

MASTER OF SCIENCE IN THE FIELD OF CYBERSECURITY IN COMPUTER SCIENCE

This MS program in cybersecurity in computer science is offered by GW's Department of Computer Science. The program was created to respond to the large and fast-growing need for technical cybersecurity experts nationally and internationally. Students in the program 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 Ph.D. students, and benefit from evening classes that accommodate the schedules of those who are working professionals. Students may choose a thesis or non-thesis option.

ADMISSIONS

Admission deadlines: Fall - January 15

Spring - September 1

Summer - March 1

Standardized test scores: The Graduate Record Examination (GRE) is required of all applicants. (Institution 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 80 on Internet-based; applicants requesting funding consideration must have 600 on paper-based; or 100 on Internet-based

- 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

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

Applicants with lower test scores may qualify for our full-time Applied English Studies program.

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 with degrees from Indian universities should upload transcripts and/or detailed 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 requirement: 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 more information on the admission process, please visit the SEAS Frequently Asked Questions page. (<http://graduate.seas.gwu.edu/apply/faq/>)

Contact for questions:

engineering@gwu.edu - 202-994-1802 (phone) - 202-994-1651 (fax)

9:00 - 5:00 pm, Monday through Friday

REQUIREMENTS

Credit Requirements:

- Thesis option: 30 credits are required for graduation; 6 of these credits are thesis credits
- Non-thesis option: 30 credits are required for graduation
- With department approval, students who complete the MS in the field of computer science and then enroll in the MS in the field of cybersecurity in computer science degree or vice versa can count the following core courses towards both degrees: CSCI 6212 Design and Analysis of Algorithms, CSCI 6221 Advanced Software Paradigms, and CSCI 6461 Computer System Architecture.

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 (http://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.

Program Restrictions:

- Student's whose admission letters state that they are required to take CSCI 6010 and CSCI 6011 are limited to EMSE 6540 Management of Information Systems and Security as their only non-CS course.
- Students required to take CSCI 6010 and CSCI 6011 must take these courses in their first semester.
- Students not required to take CSCI 6010 and CSCI 6011 may take up to three non-CS courses (9 credits) towards their degree with prior written approval from their faculty advisor.
- At least 24 of the 30 credits required for the degree must be at the 6000 level or above. As a general rule, any course taken below the 6000 level must be a Computer Science course and must be eligible to be taken for graduate credit according to the course description. Exceptions may be chosen to enhance an aspect of the student's degree program. Any course taken that is below the 6000 level must receive prior written approval from the student's faculty advisor.

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

EMSE 6540 Management of Information and Systems Security

One of the following applied cryptography courses:

CSCI 6331 Cryptography

CSCI 6541 Network Security

CSCI 6545 Software Security

One of the following computer science security courses, which may not be used to fulfill applied cryptography course requirement.

CSCI 6331 Cryptography

CSCI 6541 Network Security

CSCI 6545 Software Security

CSCI 6531 Computer Security

CSCI 6532 Information Policy

CSCI 6542 Computer Network Defense

CSCI 6547 Wireless and Mobile Security

CSCI 6548 E-Commerce Security

CSCI 8331 Advanced Cryptography

CSCI 8531 Advanced Topics in Security *

CSCI 6907 Special Topics *

Any special topics course taken for credit towards the degree must focus on security or cryptography and be approved by the faculty advisor.

Two additional security courses (6 credits) from across the university*.

All computer science security courses listed above not used to meet the applied cryptography or computer science security course requirements as well as the following courses may be used:

EMSE 6537 Information Operations

EMSE 6543 Managing the Protection of Information Assets and Systems

EMSE 6545 Internet and Online Law for Security Managers

Any other cybersecurity-related course from across the university must be reviewed and approved by the student's advisor to ensure that it is sufficiently advanced and rigorous before it can be taken for credit towards the degree.

Electives

Students who are not taking the thesis option and are not required to take CSCI 6010 or CSCI 6011 can choose any two additional courses (6 credits) numbered 6000 or higher.

Students who choose the thesis option must obtain the written approval of their thesis advisor before registering for the following courses:

CSCI 6998	Thesis Research
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CSCI 6999	Thesis Research
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If the admissions letter states that students are required to take CSCI 6010 and CSCI 6011, they will be limited to EMSE 6540 Management of Information Systems and Security as their only non-computer science course. Students required to take CSCI 6010 and CSCI 6011 are required to take these courses in their first semester. Students not required to take CSCI 6010 and CSCI 6011 may take up to three non-computer science courses (9 credits) towards their degree with prior written approval from their advisor.

At least 24 of the 30 credits required for the degree must be at the 6000 level or above. As a general rule, any course taken below the 6000 level must be a computer science course and must be eligible to be taken for graduate credit according to the course description. Exceptions may be chosen to enhance an aspect of the student's degree program. Any course taken that is below the 6000 level must receive prior written approval from the student's advisor.

With department approval, students who complete the Master of Science in Computer Science and then enroll in the Master of Science in the field of Cybersecurity in Computer Science or vice versa can count the following core courses towards both degrees:

CSCI 6212	Design and Analysis of Algorithms
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CSCI 6221	Advanced Software Paradigms
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CSCI 6461	Computer System Architecture
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*Any special topics course taken for credit toward the degree must be approved by the faculty advisor and it must focus on security or cryptography.

**Any cybersecurity-related course not specifically listed here must be approved in advance by the student's advisor to ensure it is sufficiently advanced and rigorous to count toward credit for the degree.