Computer Science
MASTER OF SCIENCE DEGREE PROGRAM

UIC ENGINEERING
UIC offers a world-class computer science education taught by globally recognized experts.

A master’s degree from UIC will prepare you to enter the CS field at a higher level—or move into a higher position than you now have.

Worldwide demand for experts in artificial intelligence, machine learning, cybersecurity, software engineering, and other computer science fields continues to grow. The U.S. Bureau of Labor Statistics cites a $131,000 median annual salary for CS jobs and anticipates a 22% increase in positions by 2030, noting that most will require a master’s degree.

UIC’s MS program provides a comprehensive foundation in CS and can be completed in three ways.

**Thesis Option**

In conjunction with your coursework, the thesis option pairs you with a faculty mentor and gives you the chance to write an original research-based thesis on a topic that interests you. Students have found that the specialization of a thesis makes them more marketable to employers. Thesis experience is ideal for students who might want to continue on for doctoral study after the MS.

**Project Option**

The project option allows you to complete a capstone project with guidance from a faculty advisor, but it does not require a formal presentation or defense. This is a way to delve into a particular application of computer science and showcase your work to potential employers.

**Coursework Option**

The coursework-only option allows you to complete all the credits toward your MS degree through our comprehensive selection of computer science courses.

**UIC’s Academic Strengths**

- Artificial Intelligence
- Machine Learning and Data Mining
- Natural Language Processing
- Computer Security
- Software Engineering

**Featured Courses**

- **CS 411 ARTIFICIAL INTELLIGENCE I**
  This course covers problem representation, rule-based problem-solving methods, and heuristic search techniques. Students explore applications in expert systems, theorem proving, and language understanding. Individual projects are assigned.

- **CS 426 VIDEO GAME DESIGN AND DEVELOPMENT**
  Learn about the theory and practice of video game design and programming. Students form interdisciplinary teams to design, build, and demonstrate video games or related interactive simulation environments.

- **CS 428 VIRTUAL, AUGMENTED, AND MIXED REALITY**
  Students develop an understanding of virtual reality, augmented reality, and mixed reality environments. Topics include display devices, input devices, tracking, navigation, interaction, collaboration, generating visuals and sounds, software tools, applications, evaluation, and safety.

- **CS 478 DESIGN OF MOBILE APPS**
  Through-in-class instruction and programming assignments, students become familiar with the design and implementation of mobile applications. Topics include operating systems, object-oriented languages and programming environments for mobile platforms, integration with hardware components, and location-aware applications.

**A Step Ahead**

Thanks to the strength of our curriculum and UIC’s global connections, many MS students are able to get internships that help them level up their career planning.

Simran Jumani
- **Internship:** Facebook
- **Location:** Menlo Park, CA
- **Assignment:** Development of machine learning models
- **Enrichment:** Participating in an internal Facebook hackathon and showcasing a prototype

Her perspective: “I was assigned to a manager who guided me throughout the internship and helped me pick the projects that I was most interested in. Interns are treated on par with full-time employees and work on projects that have a direct impact on Facebook’s products.”

Aishwarya Chevali
- **Internship:** Expedia
- **Location:** Chicago, IL
- **Assignment:** Software development on the multi-item packages team, experimenting with ideas for a new site feature and bringing it to life

Her perspective: “It is surprising how the slightest changes to a product can have a huge impact on the business.”
After UIC, where to?

Companies that have hired graduates of the UIC MS in Computer Science program include:

Adobe
Amazon
Amazon Web Services
Anthem
Apple
Applied Materials
Bitwise Global
Bloomberg LP
Blue Cross Blue Shield
BMW
Brightstar
Cerner Corporation
Cisco
Cision
Conversant
Deloitte
Facebook
Factset
Google
Hertz
HP
EY (Ernst & Young)
Kroger
LG
McKinsey & Company
Microsoft
Morningstar
Nike
Optum
Orbitz
PEAK6 Capital Management
Raytheon
Spectralink
Verizon
Visa
VMWare
Walmart
Wayfair

Marco Cavallo
Research Engineer, Apple

Marco Cavallo was drawn to UIC by his passion for computer graphics—an area in which UIC's Electronic Visualization Lab is a world leader. He focused his coursework on computer graphics, machine learning, and artificial intelligence, and wrote an original thesis on augmented reality.

Augmented reality is at the core of Cavallo’s role in Apple’s Technology Development Group, a large team at the company. He is in charge of data visualization tools and machine learning infrastructure to foster computer vision research.

His advice to incoming UIC master's students? Spend your last six months of the program on a thesis or a research assistantship—opportunities that are plentiful at UIC and, in Cavallo’s view, crucial in obtaining your first job.

Lydia Tse
Lead solutions engineer, Nike

Lydia Tse joined Nike as a data visualization engineer, and was promoted to lead solutions engineer. She obtained both her bachelor's degree and master's degree in computer science from UIC, and appreciates the strong foundation in computer science and the communication skills she learned here.

At Nike, Tse connects teams to create scalable and reusable solutions. “There are many teams across Nike with really cool goals to accomplish.”

Tse notes that computer science is very interdisciplinary, and advises incoming students to establish a strong network with people from many disciplines. “It’s an opportunity to learn a wide range of information. After all, teams with individuals from different backgrounds always arrive at the best solutions.”

Admissions

Full details on how to apply—including requirements and deadlines—are at cs.uic.edu under the Graduate menu.

Interested in graduate study at UIC? Talk to us. Contact our computer science graduate team with questions or for an informal conversation.

Barbara Di Eugenio, PhD
Professor and Director of Graduate Studies
cs-dgs@uic.edu

Roksana Sady
Program Advisor
cs-grad@uic.edu

Christina Martinez
Student Affairs
ask.csgrad@uic.edu