

# MASTER OF SCIENCE IN THE FIELD OF COMPUTER SCIENCE (STEM)

Students in the master of science program in computer science learn excellent skills at the forefront of computing, get individualized attention from world-class faculty, and benefit from evening classes that accommodate the schedules of working professionals. Thesis and non-thesis options are available.

Students choose from among numerous focus areas, including algorithms and theory; computer architecture, networks, parallel and distributed computing; computer security and information assurance; database and information retrieval systems; machine intelligence and cognition; multimedia, animation, graphics, and user interface; and software engineering and systems.

## Course/credit sharing with the MS in the field of cybersecurity in computer science degree program

With department approval, students who complete the MS in the field of computer science program, and subsequently enroll in the MS in the field of cybersecurity in computer science (<https://bulletin.gwu.edu/engineering-applied-science/computer-science/ms-cybersecurity/>) program, or vice versa, may count 9 credits in the following core courses toward both degrees: CSCI 6212, CSCI 6221, and CSCI 6461.

This is a STEM designated program.

## ADMISSIONS

Admission deadlines: Fall – January 15

Spring – September 1

Summer - March 1 (non-F1 visa seeking applicants)

Standardized test scores: The Graduate Record Examination (GRE) is required for all applicants (Institution code 5246).

The Test of English as a Foreign Language (TOEFL), the academic International English Language Testing System (IELTS), or the PTE Academic is required of all applicants except those who hold a bachelor's, master's, or doctoral degree from a college or university in the United States or from an institution located in a country in which English is the official language, provided English was the language of instruction. Minimum scores:

- Academic IELTS: an overall band score of 6.0 with no individual score below 5.0; applicants requesting funding consideration must have an overall band score of 7.0 with no individual score below 6.0; or

- TOEFL: 550 on paper-based or 80 on Internet-based; applicants requesting funding consideration must have 600 on paper-based; or 100 on Internet-based; or

- PTE Academic: 53; applicants requesting funding consideration must have 68.

Recommendations (2) recommendations required. If possible, one required: recommendation should be from your advisor at the institution from which you earned your highest degree.

Prior academic records: Transcripts are required from all colleges and universities attended, whether or not credit was earned, the program was completed, or the credit appears as transfer credit on another transcript. Unofficial transcripts from all colleges and universities attended must be uploaded to your online application. Official transcripts are required only of applicants who are offered admission.

If academic records are in a language other than English, a copy in the original language and an English language translation must be uploaded. Transcript evaluations should not be uploaded. Applicants who have earned a degree from an Indian university are required to submit individual semester marksheets.

Statement of purpose: In an essay of 250 to 500 words, state your purpose in undertaking graduate study at The George Washington University; describe your academic objectives, research interests, and career plans; and discuss your related qualifications, including collegiate, professional, and community activities, and any other substantial accomplishments not already mentioned.

Additional requirements: Bachelor's degree with a GPA of at least 3.0 on a 4.0 scale for the last 60 hours of coursework; two courses in mathematics beyond pre-calculus; one year of science with laboratory; courses in computer science using a structured language, discrete structures, data structures, and computer architecture.

All applicants should choose an area of focus that most closely matches their interests and note this on the online application. All applicants must submit a resumé or CV.

International applicants only: Please follow this link - <https://graduate.admissions.gwu.edu/international-student-application-requirements> (<https://graduate.admissions.gwu.edu/international-student-application-requirements/>) - to review the International Applicant Information carefully for details on required documents, earlier deadlines for applicants requiring an I-20 or DS-2019 from GW, and English language requirements.

For additional information about the admissions process visit the SEAS Admissions Frequently Asked Questions (<https://graduate.engineering.gwu.edu/admissions-frequently-asked-questions/>) page.

Contact for questions:

[engineering@gwu.edu](mailto:engineering@gwu.edu)

202-994-1802 (phone)

202-994-1651 (fax)

Hours: 9:00 am to 5:00 pm, Monday through Friday

## REQUIREMENTS

The following requirements must be fulfilled: Thesis option—30 credits, including 9 credits in required courses and 15 credits in elective courses, and 6 credits in thesis. Non-thesis option—30 credits, including 9 credits in required courses and 21 credits in elective courses.

At least 24 of the 30 credits required for the degree must be taken at the 6000 level or above. As a rule, any course taken below the 6000 level must be a Computer Science (CSCI) course and must be eligible to be taken for graduate credit according to the course description in this Bulletin. Any course below the 6000 level must receive the prior written approval of the advisor.

Code	Title	Credits
<b>Required</b>		
CSCI 6212	Design and Analysis of Algorithms	
CSCI 6221	Advanced Software Paradigms	
CSCI 6461	Computer System Architecture	

### Electives

Thesis students take 15 credits and non-thesis students take 21 credits in elective Computer Science (CSCI) courses offered for graduate credit. Unless a student's admission letter states they are required to take CSCI 6010 and CSCI 6011, the student can take up to 6 of these credits in non-CSCI courses with the prior written approval of the advisor. Students who are required to take CSCI 6010 and CSCI 6011 cannot take any non-CSCI courses as part of their program requirements. Such students are strongly encouraged to take CSCI 6010 and CSCI 6011 in their first semester.

### Thesis

Students pursuing the thesis option take the following courses, set up a thesis committee (see below) and defend the thesis.

CSCI 6998	Thesis Research
CSCI 6999	Thesis Research

### Master's Thesis Committee

- A master's thesis committee must consist of at least three members (including the research advisor and any co-advisors).
- The committee must have a presiding chair who must be a regular full-time faculty member with a primary appointment in the Department of Computer Science. The committee chair may not be the student's research advisor or co-advisor.

- The committee must be approved by the chair of the Department of Computer Science.