

www.clcillinois.edu/programs/mcs

Program Overview

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

TRANSFER DEGREE PROGRAM COMPUTER SCIENCE (Associate in Science) Plab 11AB

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 should be met. Additionally, students are required to select one course from the International/Multicultural list on Page 51 of the 2015-16 catalog to meet graduation requirements.

First Semester 15

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 Semester 14

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 Semester 15

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 Semester 16

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 and Behavioral Sciences Elective ...	3

Getting Started

If you satisfy the Program Entrance Requirements, visit www.clcillinois.edu/admission for steps on how to register.

What it's About

- Conduct research into fundamental computer and information science as theorists, designers or inventors
- Solve or develop solutions to problems in the field of computer hardware and software

Salary and Job Outlook

For the latest information, visit www.mynextmove.org or the Bureau of Labor Statistics online at www.bls.gov. Gainful employment data is available at www.clcillinois.edu/gainfulemployment.

Transfer Schools

Students have transferred to the following schools:

- DePaul University
- Northern IL University
- Northeastern IL University
- University of IL - Chicago
- University of IL-
Urbana Champaign
- University of IL - Springfield
- University of Wisconsin Madison
- University of Wisconsin Parkside

Grayslake • Vernon Hills • Waukegan • Online

About This Program

Computer Science (CS) vs. Computer Information Technology (CIT)

CS has a more technical emphasis, where CIT has a more business emphasis. For example, CS has more math classes to take, e.g. calculus and discrete math, and CIT has more business classes, e.g. accounting and finance.

Getting Started: First Classes

The beginning CS student takes math and computer programming, specifically MTH 144 Precalculus and MCS 141 CS1. Or, depending on a student's math background, MTH 108 Intermediate Algebra and MCS 121 Computer Science Concepts.

You cannot take a programming class until you have completed MTH 108 Intermediate Algebra or higher.

Intro Course: Computer Science Concepts

Computer Science Concepts (MCS 121) is not a core CS class. It is for the student who wants to take an introductory CS class before taking a programming class.

It is an introduction of computing systems for the computer science major, e.g. data representation, programming languages, operating systems, applications software and networks.

Programming Language

The CLC computer science programming courses use Java as the programming language vehicle for instruction. It is one of the predominant object-oriented programming (OOP) languages.

Computer Science Courses

Computer Science Concepts (MCS 121)

The course previews the fundamental concepts and applications of computer science through a survey of topics including: algorithms and problem solving, programming, computer organization, networking, databases, artificial intelligence and graphics.

Computer Programming for Engineers and Scientists (MCS 140)

This is a course in algorithm and problem solving using the Java programming language. It is intended for engineers to program in the context of scientific applications.

Computer Science I (MCS 141)

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, objects and files.

Computer Science II (MCS 142)

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.

Computer Organization and Architecture (MCS 240)

Topics include data representation, Boolean algebra and digital logic, assembly language, memory and I/O storage systems.

To Learn More

For a complete list of courses and course descriptions, visit www.clcillinois.edu/programs/mcs.

Contact Info

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CLC is committed to maintaining an environment free from harassment and discrimination for everyone and does not discriminate on the basis of race, sex, national origin, religion, sexual orientation, gender identity or expression, or any other protected status. Responsibility for coordination of compliance efforts and receipt of inquiries has been delegated to the Dean of Student Life, 19351 W. Washington St., Grayslake, IL 60030, (847) 543-2288.