

BSEE Degree Minimum Requirements

Introduction

The Bachelor of Science in Electrical Engineering degree requires a total of 124 credit hours and a minimum Graduation Index of 2.0. Students must qualify for admission into the School of Electrical and Computer Engineering by completion of the First-Year Engineering Program.

ECE Requirements (47 credit hours):

EE Core Curriculum (24 credit hours): ECE 20100, 20200, 20700, 20800, 25500, 27000, 30100, 30200, and 31100.

ECE Seminars (1 credit hour): ECE 20000 and 40000.

Advanced EE Selectives (9 - 11 credit hours): Choose three (3) of the following: ECE 30500, 32100, 36200, 38200, 43800 and 44000. Choose 4 if both ECE 43800 and 44000 selected. ECE 36200, 43800, and 44000 also contribute to satisfaction of the ECE Upper Level Laboratory Requirement described below.

Senior Design Requirement (3-4 credit hours): ECE 40200, 47700 (taken in one semester) or at least 3 credit hours of EPCS 41100/41200 (taken over 2 consecutive semesters). A prerequisite for all Senior Design courses is completion of the EE Core Curriculum. Some Senior Design Courses may have additional prerequisites. When used to satisfy the Senior Design Requirement, these courses cannot also be used to satisfy the ECE Laboratory Requirement below.

ECE Electives (7-10 credit hours): Additional ECE courses to bring total ECE credit hours to at least 47, including at least three (3) Upper-Level Laboratory courses. There are some restrictions on the use of *Special Content Courses* towards the ECE Requirements. Students are advised to refer to *Suggestions for Choosing ECE Electives for the BSEE Degree*.

ECE Laboratory Requirement: *Three (3) ECE Upper-Level Laboratory courses or ECE courses with laboratory components in addition to those required as part of the EE Core Curriculum (ECE 20700, 20800, and 27000). Courses with laboratory components taken as Advanced EE Selectives, ECE 36200, 43800 and 44000, also contribute to this requirement. No more than two (2) may be "EE Special Content" courses: ECE 39600, 49600 (not taken at the same time as ECE Sophomore level courses (ECE 20100, 20200, 20700, 20800, 25500, and 27000), 27900/37900/47900 VIP, EPCS (Excluding Senior Design) and others as designated by the ECE Curriculum Committee.*

Major-Area GPA: A GPA of 2.0 or higher in the ECE courses taken to satisfy the ECE Requirements is required to qualify for graduation with the BSEE degree.



General Engineering (7-9 credit hours):

Introduction to Engineering (4-6 credit hours): ENGR 19500/13100 (Transforming Ideas to Innovation I) & ENGR 19500/13200 (Transforming Ideas to Innovation II) **OR** ENGR 19500 (Creativity & Innovation in Engineering I) & ENGR 19500 (Creativity & Innovation in Engineering II) **OR** ENGR 10000 (First-Year Engineering Lectures) & ENGR 12600 (Engineering Problem Solving and Computer Tools)

Engineering Breadth Requirement (3 credit hours): Choose one (1) course from the approved *Engineering Breadth Requirement* list.

Mathematics Requirement (18-19 credit hours):

Choose one of the Math options below. If MA 16100 and/or MA 16200 are taken in place of MA 16500 and/or MA 16600, only 4 of the 5 credit hours for each course can be applied to degree requirements.

Option 1 (18 credits hours): MA 16500, 16600, 26100, 26600, and 26500.

Option 2 (19 credit hours): MA 16500, 16600, 26100, 26200, and one of: MA 30300, 30400, 35100, 36200, 38500, 42500, 51000, or CS 31400.

Science Requirement (18-22 credit hours):

CS 15900, CHM 11500/12300, PHYS 17200, and PHYS 27200 and one of the **Science Selectives:** BIOL 11000, BIOL 11100, CHM 11600/12400, PHYS 31000, PHYS 32200, PHYS 34200.

Liberal Arts Requirement (24-25 credit hours):

Communication Skills (6-7 credit hours): ENGL 10600 or 10008 and COM 11400.

General Education Program Requirement (18 credit hours): Students must satisfy the requirements of the *General Education Program*.

Complementary Electives (8-11 credit hours):

Additional courses to bring the total to at least 124 credit hours. These courses should be selected to enhance the students academic program. These courses may include ECE courses beyond those required to complete the ECE Requirements or additional mathematics, science, engineering, and liberal arts courses. See *Guidelines for Complementary Electives* for more information about the types of courses that are acceptable as Complementary Electives.