BSEE Degree Minimum Requirements

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 with an eligible EAI and GPA, qualifying for Change-of-degree-objective (CODO) to ECE, or meeting ECE transfer requirements.

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. No more than 6 credit hours of *EE Special Content* courses can be used towards the 47 credit hours of ECE Requirements.

> ***ECE Laboratory Requirement:*** Three (3) ECE Upper-Level (30000 and above) 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 the laboratory requirement. No more than two (2) of these labs may be *EE Special Content* courses.

Additional Requirements: A GPA of 2.0 or higher in the ECE courses taken to satisfy these 47 credit hours is required to qualify for graduation with the BSEE degree. In addition, at least 32 credit hours and all 30000 level and above courses applied to these 47 credit hours must be completed on the Purdue West Lafayette campus.

General Engineering (10 credit hours):

Introduction to Engineering (7 credit hours): ENGR 13100, ENGR 13200, & CS 15900 OR ENGR 14100 & ENGR 14200.

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

Science Requirement (15-16 credit hours):

CHM 11500/12300, PHYS 17200, and PHYS 27200 and one Science Selective from the approved *ECE Science Selective* list.

College of Engineering General Education Program (24 credit hours):

Students must satisfy the requirements of the *College of Engineering General Education Program.* This requirement has two components:

- *Foundational Learning Outcomes:* select from courses approved by the Undergraduate Curriculum Council for the pertinent learning outcomes.
- *Programmatic Requirement:* select from courses approved by the ECE Curriculum Committee.

Complementary Electives (8-10 credit hours):

Additional courses to bring the total credit hours to at least 124 credit hours. These courses should be selected to enhance the student's academic program and must be selected from the approved list of *ECE Complementary Electives.*