



2023-2024 UNDERGRADUATE PROGRAM

INDUSTRIAL ENGINEERING

2022
UNDERGRADUATE
ENROLLMENT:

423

APPROX. TOTAL
CREDIT HOURS*:

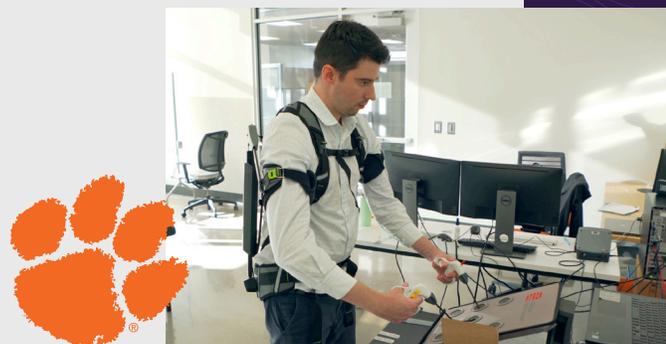
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*Dependent on emphasis

Industrial Engineering is concerned with the design, improvement, and installation of integrated systems of people, materials, information, equipment, and energy. It draws upon specialized knowledge and skills in the mathematical, physical, and social sciences, together with the principles and methods of engineering analysis

and design, to specify, predict, and evaluate the results obtained from such systems.

Industrial engineers are utilized in a number of sectors including manufacturing, healthcare, energy, consulting, finance, technical sales, supply chain, logistics and more.



INDUSTRIAL ENGINEERING AT CLEMSON

The Department of Industrial Engineering at Clemson offers foundational coursework in all major areas of industrial engineering, including probability and statistics, operations research, production systems, human factors and ergonomics, supply chain management, logistics and others. We offer a Six-Sigma Quality Certification as an elective option with no additional charge, as well as a Sales Engineering certificate.

clemson.edu/ie

INDUSTRIAL ENGINEERING

PROGRAM DETAILS:

The mission of Clemson IE is to lead discovery and innovation in engineering knowledge and methods for designing, developing, and improving systems and processes that include humans, machines, information, and technology. Be it banks, hospitals or manufacturing; industrial engineers use their skills to design, model, and analyze real-world problems to make systems more cost-effective, enhance their reliability, and improve their safety.

The bachelor's (BS) program culminates with a senior design project in which students work with real, local firms to address actual problems faced by those companies every day. The Clemson IE program also offers a bachelor's to master's (MS) program that counts some graduate classes towards both the BS and MS degree, allowing students to earn their MS degree in only one additional year.

LABS AND FACILITIES FOR HANDS-ON TRAINING

Clemson IE enjoys next-gen computing facilities, student lounges and study areas in Freeman Hall, and 5000+ sq ft of laboratories equipped with state-of-the-art equipment located in Freeman Hall and the CU-ICAR campus in Greenville..

CLUBS AND ORGANIZATIONS

The primary professional society for industrial engineers is the *Institute of Industrial and Systems Engineers (IISE)*. Two other major societies for the field include the *Institute for Operations Research and the Management Sciences (INFORMS)* and the *Human Factors and Ergonomics Society (HFES)*. The academic honor society for industrial engineers is known as *Alpha Pi Mu (APM)*. Other related organizations include:

- Society of Sales Engineers
- Consulting Club
- Society for Health Systems (SHS)
- Society for Manufacturing Engineers (SME).

GLOBAL ENGAGEMENT

Our curriculum has been designed deliberately to support work experiences, co-ops, internships and study abroad by offering classes more than once per year. Clemson IE engages international institutions that offer Clemson equivalent courses, so that students can gain a global engineering experience that many employers value today. We also have an IE-specific study abroad opportunity in France where students receive IE elective credit.

GRADUATE AND PROFESSIONAL SCHOOL OPPORTUNITIES

The majority of our undergraduate students enter the workforce immediately following graduation. However, others enroll in graduate programs in industrial and systems engineering, pursue an MBA, or enroll in law school.



The Bachelor of Science in Industrial Engineering program is accredited by the Engineering Accreditation Commission of ABET, <https://www.abet.org>, under the General Criteria and the Industrial Engineering Program Criteria.



Engineering
Accreditation
Commission

CLEMSON



UNDERGRADUATE RESEARCH

A popular option for undergraduate research experience is through creative inquiries. This is a class in which students work with faculty members on research projects. Some previous and current projects include:

- AI and Cybersecurity
- Human Factors in Healthcare
- Data Analysis and Decision Making in Healthcare
- Disaster Relief Logistics
- Design/Evaluation of Exoskeletons: human augmentation technologies for manufacturing and healthcare
- Statistical Analysis in Public Health
- Bicycle Sharing, Parking, and Transportation Systems
- Cognitive Systems and Resilience Engineering

CO-OPS AND INTERNSHIPS

Companies who partner with Clemson IE to offer co-op and internship opportunities include:

- BorgWarner
- Bosch
- Current by GE
- Electrolux
- GE Power
- Michelin

EMPLOYERS

Clemson IE graduates on average receive 1-2 job offers prior to graduation. Employers include:

- Accenture
- Boeing
- BorgWarner
- BMW
- Deloitte
- Ernst & Young
- Manhattan Assoc.
- Michelin
- Milliken
- Siemens