

# COMPUTER SCIENCE, MS

*for the degree of Master of Science in Computer Science*

The Department of Computer Science is one of the longest established computer science departments in the world and is consistently ranked as a top-5 graduate program.

The MS in Computer Science is a research-oriented degree that can be counted toward the PhD in Computer Science.

Opportunity exists for specializing in computational science and engineering via the Computational Science & Engineering (<http://catalog.illinois.edu/graduate/engineering/concentration/computational-science-engineering/>) optional graduate concentration.

## Department Research

Illinois has been an international leader in computing research for almost five decades. Broadly organized around 11 research areas (<http://cs.illinois.edu/research/>), more than 95 faculty members (<http://cs.illinois.edu/people/faculty/>) conduct research with over 545 graduate students. They regularly collaborate with researchers across campus, in other departments or research units.

The home of the Department of Computer Science at Illinois is the Thomas M. Siebel Center for Computer Science (<http://cs.illinois.edu/about-us/>), a state-of-the-art building that opened its doors in 2004. On the north side of campus, home to The Grainger College of Engineering (<https://grainger.illinois.edu/>), Siebel Center is an interactive computing habitat, made possible by a gift from alumnus Tom Siebel. The vision for the building was not only to create a magnificent space to work in, but to offer opportunities to investigate and apply computing tools on the building itself. Advanced wireless and wired communication networks, sensors, actuators, video capture and display equipment, video walls and information panels and storage and computing capabilities within the building allow researchers to examine communication and computation issues related to pervasive computing, multimedia infrastructure, building intelligence, security and privacy, and art.

*for the degree of Master of Science in Computer Science*

The Master of Science (MS) in Computer Science is a research-oriented degree that can be counted toward the Computer Science PhD. For additional details and requirements refer to the department's Graduate Degree Requirements (<https://cs.illinois.edu/academics/graduate/ms-program/>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook/>).

The Master of Science (M.S.) in Computer Science is a research-oriented degree that can be counted toward the Computer Science Ph.D. For additional details and requirements refer to the department's Graduate Degree Requirements (<http://cs.illinois.edu/academics/graduate/ms-program/>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook/>).

## Requirements

Code	Title	Hours
CS 599	Thesis Research (minimum applied toward degree)	4

Breadth Requirement - One course from each of three different core areas ( <a href="http://cs.illinois.edu/current-students/graduate-students/ms-thesis/">http://cs.illinois.edu/current-students/graduate-students/ms-thesis/</a> )	9-12
--	------

Advanced courses – One 500-level course from one of the three areas selected in the Breadth Requirement; Remaining hours from any 500-level CS course (500-590 or 598) except CS 591 or CS 597. An approved 500-level non-CS course may satisfy 4 credit hours of this requirement; CS 599 (thesis) may satisfy 4 credit hours of this requirement.	12
---	----

Select one of the following - CS 591 Prof. Development (or comparable work experience in CS); or ENG 572 Professional Practicum (CS); or Elective course (subject to Other Requirements and Conditions)	0-4
---	-----

Elective courses (subject to Other Requirements and Conditions below)	0-7
---	-----

<b>Total Hours</b>	<b>32</b>
--------------------	-----------

## Other Requirements

### Requirement

Other Requirements and Conditions may overlap

A minimum of 16 CS credit hours must be taken from the University of Illinois at Urbana-Champaign campus.

A minimum of 12 500-level credit hours overall.

A maximum of 4 hours of CS 591 and CS 491 may be applied toward the degree.

A grade of B- or higher is required for Breadth Requirement course work.

At most, 12 semester credit hours of previous graduate course work may be transferred and applied to the M.S. degree requirements and 12 credit hours of non-degree graduate courses completed in the Department of Computer Science at the University of Illinois at Urbana-Champaign may be transferred and applied to the M.S. degree requirements.

It is each student's responsibility to secure a M.S. thesis advisor and start thesis research no later than the beginning of the third semester in the program.

All degree requirements must be completed within five consecutive semesters (only fall and spring semesters are counted).

The minimum program GPA is 3.0.

*for the degree of Master of Science in Computer Science*

1. Demonstrate in-depth knowledge of a particular subject area and broad knowledge of other areas in Computer Science.
2. Analyze, design, and construct Computer Science-based solutions for current technological challenges.
3. Plan and conduct original research that addresses questions of significance in a particular subject area in Computer Science.
4. Analyze and be able to articulate the scientific advances and limitations of results described in the research literature.
5. Demonstrate the ability to effectively communicate research proposals and results.
6. Demonstrate an understanding of and ability to follow ethical standards in research and professional service.

*for the degree of Master of Science in Computer Science*

## Admission Requirements

Applicants must hold a bachelor's degree equivalent to that granted by the University of Illinois at Urbana-Champaign. The recommended background for students entering a Computer Science graduate degree program is a bachelor's degree in computer science or computer engineering. The Graduate Record Examination (GRE) (<http://www.ets.org/>) general aptitude tests (Verbal, Quantitative, and Analytical) are no longer required. However, in some cases, GRE general scores may provide helpful supporting information.

Applicants to the computer science MS program must have a minimum grade point average (GPA) of 3.20 (A = 4.00) in their undergraduate studies (international GPAs are systematically converted) to be considered. The department reserves the right to admit applicants with lower GPAs under rare and exceptional circumstances. If an applicant also holds a graduate degree, the minimum GPA for that degree must be 3.00. Full details of the programs offered by Computer Science, admissibility, application procedures, and deadlines can be found at the department's Prospective Graduate Student Information Web site (<http://cs.illinois.edu/admissions/graduate/>). To apply, click here (<http://www.grad.uiuc.edu/admissions/apply/>).

All applicants whose native language is not English are required to submit TOEFL (<http://www.toefl.org/>) or International English Language Testing System (IELTS) (<http://www.ielts.org/>) scores as evidence of English proficiency. Minimum admission requirements (<https://grad.illinois.edu/admissions/instructions/04c/>) (including other temporary test options) are set by the Graduate College.

#### Financial Aid

Fellowships, research assistantships, and teaching assistantships (all of which include tuition and partial fee waivers) are awarded on a competitive basis. All applicants, regardless of US citizenship, whose native language is not English and who wish to be considered for teaching assistantships (one of the most common forms of financial aid for new graduate students in the department) must demonstrate spoken English language proficiency (<http://grad.illinois.edu/admissions/taengprof.htm>) by achieving a minimum score of 24 on the speaking subsection of the TOEFL iBT or 8 on the speaking subsection of the IELTS (academic exam). Students who are unable to take the TOEFL iBT or IELTS are required to receive a minimum score of 5 on the EPI test ([http://cte.illinois.edu/testing/ora\\_eng/epi\\_overview.html](http://cte.illinois.edu/testing/ora_eng/epi_overview.html)), offered on campus. All new teaching assistants are required to participate in the Graduate Academy for College Teaching (<https://citl.illinois.edu/citl-101/teaching-learning/grad-academy-for-college-teaching/>) conducted prior to the start of the semester.

*for the degree of Master of Science in Computer Science*

---

#### Graduate Programs in the Department of Computer Science

- Majors
  - Computer Science, MCS (<http://catalog.illinois.edu/graduate/engineering/computer-science-mcs/>) (available online for students who are working full-time and unable to come to campus)
    - optional concentrations
      - Computational Science and Engineering (<http://catalog.illinois.edu/graduate/engineering/concentration/computational-science-engineering/>)
  - Computer Science, MS (p. 1)

- optional concentrations
  - Computational Science and Engineering (<http://catalog.illinois.edu/graduate/engineering/concentration/computational-science-engineering/>)
- Computer Science, PhD (<http://catalog.illinois.edu/graduate/engineering/computer-science-phd/>)
  - optional concentrations
    - Computational Science and Engineering (<http://catalog.illinois.edu/graduate/engineering/concentration/computational-science-engineering/>)
- Certificates
  - Computing Fundamentals, CERT (<http://catalog.illinois.edu/graduate/engineering/computing-fundamentals-cert/>)
- Concentrations
  - Bioinformatics: Computer Science, MS (<http://catalog.illinois.edu/graduate/engineering/concentration/computer-science/bioinformatics/>)
- Joint Programs
  - Computer Science, MCS & Architecture, MArch ([http://catalog.illinois.edu/graduate/engineering\\_faa/joint-degree/computer-science-mcs-architecture-march/](http://catalog.illinois.edu/graduate/engineering_faa/joint-degree/computer-science-mcs-architecture-march/))
  - Computer Science, MCS & Law, JD ([http://catalog.illinois.edu/graduate/engineering\\_law/joint-degree/computer-science-mcs-law-jd/](http://catalog.illinois.edu/graduate/engineering_law/joint-degree/computer-science-mcs-law-jd/))

*for the degree of Master of Science in Computer Science*

---

#### Computer Science

Department Head: Nancy Amato ([namato@illinois.edu](mailto:namato@illinois.edu))  
 Director of Graduate Studies: Robin Kravets ([rkh@illinois.edu](mailto:rkh@illinois.edu))  
 Computer Science website (<https://cs.illinois.edu/>)  
 Computer Science Contact: Viveka P Kudaligama ([kudaliga@illinois.edu](mailto:kudaliga@illinois.edu))  
 1210 Siebel Center, 201 N Goodwin, Urbana, IL 61801  
 (217) 333-4428  
 Computer Science email ([academic@cs.illinois.edu](mailto:academic@cs.illinois.edu))

#### Professional Master of Computer Science Program

Professional Master of Computer Science Program website (<https://cs.illinois.edu/academics/graduate/professional-master-computer-science/>)

#### Grainger College of Engineering

Grainger College of Engineering website (<https://grainger.illinois.edu/>)

#### Admissions

Computer Science Admissions & Requirements (<https://cs.illinois.edu/admissions/graduate/applications-process-requirements/>)  
 Graduate College Admissions & Requirements (<https://grad.illinois.edu/admissions/apply/>)