DEPARTMENT OF

INDUSTRIAL & SYSTEMS ENGINEERING

GRADUATE PROGRAMS

UF | UNIVERSITY of FLORIDA

ABOUT US

The University of Florida Advanced Driving Simulator in our Human Systems Engineering Lab

#13 *BEST PUBLIC ISE GRADUATE PROGRAM*

2024 U.S. News & World Report

Our department houses a total of **seven centers & labs**

Our **research areas** include advanced manufacturing, data analytics, health systems, human systems, operations research, and smart production & logistics systems

We offer **funding opportunities for graduate students** with departmental and external scholarships, as well as fellowships, assistantships, and other positions.

UF was labeled as one of 10 public "New Ivies" by Forbes in 2024 for producing exceptional and highly employable graduates


ISE
Industrial and Systems Engineering
ISE Graduate Teaching Award
Tobias Ludemann

MASTER'S PROGRAM

The Department of Industrial & Systems Engineering at the University of Florida offers a **Master of Science (M.S.)** and a **Master of Engineering (M.E.)** degree.

Each degree has a thesis or non-thesis option and offers flexibility in terms of courses and delivery methods to meet the academic goals of full-time students as well as working professionals.

DEGREE OPTIONS		
On-Campus	31 credit hours	Gainesville, FL
UF EDGE	31 credit hours	Online
UF REEF	31 credit hours	Shalimar, FL
Outreach Engineering Management	32 credit hours	Orlando, FL

TO APPLY:

Interested students must submit their applications to the UF Office of Admissions, as well as the Department of Industrial & Systems

1. Complete online application
2. Upload supporting documents, including a statement of purpose, resume, transcripts and three references
3. Report official test scores
4. Send confirmation email to the ISE department
5. Mail all documents to the UF Admissions Office

ON **CAMPUS**

The traditional, on-campus master's program must be completed with a minimum of 31 credit hours. For students who choose the thesis option, three to six thesis credits must be taken. Students who choose a non-thesis option are required to complete at least one pre-approved project course within three semesters of graduation (includes the graduation semester).

UF **EDGE**

UF Electronic Delivery of Gator Engineering (EDGE) is the Herbert Wertheim College of Engineering's distance learning program. It offers both M.S. and M.E. degrees. Course lectures and materials are offered completely online.

In order to pursue an M.S. or M.E. degree in industrial and systems engineering through UF EDGE, prospective students must apply and receive acceptance from the UF Graduate School, as well as the UF Industrial & Systems Engineering Program.

For more information on UF EDGE, visit:
www.ufedge.ufl.edu

UF **REEF**

The UF Research & Engineering Education Facility (REEF) is located in Shalimar, Florida, and supports the greater Eglin Air Force Base community and responds to Air Force research needs.

UF REEF offers a 31 credit hour online M.S. degree program in industrial and systems engineering to the Eglin Air Force Base community via UF EDGE. Students are also provided with the opportunity to work with world-class researchers from UF and the Air Force.

For more information, visit **www.reef.ufl.edu**

OEM PROGRAM

The Outreach Engineering Management (OEM) Program is a master's program offered by the Department of Industrial & Systems Engineering and is designed for working professionals with various technical backgrounds. Beginning each August, the 20-month program is held in Orlando and features live instruction one weekend a month.

Through a combination of ISE and MBA coursework, students build upon their technical expertise and learn to manage complex operations and improve manufacturing and logistics processes. Students learn to mitigate risks and make informed business decisions by using mathematical modeling tools. A concurrent degree program is available that allows students to add an MBA with only 12 additional months of study.

Admission requirements include:

- A bachelor's degree from a regionally accredited university
- Knowledge of calculus, linear algebra/matrix methods, and probability/statistics
- A GPA of 3.0 or higher on all coursework completed after the first 60 semester hours of undergraduate study
- Two years full-time, professional work experience preferred

For more information, visit **www.ise.ufl.edu/oem**

OEM **TESTIMONIAL**

"Within two months of graduating from the OEM program, my OEM degree and experiences allowed me to land an Engineering Manager role that I had been pursuing for the past few years. Without OEM, this would not have been possible and I'm extremely grateful for the experience."

- Zach Helmberger, OEM '23

DOCTORAL PROGRAM

The doctoral program in industrial and systems engineering addresses a range of methodological areas, including advanced manufacturing, data analytics, human-performance modeling, and operations research.

Faculty research expertise includes advanced manufacturing, data mining and statistical learning, financial engineering, healthcare modeling, human-system analysis, manufacturing systems modeling and analysis, optimization, production planning, risk analysis, and stochastic modeling.

A minimum of 90 credits is required for the Ph.D. degree, including: **30 credits** for a Master's Degree, **nine credits** of Qualifying Exam courses, **nine credits** to satisfy the Breadth Requirement (coursework outside of the department), **27 credits** for Advanced Technical Electives/Research, and **15 credits** for Dissertation Research.

FUNDING OPPORTUNITIES

UF UNIVERSITY of FLORIDA

INDUSTRIAL & SYSTEMS ENGINEERING

Ph.D. GRADUATES IN ACADEMIA

SINCE 2022

JAEYOUNG PARK

ASSISTANT PROFESSOR
UNIVERSITY OF CENTRAL FLORIDA

MAHTAB ESKANDAR

INSTRUCTIONAL ASSISTANT PROFESSOR
UNIVERSITY OF FLORIDA

MENG ZHAO

POSTDOCTORAL RESEARCH SCIENTIST
COLUMBIA UNIVERSITY

TOBIAS LODEMANN

ADJUNCT LECTURER
UNIVERSITY OF FLORIDA

XIN ZAN

ASSISTANT PROFESSOR
UNIVERSITY OF IOWA

YUE LUO

ASSISTANT PROFESSOR
SAN JOSE STATE UNIVERSITY

YUNMEI LIU

ASSISTANT PROFESSOR
UNIVERSITY OF LOUISVILLE

CENTERS & LABS

CENTER FOR APPLIED OPTIMIZATION

The Center for Applied Optimization (CAO) is an interdisciplinary center that fosters joint research and applied projects in optimization across faculty from engineering, mathematics, health, business, and other disciplines.

Faculty: *Leo Hamed Amini, Ph.D., associate professor, Yongpei Guan, Ph.D., George E. & Rolande G. Willis Endowed Professor, Aleksandr Kazachkov, Ph.D., assistant professor, Hongcheng Liu, Ph.D., associate professor, Jorge A. Sefair, Ph.D., associate professor, Alexander Semenov, Ph.D., research assistant professor, and Yu Yang, Ph.D., assistant professor*

DATA INFORMATICS FOR SYSTEMS IMPROVEMENT & DESIGN LAB

The Data Informatics for Systems Improvement and Design (DISIDE) Laboratory's mission is to study and develop efficient data analytics and operations research algorithms for designing, modeling, monitoring, and controlling data-rich systems for performance improvement.

Faculty: *Mostafa Reisi Gahrooei, Ph.D., assistant professor, and Minhee Kim, Ph.D., assistant professor*

ENERGY SYSTEMS LAB

The Computational Optimizations & Energy Systems (CSO) Lab at the University of Florida is focused on modeling of large-scale, stochastic integer programs. Current applications include electricity grid distribution and operation and supply chain logistics.

Faculty: *Yongpei Guan, Ph.D., George E. & Rolande G. Willis Endowed Professor*

HEALTH-ENGINE LAB

The High Quality Effective Affordable Lean Translational Healthcare-Engineering Lab at the University of Florida is focused on developing rigorous methods for modeling, analysis, design and improvement of service and healthcare delivery systems and applying the results in practice.

Faculty: *Hongcheng Liu, Ph.D., associate professor, and Xiang Zhong, Ph.D., associate professor*

HUMAN SYSTEMS ENGINEERING LAB

The Human Systems Engineering Lab's research areas include transportation human factors and human-autonomous vehicle interaction, applying wearable sensing technology and machine learning in occupational injury prevention and rehabilitation, and improving user interactions with new and emerging technologies in safety-critical systems.

Faculty: *Suman Chowdhury, Ph.D., associate professor, Wayne Giang, Ph.D., assistant professor, and Boyi Hu, Ph.D., associate professor*

INTERDISCIPLINARY MANUFACTURING ENGINEERING & DESIGN LAB

The Interdisciplinary Manufacturing Engineering and Design (iMED) Lab at the University of Florida specializes in research intended to design scalable fabrication techniques of customized material systems. Material design emphasis is in polymer and metal composites, while traditional and nondestructive testing techniques are employed for characterization and modeling of newly devised and fabricated materials.

Faculty: *Iris V. Rivero, Ph.D., Department Chair, Paul and Heidi Brown Preeminent Chair in Industrial and Systems Engineering*

SUPPLY CHAIN & LOGISTICS ENGINEERING LAB

The Supply Chain & Logistics Engineering Lab at the University of Florida is an interdisciplinary center that encourages joint research and applied projects among faculty from engineering, computer science and business administration in conjuction with industry participants.

Faculty: *Elif Akçalı, Ph.D., Michael Durham Professor in Creativity, associate professor*

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