PURDUE UNIVERSITY

Industrial Engineering

College of Engineering

code-BSc-IE
123 Credits for Graduation
Students need cumulative GPA of 2.0 to graduate.

Industrial Engineering Major Courses (36 credits)

Required IE Courses (36 credits)

_____ (0) IE 20000 - Industrial Engineering Seminar
_____ (3) IE 23000 - Probability and Statistics in Engineering I
_____ (3) IE 34300 - Engineering Economics
_____ (3) IE 33000 - Probability and Statistics in Engineering II
_____ (3) IE 33200 - Computing in Industrial Engineering
_____ (3) IE 33500 - Operation Research- Optimization
_____ (3) IE 33600 - Operations Research- Stochastic Models
_____ (3) IE 37000 – Manufacturing Processes I
_____ (3) IE 38300 – Integrated Production System I
_____ (3) IE 38600 – Work Analysis and Design I
_____ (3) IE 43100 – Industrial Engineering Design
_____ (3) IE 47400– Industrial Control System
_____ (3) IE 48600 – Work Analysis and Design II

IE Technical Electives - (**15 credits**-**NOTE**: 6 credits required in IE courses, Must do two of the first three options listed below) (https://engineering.purdue.edu/IE//Academics/IEUndergrad/Technical%20Elective%20Program)

_____ (3) IE 47000 - Manufacturing Process II, or IE 48400 - Integrated Production Systems II
_____ (3) IE 5XX00, or IE 47000, or IE 48400
_____ (3) Technical Elective I
_____ (3) Technical Elective II
_____ (3) Technical Elective III

Other Departmental/Program Course Requirements (55-57 credits)

Mathematics Requirements (18-20 cr.)

_____ (4/5) MA 16500/16100 - Calculus I (satisfies FYE requirement)*
_____ (4/5) MA 16600/16200 - Calculus II (satisfies FYE requirement)*
_____ (4) MA 26100 - Calculus III*
_____ (3) MA 26500 - Linear Algebra*
_____ (3) MA 26600 - Ordinary Differential Equations*

Science Requirements (14 cr.)

_____ (4) PHYS 17200 - Physics I (satisfies FYE requirement)*
_____ (3) PHYS 24100 - Electricity and Optics*
_____ (4) CHM 11500 - General Chemistry I (satisfies FYE requirement)*
_____ (3) CS 15900 - Programming Applications for Engineers (satisfies FYE requirement)

General Engineering/Engineering Science Requirements (16 cr.)

_____ (2) ENGR 13100 - Transforming Ideas to Innovation I (satisfies FYE requirement)
_____ (2) ENGR 13200 - Transforming Ideas to Innovation II (satisfies FYE requirement)
_____ (3) ME 27000 - Basic Mechanics I
_____ (3) ME 20000 - Thermodynamics I
_____ (3) NUCL 27300 - Mechanics of Materials
_____ (3) ECE 20100 - Linear Circuit Analysis I

General Education Elective Requirements (24 cr.)

Foundational Core (http://www.purdue.edu/provost/initiatives/curriculum/course.html)

_____ (3) _____ (satisfies Information Literacy selective for core; ENGL 10600/10800 strongly recommended)
_____ (3) _____ (satisfies Written Communication selective for core; ENGL 10600/10800 strongly recommended)
_____ (3) _____ (satisfies Oral Communication selective for core; COM 11400 strongly recommended)
_____ (3) _____ (satisfies Human Cultures: Humanities selective for core)
_____ (3) _____ (satisfies Human Cultures: Behavioral/Social Science selective for core)
_____ (3) _____ (satisfies Science, Technology & Society selective for core)

IE General Education Electives
(https://engineering.purdue.edu/IE/Academics/Undergrad/General%20Education%20Elective%20Program%20Overview)

_____ ( ) _____
_____ ( ) _____
_____ ( ) _____

University Core Requirements

Human Cultures Humanities	☐		*Science, Technology & Society Selective*	☐	
Human Cultures Behavioral/Social Science	☐		*Written Communication*	☐	
Information Literacy	☐		*Oral Communication*	☐	
Science Selective	☐	PHYS 17200	*Quantitative Reasoning*	☐	MA 16100/16500
Science Selective	☐	CHM 11500			

Revised 5/2014 (effective Fall 2014)

Industrial Engineering

https://engineering.purdue.edu/IE//Academics/IEUndergrad/POS%20Booklet%20Final.pdf

Suggested Arrangement of Courses:

Credits	Fall 1st Year	Prerequisite	Credits	Spring 1st Year	Prerequisite
4	MA 16500		4	MA 16600	MA 16500
4	CHM 11500		4	PHYS 17200	
4	General Education Elective II		3	CS 15900	
2	ENGR 13100		2	ENGR 13200	ENGR 13100
			3	General Education Elective II	
14			**16**		

Credits	Fall 2nd Year	Prerequisite	Credits	Spring 2nd Year	Prerequisite
3	IE 23000	MA 26100 co-req	3	IE 33000	IE 23000, ENGR 13100
3	General Elective III		3	MA 26500	MA 16200/16600, MA 26100 co-req
4	MA 26100	MA 16600/ 16200	3	NUCL 27300	ME 27000
3	IE 34300	MA 16200, ENGR 13100	3	PHYS 24100	PHYS 17200, MA 16200/16600 co-req
3	ME 27000	PHYS 17200, ENGR 13200, MA 16200/16600	3	General Elective IV	
0	IE 20000				
16			**15**		

Credits	Fall 3rd Year	Prerequisite	Credits	Spring 3rd Year	Prerequisite
3	ECE 20100	ENGR 13100, PHYS 17200, MA 16600/16200	3	IE 33600	IE 23000, MA 26500, MA 26600 co-req
3	IE 33200	CS 15900, IE 33000 co-req	3	IE 38300	IE 33500
3	IE 33500	MA 26500	3	IE 38600	IE 33000
3	IE 37000	ME 27000, NUCL 27300 co-req	3	ME 20000	CHM 11500, (MA 26100, ENGR 13200 co-req)
3	MA 26600	MA 26100	3	General Elective VI	
3	General Elective V				
18			**15**		

Credits	Fall 4th Year	Prerequisite	Credits	Spring 4th Year	Prerequisite
3	IE 47400	CS 15900, ME 27000, ECE 20100, MA 26600, MA 26500	3	IE 43100	IE 34300, 33200, 38600, 33600, 38300, 37000
3	IE 48600	IE 38600	3	Technical Elective III	
3	Technical Elective I		3	Technical Elective IV	
3	Technical Elective II		3	Technical Elective V	
3	General Elective VII		3	General Elective VIII	
15			**15**		

*Satisfies a University Core Requirement
**Satisfies a Non-departmental Major Course Requirement

123 semester credits required for Bachelor of Science degree.
2.0 Graduation GPA required for Bachelor of Science degree.

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The student is ultimately responsible for knowing and completing all degree requirements.

Degree Works is knowledge source for specific requirements and completion

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