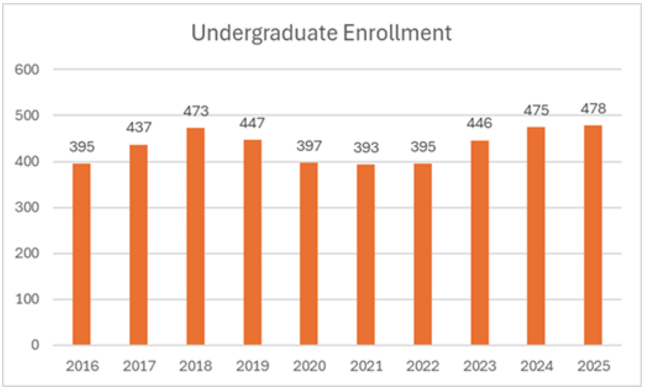
AUBURN ENGINEERING

INDUSTRIAL AND SYSTEMS ENGINEERING NEWSLETTER

Spring 2026

As we begin the Spring 2026 semester, the Auburn University Department of Industrial and Systems Engineering finds itself in a period of transition and opportunity. With so many exciting changes underway, this is an ideal time to reflect on where we are and where we're headed.

As the Spring semester begins, we have a total of 698 graduate and undergraduate students enrolled in the ISE Department. Undergraduates are 478 of that total, the largest undergraduate enrollment of the last 10 years, and I believe it to be the largest group of undergraduate students in ISE ever at Auburn.



The research of the Auburn University ISE Department is just as impressive. In the last 10 years, the faculty in the ISE Department has won more than $52 million in research awards. Even more impressive is that the research expenditures have risen from $177k per tenure/tenure-track faculty member to more than $572k per faculty member, a 223% increase, indicating that we are performing at a very high level executing that research.

One of the most significant developments involves the future leadership of our department. Following a thorough process that included applications, presentations, and feedback from a wide range of constituencies, Provost Nathan has approved Dean Mario Eden's appointment of Dr. Mark Schall as the next chair of the Department of Industrial and Systems Engineering, effective August 1, 2026. I am confident that Dr. Schall will be an excellent fit for this role and will provide strong, thoughtful leadership for the department. I look forward to supporting him during this transition and continuing to work closely with him in the years ahead.

We have also welcomed a new addition to our staff. Following the retirement of Denise Cooper, student services coordinator, we're pleased to welcome Maddie Hart to the department. Maddie

earned her bachelor's degree in marketing from Auburn and recently completed her Master of Business Administration, also at Auburn. During her graduate studies, she gained valuable experience coaching students on career opportunities. With her business background, she will be a great asset in advising students in the Business-Engineering-Technology minor as well as our undergraduate industrial and systems engineering programs.

In addition, following the retirement of LuAnn Carpenter, director of student program assessment and administration, we're excited to announce that Branden Farmer has been promoted to this role. Branden has done an outstanding job advising and recruiting undergraduate students, and we're confident he will bring the same energy, care, and commitment to supporting our graduate and accreditation programs. We are currently in the process of filling Branden's former position and look forward to welcoming another student services coordinator to the team soon.

As we continue to grow and evolve, several faculty members have recently moved on to pursue other opportunities. In response, we are actively interviewing for three tenure-track faculty positions with expertise in artificial intelligence, manufacturing, optimization, and statistics. These hires will play a key role in strengthening our teaching and research mission and positioning the department for continued success.

With so much happening in the Department of Industrial and Systems Engineering, we are also adjusting how we communicate with you. Beginning this semester, we plan to release two newsletters each semester to better keep you informed about the people, programs, and progress shaping Auburn ISE.

Thank you, as always, for your continued support of our department. I look forward to an exciting spring semester and to sharing more updates with you soon.

War Eagle,
Gregory A. Harris, Ph.D., P.E., FSME
Department Chair | Industrial & Systems Engineering
Joe W. Forehand/Accenture Distinguished Professor
Auburn University | Samuel Ginn College of Engineering

ISE professor receives grant for autonomous robotics research

Auburn University Assistant Professor of Industrial and Systems Engineering Christian Zamiela has received an NVIDIA Academic Grant to support research in autonomous robotics for semiconductor manufacturing, marking one of the first NVIDIA-funded research projects at Auburn led by a faculty member.

The project, "Sim-to-Real Deep Reinforcement Learning for Autonomous Robotics in

Semiconductor Manufacturing," was selected as part of NVIDIA's global Academic Grant Program, which supports university-led research advancing artificial intelligence and high-performance computing.

The award provides two RTX PRO 6000 Blackwell Max-Q Workstation Edition GPUs, top-tier professional graphics processors built on NVIDIA's Blackwell architecture, enabling high-fidelity simulation, accelerated reinforcement learning training and advanced AI development. The research, inspired by a recent visit by members of Auburn's industrial and systems engineering faculty, and researchers from the Interdisciplinary Center for Advanced Manufacturing Systems (ICAMS), focuses on simulation-to-reality, or Sim-to-Real, deep reinforcement learning to train autonomous mobile robots capable of adapting to complex, dynamic semiconductor factory environments.

ISE Lean Systems training improves Auburn career development operations

Lean Systems principles typically associated with manufacturing floors and engineering environments are delivering improvements within Auburn University's own operations, thanks to recent industry training completed by the Office of Career Development and Corporate Relations (CDCR).

The training was inspired by Apryl Mullins, director of Corporate Relations for CDCR, who previously participated in Auburn University's Lean Systems course through the Department of Industrial and Systems Engineering. The experience reshaped how she approached problem-solving, process improvement and collaboration, insights she later brought to her entire team.

"When I stepped into the corporate relations role, I was confident in relationship-building, but my liberal arts background meant I didn't always understand engineering concepts or know the right questions to ask," Mullins said. "As I worked more closely with companies designing and building products, I wanted to better understand their processes so Auburn could more effectively support their needs."

New graduate certificate gives ISE student

edge in healthcare

Auburn industrial and systems engineering student Cole Shankles is already seeing the impact of Auburn's new Healthcare Systems graduate certificate as he prepares to begin an executive residency with HCA Healthcare after graduation.

Shankles, from Pisgah, Alabama, earned his bachelor's degree in industrial and systems engineering in 2024 and will complete a dual master's degree in industrial and systems engineering and business administration in May. He is also president of Engineers Without Borders and previously interned with Hyundai Motor Manufacturing Alabama and Parkridge East Hospital in Chattanooga, Tennessee.

Shankles said the COVID-19 pandemic and his mother's experiences as a nurse shaped his decision to pursue a career in healthcare.

"Seeing her and her colleagues struggle is really what pushed me to want to make a difference in healthcare," he said.

Auburn ISE alumna helps shape NASA's return to the moon

Mallory James, an aerospace engineer at NASA's Marshall Space Flight Center, is helping advance America's return to the moon through the Artemis program.

James earned her bachelor's degree in industrial and systems engineering from Auburn University in 2013. Originally a pre-chemical engineering student, she discovered early in her academic career that industrial and systems engineering aligned more closely with her interests.

"I realized after my first year of classes that I really enjoy math a lot more than science," James said. "I didn't know much about industrial and systems engineering when I switched, aside from the fact that the curriculum included more statistics and a greater emphasis on the role of humans in a system, both of which really piqued my interests and inspired the change."

Advising award honors retiring student services coordinator

Denise Cooper, student services coordinator for the Thomas Walter Center (TWC), has been awarded Auburn University's Advising Above and Beyond Award as she prepares to retire after 32 years of service.

Cooper, who has spent 26 of those years supporting students in TWC's Business-Engineering-Technology minor, said the recognition from her peers is especially meaningful.

"Having colleagues I admire recognize me, especially in a community that so deeply values student success, makes this especially meaningful," Cooper said. "I never expect recognition for doing what I genuinely love, so this honor means more to me than I can put into words. I'm grateful for the opportunity to serve our students and deeply thankful to be part of such a supportive and dedicated Auburn community."

Bird Inc. Program continues outreach across Alabama

Auburn University's Bird Inc. program, a middle school manufacturing outreach initiative through the Interdisciplinary Center for Advanced Manufacturing Systems (ICAMS), continues its outreach with visits to schools across the state of Alabama. Throughout the 2025-26 school year, the program completed 257 presentations at 59 schools for 5,079 middle school students.

Recently, the team, led by Program Director John Cranston, has brought hands-on manufacturing learning experiences to Journey Middle School in Madison, Union Hill Middle School in Somerville, Lupton Jr. High School in Nauvoo, Fort Payne Middle School, Hanceville Middle School, and Huntsville Christian Academy, with additional visits scheduled.

Throughout the state, students have stepped into roles like engineers, machinists and company presidents through a hands-on manufacturing simulation and discovered how exciting and rewarding a future in manufacturing can be. Schools report high levels of student engagement and enthusiasm in the program.

“Thank you for sharing the ICAMS program at Huntsville Christian Academy,” said Cathy Sperr, principal and headmaster. “The kids had a great time, and I appreciate the character education that was incorporated. We look forward to more AU programs. This is the second AU program to visit our school, and we love the excitement.”

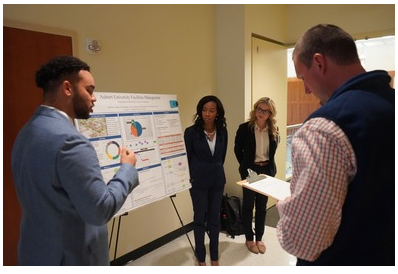
ISE launches international Lean Six Sigma study abroad program

Auburn University engineering and business students now have the opportunity to study abroad and earn an internationally recognized credential through a new partnership between Auburn, the Technical University of Applied Sciences Würzburg-Schweinfurt (THWS) and Schaeffler, a leading global manufacturer headquartered in Schweinfurt, Germany.

Through the International Lean Six Sigma Green Belt Certification Program, junior, senior and graduate students will complete coursework with Auburn University faculty before traveling abroad to apply their learning in an international setting.

“This program is truly unique because students don’t just gain valuable international experience, they also earn a credential that will set them apart in job interviews and future career opportunities,” said Tom Devall, professor and director of automotive manufacturing initiatives in the Department of Industrial and Systems Engineering.

Student Services Update



At the end of Fall semester, our department hosted the Fall 2025 Senior Design Ceremony, held in conjunction with the Fall Alumni Council meeting. We were thrilled to welcome our alumni council for a full day on campus, where they participated in department discussions, judged senior design projects, and heard presentations from graduate students.

Congratulations to our Senior Design project winners!

- **First Place – Honda Precision Parts of Georgia Project**
  Students partnered with Honda to investigate recurring rejection of end plates on the production line, identifying and addressing the root causes behind the issue.
- **Second Place – Tiger Motors (LEGO) Lab Project**
  This team completed a full DMAIC cycle to launch the Model A assembly line, rebalancing all 15 stations and developing standardized work and LPAs to strengthen the operation.
- **Third Place – Engineering Career Development & Corporate Relations Project**
  Students evaluated and improved the effectiveness of Table Talks, using the DMAIC process to make one of the key employer-student engagement programs even stronger.

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