

Electrical 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.

Electrical Engineering, BSE

- Computer Track [p. 1]
- Electrical Track [p. 2]

Computer Track

Course	Title	Hours
Academic Career		
Any Semester		
Students select one of several established focus areas or work with their academic advisor to create a customized plan. Focus areas require at least 27 s.h. in elective and/or required courses. See General Catalog, the Department of Electrical and Computer Engineering website, or an advisor for more information.		
Hours		0
First Year		
Fall		
RHET:1030	Rhetoric: Writing and Communication ^a	4
MATH:1550	Engineering Calculus I ^{b, c}	4
CHEM:1110	Principles of Chemistry I ^{b, d}	4
ENGR:1100	Introduction to Engineering Problem Solving ^e	3
CSI:1600	Success at Iowa	0
Hours		15
Spring		
GE: Approved Course Subjects ^f		3
MATH:1560	Engineering Calculus II ^b	4
MATH:2550	Engineering Matrix Algebra ^b	2
PHYS:1611	Introductory Physics I ^b	4
ENGR:1300	Introduction to Engineering Computing ^b	3
Hours		16
Second Year		
Fall		
GE: Cultural Perspectives, Values, and Society ^g		3
MATH:2560	Engineering Differential Equations ^b	3
PHYS:1612	Introductory Physics II ^a	4
ENGR:2120	Electrical Circuits ^a	3
ENGR:2730	Computers in Engineering ^b	3
Hours		16
Spring		
MATH:3550	Engineering Vector Calculus ^b	3

CS:2210	Discrete Structures ^a	3
CS:2230	Computer Science II: Data Structures ^a	4
ECE:2400	Linear Systems I ^b	3
ECE:2410	Principles of Electronic Instrumentation ^b	4

Focus Area: Students fill out a focus area plan of study form by the end of their Spring semester. The form link is located on the Electrical and Computer Engineering (ECE) Undergraduate ECE Forms webpage.

Hours		17
Third Year		
Fall		
STAT:2020	Probability and Statistics for the Engineering and Physical Sciences ^b	3
CS:3330	Algorithms ^b	3
ECE:3320	Introduction to Digital Design ^e	3
ECE:3330	Introduction to Software Design ^b	3
ECE:3700	Electromagnetic Theory ^e	3
ECE:3000	Electrical and Computer Engineering Professional Seminar ^e	1
Hours		16
Spring		
GE: Engineering Be Creative ^h		3
ECE:3350	Computer Architecture and Organization ⁱ	3
ECE:3360	Embedded Systems ^b	3
Focus Area: elective ECE course ^j		3
Focus Area: technical elective ^j		3
Focus Area: additional elective ^j		3
Hours		18
Fourth Year		
Fall		
GE: Approved Course Subjects ^f		3
ECE:4880	Electrical and Computer Engineering Senior Design 1 ^b	3
Focus Area: breadth elective ^j		3
Focus Area: ECE 5000 or above course ^j		3
Focus Area: technical elective ^j		3
Hours		15
Spring		
GE: Approved Course Subjects ^f		3
ECE:4890	Electrical and Computer Engineering Senior Design 2 ^b	3
Focus Area: depth elective ^j		3
Focus Area: ECE 5000 or above course ^j		3
Focus Area: additional elective ^j		3
Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall) ^k		
Hours		15
Total Hours		128

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 See General Catalog for list of approved course subjects.
- g Students select a course from one of two GE CLAS Core areas: Understanding Cultural Perspectives or Values and Society.
- h 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.
- i Typically this course is offered in spring semesters only. Check MyUI for course availability since offerings are subject to change.
- j Students in the computer track complete nine focus area courses, not required in their curriculum, including: one breadth elective (3 s.h.); one depth elective (3 s.h.); two courses with prefix ECE numbered above 5000 (6 s.h.); two technical electives (6 s.h.), two additional elective courses (6 s.h.), and one ECE technical elective (3 s.h.). See General Catalog and Department of Electrical and Computer Engineering website for requirements and recommendations or consult an advisor for more information.
- k Please see Academic Calendar, on 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 Degree Services.

Electrical Track

Course	Title	Hours
Academic Career		
Any Semester		
Students select one of several established focus areas or work with their academic advisor to create a customized plan. Focus areas require at least 24 s.h. in elective and/or required courses. See General Catalog, the Department of Electrical and Computer Engineering website, or an advisor for more information. ^a		
Hours		0
First Year		
Fall		
RHET:1030	Rhetoric: Writing and Communication ^b	4
MATH:1550	Engineering Calculus I ^{c, d}	4
CHEM:1110	Principles of Chemistry I ^{c, e}	4
ENGR:1100	Introduction to Engineering Problem Solving ^f	3
CSI:1600	Success at Iowa	0
Hours		15
Spring		
GE: Approved Course Subjects ^g		3
MATH:1560	Engineering Calculus II ^c	4
MATH:2550	Engineering Matrix Algebra ^c	2
PHYS:1611	Introductory Physics I ^c	4

ENGR:1300	Introduction to Engineering Computing ^c	3
Hours		16

Second Year

Fall

GE: Cultural Perspectives, Values, and Society ^h		3
MATH:2560	Engineering Differential Equations ^c	3
PHYS:1612	Introductory Physics II ^c	4
ENGR:2120	Electrical Circuits ^b	3
ENGR:2730	Computers in Engineering ^c	3
Hours		16

Spring

MATH:3550	Engineering Vector Calculus ^c	3
STAT:2020	Probability and Statistics for the Engineering and Physical Sciences ^c	3
PHYS:2704	Physics IV ⁱ	3
ECE:2400	Linear Systems I ^c	3
ECE:2410	Principles of Electronic Instrumentation ^c	4

Focus Area: Students complete their focus area plan of study by the end of the Spring semester. The link is located on the Electrical and Computer Engineering (ECE) Undergraduate ECE Forms webpage.

Hours		16
--------------	--	-----------

Third Year

Fall

ECE:3000	Electrical and Computer Engineering Professional Seminar ^f	1
ECE:3320	Introduction to Digital Design ^f	3
ECE:3400	Linear Systems II ^f	3
ECE:3410	Electronic Circuits ^f	4
ECE:3700	Electromagnetic Theory ^f	3
Focus Area: technical elective ^j		3
Hours		17

Spring

GE: Engineering Be Creative ^k		3
ECE:3360	Embedded Systems ^c	3
ECE:3500	Communication Systems ⁱ	3
ECE:3600	Control Systems ⁱ	3
ECE:3720	Semiconductor Devices ⁱ	3
Focus Area: additional elective ^j		3
Hours		18

Fourth Year

Fall

GE: Approved Course Subjects ^g		3
ECE:4880	Electrical and Computer Engineering Senior Design 1 ^c	3
Focus Area: ECE 5000 or above course ^j		3
Focus Area: technical elective ^j		3
Focus Area: breadth elective ^j		3
Hours		15

Spring

GE: Approved Course Subjects ^g		3
ECE:4890	Electrical and Computer Engineering Senior Design 2 ^c	3

Focus Area: ECE 5000 or above course ^j	3
Focus Area: additional elective ^j	3
Focus Area: depth elective ^j	3
Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall) ^l	
Hours	15
Total Hours	128

- a Students in the electrical track complete eight focus area courses including: one breadth elective (3 s.h.); one depth elective (3 s.h.); two courses with prefix ECE numbered above 5000 (6 s.h.); two technical electives (6 s.h.); and two additional elective courses (at least 6 s.h.). See General Catalog and Department of Electrical and Computer Engineering website or consult an advisor for more information.
- b Typically this course is offered in fall, spring, and summer sessions. Check MyUI for course availability since offerings are subject to change.
- c Typically this course is offered in fall and spring semesters. Check MyUI for course availability since offerings are subject to change.
- d Enrollment in math courses requires completion of a placement exam.
- e Enrollment in chemistry courses requires completion of a placement exam.
- f Typically this course is offered in fall semesters only. Check MyUI for course availability since offerings are subject to change.
- g See General Catalog for list of approved course subjects.
- h Students select a course from one of two GE CLAS Core areas: Understanding Cultural Perspectives or Values and Society.
- i Typically this course is offered in spring semesters only. Check MyUI for course availability since offerings are subject to change.
- j Students in the electrical track complete eight focus area courses including: one breadth elective (3 s.h.); one depth elective (3 s.h.); two courses with prefix ECE numbered above 5000 (6 s.h.); two technical electives (6 s.h.); and two additional elective courses (at least 6 s.h.). See General Catalog and Department of Electrical and Computer Engineering website for requirements and recommendations or consult an advisor for more information.
- k 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.
- l Please see Academic Calendar, on 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 Degree Services.