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

This MS program in cybersecurity in computer science is offered by GW's Department of Computer Science. The program was created in response to the large and fast-growing need for technical cybersecurity experts, nationally and internationally. Students acquire up-to-date knowledge and skills in cybersecurity, a field of ever-increasing importance to national security, the economy, and individual users. They also receive a firm grounding in requisite core knowledge in computer science, as well as the ability to take courses in related disciplines.

In this program, students receive individualized attention from world-class faculty, are able to take advanced topics courses along with PhD students, and benefit from evening classes that accommodate the schedules of working professionals. Thesis and non-thesis options are available.

Credit and course sharing with the MS in the field of computer science

With department approval, students who complete the MS in the field of cybersecurity in computer science program, and subsequently enroll in the MS in the field of computer science (p. 1) program, or vice versa, may count 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 GRE General Test is optional for all applicants. For applicants who want to submit scores, they must be submitted officially from ETS using the institutional code 5246.
	The Test of English as a Foreign Language (TOEFL) or the Academic International English Language Testing System (IELTS) 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:
	- TOEFL: 550 on paper-based or 81 on Internet-based; or
	- Academic IELTS: an overall band score of 6.5 with no individual score below 6.0; or
	- PTE Academic: 53; applicants requesting funding consideration must have 68.
Recommendations required:	Two (2) recommendations required of applicants. If possible, one 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 grade point average of at least 3.0 (on a 4.0 scale) in the last 60 hours of coursework.
	All applicants must 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.

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
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: Non-thesis option—30 credits, including 9 credits in required courses, 9 credits in core security courses, 6 credits in security electives, and 6 credits in other electives. Thesis option—30 credits, including 9 credits in required courses, 9 credits in core security courses, 6 credits in thesis, and 6 credits in security electives.

At least 24 of the 30 credits required for the degree must be numbered 6200 or above. As a rule, any course taken below the 6200 must be in Computer Science (CSCI) and must be eligible to be taken for graduate credit according to the course description in this Bulletin. Any course below 6200 must receive the prior written approval of the advisor.

Code	Title	Credits
Required courses		
CSCI 6212	Design and Analysis of Algorithms	
CSCI 6221	Advanced Software Paradigms	
CSCI 6461	Computer System Architecture	
Required core security courses		
CSCI 6531	Computer Security	
CSCI 6431	Computer Networks	
CSCI 6541	Network Security	
Security electives		
Two courses selected from the list below. Graduate-level security courses not listed here or offered through the Consortium of Universities of the Washington Metropolitan Area can be approved as alternatives by the advisor.		
CSCI 6331	Cryptography	
CSCI 6345	Introduction to Quantum Computing	
CSCI 6532	Information Policy	
CSCI 6533	Introduction to Usable Security and Privacy	
CSCI 6542	Computer Network Defense	
CSCI 6545	Software Security	
CSCI 6548	E-Commerce Security	
CSCI 6907	Special Topics *	
CSCI 8331	Advanced Cryptography	
CSCI 8531	Advanced Topics in Security	
ECE 6160	Secure Computing Systems	
EMSE 6540	Management of Information and Systems Security	
Additional electives for non-thesis option		
Non-thesis students take two additional elective courses (6 credits). These can be any courses offered by SEAS numbered 6000 or above, including non-cybersecurity courses, or graduate-level cybersecurity-related courses offered by any school of the University.		
Thesis Option		
Students pursuing the thesis option take the Thesis Research courses below; set up a thesis committee; and defend the thesis. If the thesis is security-related, it can replace two security electives; otherwise, it replaces other electives. **		
CSCI 6998	Thesis Research	
CSCI 6999	Thesis Research	
Students must obtain the written approval of their thesis advisor before enrolling in Thesis Research.		

**Any topics course taken to fulfill the security elective course requirement must focus on security, privacy, or cryptography and must be approved in advance by the advisor. Non-security special topics courses can, with approval, be counted as electives.

****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 is a regular full-time faculty member with a primary appointment in the Department of Computer Science. The committee chair cannot be the student's research advisor or co-advisor. The committee must be approved by the chair of the Department of Computer Science.

Graduation and Scholarship Requirements

Students are responsible for knowing the university's minimum GPA requirement for graduation and scholarships. Please visit the Graduation and Scholarship Requirements (https://bulletin.gwu.edu/engineering-applied-science/#graduation_requirements_ms) section on this site to read the requirements.

Students should contact the department for additional information and requirements.