



UNDERGRADUATE

Industrial Engineering

School of Engineering
Department of Industrial Engineering

SIUE

siue.edu/industrial-engineering

Industrial Engineering at SIUE

Industrial engineers design, produce and deliver quality products (parts or services) to customers at affordable prices in a timely manner. This process involves designing and producing value-added products, as well as planning and managing people, processes, systems, equipment and other resources efficiently and cost-effectively. Our students learn the knowledge and skills necessary in engineering and management and are uniquely positioned to work in a variety of industries including:

- Automobile and aircraft manufacturing
- Healthcare
- Shipping and logistics
- Business

Degrees Available at SIUE

- Bachelor of Science, Industrial Engineering (specialization available in the following)
 - Manufacturing Engineering

Accelerated Combined Degrees

Students may complete a bachelor's and master's degree in five academic years. Learn more at siue.edu/combined-degrees.

Accreditation

The industrial engineering program is accredited by the Accreditation Board for Engineering and Technology (ABET)



Engineering
Accreditation
Commission

What can I do with a degree in industrial engineering?

SIUE graduates are employed at major corporations in:

- Systems engineering
- Supply chain management
- Advanced manufacturing
- Human factors
- Safety engineering
- Data analytics
- Artificial intelligence
- Healthcare
- Financial technology

Corporations include:

- Boeing
- Caterpillar, Inc.
- Pepsi
- Pinnacle Foods
- Schnucks
- Kraft Foods
- Eaton Corporation
- Nestle Purina
- Lockheed Martin
- Lowe's
- GM
- Mallinckrodt
- Bayer
- Chrysler
- Emerson Electric
- Motorola
- American Airlines
- USPS
- Intelligrated Systems
- Anheuser-Busch InBev
- BJC Healthcare
- AT&T
- MasterCard

In a recent survey, typical salaries ranged from \$63,000 to \$70,000 per year. **The industrial engineering field is the third most in-demand engineering discipline and is one of the two fastest-growing engineering fields, according to *Forbes Magazine*.**

SOUTHERN ILLINOIS UNIVERSITY
EDWARDSVILLE
SCHOOL OF ENGINEERING

Sample Curriculum for the Bachelor of Science in Industrial Engineering

	Fall Semester		Spring Semester	
Year 1	IE 106 Engineering Problem Solving	3	ENG 102 English Composition II	3
	CHEM 131 Engineering Chemistry (BPS)	4	MATH 152 Calculus II (BPS)	5
	CHEM 135 Engineering Chemistry Lab (EL)	1	PHYS 141 University Physics I (BPS)	3
	ENG 101 English Composition I	3	PHYS 151L University Physics Lab I (EL)	1
	MATH 150 Calculus I (QR)	5	ACS 103 Interpersonal Communications (EUSC)	3
	FST 101 Succeeding & Engaging at SIUE	1	Total Credits	15
	Total Credits	17		
Year 2	CE 204 Engineering Graphics & CAD	3	CE 242 Mechanics of Solids	3
	CE 240 Statics	3	CS 145 Introduction to Computing for Engineers	3
	MATH 250 Calculus III (BPS)	4	ECE 210 Introduction to Electrical Circuits	3
	PHYS 142 University Physics II (BPS)	3	MATH 305 Differential Equations I	
	PHYS 152L University Physics Lab II (EL)	1	or MATH 321-Linear Algebra (BPS)	3
	Breadth Fine & Performing Arts (BFPA)	3	ECON 111 Principles of Macroeconomics (BSS)	3
	Total Credits	17	Total Credits	15
Year 3	IE 335 Intro to Information Processing Systems	3	IE 415 Operations Res-Deterministic Models	3
	IE 345 Engineering Economics Analysis	3	IE 451 Methods Design & Work Measurements	3
	STAT 380 Statistics for Application (BICS)	3	IE 465 Design & Control of Quality Systems	3
	IE 370 Manufacturing Processes	3	IE 470 Manufacturing Systems	3
	IE 375 Three Dimensional Modeling in Product Design	3	Breadth Life Science (BLS)	3
	Total Credits	15	Health Experience (EH)	0-2
			Total Credits	15-17
Year 4	IE 468 Operations Research-Simulation	3	IE 490 Integrated Engineering Design	3
	IE 476 Plantwide Process Control	3	IE Elective II	3
	IE 483 Production Planning & Control	3	IE Elective III	3
	IE 484 Facilities Planning	3	PHIL 323 Engineering, Ethics, & Professionalism (FRA, BHUM)	3
	IE Elective I	3	Interdisciplinary Studies (IS)/Experience Global Cultures (EGC)	3
	Total Credits	15	Total Credits	15
			Total Hours	124-126

Transfer Students: To maximize your transfer experience, complete the **bolded** courses/requirements pre-transfer and satisfy either the Illinois Articulation Initiative (IAI) General Ed Core or receive an AA, AS, or AAT (early childhood, special ed or math) degree from an IAI community college. If 'Minor' requirements are shown, discuss careful course selection with the academic advising contact listed. Visit siue.edu/transfer to find course equivalency guides.

Hands-on Learning

Students in the industrial engineering program have access to state-of-the-art equipment in their classes and labs to prepare for the variety of careers available upon graduation. Our students also participate in a senior design course, which allows them to practice teamwork and critical analysis and to apply their knowledge to real-world applications.

Students gain valuable experience through internships, and research opportunities are available by working under the guidance of industrial engineering faculty members on various research projects arranged through the Undergraduate Research and Creative Activities program.

Admission Requirements

To be admitted to the Bachelor of Science program, students must:

- Complete all academic development courses required by the University
- Complete any courses required to address high school deficiencies
- Complete MATH 120, College Algebra (or high school equivalent) with a grade of C or better
- Attain a cumulative GPA of at least 2.0 on a 4.0 scale

Graduation Requirements

Degree requirements include the following:

- A cumulative GPA of 2.0 or higher on a 4.0 scale for engineering courses
- A cumulative GPA of 2.0 or higher on a 4.0 scale for industrial engineering courses numbered above 299
- Completion of all departmental and University requirements
- Completion of the Senior Assignment in IE 490, Integrated Engineering Design
- A grade of C or better for IE 345, 468 and 483

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Contact Information

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