1 903L**
- ESC 120L (LAB) Earth Science (4) **P1 905L**
- ESC 121L (LAB) Physical Geology (4) **P1 907L**
- ESC 123 Introduction to Meteorology (3) **P1 905**
- ESC 124 Oceanography (3) **P1 905**
- ESC 125 Geology of National Parks (3) **P1 907**
- ESC 127L (LAB) Introduction to Meteorology (4) **P1 905L**
- ESC 128 Great Mysteries of the Earth (3) **P1 905**
- ESC 129 Severe and Hazardous Weather (3) **P1 905**
- ESC 140L (LAB) Introduction to Astronomy (4) **P1 906L**
- ESC 141 Introduction to Astronomy (3) **P1 906**
- ESC 224 Environmental Geology (3) **P1 908**
- GEG 120L (LAB) Physical Geography (4) **P1 909L**
- GEG 121 Physical Geography (3) **P1 909**
- PHY 120L (LAB) Practical Aspects of Physics (4) **P1 901L**
- PHY 121L (LAB) General Physics I (5) **P1 900L**
- PHY 123L (LAB) Physics for Science and Engineering I (5) **P2 900L**

Life Science

- BIO 120L (LAB) Environmental Biology (4) **L1 905L**
- BIO 123L (LAB) Principles of Biology (4) **L1 900L**
- BIO 127 Introduction to Evolution (3) **L1 907**
- BIO 140 Environmental Biology without Lab (3) **L1 905**
- BIO 141L (LAB) Concepts of Biology (4) **L1 900L**
- BIO 149 Genetics and Society (3) **L1 906**
- BIO 161L (LAB) General Biology I (4) **L1 910L**

Mathematics - 3 credit hours

- MTH 127 Finite Mathematics I (3) **M1 906**
- MTH 140 Contemporary Mathematics (3) **M1 904**
- MTH 141 Quantitative Literacy (3) **M1 901**
- MTH 145 Calculus and Analytic Geometry I (5) **M1 900-1**
- MTH 146 Calculus and Analytic Geometry II (4) **M1 900-2**
- MTH 221 Mathematics for Elementary Teaching II (3) **M1 903**
- MTH 222 Elementary Statistics (4) **M1 902**
- MTH 224 Calculus for Business and Social Science (4) **M1 900-B**
- MTH 244 Discrete Mathematics (3) **M1 905**
- MTH 246 Calculus and Analytic Geometry III (4) **M1 900-3**

Humanities and Fine Arts - 9 credit hours

At least one course must be selected from the Humanities section and one course from the Fine Arts section.

Humanities

- ARA 222+ Intermediate Modern Standard Arabic II (4) **H1 900**
- CHI 222+ Intermediate Chinese II (4) **H1 900**
- ENG 129+ Women in Literature (3) **H3 911D**
- ENG 223 Early American Literature (3) **H3 914**
- ENG 225 Survey of British Literature I (3) **H3 912**
- ENG 226 Survey of British Literature II (3) **H3 913**
- ENG 227 Introduction to Shakespeare (3) **H3 905**
- ENG 228+ World Literature (3) **H3 906**
- ENG 229 20th Century American Literature (3) **H3 915**
- ENG 241 Introduction to Poetry (3) **H3 903**
- ENG 243 Introduction to Fiction (3) **H3 901**
- ENG 244+ Mythology and Fairy Tales (3) **H9 901**
- ENG 246+ Latin American Writers (3) **H3 908N**
- ENG 247+ International Women Writers (3) **H3 911D**
- ENG 249 Children's Literature (3) **H3 918**
- FRN 222+ Intermediate French II (4) **H1 900**
- FRN 223 French Civilization I (3) **H1 900**
- FRN 224 French Civilization II (3) **H1 900**
- GER 222+ Intermediate German II (4) **H1 900**
- GER 224 German Civilization II (3) **H1 900**
- HUM 121+ Humanities: Ancient Times to the Middle Ages (3) **HF 902**
- HUM 122+ Humanities: Renaissance to the Present (3) **HF 903**
- HUM 127 Critical Thinking (3) **H4 906**
- HUM 128+ Introduction to Middle-Eastern Civilizations (3) **H2 903 N**
- HUM 129+ Introduction to East Asian Civilization (3) **HF 904 N**
- HUM 141+ World Humanities 20/21 Century (3) **HF 904 N**
- HUM 221+ American Decades (3) **HF 906D**
- HUM 226+ Women and the Arts (3) **HF 907D**
- ITL 222+ Intermediate Italian II (4) **H1 900**
- ITL 223 Italian Civilization I (3) **H1 900**
- JPN 222+ Intermediate Japanese II (4) **H1 900**
- PHI 121 Introduction to Philosophy (3) **H4 900**
- PHI 122 Logic (3) **H4 906**
- PHI 123 Philosophy of Religion (3) **H4 905**
- PHI 125+ Introduction to Ethics (3) **H4 904**
- PHI 126+ World Religions (3) **H5 904N**
- PHI 221+ Asian Philosophy (3) **H4 903N**
- RUS 222+ Intermediate Russian II (4) **H1 900**
- SPA 222+ Intermediate Spanish II (4) **H1 900**
- SPA 223+ Spanish Civilization I (3) **H1 900**
- SPA 224+ Spanish Civilization II (3) **H1 900**

Fine Arts

- ART 121 Introduction to Art (3) **F2 900**
- ART 240+ History of Art I (3) **F2 901**
- ART 241+ History of Art II (3) **F2 902**
- ART 260 History of Photography (3) **F2 904**
- ART 261+ Non-Western Art History (3) **F2 903N**
- DNC 240+ The Art of Dance (3) **F1 906**
- HUM 121+ Humanities: Ancient Times to the Middle Ages (3) **HF 902**
- HUM 122+ Humanities: Renaissance to the Present (3) **HF 903**
- HUM 123 Introduction to Film (3) **F2 908**
- HUM 126 Introduction to the Performing Arts (3) **F9 900**
- HUM 129+ Introduction to East Asian Civilization (3) **HF 904 N**
- HUM 140+ Introduction to International Film (3) **F2 909**
- HUM 141+ World Humanities 20/21 Century (3) **HF 904N**
- HUM 221+ American Decades (3) **HF 906D**
- HUM 222 Film and Society (3) **F2 908**

- HUM 226+ Women and the Arts (3) **HF 907D**
- MUS 124 Introduction to Music (3) **F1 900**
- MUS 224 Music Literature (3) **F1 902**
- THE 121 Introduction to Theatre I (3) **F1 907**
- THE 123+ Diversity in American Theatre (3) **F1 909D**

International/Multicultural Requirements

Include one course in International/Multicultural Education—Choose one course with a + following the course number OR one of the following: CMM 127, ECO 225, EDU 224, ENG 263, 264, GXS 221, 299, HST 128, LAT 121, PDS 123, PHI 128, 129, PSY 229, SSI 121. This course can fulfill both the I/M requirement and a Social Science, Humanities, Fine Arts, or Elective requirement. A B.A. degree at many four year colleges may require college level foreign language.

Area of Concentration/Elective Requirements- 23 credit hours

- Choose elective courses with an even middle digit that relate to your intended major. Students should choose electives only after consulting with an Advising Professional.
- Exception:** Up to six hours of courses with an odd middle digit (1-3-5-7-9) may be used as general electives in the degree. All 199 courses are exempt from this rule. However, students should select these courses only after they have verified their transferability with their Advising Professional or the transfer institution. EDU 999 does not count toward this six-hour limit.
- Students may not receive credit towards degree for both CHM 140 and CHM 142, or both BIO 120 and BIO 140, or both ESC 123 and ESC 127.
- Students with credit for both MTH 122 and MTH 123 will not be given credit for MTH 144. Students may not receive credit towards degree for both (MTH 122 and MTH 144) or (MTH 123 and MTH 144).
- Please review lists of recommended courses for individual programs of study listed on pages 68-112 in this catalog.

- _____ _____
- _____ _____
- _____ _____
- _____ _____

Total A.A. Degree Requirements - 60 credit hours**Other Graduation Requirements**

- Cumulative CLC GPA of 2.00 or higher
- Completion of at least 15 credit hours at CLC
- Petition to Graduate:** The Petition to Graduate form must be submitted to the Welcome and One-Stop Center to have your degree processed. It can be found online at www.clcillinois.edu/petition. Contact Admissions for more information at (847) 543-2061.

Associate in Science (11AB)

(Effective January 1, 2017, IAI duplication restriction removed.)

The Associate in Science degree is designed to parallel the first two years of a science-related baccalaureate degree program. Students complete freshman and sophomore level courses for majors in such areas as biology, chemistry, physics and related professional fields. Since differences in course requirements exist at different universities and in different science disciplines within the same university, it is important that students work closely with a CLC Counselor and their transfer school to choose appropriate courses.

Completion of the A.S. degree does not fulfill the requirements of the Illinois Articulation Initiative General Education Core Curriculum (IAI GECC). Many science majors are highly structured and require extensive sequential lower-division mathematics and science courses. In order to take courses required for the major in a similar pattern to those of the freshman and sophomore students at a university, some general education courses are postponed until after transfer. Students then either complete the general education requirements of the transfer institution or are given the opportunity to complete the IAI.

Communication - 9 credit hours

A grade of C or better is required for both ENG courses.

- CMM 121 Fundamentals of Speech (3) **C2 900**
- ENG 121 English Composition I (3) **C1 900**
- ENG 122 English Composition II (3) **C1 901 R or**
- ENG 126 Advanced Composition: Scientific and Technical Communications (3) **C1 901 R**

Social and Behavioral Science - 6 credit hours

Select courses from at least two different disciplines i.e. different prefixes.

- ANT 121+ Introduction to Anthropology (3) **S1 900N**
- ANT 221+ Cultural Anthropology (3) **S1 901N**
- ANT 222 Introduction to Physical Anthropology (3) **S1 902**
- ANT 224 Introduction to Archaeology (3) **S1 903**
- ANT 228+ Cross-Cultural Relationships (3) **S1 904D**
- ECO 221 Principles of Macroeconomics (3) **S3 901**
- ECO 222 Principles of Microeconomics (3) **S3 902**
- GEG 122 Cultural Geography (3) **S4 900N**
- GEG 123 World Regional Geography (3) **S4 900N**
- GXS 121+ Introduction to Gender Studies (3) **S9 900**
- GXS 229+ Sex, Gender, and Power (3) **S7 904D**
- HST 121 History of Western Civilization I (3) **S2 902**
- HST 122 History of Western Civilization II (3) **S2 903**
- HST 126+ History of Contemp. Non-Western Civilization (3) **S2 905N**
- HST 127+ History of Chinese Culture & Society (3) **S2 914N**
- HST 221 United States History to 1876 (3) **S2 900**
- HST 222 United States History 1876 to Present (3) **S2 901**
- HST 245+ History of Latin America to 1825 (3) **S2 910N**
- HST 246+ History of Latin America from 1825 (3) **S2 911N**
- PSC 121 American National Politics (3) **S5 900**
- PSC 122 State and Local Politics (3) **S5 902**
- PSC 221+ Comparative Political Systems (3) **S5 905**
- PSC 222+ International Relations (3) **S5 904N**

- PSY 121 Introduction to Psychology (3) **S6 900**
- PSY 220 Lifespan Development (3) **S6 902**
- PSY 222 Child Growth and Development (3) **S6 903**
- PSY 225 Social Psychology (3) **S8 900**
- PSY 226 Adolescent Psychology (3) **S6 904**
- SOC 121 Introduction to Sociology (3) **S7 900**
- SOC 222 Social Problems (3) **S7 901**
- SOC 224 Sociology of the Family (3) **S7 902**
- SOC 225+ Class, Race, and Gender (3) **S7 903D**
- SOC 229+ Sex, Gender, and Power (3) **S7 904D**

Physical and Life Sciences - 11 credit hours

One course must be selected from Physical Science and one course from Life Science. Both courses must be IAI and laboratory science courses (L). A third course should be selected from the Physical Science course list or the Life Science course list or the Additional Science course list.

Physical Science

- CHM 120L (LAB) Chemical Concepts (4) **P1 902L**
- CHM 121L (LAB) General Chemistry I (5) **P1 902L**
- CHM 142L (LAB) Chemistry for a Changing World (4) **P1 903L**
- ESC 120L (LAB) Earth Science (4) **P1 905L**
- ESC 121L (LAB) Physical Geology (4) **P1 907L**
- ESC 127L (LAB) Introduction to Meteorology (4) **P1 905L**
- ESC 140L (LAB) Introduction to Astronomy (4) **P1 906L**
- GEG 120L (LAB) Physical Geography (4) **P1 909L**
- PHY 120L (LAB) Practical Aspects of Physics (4) **P1 901L**
- PHY 121L (LAB) General Physics I (5) **P1 900L**
- PHY 123L (LAB) Physics for Science and Engineering I (5) **P2 900L**

Life Science

- BIO 120L (LAB) Environmental Biology (4) **L1 905L**
- BIO 123L (LAB) Principles of Biology (4) **L1 900L**
- BIO 141L (LAB) Concepts of Biology (4) **L1 900L**
- BIO 161L (LAB) General Biology I (4) **L1 910L**

Additional Science Course List

- Any BIO, CHM, ESC, GEG, HRT or PHY course with an even middle digit course number, excluding GEG 122 and 123.

Mathematics - 7 credit hours

One course MUST be selected from the courses with an IAI number (shown in bold) in order to meet CLC graduation requirements.

- MTH 121 Mathematics for Elementary Teaching (3)
- MTH 122 College Algebra (4)
- MTH 123 Trigonometry (3)
- MTH 127 Finite Mathematics I (3) **M1 906**
- MTH 144 Precalculus (5)
- MTH 145 Calculus and Analytic Geometry I (5) **M1 900-1**
- MTH 146 Calculus and Analytic Geometry II (4) **M1 900-2**
- MTH 221 Math for Elementary Teaching II (3) **M1 903**
- MTH 222 Elementary Statistics (4) **M1 902**
- MTH 224 Calculus for Business and Social Science (4) **M1 900B**
- MTH 227 Ordinary Differential Equations (4)
- MTH 244 Discrete Mathematics (3) **M1 905**
- MTH 246 Calculus and Analytic Geometry III (4) **M1 900-3**

Humanities and Fine Arts - 6 credit hours

At least one course must be selected from the Humanities section and one course from the Fine Arts section.

Humanities

- ARA 222+ Intermediate Modern Standard Arabic II (4) **H1 900**
- CHI 222+ Intermediate Chinese II (4) **H1 900**
- ENG 129+ Women in Literature (3) **H3 911D**
- ENG 223 Early American Literature (3) **H3 914**
- ENG 225 Survey of British Literature I (3) **H3 912**
- ENG 226 Survey of British Literature II (3) **H3 913**
- ENG 227 Introduction to Shakespeare (3) **H3 905**
- ENG 228+ World Literature (3) **H3 906**
- ENG 229 20th Century American Literature (3) **H3 915**
- ENG 241 Introduction to Poetry (3) **H3 903**
- ENG 243 Introduction to Fiction (3) **H3 901**
- ENG 244+ Mythology and Fairy Tales (3) **H9 901**
- ENG 246+ Latin American Writers (3) **H3 908N**
- ENG 247+ International Women Writers (3) **H3 911D**
- ENG 249 Children's Literature (3) **H3 918**
- FRN 222+ Intermediate French II (4) **H1 900**
- FRN 223 French Civilization I (3) **H1 900**
- FRN 224 French Civilization II (3) **H1 900**
- GER 222+ Intermediate German II (4) **H1 900**
- GER 224 German Civilization II (3) **H1 900**
- HUM 121+ Humanities: Ancient Times to the Middle Ages (3) **HF 902**
- HUM 122+ Humanities: Renaissance to the Present (3) **HF 903**
- HUM 127 Critical Thinking (3) **H4 906**
- HUM 128+ Introduction to Middle-Eastern Civilizations (3) **H2 903 N**
- HUM 129+ Introduction to East Asian Civilization (3) **HF 904N**
- HUM 141+ World Humanities 20/21 Century (3) **HF 904 N**
- HUM 221+ American Decades (3) **HF 906D**
- HUM 226+ Women and the Arts (3) **HF 907D**
- ITL 222+ Intermediate Italian II (4) **H1 900**
- ITL 223 Italian Civilization I (3) **H1 900**
- JPN 222+ Intermediate Japanese II (4) **H1 900**
- PHI 121 Introduction to Philosophy (3) **H4 900**
- PHI 122 Logic (3) **H4 906**
- PHI 123 Philosophy of Religion (3) **H4 905**
- PHI 125+ Introduction to Ethics (3) **H4 904**
- PHI 126+ World Religions (3) **H5 904N**
- PHI 221+ Asian Philosophy (3) **H4 903N**
- RUS 222+ Intermediate Russian II (4) **H1 900**
- SPA 222+ Intermediate Spanish II (4) **H1 900**
- SPA 223+ Spanish Civilization I (3) **H1 900**
- SPA 224+ Spanish Civilization II (3) **H1 900**

Fine Arts

- ART 121 Introduction to Art (3) **F2 900**
- ART 240+ History of Art I (3) **F2 901**
- ART 241+ History of Art II (3) **F2 902**
- ART 260 History of Photography (3) **F2 904**
- ART 261+ Non-Western Art History (3) **F2 903N**
- DNC 240+ The Art of Dance (3) **F1 906**
- HUM 121+ Humanities: Ancient Times to the Middle Ages (3) **HF 902**
- HUM 122+ Humanities: Renaissance to the Present (3) **HF 903**
- HUM 123 Introduction to Film (3) **F2 908**
- HUM 126 Introduction to the Performing Arts (3) **F9 900**

- HUM 129+ Introduction to East Asian Civilization (3) **HF 904N**
- HUM 140+ Introduction to International Film (3) **F2 909**
- HUM 141+ World Humanities 20/21 Century (3) **HF 904N**
- HUM 221+ American Decades (3) **HF 906D**
- HUM 222 Film and Society (3) **F2 908**
- HUM 226+ Women and the Arts (3) **HF 907D**
- MUS 124 Introduction to Music (3) **F1 900**
- MUS 224 Music Literature (3) **F1 902**
- THE 121 Introduction to Theatre I (3) **F1 907**
- THE 123+ Diversity in American Theatre (3) **F1 909D**

International/Multicultural Requirement

Include one course in International/Multicultural Education which must be taken from the catalog. Refer to page 51. Courses with + fulfill this requirement.

Area of Concentration/Elective Requirements- 21 credit hours

- Choose elective courses with an even middle digit that relate to your intended major. Students should choose electives only after consulting with an Advising Professional.
- Exception:** Up to six hours of courses with an odd middle digit (1-3-5-7-9) may be used as general electives in the degree. All 199 courses are exempt from this rule. However, students should select these courses only after they have verified their transferability with their Advising Professional or the transfer institution. EDU 999 does not count toward this six-hour limit.
- Students may not receive credit towards degree for both CHM 140 and CHM 142, or both BIO 120 and BIO 140, or both ESC 123 and ESC 127.
- Students with credit for both MTH 122 and MTH 123 will not be given credit for MTH 144. Students may not receive credit towards degree for both (MTH 122 and MTH 144) or (MTH 123 and MTH 144).
- Please review lists of recommended courses for individual programs of study listed on pages 68-112 in this catalog.

- _____ _____
- _____ _____
- _____ _____

Total A.S. Degree Requirements - 60 credit hours

Other Graduation Requirements

- Cumulative CLC GPA of 2.00 or higher
- Completion of at least 15 credit hours at CLC
- Petition to Graduate:** The Petition to Graduate form must be submitted to the Welcome and One-Stop Center to have your degree processed. It can be found online at www.clcillinois.edu/petition. Contact Admissions for more information at (847) 543-2061.

Associate in Engineering Science (12AB)

(Effective January 1, 2017, IAI duplication restriction removed and course changes.)

This program is recommended for students pursuing a **B.S. in Engineering**, including any of the various engineering disciplines (e.g. mechanical, electrical, civil, aeronautical, materials, agricultural, biomedical, chemical, and computer, etc.). The program parallels the first two years of engineering programs at most universities accredited by the Accrediting Board for Engineering and Technology (ABET). Four year schools offering a **B.S. in Engineering** include the University of Illinois at Chicago (UIC), Northern Illinois University (NIU), University of Illinois at Urbana-Champaign (UIUC), Illinois Tech (IIT), Bradley, Southern Illinois University (SIU), Northwestern University, Milwaukee School of Engineering (MSOE), Marquette, Purdue, and more. Upon completion of minimum transfer requirements (which vary by four-year school), CLC Engineering students can transfer to complete their B.S degree at a four-year college or university.

This program is also appropriate for students pursuing a **B.S. in Computer Science with an engineering focus**. Four-year schools offering a B.S. in Computer Science with an engineering focus include University of Illinois at Chicago (UIC), University of Illinois at Urbana-Champaign (UIUC College of Engineering), Illinois Tech (IIT), Southern Illinois University at Carbondale (SIUC) and Southern Illinois University at Edwardsville (SIUE). Students desiring a **B.A. or B.S. in Computer Science with a math or liberal arts focus** may want to pursue the program of study recommended under **Computer Science** (Associate in Science) on page 76.

Since minor differences in course requirements exist at different universities and in different engineering disciplines within the same university, students are strongly advised to meet with a faculty advisor from the Engineering Department or a CLC counselor, and consult the college catalog and an engineering advisor at their intended transfer institution.

Communication - 6 credit hours

A grade of C or better is required for both ENG courses.

- ENG 121 English Composition I (3) **C1 900**
- ENG 122 English Composition II (3) **C1 901 R or**
- ENG 126 Advanced Composition: Scientific and Technical Communications (3) **C1 901 R**

Social/Behavioral Sciences, Humanities and Fine Arts - 9 credit hours

Select courses from three different disciplines (i.e., different prefixes). At least one course must be selected from the Social and Behavioral Sciences section and one course from either the Humanities or Fine Arts section.

Students are recommended to choose courses in consultation with an advisor to meet 4-year engineering school transfer requirements.

Social and Behavioral Sciences

- ANT 121+ Introduction to Anthropology (3) **S1 900N**
- ANT 221+ Cultural Anthropology (3) **S1 901N**
- ANT 222 Introduction to Physical Anthropology (3) **S1 902**
- ANT 224 Introduction to Archaeology (3) **S1 903**
- ANT 228+ Cross-Cultural Relationships (3) **S1 904D**
- ECO 221 Principles of Macroeconomics (3) **S3 901**
- ECO 222 Principles of Microeconomics (3) **S3 902**
- GEG 122 Cultural Geography (3) **S4 900N**
- GEG 123 World Regional Geography (3) **S4 900N**
- GXS 121+ Introduction to Gender Studies (3) **S9 900**
- GXS 229+ Sex, Gender, and Power (3) **S7 904D**
- HST 121 History of Western Civilization I (3) **S2 902**
- HST 122 History of Western Civilization II (3) **S2 903**
- HST 126+ History of Contemp. Non-Western Civilization (3) **S2 905N**
- HST 127+ History of Chinese Culture & Society (3) **S2 914N**
- HST 221 United States History to 1876 (3) **S2 900**
- HST 222 United States History 1876 to Present (3) **S2 901**
- HST 245+ History of Latin America to 1825 (3) **S2 910N**
- HST 246+ History of Latin America from 1825 (3) **S2 911N**
- PSC 121 American National Politics (3) **S5 900**
- PSC 122 State and Local Politics (3) **S5 902**
- PSC 221+ Comparative Political Systems (3) **S5 905**
- PSC 222+ International Relations (3) **S5 904N**
- PSY 121 Introduction to Psychology (3) **S6 900**
- PSY 220 Lifespan Development (3) **S6 902**
- PSY 222 Child Growth and Development (3) **S6 903**
- PSY 225 Social Psychology (3) **S8 900**
- PSY 226 Adolescent Psychology (3) **S6 904**
- SOC 121 Introduction to Sociology (3) **S7 900**
- SOC 222 Social Problems (3) **S7 901**
- SOC 224 Sociology of the Family (3) **S7 902**
- SOC 225+ Class, Race, and Gender (3) **S7 903D**
- SOC 229+ Sex, Gender, and Power (3) **S7 904D**

Humanities

- ARA 222+ Intermediate Modern Standard Arabic II (4) **H1 900**
- CHI 222+ Intermediate Chinese II (4) **H1 900**
- ENG 129+ Women in Literature (3) **H3 911D**
- ENG 223 Early American Literature (3) **H3 914**
- ENG 225 Survey of British Literature I (3) **H3 912**
- ENG 226 Survey of British Literature II (3) **H3 913**
- ENG 227 Introduction to Shakespeare (3) **H3 905**
- ENG 228+ World Literature (3) **H3 906**
- ENG 229 20th Century American Literature (3) **H3 915**
- ENG 241 Introduction to Poetry (3) **H3 903**
- ENG 243 Introduction to Fiction (3) **H3 901**
- ENG 244+ Mythology and Fairy Tales (3) **H9 901**
- ENG 246+ Latin American Writers (3) **H3 908N**
- ENG 247+ International Women Writers (3) **H3 911D**
- FRN 222+ Intermediate French II (4) **H1 900**
- FRN 223 French Civilization I (3) **H1 900**
- FRN 224 French Civilization II (3) **H1 900**
- GER 222+ Intermediate German II (4) **H1 900**
- GER 223 German Civilization I (3) **H1 900**
- GER 224 German Civilization II (3) **H1 900**

- HUM 121+ Humanities: Ancient Times to the Middle Ages (3) **HF 902**
- HUM 122+ Humanities: Renaissance to the Present (3) **HF 903**
- HUM 127 Critical Thinking (3) **H4 906**
- HUM 128+ Introduction to Middle-Eastern Civilizations (3) **H2 903 N**
- HUM 129+ Introduction to East Asian Civilization (3) **HF 904 N**
- HUM 141+ World Humanities 20/21 Century (3) **HF 904N**
- HUM 221+ American Decades (3) **HF 906D**
- HUM 226+ Women and the Arts (3) **HF 907D**
- ITL 222+ Intermediate Italian II (4) **H1 900**
- ITL 223 Italian Civilization I (3) **H1 900**
- JPN 222+ Intermediate Japanese II (4) **H1 900**
- PHI 121 Introduction to Philosophy (3) **H4 900**
- PHI 122 Logic (3) **H4 906**
- PHI 123 Philosophy of Religion (3) **H4 905**
- PHI 125+ Introduction to Ethics (3) **H4 904**
- PHI 126+ World Religions (3) **H5 904N**
- PHI 221+ Asian Philosophy (3) **H4 903N**
- RUS 222+ Intermediate Russian II (4) **H1 900**
- SPA 222+ Intermediate Spanish II (4) **H1 900**
- SPA 223+ Spanish Civilization I (3) **H1 900**
- SPA 224+ Spanish Civilization II (3) **H1 900**

Fine Arts

- ART 121 Introduction to Art (3) **F2 900**
- ART 240+ History of Art I (3) **F2 901**
- ART 241+ History of Art II (3) **F2 902**
- ART 260 History of Photography (3) **F2 904**
- DNC 240+ The Art of Dance (3) **F1 906**
- HUM 121+ Humanities: Ancient Times to the Middle Ages (3) **HF 902**
- HUM 122+ Humanities: Renaissance to the Present (3) **HF 903**
- HUM 123 Introduction to Film (3) **F2 908**
- HUM 126 Introduction to the Performing Arts (3) **F9 900**
- HUM 129+ Introduction to East Asian Civilization (3) **HF 904 N**
- HUM 140+ Introduction to International Film (3) **F2 909**
- HUM 141+ World Humanities 20/21 Century (3) **HF 904N**
- HUM 221+ American Decades (3) **HF 906D**
- HUM 222 Film and Society (3) **F2 908**
- HUM 226+ Women and the Arts (3) **HF 907D**
- MUS 124 Introduction to Music (3) **F1 900**
- MUS 224 Music Literature (3) **F1 902**
- THE 121 Introduction to Theatre I (3) **F1 907**
- THE 123+ Diversity in American Theatre (3) **F1 909D**

Physical and Life Sciences - 15 credit hours

Physical Science

- CHM 121L (LAB) General Chemistry I (5) **P1 902L**
- PHY 123L (LAB) Physics for Science and Engineering I (5) **P2 900L**
- PHY 124L (LAB) Physics for Science and Engineering II (5)

Mathematics - 16 credit hours

- MTH 145 Calculus and Analytic Geometry I (5) **M1 900-1**
- MTH 146 Calculus and Analytic Geometry II (4) **M1 900-2**
- MTH 227 Ordinary Differential Equations (3) **MTH 912**
- MTH 246 Calculus and Analytic Geometry III (4) **M1 900-3**

Math Computer Science - 3 credit hours

- MCS 140 Computer Programming for Engineers and Scientists (3) **CS 911**
- OR**
- MCS 141 Computer Science I (3) **CS 911**

International/Multicultural Requirement

Include one course in International/Multicultural Education — Choose one course with a + following the course number. This course can fulfill both the I/M requirement and a Social Science, Humanities, or Fine Arts requirement.

Area of Concentration/Elective Requirements- 12 credit hours

Choose 12 credit hours from the following courses.
See **Recommended Area of Concentration/Technical
Electives for Specific Engineering Majors below.

EGR	120	Introduction to Engineering	1
EGR	121	Engineering Design Graphics EGR 941	3
EGR	125	Engineering Statics EGR 942	3
EGR	225	Engineering Dynamics EGR 943	3
EGR	221	Statics and Dynamics	5
EGR	260	Introduction to Circuit Analysis EGR 931L ..	4
EGR	222	Engineering Mech of Materials EGR 945	3
EET	223	Introduction to Digital Electronics.....	4
CHM	123	General Chemistry II CHM 912	5
CHM	222	Organic Chemistry I CHM 913	5
MCS	142	Computer Science II CS 912	3
MCS	240	Computer Organization and Architecture	3
MTH	225	Introduction to Linear Algebra MTH 911	3
MTH	244	Discrete Mathematics M1 905	3
PHY	221	Physics for Science & Egr III	4

** Recommended Area of Concentration/Technical Electives for Specific Engineering Majors:

These are recommended (not required) electives that students
can choose from when developing an academic plan of study.

These recommendations align with the IAI Engineering Panel
recommendations. Students are strongly recommended to
choose courses in consultation with an advisor to meet
4-year engineering school transfer requirements.

General or Undecided:

EGR 120, 121, 125, 225, 260

Chemical Engineering:

EGR 120, 121, CHM 123, 222

Civil Engineering:

EGR 120, 121, 125, 222, 225

Electrical/Computer Engineering:

EGR 120, 260, EET 223, MTH 225, 244

Computer Science:

EGR 120, MCS 141, 142, 240, MTH 244

Industrial Engineering:

EGR 120, 121, 125, 225, 222

Mechanical Engineering:

EGR 120, 121, 125, 225, 222, 260

Other: Consult with CLC advisor or four-year university
engineering advisor

Other Graduation Requirements

- Cumulative CLC GPA of 2.00 or higher
- Completion of at least 15 credit hours at CLC
- Petition to Graduate:** The Petition to Graduate form
must be submitted to the Welcome and One-Stop Center
to have your degree processed. It can be found online at
www.clcillinois.edu/petition. Contact Admissions for
more information at (847) 543-2061.

Total A.E.S. Degree Requirements - 61 credit hours

Associate in Fine Arts in Art (14AA)

(Effective January 1, 2017, IAI duplication restriction removed.)

Students may obtain an Associate in Fine Arts in Art degree from the College of Lake County by successfully meeting college requirements and the course requirements outlined below.

The College of Lake County is a participant in the Illinois Articulation Initiative (IAI), a major statewide cooperative agreement that eases the transfer process of the completed Illinois General Education Core.

Curriculum among participating institutions. The Associate in Fine Arts degree, however, is not automatically accepted in whole for transfer at all participating IAI four-year colleges and universities in Illinois; therefore students must work with the institutions in which they intend to transfer to ensure transferability of specific courses.

Communication - 9 credit hours

A grade of C or better is required for both ENG courses.

- CMM 121 Fundamentals of Speech (3) **C2 900**
- ENG 121 English Composition I (3) **C1 900**
- ENG 122 English Composition II (3) **C1 901 R or**
- ENG 126 Advanced Composition: Scientific and Technical Communications (3) **C1 901 R**

Social and Behavioral Science - 6 credit hours

Courses must be selected from at least two different disciplines i.e. different prefixes.

- ANT 121+ Introduction to Anthropology (3) **S1 900N**
- ANT 221+ Cultural Anthropology (3) **S1 901N**
- ANT 222 Introduction to Physical Anthropology (3) **S1 902**
- ANT 224 Introduction to Archaeology (3) **S1 903**
- ANT 228+ Cross-Cultural Relationships (3) **S1 904D**
- ECO 221 Principles of Macroeconomics (3) **S3 901**
- ECO 222 Principles of Microeconomics (3) **S3 902**
- GEG 122 Cultural Geography (3) **S4 900N**
- GEG 123 World Regional Geography (3) **S4 900N**
- GXS 121+ Introduction to Gender Studies (3) **S9 900**
- GXS 229+ Sex, Gender, and Power (3) **S7 904D**
- HST 121 History of Western Civilization I (3) **S2 902**
- HST 122 History of Western Civilization II (3) **S2 903**
- HST 126+ History of Contemp. Non-Western Civilization (3) **S2 905N**
- HST 127+ History of Chinese Culture & Society (3) **S2 914N**
- HST 221 United States History to 1876 (3) **S2 900**
- HST 222 United States History 1876 to Present (3) **S2 901**
- HST 245+ History of Latin America to 1825 (3) **S2 910N**
- HST 246+ History of Latin America from 1825 (3) **S2 911N**
- PSC 121 American National Politics (3) **S5 900**
- PSC 122 State and Local Politics (3) **S5 902**
- PSC 221+ Comparative Political Systems (3) **S5 905**
- PSC 222+ International Relations (3) **S5 904N**

- PSY 121 Introduction to Psychology (3) **S6 900**
- PSY 220 Lifespan Development (3) **S6 902**
- PSY 222 Child Growth and Development (3) **S6 903**
- PSY 225 Social Psychology (3) **S8 900**
- PSY 226 Adolescent Psychology (3) **S6 904**
- SOC 121 Introduction to Sociology (3) **S7 900**
- SOC 222 Social Problems (3) **S7 901**
- SOC 224 Sociology of the Family (3) **S7 902**
- SOC 225+ Class, Race, and Gender (3) **S7 903D**
- SOC 229+ Sex, Gender, and Power (3) **S7 904D**

Physical and Life Sciences - 7 credit hours

One course must be selected from Physical Science and one course from Life Sciences. At least one course must be a laboratory science class (L).

Physical Science

- CHM 120L (LAB) Chemical Concepts (4) **P1 902L**
- CHM 121L (LAB) General Chemistry I (5) **P1 902L**
- CHM 140 Chemistry for a Changing World (3) **P1 903**
- CHM 142L (LAB) Chemistry for a Changing World (4) **P1 903L**
- ESC 120L (LAB) Earth Science (4) **P1 905L**
- ESC 121L (LAB) Physical Geology (4) **P1 907L**
- ESC 123 Introduction to Meteorology (3) **P1 905**
- ESC 124 Oceanography (3) **P1 905**
- ESC 125 Geology of National Parks (3) **P1 907**
- ESC 127L (LAB) Introduction to Meteorology (4) **P1 905L**
- ESC 128 Great Mysteries of the Earth (3) **P1 905**
- ESC 129 Severe and Hazardous Weather (3) **P1 905**
- ESC 140L (LAB) Introduction to Astronomy (4) **P1 906L**
- ESC 141 Introduction to Astronomy (3) **P1 906**
- ESC 224 Environmental Geology (3) **P1 908**
- GEG 120L (LAB) Physical Geography (4) **P1 909L**
- GEG 121 Physical Geography (3) **P1 909**
- PHY 120L (LAB) Practical Aspects of Physics (4) **P1 901L**
- PHY 121L (LAB) General Physics I (5) **P1 900L**
- PHY 123L (LAB) Physics for Science and Engineering I (5) **P2 900L**

Life Science

- BIO 120L (LAB) Environmental Biology (4) **L1 905L**
- BIO 123L (LAB) Principles of Biology (4) **L1 900L**
- BIO 127 Introduction to Evolution (3) **L1 907**
- BIO 140 Environmental Biology without Lab (3) **L1 905**
- BIO 141L (LAB) Concepts of Biology (4) **L1 900L**
- BIO 149 Genetics and Society (3) **L1 906**
- BIO 161L (LAB) General Biology I (4) **L1 910L**

Mathematics - 3 credit hours

- MTH 127 Finite Mathematics I (3) **M1 906**
- MTH 140 Contemporary Mathematics (3) **M1 904**
- MTH 141 Quantitative Literacy (3) **M1 901**
- MTH 145 Calculus and Analytic Geometry I (5) **M1 900-1**
- MTH 146 Calculus and Analytic Geometry II (4) **M1 900-2**
- MTH 221 Mathematics for Elementary Teaching II (3) **M1 903**
- MTH 222 Elementary Statistics (4) **M1 902**
- MTH 224 Calculus for Business and Social Science (4) **M1 900-B**
- MTH 244 Discrete Mathematics (3) **M1 905**
- MTH 246 Calculus and Analytic Geometry III (4) **M1 900-3**

Humanities and Fine Arts - 6 credit hours

At least one course must be selected from the Humanities section and one course from the Fine Arts section.

Humanities

- ARA 222+ Intermediate Modern Standard Arabic II (4) **H1 900**
- CHI 222+ Intermediate Chinese II (4) **H1 900**
- ENG 129+ Women in Literature (3) **H3 911D**
- ENG 223 Early American Literature (3) **H3 914**
- ENG 225 Survey of British Literature I (3) **H3 912**
- ENG 226 Survey of British Literature II (3) **H3 913**
- ENG 227 Introduction to Shakespeare (3) **H3 905**
- ENG 228+ World Literature (3) **H3 906**
- ENG 229 20th Century American Literature (3) **H3 915**
- ENG 241 Introduction to Poetry (3) **H3 903**
- ENG 243 Introduction to Fiction (3) **H3 901**
- ENG 244+ Mythology and Fairy Tales (3) **H9 901**
- ENG 246+ Latin American Writers (3) **H3 908N**
- ENG 247+ International Women Writers (3) **H3 911D**
- ENG 249 Children's Literature (3) **H3 918**
- FRN 222+ Intermediate French II (4) **H1 900**
- FRN 223 French Civilization I (3) **H1 900**
- FRN 224 French Civilization II (3) **H1 900**
- GER 222+ Intermediate German II (4) **H1 900**
- GER 224 German Civilization II (3) **H1 900**
- HUM 121+ Humanities: Ancient Times to the Middle Ages (3) **HF 902**
- HUM 122+ Humanities: Renaissance to the Present (3) **HF 903**
- HUM 127 Critical Thinking (3) **H4 906**
- HUM 128+ Introduction to Middle-Eastern Civilizations (3) **H2 903 N**
- HUM 129+ Introduction to East Asian Civilization (3) **HF 904 N**
- HUM 141+ World Humanities 20/21 Century (3) **HF 904 N**
- HUM 221+ American Decades (3) **HF 906D**
- HUM 226+ Women and the Arts (3) **HF 907D**
- ITL 222+ Intermediate Italian II (4) **H1 900**
- ITL 223 Italian Civilization I (3) **H1 900**
- JPN 222+ Intermediate Japanese II (4) **H1 900**
- PHI 121 Introduction to Philosophy (3) **H4 900**
- PHI 122 Logic (3) **H4 906**
- PHI 123 Philosophy of Religion (3) **H4 905**
- PHI 125+ Introduction to Ethics (3) **H4 904**
- PHI 126+ World Religions (3) **H5 904N**
- PHI 221+ Asian Philosophy (3) **H4 903N**
- RUS 222+ Intermediate Russian II (4) **H1 900**
- SPA 222+ Intermediate Spanish II (4) **H1 900**
- SPA 223+ Spanish Civilization I (3) **H1 900**
- SPA 224+ Spanish Civilization II (3) **H1 900**

Fine Arts

- DNC 240+ The Art of Dance (3) **F1 906**
- HUM 121+ Humanities: Ancient Times to the Middle Ages (3) **HF 902**
- HUM 122+ Humanities: Renaissance to the Present (3) **HF 903**
- HUM 123 Introduction to Film (3) **F2 908**
- HUM 126 Introduction to the Performing Arts (3) **F9 900**
- HUM 129+ Introduction to East Asian Civilization (3) **HF 904 N**
- HUM 140+ Introduction to International Film (3) **F2 909**

- HUM 141+ World Humanities 20/21 Century (3) **HF 904 N**
- HUM 221+ American Decades (3) **HF 906D**
- HUM 222 Film and Society (3) **F2 908**
- HUM 226+ Women and the Arts (3) **HF 907D**
- MUS 124 Introduction to Music (3) **F1 900**
- MUS 224 Music Literature (3) **F1 902**
- THE 121 Introduction to Theatre I (3) **F1 907**
- THE 123+ Diversity in American Theatre (3) **F1 909D**

Area of Concentration/Elective Requirements- 30 credit hours

Art Core - 21 credit hours

- ART 122 Two Dimensional Design (3)
- ART 124 Drawing I (3)
- ART 127 Drawing II (3)
- ART 221 Three Dimensional Design (3)
- ART 225 Figure Drawing (3)
- ART 240+ History of Art I (3) **F2 901**
- ART 241+ History of Art II (3) **F2 902**

Art Studio Electives- 9 credit hours

- ART 123 Color and Design Techniques (3)
- ART 129 Photography I (3)
- ART 149 Digital Photography I (3)
- ART 222 Computer Art I (3)
- ART 223 Sculpture I (3)
- ART 224 Painting I (3)
- ART 226 Ceramics I (3)
- ART 227 Painting II (3)
- ART 228 Sculpture II (3)
- ART 229 Photography II (3)
- ART 245 Jewelry I (3)
- ART 246 Ceramics II (3)
- ART 249 Digital Photography II (3)

International/Multicultural Requirement

Include one course in International/Multicultural Education—Choose one course with a + following the course number. This course can fulfill both the I/M requirement and a Social Science, Humanities, or Fine Arts requirement. A BA degree at many four-year colleges may require college-level foreign language.

Total A.F.A. in Art Degree Requirements - 61 credit hours

Other Graduation Requirements

- Cumulative CLC GPA of 2.00 or higher
- Completion of at least 15 credit hours at CLC
- Petition to Graduate:** The Petition to Graduate form must be submitted to the Welcome and One-Stop Center to have your degree processed. It can be found online at www.clcillinois.edu/petition. Contact Admissions for more information at (847) 543-2061.

Associate in Fine Arts in Music (16AB)

(Effective January 1, 2017, IAI duplication restriction removed.)

Students may obtain an Associate in Fine Arts in Music Performance degree from the College of Lake County by successfully meeting college requirements and the course requirements outlined below.

The College of Lake County is a participant in the Illinois Articulation Initiative (IAI), a major statewide cooperative agreement that eases the transfer process of the completed Illinois General Education Core Curriculum among participating institutions. The Associate in Fine Arts degree, however, is not automatically accepted in whole for transfer at all participating IAI four-year colleges and universities in Illinois; therefore students must work with the institutions in which they intend to transfer to ensure transferability of specific courses.

Communication - 9 credit hours

A grade of C or better is required for both ENG courses.

<input type="checkbox"/>	CMM	121	Fundamentals of Speech (3) C2 900
<input type="checkbox"/>	ENG	121	English Composition I (3) C1 900
<input type="checkbox"/>	ENG	122	English Composition II (3) C1 901 R or
<input type="checkbox"/>	ENG	126	Advanced Composition: Scientific and Technical Communications (3) C1 901 R

Social and Behavioral Science - 3 credit hours

<input type="checkbox"/>	ANT	121+	Introduction to Anthropology (3) S1 900N
<input type="checkbox"/>	ANT	221+	Cultural Anthropology (3) S1 901N
<input type="checkbox"/>	ANT	222	Introduction to Physical Anthropology (3) S1 902
<input type="checkbox"/>	ANT	224	Introduction to Archaeology (3) S1 903
<input type="checkbox"/>	ANT	228+	Cross-Cultural Relationships (3) S1 904D
<input type="checkbox"/>	ECO	221	Principles of Macroeconomics (3) S3 901
<input type="checkbox"/>	ECO	222	Principles of Microeconomics (3) S3 902
<input type="checkbox"/>	GEG	122	Cultural Geography (3) S4 900N
<input type="checkbox"/>	GEG	123	World Regional Geography (3) S4 900N
<input type="checkbox"/>	GXS	121+	Introduction to Gender Studies (3) S9 900
<input type="checkbox"/>	GXS	229+	Sex, Gender and Power (3) S7 904D
<input type="checkbox"/>	HST	121	History of Western Civilization I (3) S2 902
<input type="checkbox"/>	HST	122	History of Western Civilization II (3) S2 903
<input type="checkbox"/>	HST	126+	History of Contemporary Non-Western Civilization (3) S2 905N
<input type="checkbox"/>	HST	127+	History of Chinese Culture and Society (3) S2 914N
<input type="checkbox"/>	HST	221	United States History to 1876 (3) S2 900
<input type="checkbox"/>	HST	222	United States History 1876 to Present (3) S2 901
<input type="checkbox"/>	HST	245+	History of Latin America to 1825 (3) S2 910N
<input type="checkbox"/>	HST	246+	History of Latin America from 1825 (3) S2 911N
<input type="checkbox"/>	PSC	121	American National Politics (3) S5 900
<input type="checkbox"/>	PSC	122	State and Local Politics (3) S5 902
<input type="checkbox"/>	PSC	221+	Comparative Political Systems (3) S5 905
<input type="checkbox"/>	PSC	222+	International Relations (3) S5 904N
<input type="checkbox"/>	PSY	121	Introduction to Psychology (3) S6 900
<input type="checkbox"/>	PSY	220	Lifespan Development (3) S6 902
<input type="checkbox"/>	PSY	222	Child Growth and Development (3) S6 903

<input type="checkbox"/>	PSY	225	Social Psychology (3) S8 900
<input type="checkbox"/>	PSY	226	Adolescent Psychology (3) S6 904
<input type="checkbox"/>	SOC	121	Introduction to Sociology (3) S7 900
<input type="checkbox"/>	SOC	222	Social Problems (3) S7 901
<input type="checkbox"/>	SOC	224	Sociology of the Family (3) S7 902
<input type="checkbox"/>	SOC	225+	Class, Race, and Gender (3) S7 903D
<input type="checkbox"/>	SOC	229+	Sex, Gender and Power (3) S7 904D

Physical and Life Sciences - 7 credit hours

One course must be selected from Physical Science and one course from Life Sciences. At least one course must be a laboratory science class (L).

Physical Science

<input type="checkbox"/>	CHM	120L	(LAB) Chemical Concepts (4) P1 902L
<input type="checkbox"/>	CHM	121L	(LAB) General Chemistry I (5) P1 902L
<input type="checkbox"/>	CHM	140	Chemistry for a Changing World (3) P1 903
<input type="checkbox"/>	CHM	142L	(LAB) Chemistry for a Changing World (4) P1 903L
<input type="checkbox"/>	ESC	120L	(LAB) Earth Science (4) P1 905L
<input type="checkbox"/>	ESC	121L	(LAB) Physical Geology (4) P1 907L
<input type="checkbox"/>	ESC	123	Introduction to Meteorology (3) P1 905
<input type="checkbox"/>	ESC	124	Oceanography (3) P1 905
<input type="checkbox"/>	ESC	125	Geology of National Parks (3) P1 907
<input type="checkbox"/>	ESC	127L	(LAB) Introduction to Meteorology (4) P1 905L
<input type="checkbox"/>	ESC	128	Great Mysteries of the Earth (3) P1 905
<input type="checkbox"/>	ESC	129	Severe and Hazardous Weather (3) P1 905
<input type="checkbox"/>	ESC	140L	(LAB) Introduction to Astronomy (4) P1 906L
<input type="checkbox"/>	ESC	141	Introduction to Astronomy (3) P1 906
<input type="checkbox"/>	ESC	224	Environmental Geology (3) P1 908
<input type="checkbox"/>	GEG	120L	(LAB) Physical Geography (4) P1 909L
<input type="checkbox"/>	GEG	121	Physical Geography (3) P1 909
<input type="checkbox"/>	PHY	120L	(LAB) Practical Aspects of Physics (4) P1 901L
<input type="checkbox"/>	PHY	121L	(LAB) General Physics I (5) P1 900L
<input type="checkbox"/>	PHY	123L	(LAB) Physics for Science and Engineering I (5) P2 900L

Life Science

<input type="checkbox"/>	BIO	120L	(LAB) Environmental Biology (4) L1 905L
<input type="checkbox"/>	BIO	123L	(LAB) Principles of Biology (4) L1 900L
<input type="checkbox"/>	BIO	127	Introduction to Evolution (3) L1 907
<input type="checkbox"/>	BIO	140	Environmental Biology without Lab (3) L1 905
<input type="checkbox"/>	BIO	141L	(LAB) Concepts of Biology (4) L1 900L
<input type="checkbox"/>	BIO	149	Genetics and Society (3) L1 906
<input type="checkbox"/>	BIO	161L	(LAB) General Biology I (4) L1 910L

Mathematics - 3 credit hours

<input type="checkbox"/>	MTH	127	Finite Mathematics I (3) M1 906
<input type="checkbox"/>	MTH	140	Contemporary Mathematics (3) M1 904
<input type="checkbox"/>	MTH	141	Quantitative Literacy (3) M1 901
<input type="checkbox"/>	MTH	145	Calculus and Analytic Geometry I (5) M1 900-1
<input type="checkbox"/>	MTH	146	Calculus and Analytic Geometry II (4) M1 900-2
<input type="checkbox"/>	MTH	221	Mathematics for Elementary Teaching II (3) M1 903
<input type="checkbox"/>	MTH	222	Elementary Statistics (4) M1 902
<input type="checkbox"/>	MTH	224	Calculus for Business and Social Science (4) M1 900-B
<input type="checkbox"/>	MTH	244	Discrete Mathematics (3) M1 905
<input type="checkbox"/>	MTH	246	Calculus and Analytic Geometry III (4) M1 900-3

Humanities and Fine Arts - 6 credit hours

One course must be selected from the Humanities section and one course from the Fine Arts section.

Humanities

- ARA 222+ Intermediate Modern Standard Arabic II (4) **H1 900**
- CHI 222+ Intermediate Chinese II (4) **H1 900**
- ENG 129+ Women in Literature (3) **H3 911D**
- ENG 223 Early American Literature (3) **H3 914**
- ENG 225 Survey of British Literature I (3) **H3 912**
- ENG 226 Survey of British Literature II (3) **H3 913**
- ENG 227 Introduction to Shakespeare (3) **H3 905**
- ENG 228+ World Literature (3) **H3 906**
- ENG 229 20th Century American Literature (3) **H3 915**
- ENG 241 Introduction to Poetry (3) **H3 903**
- ENG 243 Introduction to Fiction (3) **H3 901**
- ENG 244+ Mythology and Fairy Tales (3) **H9 901**
- ENG 246+ Latin American Writers (3) **H3 908N**
- ENG 247+ International Women Writers (3) **H3 911D**
- ENG 249 Children's Literature (3) **H3 918**
- FRN 222+ Intermediate French II (4) **H1 900**
- FRN 223 French Civilization I (3) **H1 900**
- FRN 224 French Civilization II (3) **H1 900**
- GER 222+ Intermediate German II (4) **H1 900**
- GER 224 German Civilization II (3) **H1 900**
- HUM 121+ Humanities: Ancient Times to the Middle Ages (3) **HF 902**
- HUM 122+ Humanities: Renaissance to the Present (3) **HF 903**
- HUM 127 Critical Thinking (3) **H4 906**
- HUM 128+ Introduction to Middle-Eastern Civilizations (3) **H2 903 N**
- HUM 129+ Introduction to East Asian Civilization (3) **HF 904 N**
- HUM 141+ World Humanities 20/21 Century (3) **HF 904 N**
- HUM 221+ American Decades (3) **HF 906D**
- HUM 226+ Women and the Arts (3) **HF 907D**
- ITL 222+ Intermediate Italian II (4) **H1 900**
- ITL 223 Italian Civilization I (3) **H1 900**
- JPN 222+ Intermediate Japanese II (4) **H1 900**
- PHI 121 Introduction to Philosophy (3) **H4 900**
- PHI 122 Logic (3) **H4 906**
- PHI 123 Philosophy of Religion (3) **H4 905**
- PHI 125+ Introduction to Ethics (3) **H4 904**
- PHI 126+ World Religions (3) **H5 904N**
- PHI 221+ Asian Philosophy (3) **H4 903N**
- RUS 222+ Intermediate Russian II (4) **H1 900**
- SPA 222+ Intermediate Spanish II (4) **H1 900**
- SPA 223+ Spanish Civilization I (3) **H1 900**
- SPA 224+ Spanish Civilization II (3) **H1 900**

Fine Arts

- ART 121 Introduction to Art (3) **F2 900**
- ART 240+ History of Art I (3) **F2 901**
- ART 241+ History of Art II (3) **F2 902**
- ART 260 History of Photography (3) **F2 904**
- ART 261+ Non-Western Art History (3) **F2 903N**
- DNC 240+ The Art of Dance (3) **F1 906**
- HUM 121+ Humanities: Ancient Times to the Middle Ages (3) **HF 902**
- HUM 122+ Humanities: Renaissance to the Present (3) **HF 903**
- HUM 123 Introduction to Film (3) **F2 908**
- HUM 126 Introduction to the Performing Arts (3) **F9 900**
- HUM 129+ Introduction to East Asian Civilization (3) **HF 904 N**
- HUM 140+ Introduction to International Film (3) **F2 909**
- HUM 141+ World Humanities 20/21 Century (3) **HF 904 N**
- HUM 221+ American Decades (3) **HF 906D**
- HUM 222 Film and Society (3) **F2 908**

- HUM 226+ Women and the Arts (3) **HF 907D**
- THE 121 Introduction to Theatre I (3) **F1 907**
- THE 123+ Diversity in American Theatre (3) **F1 909D**

Area of Concentration/Elective Requirements- 37 credit hours**Music Core - 21 credit hours**

- MUS 128 Theory of Music I (4)
- MUS 129 Theory of Music II (4)
- MUS 142 Ear-training and Sight-singing I (1)
- MUS 149 Ear-training and Sight-singing II (1)
- MUS 224 Music Literature (3) **F1 902**
- MUS 228 Theory of Music III (4)
- MUS 229 Theory of Music IV (4)

Music Electives - 16 credit hours**Choose 4 credit hours from below—Keyboard Skills**

- MUS 143^ Applied Music - Piano I (1-2)
- MUS 144^ Applied Music - Jazz Piano I (1-2)
- MUS 145 Piano Class I (1)
- MUS 146 Piano Class II (1)
- MUS 245 Piano Class III (1)
- MUS 246 Piano Class IV (1)

Choose 4 credit hours from below

- MUS 120^ Vocal Ensembles (1)
- MUS 123^ Wind Ensemble (1)
- MUS 223^ Jazz Ensemble (1)

Choose 4 credit hours from the same 100 level course and 4 credit hours from the same 200 level course. All 8 credit hours must be taken in voice or in one major instrument.

- MUS 141^ Applied Music Voice I (1-2) *and*
- MUS 241^ Applied Music Voice II (1-2) *or*
- MUS 143^ Applied Music Piano I (1-2) *and*
- MUS 243^ Applied Music Piano II (1-2) *or*
- MUS 144^ Applied Music Jazz Piano I (1-2) *and*
- MUS 244^ Applied Music Jazz Piano II (1-2) *or*
- MUS 160-188^ Applied Music Instrument I (1-2) *and*
- MUS 260-288^ Applied Music Instrument II (1-2)

^ Repeatable up to four credit hours

International/Multicultural Requirement

Include one course in International/Multicultural Education—Choose one course with a + following the course number. This course can fulfill both the I/M requirement and a Social Science, Humanities, or Fine Arts requirement.

Total A.F.A. in Music Degree Requirements - 65 credit hours**Other Graduation Requirements**

- Cumulative CLC GPA of 2.00 or higher
- Completion of at least 15 credit hours at CLC
- Petition to Graduate:** The Petition to Graduate form must be submitted to the Welcome and One-Stop Center to have your degree processed. It can be found online at www.clcillinois.edu/petition. Contact Admissions for more information at (847) 543-2061.

Associate in Teaching Secondary Mathematics (17AB)

(Effective January 1, 2017, IAI duplication restriction removed.)

Students may obtain an Associate in Arts in Teaching Secondary Mathematics degree from the College of Lake County by successfully meeting college requirements and the course requirements outlined below.

The College of Lake County is a participant in the Illinois Articulation Initiative (IAI), a major statewide cooperative agreement that eases the transfer process of the completed Illinois General Education Core Curriculum among participating institutions. The Associate in Arts in Teaching Secondary Mathematics degree, however, is not automatically accepted in whole for transfer at all participating IAI four-year colleges and universities in Illinois; therefore students must work with their intended transfer institutions to ensure transferability of specific courses. Students should also check with their intended transfer school regarding specific constitution examination requirements.

Students must pass the Illinois Test of Academic Proficiency in order to be awarded the A.A.T. degree.

Communication - 9 credit hours

A grade of C or better is required for both ENG courses.

- CMM 121 Fundamentals of Speech (3) **C2 900**
- ENG 121 English Composition I (3) **C1 900**
- ENG 122 English Composition II (3) **C1 901 R or**
- ENG 126 Advanced Composition: Scientific and Technical Communications (3) **C1 901 R**

Social and Behavioral Science - 9 credit hours

- PSY 121 Introduction to Psychology (3) **S6 900**
- PSY 226 Adolescent Development (3) **S6 904**

One other course from the list below:

- ANT 121+ Introduction to Anthropology (3) **S1 900N**
- ANT 221+ Cultural Anthropology (3) **S1 901N**
- ANT 222 Introduction to Physical Anthropology (3) **S1 902**
- ANT 224 Introduction to Archaeology (3) **S1 903**
- ANT 228+ Cross-Cultural Relationships (3) **S1 904D**
- ECO 221 Principles of Macroeconomics (3) **S3 901**
- ECO 222 Principles of Microeconomics (3) **S3 902**
- GEG 122 Cultural Geography (3) **S4 900N**
- GEG 123 World Regional Geography (3) **S4 900N**
- HST 121 History of Western Civilization I (3) **S2 902**
- HST 122 History of Western Civilization II (3) **S2 903**

- HST 126+ History of Contemporary Non-Western Civilization (3) **S2 905N**
- HST 127+ History of Chinese Culture and Society (3) **S2 914N**
- HST 221 United States History to 1876 (3) **S2 900**
- HST 222 United States History 1876 to Present (3) **S2 901**
- HST 245+ History of Latin America to 1825 (3) **S2 910N**
- HST 246+ History of Latin America from 1825 (3) **S2 911N**
- PSC 121 American National Politics (3) **S5 900**
- PSC 122 State and Local Politics (3) **S5 902**
- PSC 221+ Comparative Political Systems (3) **S5 905**
- PSC 222+ International Relations (3) **S5 904N**

Physical and Life Sciences - 9 credit hours

- BIO 161L (LAB) General Biology I (4) **L1 910L**
- PHY 123 (LAB) Physics for Science and Engineering I (5) **P2 900L**

Mathematics - 5 credit hours

- MTH 145 Calculus and Analytic Geometry I (5) **M1 900-1**

Humanities and Fine Arts - 9 credit hours

- PHI 122 Logic (3) **H4 906**

- Two other courses from the following lists must be completed.
- One course must be selected from the Humanities section and one course from the Fine Arts section.

Humanities - 3 credit hours minimum

- ARA 222+ Intermediate Modern Standard Arabic II (4) **H1 900**
- CHI 222+ Intermediate Chinese II (4) **H1 900**
- ENG 129+ Women in Literature (3) **H3 911D**
- ENG 223 Early American Literature (3) **H3 914**
- ENG 225 Survey of British Literature I (3) **H3 912**
- ENG 226 Survey of British Literature II (3) **H3 913**
- ENG 227 Introduction to Shakespeare (3) **H3 905**
- ENG 228+ World Literature (3) **H3 906**
- ENG 229 20th Century American Literature (3) **H3 915**
- ENG 241 Introduction to Poetry (3) **H3 903**
- ENG 243 Introduction to Fiction (3) **H3 901**
- ENG 244+ Mythology and Fairy Tales (3) **H9 901**
- ENG 246+ Latin American Writers (3) **H3 908N**
- ENG 247+ International Women Writers (3) **H3 911D**
- ENG 249 Children's Literature (3) **H3 918**
- FRN 222+ Intermediate French II (4) **H1 900**
- FRN 223 French Civilization I (3) **H1 900**
- FRN 224 French Civilization II (3) **H1 900**
- GER 222+ Intermediate German II (4) **H1 900**
- GER 224 German Civilization II (3) **H1 900**
- HUM 121+ Humanities: Ancient Times to the Middle Ages (3) **HF 902**
- HUM 122+ Humanities: Renaissance to the Present (3) **HF 903**
- HUM 127 Critical Thinking (3) **H4 906**
- HUM 128+ Introduction to Middle-Eastern Civilizations (3) **H2 903 N**

- HUM 129+ Introduction to East Asian Civilization (3) **HF 904 N**
- HUM 141+ World Humanities 20/21 Century (3) **HF 904 N**
- HUM 221+ American Decades (3) **HF 906D**
- HUM 226+ Women and the Arts (3) **HF 907D**
- ITL 222+ Intermediate Italian II (4) **H1 900**
- ITL 223 Italian Civilization I (3) **H1 900**
- JPN 222+ Intermediate Japanese II (4) **H1 900**
- PHI 121 Introduction to Philosophy (3) **H4 900**
- PHI 122 Logic (3) **H4 906**
- PHI 123 Philosophy of Religion (3) **H4 905**
- PHI 125+ Introduction to Ethics (3) **H4 904**
- PHI 126+ World Religions (3) **H5 904N**
- PHI 221+ Asian Philosophy (3) **H4 903N**
- RUS 222+ Intermediate Russian II (4) **H1 900**
- SPA 222+ Intermediate Spanish II (4) **H1 900**
- SPA 223+ Spanish Civilization I (3) **H1 900**
- SPA 224+ Spanish Civilization II (3) **H1 900**

Fine Arts—3 credit hours minimum

- ART 121 Introduction to Art (3) **F2 900**
- ART 240+ History of Art I (3) **F2 901**
- ART 241+ History of Art II (3) **F2 902**
- ART 260 History of Photography (3) **F2 904**
- ART 261+ Non-Western Art History (3) **F2 903N**
- DNC 240+ The Art of Dance (3) **F1 906**
- HUM 121+ Humanities: Ancient Times to the Middle Ages (3) **HF 902**
- HUM 122+ Humanities: Renaissance to the Present (3) **HF 903**
- HUM 123 Introduction to Film (3) **F2 908**
- HUM 126 Introduction to the Performing Arts (3) **F9 900**
- HUM 129+ Introduction to East Asian Civilization (3) **HF 904 N**
- HUM 140+ Introduction to International Film (3) **F2 909**
- HUM 141+ World Humanities 20/21 Century (3) **HF 904 N**
- HUM 221+ American Decades (3) **HF 906D**
- HUM 222 Film and Society (3) **F2 908**
- HUM 226+ Women and the Arts (3) **HF 907D**
- MUS 124 Introduction to Music (3) **F1 900**
- MUS 224 Music Literature (3) **F1 902**
- THE 121 Introduction to Theatre I (3) **F1 907**
- THE 123+ Diversity in American Theatre (3) **F1 909D**

Area of Concentration – 21 credit hours

Education:

- EDU 121 Introduction to Teaching (3)
- EDU 222 The Exceptional Child (3)
- EDU 242 Observational/Clinical Experience in Education (1)

Mathematics:

- MTH 146 Calculus and Analytic Geometry II (4) **M1 900-2**
- MTH 225 Linear Algebra (3)
- MTH 246 Calculus and Analytic Geometry III (4) **M1 900-3**

Math Comp/Sci:

- MCS 140 Computer Programming for Engineers and Scientists (3) **CS 911**

International/Multicultural Requirement

Include one course in International/Multicultural Education—Choose one course with a + following the course number. This course can fulfill both the I/M requirement and a Social Science, Humanities, or Fine Arts requirement.

Total A.A.T. in Secondary Mathematics Degree Requirements - 62 credit hours

Other Requirements for Awarding the A.A.T. in Secondary Mathematics

- Successfully pass the ICTS Test of Academic Proficiency (TAP).

Other Graduation Requirements

- Cumulative CLC GPA of 2.00 or higher
- Completion of at least 15 credit hours at CLC
- Petition to Graduate:** The Petition to Graduate form must be submitted to the Welcome and One-Stop Center to have your degree processed. It can be found online at www.clcillinois.edu/petition. Contact Admissions for more information at (847) 543-2061.

Note: For students wishing to obtain a teaching credential in the State of Illinois, a grade of C or above is compulsory for all coursework required for the teaching credential. This includes courses in the major, all education courses, and required general electives. This is effective for those applying for teacher certification as of 2012 (Illinois State Board of Education).