Industrial & Systems Engineering
202 W. Boyd, 124 Carson Engineering Center
Phone (405) 325-3721
Email ise@ou.edu
Web ise.ou.edu

What is Industrial & Systems Engineering?
Industrial & systems engineers improve, integrate, inform and innovate. While most engineers work with products or processes, ISEs work on a broad range of problems involving both people and technology. Companies seek ISEs for their expertise in understanding, evaluating and improving the performance of entire technical and business systems.

As improvement engineers, ISEs help companies add value by eliminating waste and using resources effectively. As integration engineers, ISEs bring people, processes, machines and technologies together to solve complex problems. As information engineers, ISEs use digital tools to collect data, organize and analyze information, and present solutions. As innovation engineers, ISEs use a total systems approach, combining engineering expertise with a business perspective to solve modern problems on a global scale.

Industrial & Systems Engineering Careers
Employers
As businesses strive for improvement in quality and productivity, they increasingly turn to industrial & systems engineers. The U.S. Department of Labor expects ISE jobs to grow by 14% in the coming decade, faster than the average for all occupations. Although ISE has its roots in manufacturing, today’s ISEs can be found everywhere. Hospitals, shipping companies, retailers and wholesalers, research institutions, law firms, government agencies and digital security firms all enjoy the benefits of industrial engineering expertise. ISEs are CEOs, product designers, doctors, legislators, software developers, astronauts, professors and project managers. Major companies and government agencies such as Disney, Apple, Toyota, Frito-Lay, Kimberly-Clark, Coca-Cola, Boeing, Walmart, the Federal Aviation Administration, The Gap, Chesapeake Energy, the FBI, UPS and Schlumberger employ industrial engineers.

Projects
Industrial & systems engineers apply their talents to many types of problems. Here are just a few examples:
• Minimizing environmental impact of new products & facilities
• Selecting investments for energy companies
• Designing crew areas for the international space station
• Predicting demand for flu vaccines
• Protecting valuable shipments from theft or attack
• Automating assembly lines for aircraft
• Managing technical projects and people

Salaries & Career Advancement
In 2011, ISE graduates from the University of Oklahoma reported average starting salaries exceeding $60,000. Median nationwide salaries for ISEs with 4 to 5 years of experience now exceed $84,000, according to Salary.com. Because of their special training in problem solving and business development, industrial & systems engineers are promoted to leadership positions more quickly than many other professionals.

Industrial Engineering at OU
Degree Options
OU Industrial & Systems Engineering students graduate with a Bachelor of Science in Industrial Engineering degree. Students can follow the standard curriculum or pursue one of our specialized bachelor’s degrees emphasizing information technology or pre-medicine courses.

ISE students may also pursue one of three combined bachelor’s/master’s degree programs. These accelerated five-year programs include the Bachelor of Science in Industrial Engineering/Master of Business Administration, the Bachelor of Science/Master of Science in Industrial Engineering and the Bachelor of Science/Master of Science in Industrial Engineering (Information Technology Option).

Interests and Skills
ISE students typically are interested in math, business and psychology. They like working with people and are seeking a career that will combine their technical and interpersonal skills. High school preparation should include study in mathematics and the physical sciences. The most successful students are prepared to take Calculus & Analytic Geometry I (MATH 1823) during their first semester at OU.

Want to learn more?
For more information about ISE at OU, visit our website, ise.ou.edu, or our Facebook page, OU Industrial and Systems Engineering. To learn more about the ISE profession, visit the Institute of Industrial Engineers at www.iienet.org.