GRADUATE PROGRAMS IN CYBERSECURITY

MASTER OF SCIENCE
DOCTORAL DEGREE
GRADUATE CERTIFICATES

STEVENS.EDU/GRAD-CYBER
The Master of Science in Cybersecurity provides a rigorous education in the foundations of security and privacy, including cryptography and secure systems. You’ll acquire sophisticated hands-on skills and an in-depth understanding of the organizational, social and legal aspects of security and privacy. The program addresses the technical details behind the cybersecurity breaches that are happening with increasing frequency, affecting the global economy.

Outstanding faculty members with strong ties to industry guide graduate students in developing an understanding of the art and practice of cybersecurity. If you wish to further your studies, Stevens offers complementary curricula in computational technologies and security administration.

Stevens is recognized by the National Security Agency as one of its National Centers of Academic Excellence in Cyber Defense Education. Cybersecurity graduate students can take advantage of world-class research laboratories such as our Secure Systems Lab.
CAREER OPPORTUNITIES

- Government
- Finance Industry
- Computer Research and Development
- Cryptologist
- Forensics Expert
- Penetration Tester
- Security Administrator
- Security Analyst
- Security Consultant
- Security Engineer

TOP HIRING ORGANIZATIONS

- National Security Agency
- Federal Reserve
- Goldman Sachs
- Visa
- Google
- Facebook
- Lockheed Martin
- Booz Allen
- Northrup Grumman
- Accenture
CURRICULUM

The master’s program requires completion of at least 30 credits at the graduate level. Seven core courses must be completed. The remaining elective courses may be selected from a range of appropriate subject areas or approved by your graduate advisor.

CORE COURSES

- Operating Systems*
- Advanced Algorithms Analysis and Design*
- Discrete Mathematics for Cryptography/Cybersecurity
- Fundamentals of Cybersecurity
- Privacy in a Networked World
- Foundations of Cryptography
- Forensics Analysis or Threats, Exploits, and Countermeasures

* If you have taken this course previously, you may substitute it with an elective, subject to approval by your graduate advisor.

ELECTIVES

Choose from courses in cybersecurity, systems, enterprise computing and management.

- TCP/IP Networking
- Mobile Systems and Applications
- Enterprise Software Arch & Design
- Distributed Systems & Cloud Computing
- Enterprise Security & Info Assurance
- Information Systems and the Law
- Systems Administration
- Advanced UNIX Programming
- Cryptographic Protocols
- Wireless Systems Security

NOTE: The program assumes pre-existing familiarity both with the fundamentals of programming (Java, C/C++) and computer science (data structures, algorithms), and with mathematics (discrete math, probability/statistics, some calculus).

DOCTORAL PROGRAM IN COMPUTER SCIENCE

The Ph.D. program in computer science is designed for those who want to make an impact on the future of computer science or advance it in academia. As a doctoral student, you will work in world-class research labs with acclaimed faculty members who will advise you in research areas such as security, programming languages, computer graphics and vision, software engineering and computer networking. Stevens offers a number of federally supported research programs, allowing some doctoral candidates to be fully funded.
**STEVENS OFFERS 12-CREDIT GRADUATE CERTIFICATE PROGRAMS IN ENGINEERING AND SCIENCE FOR THOSE WHO WANT TO IMPROVE THEIR SKILLS, MAKE A CAREER CHANGE OR RESUME AN ACADEMIC PATH. COURSES MAY BE APPLIED TOWARD A MASTER’S DEGREE. CERTIFICATES ARE AVAILABLE IN:**

- Databases
- Cybersecurity
- Enterprise Security and Information Assurance
- Enterprise and Cloud Computing
- Distributed Systems
- Health Informatics

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**RESEARCH**

The Center for the Advancement of Secure Systems and Information Assurance (CASSIA)

A centerpiece of cybersecurity research at Stevens is the Center for the Advancement of Secure Systems and Information Assurance. CASSIA’s mission is to foster collaboration and act as a catalyst for research, education and entrepreneurship in information assurance and cybersecurity. It is a nexus for:

- Basic and applied research in secure, dependable and sustainable computing and communications systems
- Exploration of the implications for information assurance and cybersecurity of ubiquitous computing and other visionary scenarios
- Anticipation of cultural evolution resulting from the inception of innovative technologies such as social networking
- Public-private partnerships for threat assessment, response and technology development and deployment
- Education of professionals in security technologies, policy and commerce
- Education of non-technical users – children, parents, teachers and small-business owners

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**GRADUATE CERTIFICATE PROGRAMS**

Stevens offers 12-credit graduate certificate programs in engineering and science for those who want to improve their skills, make a career change or resume an academic path. Courses may be applied toward a master’s degree. Certificates are available in:

- Databases
- Cybersecurity
- Enterprise Security and Information Assurance
- Enterprise and Cloud Computing
- Distributed Systems
- Health Informatics
WHO SHOULD APPLY

We welcome applicants who have a passion for problem-solving and “hacking” and a drive to innovate for technological progress. You can apply with an undergraduate degree in computer science, computer engineering or a closely related field.

Application requirements include:
• Bachelor’s degree, with a minimum GPA of 3.0, from an accredited institution
• Official college transcripts
• Two letters of recommendation
• A statement of purpose
• TOEFL/IELTS scores (for international students)
• A competitive GRE or GMAT score*

* GRE/GMAT is not required for part-time students.

ABOUT STEVENS INSTITUTE OF TECHNOLOGY

Stevens Institute of Technology, *The Innovation University®,* is a premier, private research university situated in Hoboken, N.J. overlooking the Manhattan skyline. Founded in 1870, technological innovation has been the hallmark and legacy of Stevens’ education and research programs for more than 145 years. Within the university’s three schools and one college, 6,600 undergraduate and graduate students collaborate with more than 290 full-time faculty members in an interdisciplinary, student-centric, entrepreneurial environment to advance the frontiers of science and leverage technology to confront global challenges. Stevens is home to three national research centers of excellence, as well as joint research programs focused on critical industries such as healthcare, energy, finance, defense, maritime security, STEM education and coastal sustainability.

ABOUT SCHAEFER SCHOOL OF ENGINEERING & SCIENCE

The Charles V. Schaefer, Jr. School of Engineering & Science (SES) is dedicated to preparing the next generation of technology leaders by offering a multi-disciplinary, design-based education. With eight departments and an intensive curriculum for undergraduates, master’s and doctoral candidates, SES is dedicated to supporting hands-on learning, research and technology transfer that provides each student with invaluable, experiential knowledge. SES is globally recognized for its world-class faculty and leading-edge research facilities.

CONTACT INFORMATION:

Office of Graduate Admissions
Stevens Institute of Technology
1 Castle Point Terrace
Hoboken, New Jersey 07030
888.STEVENS (888.783.8367)
graduate@stevens.edu

Department of Computer Science
Graduate Program Director, Cybersecurity
Schaefer School of Engineering & Science
1 Castle Point Terrace
Hoboken, New Jersey 07030
grad-cyber@stevens.edu

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