Approved EEE Selective Course Lists

For several elective and selective requirements, lists of acceptable courses will be maintained by the EEE Associate Director of Advising, with approval of changes by the EEE Academics Committee. In addition, students will be able to petition the EEE Academics Committee to have other courses (including one-time special offerings) count for one of the requirements. These lists are therefore considered dynamic, and it is anticipated that small changes will be made to the lists regularly.

All Plans of Study are ultimately subject to approval by the EEE Academics Committee. The EEE curricular guidelines were designed to maximize flexibility so individualized student-centered Plans of Study can be crafted. Proposed Plans of Study without sufficient rigor and academic integrity worthy of earning a BSEEE will not be permitted.

Many courses have prerequisites. It is the student’s responsibility to integrate prerequisite courses into the overall Plan of Study.

Rules for EEE Selectives

1. At least six courses, comprising at least 18 credits, are required.
2. At least nine of the 18 credits must be in the College of Engineering at the 20000-level or above. Of these, at least three credits must be at the 40000-level or above.
3. At least one course (or three credits) must focus on Earth Science (Category A).
4. At least one course (or three credits) must be classified as an “engineering design” course (Category B).
5. At least one course (or three credits) must be classified as “EEE Professional Practice” course (Category C).
6. Students are encouraged to propose a selective plan of study which integrates personal career goals with Purdue coursework. Plans of study require approval from the EEE advisor, the EEE Faculty Mentor and EEE Academics Committee.
7. Students are allowed and encouraged to choose more than nine credits from the Universally Approved (ABC categories) list.

Universally Approved EEE Selectives

Category A: Earth Science

(Choose at least 1; 3 credit minimum)

AGRY 25500: Soil Science
AGRY 33700: Environmental Hydrology
CE 54200: Hydrology
EAPS 32000: Physics of Climate
EAPS 58400: Hydrogeology

Category B: Engineering Design

(Choose at least 1; 3 credit minimum)

ABE 32500: Soil and Water Resource Engineering
CE 44000: Urban Hydraulics
CE 45700: Air Pollution Control and Design
EEE 45600: Wastewater Treatment Processes
EEE 53000: LCA: Principles And Applications
EEE 59500 (variable title): Solid & Hazardous Waste Management

Category C: Engineering Fundamentals/EEE Professional Practice
(Choose at least 1; 3 credit minimum)
AGRY 38500: Environmental Soil Chemistry
CE 31100: Arch Engineering
CE 38300: Geo-technical Engineering I
CE 40800: Geographic Information Systems in Engineering
CE 44300: Introductory Environmental Fluid Mechanics
CE 55700: Air Quality Management
CE 59700 (variable title): Geographic Information Systems
CE 59700 (variable title): Water Chemistry Environmental Ecological Engineering
EEE 49500 (variable title): Environmental Ecological Regulation & Compliance (1 credit)
FNR 35700: Fundamental Remote Sensing
IE 34300: Engineering Economics

Historically Acceptable EEE Selectives

All courses listed below are subject to approval for selective credit.

* Courses with an asterisk can count for EEE Selective only if they are not used to satisfy required options.

** Students may count only one course marked with a double asterisk as an EEE Selective.

Variable title = temporary or special topics number. Course title must match. These courses may be granted permanent course numbers in the future.

ABE 32500: Soil And Water Resource Engineering
ABE 52700: Computer Models in Environmental and Natural Resources
ABE 56000: Biosensors: Fundamentals and Applications
AGRY 25500: Soil Science
AGRY 33700: Environmental Hydrology
AGRY 38500: Environmental Soil Chemistry
AGRY 45000: Soil Conservation and Water Management
AGRY 54000: Soil Chemistry
AGRY 54400: Environmental Organic Chemistry
AGRY 54500: Remote Sensing of Land Resources
AGRY 56000: Soil Physics
AGRY 58000: Soil Microbiology
AGRY 58500: Soils and Land Use
ASM 33600: Environmental Systems Management
ASM 54000: GIS Applications
BIOL 54900: Microbial Ecology
BCM 41900: Sustainable Construction
BCM 51000: Environmental Sustainable Construction Design & Development
CE 31100: Arch Engineering
CE 38300: Geotechnical Engineering I
CE 40800: Geographic Information Systems in Engineering
CE 41300: Building Envelope Design And Thermal Loads
CE 41400: Building Mechanical And Electrical System Design
CE 44000: Urban Hydraulics
CE 44300: Introductory Environmental Fluid Mechanics
CE 45700: Air Pollution Control And Design
CE 49700 (variable title): Community Resilience: Urban To Rural
CE 51200: The Comprehensive Urban Planning Process
CE 51501: Building Energy Audits
CE 54000: Open Channel Hydraulics
CE 54200: Hydrology
CE 54500: Sediment Transport Engineering
CE 54900: Computational Watershed Hydrology
CE 55000: Physico-Chemical Processes In Environ. Engr.
CE 55700: Air Quality Management
CE 59300: Environmental Geotechnology
CE 59700 (variable title): Environ Analytical Chemistry
CE 59700 (variable title): Geographic Information Systems
CE 59700 (variable title): Sustainable Building Design Construction & Operations
CE 59700 (variable title): Polymers In Infrastructure & Environment
CE 59700 (variable title): Water Chemistry Environmental Ecological Engineering
CHE 59700 (variable title): Advanced Solar Conversion
EAPS 30900: Computer-Aided Analysis for Geosciences
EAPS 32000: Physics of Climate
**EAPS 32700: Climate, Science And Society
**EAPS 37500: Great Issues: Fossil Fuels, Energy, and Society
EAPS 58300: Geology of Landfills
EAPS 58400: Hydrogeology
*EEE 36000: EEE Laboratory (Three credits required as core; additional titled credits may be used as Selective)
EEE 45600: Wastewater Treatment Processes
EEE 49500 (variable title): Environmental Ecological Regulation & Compliance
EEE 49500 (variable title): Urban Water Projects
EEE 49800 (variable title): Environmental And Ecological Engineering Projects (Ind. research proposal required.) Only 3 credits may be applied toward BSEEE.
EEE 53000: LCA: Principles And Applications
EEE 59500 (variable title): Any EEE 59500 course is allowable as EEE Selective; students must confirm they have appropriate requisite knowledge from instructor or EEE office
EDCI 50600: Environmental Education
EPICS Participation: Three credits total required; Project must be environmental engineering related and the courses must be taken in consecutive semesters and be dedicated to the same project.
FNR 35700: Fundamental Remote Sensing
**FNR 48800: Global Environmental Issues
FNR 54300: Conservation Biology I
FNR 55800: Digital Remote Sensing and GIS
GEP Participation: Three credits total required; Project must be environmental engineering related and the courses must be taken in consecutive semesters and be dedicated to the same project.
IE 34300: Engineering Economics
ME 41300: Noise Control of Acoustic Waves
ME 43000: Power Engineering
ME 49200: Technology and Values
ME 51400: Fundamentals of Wind Energy
ME 59700 (variable title): Sustainable Energy Options & Analysis
ME 59700 (variable title): Solar Energy Technology
MET 42200: Power Plants And Energy Conversion
MET 58100 (variable title): Fuel Cell Fund, Modeling & Diagnostics
NRES 38500: Environmental Soil Chemistry
NRES 45000: Soil Conservation and Water Management
NUCL 30000: Nuclear Structure and Radiation Interactions
NUCL 47000: Fuel Cell Engineering