MESSAGE FROM THE DEAN

The School of Systems and Enterprises (SSE) at Stevens Institute of Technology provides graduate students with a world-class education to become future leaders in complex, adaptive and smart systems. SSE graduate students will engineer solutions to challenging complex problems such as healthcare systems, intelligent transportation, smart cities, defense and urban informatics. Students will build such skills as formulating insight-driven decisions in a fast-paced environment and accounting for design, cost, security, privacy and policy constraints. This assemblage of skills creates high demand for SSE graduate students as technical leaders in industry and government.

YEHIA MASSOUD
Dean, School of Systems and Enterprises
The School of Systems and Enterprises at Stevens Institute of Technology is one of the leading institutions in systems innovation and research. SSE graduate programs are led by faculty whose illustrious careers are equally balanced between classical research and industry. When prospective graduate students choose to pursue an advanced degree at SSE, they’ll embark on a rewarding and transdisciplinary education that blends engineering, systems and management subjects, giving them the multidisciplinary perspectives needed to excel in their field of interest. Our graduate programs employ a systems approach to teach students to successfully navigate and manage complex systems and enterprises, and ultimately take on leadership roles. This approach will educate students on viewing challenges from all angles, empowering them to see the big picture.
STEVENS, SSE
AND YOU

With a heritage of more than 145 years of innovation, Stevens offers premier, high-impact and applied graduate education to prepare you for today’s technology-centric enterprises. Your educational and research experience here will enable you to quickly ascend in your career as you masterfully solve the most complex and urgent societal challenges. In today’s world, a degree from Stevens School of Systems and Enterprises will give you the expertise and recognition that will open many doors throughout your career.
PREPARING STUDENTS AND PROFESSIONALS FOR TECHNICAL LEADERSHIP IN THE 21ST CENTURY

Engineering Management
Socio-Technical Systems
Software Engineering
Space Systems Engineering
Systems Analytics
Systems Engineering
THE SSE DIFFERENCE

SKILLS FOR FAST-GROWING 21ST CENTURY OPPORTUNITIES

SSE provides students with systems thinking and design skills to build complex systems and to advance to positions of technical leadership across academia, industry and government.

INTERDISCIPLINARY APPROACH

SSE programs provide the interdisciplinary skills and approaches needed to architect, design and manage complex technical systems and processes throughout their life cycles.

Our education and research are grounded in the science of system modeling and analysis (system science, network science, general system theory) and system design and decision-making (cognitive science, decision science, operations research).

FLEXIBLE DELIVERY

We offer classes to prospective students on campus, online and onsite at industry locations.

SYSTEMS AND ENTERPRISES PERSPECTIVE

A systems approach teaches engineers and technical leaders to view challenges from all angles. This means understanding the nature and complexity of enterprise-wide problems and conceiving creative solutions that achieve breakthrough results across a wide range of domains.

Our unique curriculum spans machine learning, analytics and modeling to improve decision-making. Graduates work on some of the most complex socio-technical challenges of the 21st century.

EXPERIENTIAL AND APPLIED LEARNING

SSE students work on project and case-driven courses in state-of-the-art classrooms, labs, and design and visualization studios, led by experienced industry leaders and distinguished academic and research faculty.

INDUSTRY IMPACT

We deliver graduate educational programs and work to create opportunities for students at leading organizations.

Driven by real-world applicability, SSE graduate programs empower professionals and technical leaders to make a positive and lasting impact on people, organizations and society.
We have leveraged, and continue to leverage, the Stevens systems and engineering programs robustly within our company. It is a core capability requirement for us.”

DR. JEFF WILCOX
Vice President of Digital Transformation, Lockheed Martin
ENTERPRISE SCIENCE AND ENGINEERING

Today’s complex systems and enterprises need leaders with a strong understanding of the technology involved in engineering projects and the ability to manage them. Our goal is to create decision-makers who can interface between the technical and business aspects through analytics, visualization and decision-making tools.”

DR. JOSE EMMANUEL RAMIREZ-MARQUEZ
Division Director, Enterprise Science and Engineering

STEVENS RANKING AND RECOGNITION

“Most Innovative Schools”
(U.S. News & World Report)

Top 25

in the nation for
20-year net return on investment
(PayScale 2017-18 College ROI Report)

15th

in the nation for
mid-career salary of graduates
(PayScale 2017-18 College Salary Report)

17th
WHERE CAN AN ADVANCED DEGREE TAKE YOU?

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<th>PROGRAM</th>
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<td>Engineering Management</td>
<td>Data Analyst</td>
<td>Project Management</td>
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<tr>
<td>Systems Analytics</td>
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<td>Data Analyst</td>
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EMPLOYMENT OUTLOOK

Data scientist is the #1 profession in the country, according to Glassdoor’s 2018 50 Best Jobs in America list, which looks at median salary, job satisfaction and job availability. Additionally, McKinsey Global reports that there is an estimated shortage of 190,000 skilled data scientists in the U.S. According to IBM in their 2017 report *The Quant Crunch: How The Demand For Data Science Skills Is Disrupting The Job Market*, demand for data scientists will soar 28 percent by 2020.

HOW STUDENTS EXCEL

As an international student from China, coming to Stevens has been a very enriching experience for me. The engineering management program at SSE is excellent and provides essential tools for getting ahead in the world. Along with technical knowledge, we learn about the workings of day-to-day business, strategic planning, and most importantly, building relationships and having confidence. We are taught to see the big picture.”

GUOQUAN XU
Alumnus, Master of Engineering in Engineering Management

15th
in the nation for the number of engineering master’s degrees
(American Society for Engineering Education)

23rd
in U.S. for “Best Online Graduate Engineering Programs”
(U.S. News & World Report)

32nd
nationally in the industrial/manufacturing/systems engineering category, “Best Graduate Schools,” 2018 edition
(U.S. News & World Report)
systems and software engineering

where can an advanced degree take you?

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<tr>
<th>program</th>
<th>professional opportunities</th>
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<td>systems engineering</td>
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<td>socio-technical systems</td>
<td>how students excel</td>
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</table>

The systems engineering graduate program at SSE is exactly what I was looking for after I finished my undergraduate in aerospace engineering. The program curriculum is a perfect balance of systems theory and practice, and we have the unique opportunity to work on real-world problems. With faculty who are at the top of their game and more than willing to impart their knowledge and experience, coming to Stevens has been my best decision ever.”

lanapa brooke miller
alumna, master of engineering in system engineering
We strive to produce technical leaders who apply a systems approach to navigate and manage complex systems and enterprises, and who can address systems integration, life cycle issues and systems thinking at the system, systems of systems and enterprise levels.”

DR. JON WADE
Division Director, Systems and Software Engineering

IBM students across the globe have participated in systems engineering programs from Stevens with significant benefits for our business.”

RALPH NELSON
Vice President, IBM
INNOVATION TO MEET GROWING CHALLENGES

The Systems Engineering Research Center is a University Affiliated Research Center awarded by the United States Department of Defense to Stevens Institute of Technology. It is unprecedented in the depth and breadth of its reach, leadership and community in systems engineering.

SERC leverages the expertise of senior lead researchers from 22 universities to manage critical 21st-century challenges facing the U.S. defense and intelligence communities.

SERC DOCTORAL FELLOWS PROGRAM

The SERC Doctoral Fellows Program is designed to nurture the next generation of systems engineers. This program provides a platform that brings together Ph.D. students from participating organizations and leading systems thinkers from the SERC collaborating universities as doctoral mentors.

SERC TARGETS ESSENTIAL AREAS OF RESEARCH

- Enterprises and Systems of Systems
- Trusted Systems
- Systems Engineering and Management Transformation
- Human Capital Development

Participating in the SERC Doctoral Fellows Program gives Boeing an opportunity to invest in valuable systems engineering research that benefits our employees, businesses and customers. The program’s rich and diverse community of leaders is committed to cutting-edge systems engineering research in a unique environment of industry, academia and government.”

MARC NANCE
Director, Productivity Leadership Development

The SERC at Stevens crosses boundaries through integrative collaboration in the systems engineering community. Together with our partner universities and sponsors, we aim to build upon essential human capital in the area of systems and help address the critical systems challenges of this century.”

DR. DINESH VERMA
Executive Director, SERC
The goal of CCSE is to foster knowledge and skills that contribute to a fundamental transformation of complex systems by enhancing human abilities, overcoming human limitations and fostering human acceptance of solutions carefully tailored to their needs and desires.”

DR. WILLIAM B. ROUSE
Founding Director, CCSE

IMPROVE THE SYSTEMS THAT ADVANCE OUR SOCIETY

There are many public and private enterprises such as healthcare, cities and the global financial system that our society depends on. These enterprises continue to become increasingly dependent on technology.

The Center for Complex Systems and Enterprises was created to empower research teams to find human solutions for these complex socio-technical systems. Understanding and improving these systems requires knowledge and expertise that span several disciplines including:

- Engineering and Physical Sciences
- Economics
- Finance and Management
- Behavioral and Social Sciences

CCSE FOCUSES ON SEVERAL KEY DOMAINS

- Healthcare Delivery
- Financial Systems
- Urban Resilience
- National Security

CCSE CHARTER PARTNERS

- Accenture
- Lockheed Martin
- Northern Light

HOW STUDENTS EXCEL

CCSE has admirably leveraged the hands-on, results-oriented culture of Stevens. Their focus on understanding complex enterprises and influencing improvements in their operations reflects Stevens' long tradition of invention and innovation.”

C. DAVID SEUSS
CEO, Northern Light
MASTER’S PROGRAMS

Master of Engineering (M.Eng.) in Engineering Management
Master of Science (M.S.) in Socio-Technical Systems
Master of Science (M.S.) in Software Engineering
Master of Engineering (M.Eng.) in Space Systems Engineering
Master of Engineering (M.Eng.) in Systems Analytics
Master of Engineering (M.Eng.) in Systems Engineering

The master’s degree curriculum consists of ten courses (30 credits). For additional program information, see stevens.edu/sse

DOCTORAL PROGRAMS

Doctor of Philosophy (Ph.D.) in Engineering Management
Doctor of Philosophy (Ph.D.) in Socio-Technical Systems
Doctor of Philosophy (Ph.D.) in Systems Engineering

For more details on the doctoral program and requirements, please visit stevens.edu/sse/doctoral-studies

GRADUATE CERTIFICATES

Advanced Systems Engineering
Data Exploration and Visualization for Risk & Decision Making
Engineering Management
Integrated Ship Systems Engineering
Logistics and Supply Chain Analysis
Socio-Technical Systems
Software Design & Development
Software Engineering
Software Systems Architecture
Space Systems Engineering
Systems Engineering
Systems Engineering of Embedded/Cyber-Physical Systems
Systems Engineering Management
Systems Security Engineering
Systems Supportability Engineering
Urban Resilience
Urban Systems Informatics

Graduate certificates are four-course programs (12 credits) that can be applied toward a master’s degree.

For a full list of certificates, visit stevens.edu/sse/graduate-certificates

FOR MORE INFORMATION

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Stevens Institute of Technology
1 Castle Point Terrace
Hoboken, New Jersey 07030
888.STEVENS (888.783.8367)
email: graduate@stevens.edu
website: stevens.edu/graduate-admissions

School of Systems and Enterprises
Graduate Studies
Babbio Center | 5th Floor
1 Castle Point Terrace
Hoboken, New Jersey 07030
email: sse.assist@stevens.edu
website: stevens.edu/sse
A premier, private research university just minutes from New York City with an incredible view and exceptional access to opportunity.