INDUSTRIAL ENGINEERING, B.S. (ENGINEERING)

Begin Campus: Any Penn State Campus
End Campus: University Park

Degree Requirements
For the Bachelor of Science degree in Industrial Engineering, a minimum of 129 credits is required:

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<th>Requirement</th>
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27 of the 45 credits for General Education are included in the Requirements for the Major. This includes: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses; 9 credits of GWS courses.

Requirements for the Major
To graduate, a student enrolled in the major must earn a grade of C or better in each course designated by the major as a C-required course, as specified by Senate Policy 82-44 (https://senate.psu.edu/students/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/).

Additional Courses
Select 1 credit of First-Year Seminar 1
CMPSC 200 Programming for Engineers with MATLAB 3
or CMPSC 201 Programming for Engineers with C++ 3
ECON 102 Introductory Microeconomic Analysis and Policy 3
or ECON 104 Introductory Macroeconomic Analysis and Policy 3
Select one of the following: 1
IE 408 Cognitive Work Design 3
IE 418 Human/Computer Interface Design 3
IE 419 Work Design - Productivity and Safety 3

Additional Courses: Require a grade of C or better
CAS 100A Effective Speech 3
or CAS 100B Effective Speech 3
ENGL 15 Rhetoric and Composition 3
or ENGL 30H Honors Rhetoric and Composition 3

Supporting Courses and Related Areas
Select 3 credits as a science selection from department list 3
Select 6 credits as non-major electives from department list 2 6
Select 3 credits in manufacturing processes from department list 1 3
Select 6 credits of technical electives from the department list; all 6 credits must be IE credits 6

1 The course not taken to satisfy this requirement can be taken as a technical elective. Please see the department list.
2 Please see the department list.

General Education
Connecting career and curiosity, the General Education curriculum provides the opportunity for students to acquire transferable skills necessary to be successful in the future and to thrive while living in interconnected contexts. General Education aids students in developing intellectual curiosity, a strengthened ability to think, and a deeper sense of aesthetic appreciation. These are requirements for all baccalaureate students and are often partially incorporated into the requirements of a program. For additional information, see the General Education Requirements (https://bulletins.psu.edu/undergraduate/general-education/baccalaureate-degree-general-education-program/) section of the Bulletin and consult your academic adviser.

The keystone symbol appears next to the title of any course that is designated as a General Education course. Program requirements may also satisfy General Education requirements and vary for each program.

Foundations (grade of C or better is required and Inter-Domain courses do not meet this requirement.)
- Quantification (GQ): 6 credits
- Writing and Speaking (GWS): 9 credits

Breadth in the Knowledge Domains (Inter-Domain courses do not meet this requirement.)
- Arts (GA): 3 credits
- Health and Wellness (GHW): 3 credits
- Humanities (GH): 3 credits
- Social and Behavioral Sciences (GS): 3 credits
- Natural Sciences (GN): 3 credits
Integrative Studies
- Inter-Domain Courses (Inter-Domain): 6 credits

Exploration
- GN, may be completed with Inter-Domain courses: 3 credits
- GA, GH, GN, GS, Inter-Domain courses. This may include 3 credits
  of World Language course work beyond the 12th credit level or the
  requirements for the student's degree program, whichever is higher: 6
  credits

University Degree Requirements
First Year Engagement
All students enrolled in a college or the Division of Undergraduate Studies
at University Park, and the World Campus are required to take 1 to 3
credits of the First-Year Seminar, as specified by their college First-Year
Engagement Plan.

Other Penn State colleges and campuses may require the First-Year
Seminar; colleges and campuses that do not require a First-Year Seminar
provide students with a first-year engagement experience.

First-year baccalaureate students entering Penn State should consult
their academic adviser for these requirements.

Cultures Requirement
6 credits are required and may satisfy other requirements
- United States Cultures: 3 credits
- International Cultures: 3 credits

Writing Across the Curriculum
3 credits required from the college of graduation and likely prescribed as
part of major requirements.

Total Minimum Credits
A minimum of 120 degree credits must be earned for a baccalaureate
degree. The requirements for some programs may exceed 120 credits.
Students should consult with their college or department adviser for
information on specific credit requirements.

Quality of Work
Candidates must complete the degree requirements for their major and
earn at least a 2.00 grade-point average for all courses completed within
their degree program.

Limitations on Source and Time for Credit Acquisition
The college dean or campus chancellor and program faculty may require
up to 24 credits of course work in the major to be taken at the location or
in the college or program where the degree is earned. Credit used toward
degree programs may need to be earned from a particular source or
within time constraints (see Senate Policy 83-80 (https://senate.psu.edu/
policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-
requirements/#83-80)). For more information, check the Suggested
Academic Plan for your intended program.