Computer Sciences: Computer Sciences, M.S.

This is a named option within the Computer Sciences M.S. (http://guide.wisc.edu/graduate/computer-sciences/computer-sciences-ms/)

Research specialty areas include artificial intelligence, computational biology, computer architecture, computer graphics, computer networks, computer security, database systems, human–computer interaction, numerical analysis, optimization, performance analysis, programming languages and compilers, systems research, and theoretical computer sciences. See the department website (https://www.cs.wisc.edu/) for faculty interests, research activities, courses, facilities, and degree requirements.

Admissions

Please consult the table below for key information about this degree program's admissions requirements. The program may have more detailed admissions requirements, which can be found below the table or on the program's website. Graduate admissions is a two-step process between academic programs and the Graduate School. Applicants must meet the minimum requirements (https://grad.wisc.edu/apply/requirements/) of the Graduate School as well as the program(s).

Once you have researched the graduate program(s) you are interested in, apply online (https://grad.wisc.edu/apply/).

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Deadline</td>
<td>December 15</td>
</tr>
<tr>
<td>Spring Deadline</td>
<td>The program does not admit in the spring.</td>
</tr>
<tr>
<td>Summer Deadline</td>
<td>The program does not admit in the summer.</td>
</tr>
<tr>
<td>GRE (Graduate Record Examinations)</td>
<td>Required.</td>
</tr>
<tr>
<td>English Proficiency Test</td>
<td>Every applicant whose native language is not</td>
</tr>
<tr>
<td></td>
<td>English or whose undergraduate instruction was not in English must provide an English proficiency test score and meet the Graduate School minimum requirements (<a href="https://grad.wisc.edu/apply/requirements/#english-proficiency">https://grad.wisc.edu/apply/requirements/#english-proficiency</a>).</td>
</tr>
<tr>
<td>Other Test(s) (e.g., GMAT, MCAT)</td>
<td>n/a</td>
</tr>
<tr>
<td>Letters of Recommendation</td>
<td>3</td>
</tr>
<tr>
<td>Required</td>
<td></td>
</tr>
</tbody>
</table>

Funding

Graduate School Resources

Resources to help you afford graduate study might include assistantships, fellowships, traineeships, and financial aid. Further funding information (https://grad.wisc.edu/funding/) is available from the Graduate School. Be sure to check with your program for individual policies and restrictions related to funding.

Program Resources

Funding is offered to about half of the students to whom admission is offered. Funding is usually in the form of fellowships, teaching assistantships, or research assistantships. Because computer science skills are in demand, students who are admitted without funding are often able to find graduate assistantships on campus. The department website (https://www.cs.wisc.edu/academics/graduate-programs/guidebook/financial-aid/) provides information on funding options and offers suggestions for those who are admitted without department funding.

Requirements

Minimum Graduate School Requirements

Review the Graduate School minimum academic progress and degree requirements (http://guide.wisc.edu/graduate/#policiesandrequirementstext), in addition to the program requirements listed below.

Named Option Requirements

Mode of Instruction

<table>
<thead>
<tr>
<th>Face to Face</th>
<th>Evening/Weekend</th>
<th>Online</th>
<th>Hybrid</th>
<th>Accelerated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Mode of Instruction Definitions

Evening/Weekend: These programs are offered in an evening and/or weekend format to accommodate working schedules. Enjoy the advantages of on-campus courses and personal connections, while keeping your day job. For more information about the meeting schedule of a specific program, contact the program.

Online: These programs are offered primarily online. Many available online programs can be completed almost entirely online with all online programs offering at least 50 percent or more of the program work online. Some online programs have an on-campus component that is often designed to accommodate working schedules. Take advantage of the convenience of online learning while participating in a rich, interactive learning environment. For more information about the online nature of a specific program, contact the program.

Hybrid: These programs have innovative curricula that combine on-campus and online formats. Most hybrid programs are completed on-campus with a partial or completely...
online semester. For more information about the hybrid schedule of a specific program, contact the program.

Accelerated: These on-campus programs are offered in an accelerated format that allows you to complete your program in a condensed time-frame. Enjoy the advantages of on-campus courses with minimal disruption to your career. For more information about the accelerated nature of a specific program, contact the program.

**CURRICULAR REQUIREMENTS**

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Credit Requirement</td>
<td>30 credits</td>
</tr>
<tr>
<td>Minimum Residence Credit Requirement</td>
<td>16 credits</td>
</tr>
<tr>
<td>Minimum Graduate Coursework Requirement</td>
<td>Half of degree coursework (15 out of 30 total credits) must be completed graduate-level coursework; courses with the Graduate Level Coursework attribute are identified and searchable in the university’s Course Guide.</td>
</tr>
<tr>
<td>Overall Graduate GPA Requirement</td>
<td>3.00 GPA required.</td>
</tr>
<tr>
<td>Other Grade Requirements</td>
<td>No other grade requirements.</td>
</tr>
<tr>
<td>Assessments and Examinations</td>
<td>None.</td>
</tr>
<tr>
<td>Language Requirements</td>
<td>No language requirements.</td>
</tr>
</tbody>
</table>

**REQUIRED COURSES**

24 of the 30 credits must be for Computer Sciences courses (http://guide.wisc.edu/courses/comp_sci/) numbered 400 or above, excluding COMP SCI 400 Programming III, such that:

- at least 15 are core credits,¹
- none are for seminar courses,²
- none are for individual instruction courses other than COMP SCI 790 Master’s Thesis,³
- the credits for COMP SCI 790 Master’s Thesis are either
  - at most 3, all for a project for which a report has been filed with the department and approved by at least one full-time CS faculty member (http://www.cs.wisc.edu/people/faculty/), or else
  - at most 6, all for a master’s thesis that has been submitted as a departmental tech report (http://www.cs.wisc.edu/research/submit-tech-report/) and approved by a properly formed thesis committee.

Courses that are cross-listed with Computer Sciences are considered Computer Sciences courses for the purposes of this requirement. Non-Computer Sciences courses cannot be counted towards the credits, even though their syllabus may be similar to those of Computer Sciences courses.

¹ Core credit is assigned for:
  - every Computer Sciences course numbered 700 or above, other than seminar courses, seminar courses, individual instruction courses⁵, and topics courses⁶, provided the grade received is on the A-F scale,
  - COMP SCI 790 Master’s Thesis, provided the instructor explicitly declares so, and
  - one Computer Sciences topics course⁷ numbered 700 or above, provided the grade received is on the A-F scale and that particular offering is explicitly designated by the instructor as a core course.

To be designated as core, an offering should have a fairly broad coverage and be lecture-style. The latter excludes individual instruction courses and seminar-style courses.

² The seminar courses offered by the COMP SCI Department are COMP SCI 900 Advanced Seminar in Computer Science and COMP SCI/B M E/B M I/BIOCHEM/CBE/GENETICS 915 Computation and Informatics in Biology and Medicine. Seminar courses can be taken multiple times for credit.

³ These are courses with middle digit 9. Individual instruction courses are intended for directed study, independent study, research, and project or thesis work.

⁴ These are the courses COMP SCI 638, COMP SCI 703, COMP SCI 758, COMP SCI/MATH 837, COMP SCI 838 and COMP SCI 880. In Fall 2017, the new course COMP SCI 839 was created and is approved for core credit. Any COMP SCI 838 course offered beginning in fall 2017 is considered a non-core course. Topics courses have syllabi that may change significantly from one offering to another. In principle, they can be taken multiple times for credit, although their use for the M.S. is limited. In advance of each semester, it is announced which sections of those courses can count towards core credit.

**POLICIES**

**GRADUATE SCHOOL POLICIES**

The Graduate School’s Academic Policies and Procedures (https://grad.wisc.edu/acadpolicy/) provide essential information regarding general university policies. Program authority to set degree policies beyond the minimum required by the Graduate School lies with the degree program faculty. Policies set by the academic degree program can be found below.

**NAMED OPTION-SPECIFIC POLICIES**

**PRIOR COURSEWORK**

**Graduate Work from Other Institutions**

No credits taken at other institutions are allowed to satisfy requirements.

**UW–Madison Undergraduate**

No credits from a UW–Madison undergraduate degree are allowed to satisfy requirements.

**UW–Madison University Special**

With program approval, students are allowed to count no more than 15 credits of coursework numbered 300 or above taken as a UW–Madison University Special student. Of the 15 credits of allowable prior course work a maximum of 6 credits are allowed for 300 level courses and COMP SCI 400. Coursework earned five or more years prior to admission to a master’s degree is not allowed to satisfy requirements.

**PROBATION**

At the end of any regular (nonsummer) semester, a student is considered to be making satisfactory academic progress (SAP) if the following conditions are all satisfied:
• The student has completed at least 6 (if full load) or 3 (if part load) credits of approved courses during the semester.
• The student has removed all Incomplete grades from any previous regular semester or summer session.
• The student has passed any required exams and procedures within designated time limits.

Any graduate student who fails to make SAP during two consecutive regular semesters (fall and spring, or spring and fall) will be dismissed from the department at the end of the subsequent summer session. Any graduate student who fails to make SAP due to missed deadlines will be dismissed from the department at the end of the subsequent summer session.

ADVISOR / COMMITTEE
Students are advised by the Computer Sciences Graduate Advising Committee. These advisors must formally approve the student’s initial course plan, and the courses taken each semester.

CREDITS PER TERM ALLOWED
15 credits

TIME CONSTRAINTS
Master’s degree students who have been absent for five or more consecutive years lose all credits that they have earned before their absence.

GRIEVANCES AND APPEALS
These resources may be helpful in addressing your concerns:

• Bias or Hate Reporting (https://doso.students.wisc.edu/bias-or-hate-reporting/)
• Graduate Assistantship Policies and Procedures (https://hr.wisc.edu/policies/gapp/#grievance-procedure)
• Hostile and Intimidating Behavior Policies and Procedures (https://hr.wisc.edu/hib/)
  • Office of the Provost for Faculty and Staff Affairs (https://facstaff.provost.wisc.edu/)
• Dean of Students Office (https://doso.students.wisc.edu/) (for all students to seek grievance assistance and support)
• Employee Assistance (http://www.eao.wisc.edu/) (for personal counseling and workplace consultation around communication and conflict involving graduate assistants and other employees, post-doctoral students, faculty and staff)
• Employee Disability Resource Office (https://employeedisabilities.wisc.edu/) (for qualified employees or applicants with disabilities to have equal employment opportunities)
• Graduate School (https://grad.wisc.edu/) (for informal advice at any level of review and for official appeals of program/departmental or school/college grievance decisions)
• Office of Compliance (https://compliance.wisc.edu/) (for class harassment and discrimination, including sexual harassment and sexual violence)
• Office of Student Conduct and Community Standards (https://conduct.students.wisc.edu/) (for conflicts involving students)
• Ombuds Office for Faculty and Staff (http://www.ombuds.wisc.edu/) (for employed graduate students and post-docs, as well as faculty and staff)
• Title IX (https://compliance.wisc.edu/titleix/) (for concerns about discrimination)

Students should contact the department chair or program director with questions about grievances.

OTHER
n/a

PROFESSIONAL DEVELOPMENT

GRADUATE SCHOOL RESOURCES
Take advantage of the Graduate School’s professional development resources (https://grad.wisc.edu/pd/) to build skills, thrive academically, and launch your career.

PROGRAM RESOURCES
The Department of Computer Sciences hosts many professional development opportunities including: job fairs, workshops, seminars, talks, employer information sessions, mentoring and student socials. The Department of Computer Sciences student organizations, Student-ACM (SACM) and Women’s ACM (WACM), are active partners in providing professional development opportunities for computer sciences graduate students.

PEOPLE

Faculty: Professors Remzi Arpaci-Dusseau (chair), Akella, A. Arpaci-Dusseau, R. Arpaci-Dusseau, Bach, Banerjee, Barford, Cai, Chawla, Doan, Ferris, Gleicher, Jha, Livny, van Melkebeek, Miller, Patel, Reps, Ron, Sankaralingam, Sohi, Swift, Wright, Zhu; Associate Professors Mutlu, Sifakis; Assistant Professors Albarghouti, Chatterjee, D’Antoni, I. Diakonikolas, J. Diakonikolas, Gupta, Hsu, Koutris, Liang, Rekatsinas, Sinclair, Tzamos, Venkataaraman, Yu. See also Faculty (https://www.cs.wisc.edu/people/faculty/) on the department website.