

www.clcillinois.edu/programs/egr

PROGRAM OVERVIEW

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

**Degree: Associate in Engineering Science
Plan 12AB**

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) www.clcillinois.edu/programs/mcs.

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 Student Development 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 # or Technical Elective	1
EGR 121	Engineering Graphics # or Technical Elective	3
ENG 121	English Composition I	3
SECOND SEMESTER		15-16
MCS 140	Computer Programming I or	
MCS 141	Computer Science I	3-4
MTH 146	Calculus and Analytic Geometry II	4
ENG 122	English Composition II or	
ENG 126	Advanced Composition: Scientific and Technical Communications	3
PHY 123	Physics for Science and Engineering I	5
THIRD SEMESTER		16
PHY 124	Physics for Science and Engineering II	5
EGR 125	Engineering Statics # or Technical Elective	3
MTH 246	Calculus and Analytical Geometry III	5
PHI 125	Introduction to Ethics or other Humanities/Fine Arts or Social Science Elective*	3
FOURTH SEMESTER		15-16
MTH 227	Differential Equations	3
EGR 225	Engineering Dynamics # or Technical Elective	3
EGR 260	Introduction to Circuit Analysis # or Technical Elective	3-4
ECO 222	Principles of Microeconomics or other Humanities/Fine Arts or Social Science Elective*	3
PSY 121	Introduction to Psychology or other Humanities/Fine Arts or Social Science Elective*	3

WHY CHOOSE CLC'S ENGINEERING PROGRAM?

- Ease of transfer
- Lower cost
- Smaller classes
- Quality education
- Numerous extracurricular opportunities
- Engineering internships are available
- Scholarships are available

IS ENGINEERING FOR ME?

If you like figuring out how things work, solving problems, new technologies, science and math, then engineering could be a good field for you.

CLC'S ENGINEERING CLUB

The CLC Engineering club is active, with more than 15 students who meet for social events, professional speakers, tours, networking and more.

BAXTER INNOVATION LAB

CLC Engineering students have their own Fab lab/Makerspace to prototype, make, fabricate, study and socialize.

For more information visit www.clcillinois.edu/baxterlab

GETTING STARTED

For steps on how to apply and register, visit www.clcillinois.edu/admission.

Students are **strongly encouraged** to make an appointment with a CLC advisor, counselor or Engineering department chair.

Grayslake • Vernon Hills • Waukegan • Online

OPTIONAL SUMMER RECOMMENDATIONS

(based on the institution you intend to transfer to)

CHM 123	General Chemistry II #	5
EGR 222	Engineering Mechanics of Materials# or Technical Elective	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.

* 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 pages 44-45 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.

TECHNICAL ELECTIVES FOR SPECIFIC ENGINEERING MAJORS BELOW

EGR 120	Introduction to Engineering	1
EGR 121	Engineering Design Graphics	3
EGR 125	Engineering Statics	3
EGR 140	How to Make Almost Anything	3
EGR 225	Engineering Dynamics	3
EGR 260	Introduction to Circuit Analysis	4
EGR 222	Engineering Mech of Materials	3
EGR 299	Special Topics in Engineering	1-3
EET 223	Introduction to Digital Electronics	4
CHM 123	General Chemistry II	5
CHM 222	Organic Chemistry I	5
MCS 142	Computer Science II	3
MCS 240	Computer Organization and Architecture	3
MTH 225	Introduction to Linear Algebra	3
MTH 244	Discrete Mathematics	3
PHY 221	Physics for Science and Engineering III	4

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

Aeronautical/Aerospace:
EGR 120, 121, 125, 222, 225, 260

Biomedical Engineering:
EGR 120, 260, CHM 123, BIO 161

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

Materials Engineering:
EGR 120, 121, 125, 222, 225

Mechanical Engineering:
EGR 120, 121, 125, 225, 222, 260

TYPICAL JOBS

- Mechanical Engineer
- Electrical Engineer
- Civil Engineer
- Computer Scientist
- Chemical Engineer
- Industrial Engineer
- Materials Science Engineer
- Biomedical Engineer
- Aeronautical Engineer

EMPLOYERS

Engineers work in technical or managerial roles for a variety of types of employers, including companies that design, manufacture or build, research, or sell engineering related products.

TRANSFER SCHOOLS

All CLC courses transfer to the major engineering schools in Illinois and surrounding states. You can take up to 60 hours and transfer them to any engineering school, including:

- University of Illinois at Chicago
- University of Illinois at Urbana-Champaign
- Northern Illinois University
- University of Wisconsin at Milwaukee
- University of Wisconsin at Madison
- University of Wisconsin at Platteville
- Illinois Institute of Technology
- Marquette University
- Milwaukee School of Engineering
- Bradley University
- Purdue University
- Iowa University
- Iowa State University
- Southern Illinois University
- Michigan Technological University

www.clcillinois.edu/transfer

www.clcillinois.edu/programs/egr

COURSES OFFERED IN SELECTED SEMESTERS ONLY

Course	Fall	Spring	Summer
CHM 222	X	X	
EGR 120	X	X	
EGR 125	X	X	
EGR 222		X	X
EGR 225	X	X	
EGR 260		X	
EET 223	X	X	
MCS 240	X		
MTH 225		X	X
MTH 244	X	X	
PHY 123	X	X	
PHY 124	X	X	
PHY 221		X	X

GUARANTEED TRANSFER OPTIONS

CLC has Guaranteed Transfer Agreements with several universities that offer engineering programs. The agreements guarantee admission to the university, while admission to the Engineering major may require additional conditions be met as outlined in the agreement. Participating partners include Arizona State University, Eastern Illinois University, Marquette University, Northern Illinois University, Southern Illinois University Carbondale, University of Illinois Chicago and University of Iowa. For details, visit www.clcillinois.edu/gta.

CLC also has a partnership with the University of Illinois, Urbana/Champaign that is open to high school seniors who intend on enrolling at CLC and transferring to UIUC for their B.S. in Engineering. Known as Engineering Pathways, the program offers qualified students guaranteed admission to UIUC's College of Engineering. For details, visit www.clcillinois.edu/programs/egr/options/engineering-pathways.

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