COMPUTER SCIENCE (MS)

Modality: Face-to-Face

The Master of Science in Computer Science graduate program is designed to prepare students for immediate entry into the nation's professional workforce in computer science. The program, which is coding and design intensive, will help provide advanced quality graduate studies, in the areas of critical importance and great demands (such as Software Engineering, Database, Website Development, Computer Networking, Cyber Security, Big Data, Cloud Computing and Mobile Application Development), to the citizens of the Illinois, the nation and the world. Program objectives include:

- An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design, implementation and evaluation of software systems, processes, components, or programs of varying complexity in a way that meets the desired needs and demonstrates comprehension of the tradeoffs involved in design choices
- An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution
- An ability to function effectively on teams to accomplish a common goal
- An understanding of professional, ethical, legal, security and social issues and responsibilities
- An ability to communicate effectively with a range of audiences
- An ability to analyze the local and global impact of computing on individuals, organizations, and society
- Recognition of the need for and an ability to engage in continued professional development
- An ability to use current techniques, skills, and tools necessary for computing practice

Once admitted to the on-campus program, students should schedule a meeting with their faculty advisor to determine if prerequisite coursework is needed, and to complete a program plan which outlines each semester of their graduate program. The outcome of this faculty advising session approves registration and enrollment into the Computer Science program.

General Graduate Admission Requirements

All applicants must meet the general admission requirements for Concordia University Chicago graduate programs as published in the Concordia University Chicago academic catalog (https://catalog.cuchicago.edu/graduate/graduate-admission-student-services/).

New students are accepted into most graduate degree-seeking, certificate, endorsement and/or post-graduate programs for online and on-campus study in the fall, spring, or summer semesters. Students seeking to change programs may do so by submitting a Change-of-Program quick app (https://capp.cuchicago.edu/graduate/change-of-program/). Applicants must be in good academic standing according to Concordia University Chicago's satisfactory academic progress standards and meet published program admission requirements at the time of requesting a program change. Program changes will be processed and recorded for the subsequent semester.

Program-Specific Admission Requirements

International applicants with a "3+2" Master's degree will be evaluated as equivalent to a 4-year Bachelor's degree.

Candidates should demonstrate proficiency in the following prerequisite areas:

- C++ or Java
- Data Structures
- Operating Systems
- Computer Architecture

If the faculty advisor determines that the candidate is deficient in the above prerequisite areas, he/she will assign the candidate to complete and pass CUC undergraduate deficiency courses and earn a grade of C or higher while being enrolled in the Computer Science graduate program. These courses will remain undergraduate credit and will not apply to the graduate degree.

Deficiency Courses

The prerequisite courses are assessed per credit hour and are an additional tuition charge to the core Computer Science program.

Code	Title	Hours
CSC-2410	Computer Science I	3
CSC-2510	Computer Science II	3
CSC-3420	Data Structures and Algorithms	3

Students who wish to enroll in graduate-level computer science courses at Concordia University Chicago may need to take and successfully pass computer science placement exam(s) if prerequisite coursework has not been met.

Eligibility & Scheduling:

- Students must email the Computer Science program leader to confirm eligibility and schedule the placement exam(s) before the start of the term.

Placement Exam Administration:

- All placement exams are administered in person—there are no online options.
- Placement exams are free of charge and must be taken before the third day of the term.
- The expected content of the placement exams is available in the undergraduate course descriptions (https://catalog.cuchicago.edu/undergraduate/course-descriptions/csc/).

Registration & Drop Policy:

- Students who pass the placement exam(s) should drop the course(s) within the first week of the term to qualify for a full tuition refund, in accordance with the academic calendar (https://catalog.cuchicago.edu/graduate/academic-calendars/).
- Students who do not pass or choose not to take the placement exam(s) are subject to the prerequisite expectations in the catalog listed above.

Degree Requirements

Code	Title	Hours
Core		
CSC-6051	Operating System II	3
CSC-6021	Data Structures and Algorithms II	3
CSC-6022	Advanced Data Structures and Algorithms	3
Specializations		
Select two of the following specializations:		18
Software Engineering (p. 2)		
Database Design and Development (p. 2)		
Website Design and Development (p. 2)		
Computer Networking and Cyber Security (p. 2)		
Mobile Application Design and Development (p. 2)		
Breadth		
Select nine hours of breadth courses [1]		9
Total Hours		**36**

Software Engineering

Code	Title	Hours
CSC-6160	Software Engineering	3
CSC-6161	Software Engineering II	3
CSC-6162	Advanced Software Engineering	3

Database Design and Development

Code	Title	Hours
CSC-6220	Database Design and Development I	3
CSC-6221	Database Design and Development II	3
CSC-6222	Advanced Design and Development (Big Data)	3

Website Design and Development

Code	Title	Hours
CSC-6350	Website Design and Development I	3
CSC-6351	Website Design and Development II	3
CSC-6352	Advanced Web Design and Development	3

Computer Networking and Cyber Security

Code	Title	Hours
CSC-6440	Computer Networking and Cyber Security I	3
CSC-6441	Computer Networking and Cyber Security II	3
CSC-6442	Advanced Computer Networking and Cyber Security	3

Mobile Application Design and Development

Code	Title	Hours
CSC-6530	Mobile Application Design and Development I	3
CSC-6531	Mobile Application Design and Development II	3
CSC-6532	Advanced Mobile Application Design and Development	3

[1] In addition to taking eighteen credits in two specialization areas, candidates must choose at least one course from each of the remaining specialization tracks. CSC-6990 Master's Thesis may be taken with the approval of the supervising professor, which may count as a breadth requirement course. However, candidates need to:

1. Have at least a 3.5 GPA after completing at least eighteen hours of graduate coursework in order to qualify for the Internship course, and
2. Provide to the supervising professor a written job proposal from the employer explaining how the internship will address the needs for the development and enhancement of the candidate's master's degree and future as a computer scientist.

Graduation Requirements

- Have on file an application for this master's degree program.
- Have on file one official transcript from EACH college/university attended of all previous coursework taken.
- Complete, for the degree being sought:
  - the credit hours and levels as designated,
  - within the specified time limit,
  - with grades of C- or higher (grades of C or higher required for MAT programs),
  - with a minimum cumulative GPA of 3.0.
  - Students completing multiple advanced programs or degrees at CUC must have a 3.0 GPA in each academic program in addition to a minimum cumulative GPA of 3.0.
- Have on file approved "Graduate Transfer Credit Approval" form(s), "Course Substitution" form(s), or evaluation(s), if applicable.
- Have on file the Intent to Graduate/Complete form with the Office of the Registrar by the published deadline.
- Have on file, if applicable, necessary copies of a project, portfolio, thesis or dissertation.
- Approval of the faculty.
- All administrative obligations to CUC must be cleared in order to prompt the release of CUC transcripts and diploma(s).

Every attempt has been made to include information to aid the student with information about his/her program, degree and graduation/completion requirements. It is, however, the student's responsibility to complete all steps and meet all deadlines relevant to graduation requirements.