

## 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