

Industrial Engineering, BSE

Academic Plans

Sample Plan of Study

Sample plans represent one way to complete a program of study. Actual course selection and sequence will vary and should be discussed with an academic advisor. For additional sample plans, see MyUI.

Industrial Engineering, BSE

Course	Title	Hours
First Year		
Fall		
RHET:1030	Rhetoric ^a	4
MATH:1550	Engineering Mathematics I: Single Variable Calculus ^{b, c}	4
CHEM:1110	Principles of Chemistry I ^{a, d}	4
ENGR:1100	Introduction to Engineering Problem Solving ^e	3
ENGR:1000	Engineering Success for First-Year Students ^e	1
CSI:1600	Success at Iowa	0
Hours		16
Spring		
PSY:1001	Elementary Psychology ^a	3
MATH:1560	Engineering Mathematics II: Multivariable Calculus ^b	4
MATH:2550	Engineering Mathematics III: Matrix Algebra ^a	2
PHYS:1611	Introductory Physics I ^b	4
ENGR:1300	Introduction to Engineering Computing ^b	3
Hours		16
Second Year		
Any Semester		
Students must choose a focus area. See General Catalog or consult an advisor for more information.		
Hours		0
Fall		
GE: Diversity, Equity, and Inclusion ^f		3
MATH:2560	Engineering Mathematics IV: Differential Equations ^a	3
PHYS:1612	Introductory Physics II ^a	4
Major: engineering fundamentals elective ^g		2 - 3
Major: engineering fundamentals elective ^g		3
Major: engineering fundamentals elective ^g		3
ISE:2000	Industrial Engineering Sophomore Seminar ^e	0
Hours		18-19
Spring		
STAT:2020	Probability and Statistics for the Engineering and Physical Sciences ^a	3
Major: engineering fundamentals elective ^g		3

ISE:2500	Engineering Economy ^h	3
ISE:3500	Information Systems Design ^h	3
Focus Area: required course ⁱ		3
Hours		15

Third Year

Fall

GE: Engineering Be Creative ^j		3
ISE:2360	Design for Manufacturing ^e	3
ISE:3400	Human Factors ^e	3
ISE:3610	Stochastic Modeling ^e	3
ISE:3700	Operations Research ^e	3

Hours 15

Spring

GE: Approved Course Subjects ^k		3
ISE:3300	Manufacturing Systems ^h	3
ISE:3450	Ergonomics ^h	3
ISE:3660	Data Analytics with R ^h	3
ISE:3750	Digital Systems Simulation ^h	3
Focus Area: required or elective course ⁱ		3
ISE:3000	Professional Seminar: Industrial Engineering ^h	0

Hours 18

Fourth Year

Fall

GE: Approved Course Subjects ^k		3
ISE:3350	Process Engineering ^e	3
ISE:3600	Quality Control ^e	3
Focus Area: required course ⁱ		3
Focus Area: required or elective course ⁱ		3

Hours 15

Spring

ISE:4600	Industrial Engineering Design Project ^b	4
Major: systems elective ^l		3
Focus Area: required or elective course ⁱ		3
Focus Area: required or elective course ⁱ		3
Focus Area: elective course ⁱ		3

Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall)^m

Hours 16

Total Hours 129-130

- a Typically this course is offered in fall, spring, and summer sessions. Check MyUI for course availability since offerings are subject to change.
- b Typically this course is offered in fall and spring semesters. Check MyUI for course availability since offerings are subject to change.
- c Enrollment in math courses requires completion of a placement exam.
- d Enrollment in chemistry courses requires completion of a placement exam.
- e Typically this course is offered in fall semesters only. Check MyUI for course availability since offerings are subject to change.
- f Students select a course from one of two GE CLAS Core areas: Diversity and Inclusion or Values and Culture.
- g Students complete at least 11 s.h. in engineering fundamentals courses, selected from the following:

ENGR:2110, ENGR:2120, ENGR:2130, ENGR:2710,
ENGR:2720, ENGR:2730, ENGR:2750, and ENGR:2995.

Students who are required to complete ENGR:2730 as part of their focus area must select a different course to fulfill the engineering fundamentals requirement. See General Catalog or consult an advisor for more information.

- h Typically this course is offered in spring semesters only. Check MyUI for course availability since offerings are subject to change.
- i Students select one of several standard focus areas or tailor a focus area to individual interests. Focus areas require at least 21 s.h. and consist of content area courses and electives. Carefully selected elective courses may contribute to earning a minor and/or certificate. See General Catalog or consult an advisor for more information.
- j See General Catalog for list of approved courses. Students who intend to enroll in a Be Creative course with prerequisites must request a waiver by completing the Request Prerequisite Special Permission form on MyUI.
- k See General Catalog for list of approved course subjects.
- l Students complete one systems elective (3 s.h.), selected from the following: ISE:4172, ISE:4175, ISE:4900, ENGR:2730, or a course with prefix ISE numbered 5000 or above. Students who are required to complete ENGR:2730 or ISE:4900 as part of their focus area must select a different course to fulfill the systems elective requirement. See General Catalog or consult an advisor for more information.
- m Please see Academic Calendar, Office of the Registrar website for current degree application deadlines. Students should apply for a degree for the session in which all requirements will be met. For any questions on appropriate timing, contact your academic advisor or Graduation Services.