



INDUSTRIAL ENGINEERING

Just the Facts

Number of Students

1,600 undergraduate / 350 graduate

Number of Faculty

85 full-time, 100% doctorate

Undergraduate Degrees

Bachelor of Science in Computer Science
Bachelor of Science in Engineering
(Civil, Computer, Electrical, Industrial,
Materials and Mechanical)

Minors

Computer Science, Electrical Engineering, Industrial
Engineering, Materials Engineering, Mechanical
Engineering, Structural Engineering

Graduate Degrees

Master of Science in Engineering
Master of Science in Computer Science
Master of Science in Engineering
Master of Urban Planning
Doctor of Philosophy in Engineering
Doctor of Philosophy in Medical Informatics
Graduate Certificate Programs

Academic Advising

Many students find that determining schedules, registering for courses, and making important academic decisions can be daunting. This is why the College of Engineering & Applied Science (CEAS) offers personal, individualized advising to all students. Academic advisors are available to support students throughout their entire stay at CEAS, acting as a liaison to other university departments and working collaboratively with faculty advisors.

For more information about the College of Engineering & Applied Science at the University of Wisconsin-Milwaukee, please contact us.

Cooperative Education/Internships

The Career Services Office within CEAS provides a link between education and the real world. Because we know that relevant work experience in combination with good academics is crucial in gaining employment, we are dedicated to helping all CEAS students secure work experience before graduating. The Cooperative Education and Internship programs offer students an opportunity to gain professional employment prior to graduation. Students are able to apply the skills they are learning under the supervision and guidance of a professional engineer or computer scientist. The Career Services Office also offers a variety of services in addition to co-op/internships and job placement, including resume reviews, interview coaching, information on market trends, and how to negotiate salaries.

Undergraduate Research

To enhance the undergraduate experience, all undergraduates have the opportunity to participate in world-class research under the supervision of faculty members.

Study Abroad

CEAS collaborates with the Overseas Programs and Partnerships Office to offer unique study abroad experiences. In one such experience, CEAS students have the opportunity to study renewable energies in Germany during the winter interim session. The program includes lectures by Kassel University professors, site visits to factories and companies; and visits to a wind park and a biogas power plant. Through field trips and hands-on projects, engineering students are offered an incredible, international learning experience.

E-mail: ceas-adv@UWM.edu Website: www.uwm.edu/CEAS Phone: (414) 229-4667



INDUSTRIAL ENGINEERING

It's about the big picture. The most people-oriented of all the engineering disciplines, **industrial engineering** deals with designing and improving systems. An industrial engineer of an assembly line may interact with people from operations, maintenance, management, and packaging – all in one day. These engineers improve the quality of products, reduce workers' injuries, and increase companies' profitability. Industrial engineers have created machines to lift patients in hospitals, so that medical professionals don't injure themselves lifting. And it's industrial engineers who improve the efficiency of hospitals, from the time a patient is admitted to final discharge – saving time, energy, and lives.

Sample Course Plan

Semester 1

Calculus I
Chemistry for Engineers
Introduction to Engineering
General Education Requirement

Semester 2

Calculus II
Engineering Materials
Engineering Drawing & CAD/Drafting
General Education Requirement

Semester 3

Calculus III
Physics I
Introduction to Computer Programming
Statics
Professional Seminar

Semester 4

Analytical Methods in Engineering
Physics II
Dynamics
Natural Science Elective
Manufacturing Processes

Semester 5

Operations Research I
Introduction to Operations Analysis
Introductory Statistics for Physical
Sciences & Engineering
Electrical Circuits I
General Education Requirement

Semester 6

Operations Research II
Ergonomics
Basic Engineering Thermodynamics
Simulation Methodology
General Education Requirement

Semester 7

Methods Engineering
Facility Layout and Material Handling
Engineering Economic Analysis
Technical Elective
Technical Elective

Semester 8

Quality Control & Design
of Experiments I
Senior Design Project
Technical Elective
Technical Elective
General Education Requirement

This is only a sample course plan and will vary for each student. Plans can be influenced by many factors including: the need for pre-requisite coursework, inclusion of related work experience through co-op and/or internship, and appropriate pace for individual students. Each student will develop personal course plans with their advisor.

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