



College of Engineering

Engineering Faculty Document No.:
126-25
January 31, 2025

TO: The Engineering Faculty
FROM: The Faculty of the Edwardson School of Industrial Engineering
RE: Change in degree requirements for Bachelor of Science in Industrial Engineering (B.S.I.E.) effective for students entering Purdue Fall 2025 and later.

The Faculty of the Edwardson School of Industrial Engineering has approved the following changes in the B.S.I.E. degree requirements. This action is now submitted to the Engineering Faculty with a recommendation for approval.

From: See pages 2-3

To: See pages 4-5

RATIONALE:

These changes are made in relation to recent additions to pathways for completing FYE and science requirements.

DocuSigned by:

A handwritten signature in black ink that reads 'Young-Jun Son'.

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Young-Jun Son
Head of the Edwardson School of Industrial Engineering

BSIE Minimum Degree Requirements: Current

The Bachelor of Science in Industrial Engineering degree requires a total of 123 credit hours and a minimum Graduation Index of 2.0.

Students must qualify for admission into the School of Industrial Engineering by completion of the First Year Engineering Program, qualifying for Change-of-Curricula (CODO) to IE, or meeting IE transfer requirements.

IE Requirements

IE Core Courses (36 cr.): IE 20000, 23000, 33000, 33200, 33500, 33600, 34300, 37000, 38300, 38600, 43100, 47400, 48600

IE Technical Electives (6 cr.): Choose one of the following options:

IE 47000 and IE 48400, or

IE47000 or IE48400, and approved course offered within the School of Industrial Engineering (either at senior-undergraduate or 50000-level).

Complementary Technical Electives (9 cr.): Students may choose courses from a preapproved list selected by the IE Undergraduate Committee. These courses are primarily culled from upper-level engineering courses, upper-level sciences (MA, STAT, PSY, PHYS, etc.), or selected upper-level MGMT courses.

General Engineering

Introduction to Engineering (4 cr.):

ENGR 13100, 14100, 16100, or (EPCS 11100 and EPCS 12100); and

ENGR 13200, 14200, 16200, or ENGR 13300

* ENGR 13100, 13300, and 14100 satisfy the Information Literacy foundational outcome requirement

Engineering Computation (3 cr.): CS 15900

Engineering Science (12 cr.): ME 27000, ME 20000, ECE 20001, NUCL 27300

Mathematics and Physical Sciences

Mathematics (18 cr.): MA 16500, 16600, 26100, 26500, 26600

* All courses satisfy the Quantitative Reasoning foundational outcome requirement

Science (11 cr.): PHYS 17200 and 24100, CHM 11500 or CHM 12300 or (CHM 11100 and CHM 11200)

* CHM 11500, and PHYS 17200 and 24100 can be used to satisfy the two courses needed for the Science foundational outcome requirement

College of Engineering General Education Program

Students must satisfy the requirements of the College of Engineering General Education Program, which consists of two components for a total of 24 credit hours:

1. Foundational learning outcomes: Courses must come from those approved by the Undergraduate Curriculum Council for each learning outcome.
2. Programmatic requirements: Courses are selected from those approved by the IE Undergraduate Committee (or designee)

Other Requirements

Foundational Outcome Courses: All courses taken to fulfill a Foundational Outcome require a grade of C- or higher in order to meet the outcome requirements.

Grade Options: All courses taken to meet a requirement for the BSIE degree have to be taken for a grade. However, excess courses can be taken on a Pass/Not Pass basis at the discretion of the student.

Exceptions: Deviations from the stated curriculum must be approved by the IE Undergraduate Committee or their designee. Petitions must be made in writing and submitted to the IE undergraduate office for distribution for review.

BSIE Minimum Degree Requirements: Proposed

The Bachelor of Science in Industrial Engineering degree requires a total of 123 credit hours and a minimum Graduation Index of 2.0.

Students must qualify for admission into the School of Industrial Engineering by completion of the First Year Engineering Program, qualifying for Change-of-Curricula (CODO) to IE, or meeting IE transfer requirements.

IE Requirements

IE Core Courses (36 cr.): IE 20000, 23000, 33000, 33200, 33500, 33600, 34300, 37000, 38300, 38600, 43100, 47400, 48600

IE Technical Electives (6 cr.): Choose one of the following options:

IE 47000 and IE 48400, or

IE 47000 or IE 48400, and approved course offered within the School of Industrial Engineering (either at senior-undergraduate or 50000-level).

Complementary Technical Electives (9 cr.): Students may choose courses from a preapproved list selected by the IE Undergraduate Committee. These courses are primarily culled from upper-level engineering courses, upper-level sciences (MA, STAT, PSY, PHYS, etc.), or selected upper-level MGMT courses.

General Engineering

Introduction to Engineering (4 cr.):

Option 1: ENGR 13100, 14100, 16100, or (EPCS 11100 and EPCS 12100) or (VIP 17911 and VIP 17912); and
ENGR 13200, 14200, 16200, or ENGR 13300

* ENGR 13100, 13300, and 14100 satisfy the Information Literacy foundational outcome requirement

** ENGR 16100 and ENGR 16200 *combined* satisfy the Information Literacy foundational outcome requirement

Option 2: ENGR 13000

*** ENGR 13000 satisfies the Information Literacy foundational outcome requirement

Engineering Computation (3 cr.): CS 15900

Engineering Science (12 cr.): ME 27000, ME 20000, ECE 20001, NUCL 27300

Mathematics and Physical Sciences

Mathematics (18 cr.): MA 16500, 16600, 26100, 26500, 26600

* All courses satisfy the Quantitative Reasoning foundational outcome requirement

Science (11 cr.): PHYS 17200 and 24100, CHM 11500 or (CHM 11100 and CHM 11200) or (CHM 11510 and CHM 11520) or (CHM 11510 and CHM 11530)

* CHM 11500, and PHYS 17200 and 24100 can be used to satisfy the two courses needed for the Science foundational outcome requirement

** ENGR 16100 and ENGR 16200 combined satisfy the PHYS 17200 requirement

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