The School of Systems and Enterprises at Stevens Institute of Technology is one of the first schools dedicated to systems science and engineering. The school is one of the discipline’s pioneers, and with this plan moves forward in its tireless quest to provide world-class systems education and groundbreaking research.

The strategic plan for the School of Systems and Enterprises for the coming five years seeks to substantially strengthen our status. This includes a reinvigorated and exciting new curriculum with interdisciplinary education as its cornerstone, a redesigned infrastructure to provide students and faculty with additional space and resources, and a reinvestment in the image and visibility of the school. This strategic plan also focuses on fostering a culture of research and collaboration within the school and beyond its borders, diversifying corporate education, and becoming a destination school for aspiring undergraduate, graduate and doctoral students.

Standing alongside the School of Systems and Enterprises faculty and staff, I am markedly confident we will achieve and exceed the goals set forth in this plan. Together, as a team, we will rise to significant levels of prominence in both the academic and research-based worlds.

YEHIA MASSOUD, DEAN
School of Systems and Enterprises
INTRODUCTION

Ranked among the top graduate programs in systems engineering, the School of Systems and Enterprises (SSE) at Stevens Institute of Technology is a leading institution in systems innovation, education and research. The SSE strategic plan outlines how the school will effectively educate tomorrow’s systems leaders through an interdisciplinary approach to education, create an atmosphere of collaborative and quality research within SSE, emphasize leadership in systems engineering, invest in multi-use academic spaces for students to collaborate with peers on school projects, consider restructuring the curricula, and engage alumni. With emphasis on the vital and collaborative relationships that thrive across the university, SSE has closely aligned its core goals with Stevens’ overarching strategic plan, *The Future. Ours To Create. 2017-2022.*

OVERVIEW

The School of Systems and Enterprises offers undergraduate and graduate degree programs that integrate education and research, extending human intelligence to address some of the world’s biggest challenges. SSE combines the advantages of programs in software engineering, systems analytics, engineering management and industrial and systems engineering with the extensive resources of a major research university. Students receive an education that blends rigorous academic study and cutting-edge research with innovative opportunities, entrepreneurial thinking, and the support and intellectual stimulation of a diverse campus community. SSE is home to the Systems Engineering Research Center, a University-Affiliated Research Center of the U.S. Department of Defense. The center is unprecedented in the depth and breadth of its reach, leadership and citizenship in systems engineering through its conduct of vitally important research and the education of future systems engineering leaders.
MISSION

The mission of the School of Systems and Enterprises is to provide students with a research-centered interdisciplinary and transdisciplinary education embedded in systems thinking and design. SSE focuses on applying a systems approach that teaches technical leaders to view challenges from all angles, to understand the nature and complexity of enterprise-wide problems and to conceive creative solutions that achieve breakthrough results across a range of domains.

VISION

Over the next five years, the School of Systems and Enterprises will build on its strengths as a world leader in systems science and engineering to play an evolutionary role in facilitating efficient solutions to some of the most pressing challenges facing our society. The school will effectively educate thought and technical leaders who will impact global challenges in research and development, policy and strategy, and entrepreneurial innovation in academia, business and government.
STRATEGIC GOALS

1. Educate Tomorrow’s Leaders
2. Reinvigorate the Learning Experience
3. Foster a Culture of Research Excellence
4. Increase Impact and Visibility
5. Expand our Infrastructure for Sustained Growth
GOAL 1

EDUCATE TOMORROW’S LEADERS

Sustainably grow the undergraduate, graduate and doctoral populations by providing world-class, high-quality, multidisciplinary education.

- Involve students in early stages of study in overarching, interdisciplinary research projects with real-world implications.
- Leverage existing corporate relationships with SSE to increase the number of co-op and internship opportunities for undergraduate and graduate students with leading industry partners.
- Grow the number of female students and students from underrepresented minorities to increase the diversity of our student population.
- Develop a strong process to improve academic and industry employment prospects for graduating students.
- Aggressively promote SSE undergraduate, graduate and doctoral programs to prospective candidates through improved, consistent admissions engagement processes.
- Increase the involvement of undergraduate and graduate students in the decision-making processes of the school.
GOAL 2

REINVIGORATE THE LEARNING EXPERIENCE

Strengthen and restructure the curricula for undergraduate and graduate students to ensure the highest level of competencies and access to state-of-the-art technologies and innovations.

- Improve curricula and majors based on current market and corporate needs to best prepare students for attention from professional and industry organizations.
- Bolster curricula with new areas of defined fields of research, including data analytics, artificial intelligence and security to provide students with a cutting-edge learning experience.
- Develop updates to curricula and pedagogy to ensure emphasis on student education quality and future success after graduation.
- Improve online student experience to achieve and maintain leadership among peers.
- Ensure that the majority of students undertake a significant research experience as part of their studies at the school.
GOAL 3

FOSTER A CULTURE OF RESEARCH EXCELLENCE

Create an atmosphere of collaborative research that will translate to national prominence and impact on academia, business and government.

- Promote and sustain collaborative research efforts across the student body and faculty to establish SSE’s place as a premier school.
- Expand SSE research in emerging high-impact areas, including transportation, smart cities and healthcare, and continue to build strength in defense and aerospace.
- Recruit world-class faculty and increase faculty diversity by actively pursuing women and underrepresented minority candidates.
- Enable faculty to work closely with corporate research partners to bolster research funding, build further research opportunities for students and strengthen SSE’s reputation.
- Encourage master’s students to work on research projects as an option that complements their course of study.
- Advance a high-quality and diverse Ph.D. program able to recruit students from top-notch institutions worldwide.
GOAL 4

INCREASE IMPACT AND VISIBILITY

Consistently emphasize SSE leadership in systems engineering by positively impacting the world. Strengthen the visibility and recognition of SSE as an established leader of systems education and research.

- Continue to build on the strong reputations of SSE and the Systems Engineering Research Center as leaders that impact and solve the most challenging global systems problems in defense, aerospace and security research.
- Develop working relationships between SSE and New York Metro area entities to expand the school’s global research impact in the critical areas of transportation, healthcare and smart cities.
- Increase SSE’s visibility at leading academic conferences and promote our research through top-tier publications and journals.
- Mentor faculty to achieve top societal awards and gain fellowship/membership status to prestigious professional organizations.
- Create a communications plan to distribute well-executed messaging and distinct branding to substantially improve SSE’s visibility and recognition.
EXPAND OUR INFRASTRUCTURE FOR SUSTAINED GROWTH

Furnish faculty, students and supporting staff with a collaborative, inspiring and entrepreneurial environment that is well-equipped with world-class technology and tools.

- Invest in shared research laboratories for SSE faculty to encourage collaboration and greater space efficiency.
- Invest in multi-use academic spaces to nurture a student collaborative culture and provide a welcoming work environment.
- Continue to expand support staff, allowing faculty to focus more efforts on student mentorship and research.
- Engage more deeply with SSE alumni to build strong relationships that yield a forward-looking alumni relations and fundraising portfolio.
- Enhance the role of the SSE development office to better connect active and prospective donors with the school.
IMPLEMENTATION PLAN

The strategic plan for the School of Systems and Enterprises is exactly that — a plan. A roadmap for progress within the school that now lies in the capable hands of faculty and staff.

Now that the strategic plan has been laid out, focusing on specific areas of growth needed for the school, a series of program and function-aligned implementation plans will be developed by the SSE academic leadership, faculty, staff and students. Working together on the execution of the strategic plan is vital to its realization as a whole.

Much like the overarching strategic plan for Stevens Institute of Technology, the SSE strategic plan is a living, breathing document. Goals can be tailored and augmented to better suit the future successes of the school, and new goals can be added based on achievements. The SSE faculty and staff are wholly committed to seeing the entirety of the strategic plan to its full and satisfying fruition.

The SSE strategic plan has been carefully crafted to address the needs of students, faculty and staff, as well as to successfully address the goals listed in the Stevens strategic plan midpoint update.