

INDUSTRIAL ENGINEERING, B.S. (ENGINEERING)

wide variety of sectors including academia, banking, communications, consulting, healthcare, information technology, transportation, etc.

Seven Penn State campuses are scheduled for closure after Spring 2027: DuBois, Fayette, New Kensington, Mont Alto, Shenango, Wilkes-Barre, and York. New students are not being admitted at these campuses.

Begin Campus: Any Penn State Campus

End Campus: University Park

Program Description

The undergraduate program in Industrial Engineering, recognized as the first of its kind globally, boasts a rich tradition of delivering a robust, technical, and hands-on education in the design, control, and operation of manufacturing processes and systems. The curriculum offers a comprehensive education in manufacturing, operations research, ergonomics, and service, grounded in a solid foundation of mathematics, physical and engineering sciences, and enriched by extensive laboratory and industrial experiences. This program offers two distinct options designed to provide students with diverse career pathways: the General Option (GEN) delivers a well-rounded Industrial Engineering education and is available at both the University Park (UP) and Behrend campuses, while the Service Systems Option (SSE) provides a specialized track focused on Service Systems Engineering and is exclusively offered at the UP campus. Both options equip students with the essential skills and knowledge to thrive as professionally competent and versatile industrial engineers. Graduates are well-prepared for a wide array of careers in sectors such as manufacturing, supply chain, finance, communication, information technology, transportation, healthcare, consulting, and academia.

After completing courses required for the core and fundamental competencies in the major, students can choose elective courses from a department list. In addition, students must also complete the three-credit capstone design course.

What is Industrial Engineering?

Industrial Engineering is rooted in the sciences of engineering, the study of systems, and the management of people. Industrial engineers are big-picture problem solvers who optimize complex engineering systems and processes. They bring together people, machinery, materials, information, energy, and financial resources to improve efficiency, performance, quality, and safety while reducing cost and waste. According to the Institute of Industrial & Systems Engineers, Industrial Engineers "work to eliminate waste of time, money, materials, energy, and other commodities." Because it is a broad and versatile discipline, study of industrial engineering prepares you for careers in every sector of the economy.

You Might Like This Program If...

Largely based in math and science, while incorporating business and psychology, the industrial engineering program is designed to prepare students to become leaders in engineering. We provide students with a comprehensive education in human factors/ergonomics; manufacturing; operations research; and supply chain/service engineering through coursework and hands-on experience. Our students become innovators who discover new solutions that address evolving challenges in a