

INDUSTRIAL ENGINEERING, B.S. (ENGINEERING)

Begin Campus: Any Penn State Campus

End Campus: University Park

Program Educational Objectives

Within three to five years after graduation, we anticipate graduates will:

1. Participate in and lead cross-functionally defined project teams, designing, implementing and improving processes, products and systems in the manufacturing, service or government sectors.
2. Work effectively in managerial and leadership positions, to establish and execute engineering and business strategies.
3. Work and communicate effectively with internal and external stakeholders in the global environment, while satisfying engineering, business and financial goals, and the end customers.
4. Embrace the importance of continuous learning through varied work assignments, graduate school, professional training programs and independent study, for the purpose of ongoing professional development.
5. Demonstrate proficiency in data analysis using state-of-the art tools, to assist with decision-making.

Student Outcomes

Student outcomes describe what students are expected to know and be able to do by the time of graduation. The Industrial Engineering program is designed to enable students to:

1. Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. Communicate effectively with a range of audiences
4. Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. Acquire and apply new knowledge as needed, using appropriate learning strategies.