

## **Environmental and Ecological Engineering Approved EEE Elective and Selective Course Lists – Fall 2014**

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.

**General Education must include one "course at the intersection of society and the environment".**

### **Suggested Courses:**

- AD [39700](#): Sustainability In The Built Environment
- AGEC [40600](#): Natural Resources and Environmental Economics
- AGEC [41500](#): Community and Resource Development
- AGEC [52500](#): Environmental Policy Analysis
- ANTH [32700](#): Environment And Culture
- POL [22300](#): Introduction to Environmental Policy
- POL [32700](#): Global Green Politics
- POL [42300](#): International Environmental Policy
- POL [42500](#): Environmental Law and Politics
- POL [42800](#): Politics of Regulation
- POL 42900 (variable title): Climate, Science, & Society
- POL [52300](#): Environmental Politics and Public Policy

**EEE requires 18 credits of 'selectives' from a narrowly defined set of courses (see below). Additionally, five credits of technical electives and two credits of free electives are required. Technical electives are defined as any course in a technical field, typically from the Colleges of Engineering, Technology, Science, or Agriculture. Remedial courses are not allowed.**

### **Rules for EEE Selectives**

- a. At least six courses, comprising at least 18 credits, are required.
- b. 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.
- c. At least one course (or three credits) must focus on Earth Science (Column A)
- d. At least one course(or three credits) must be classified as an "engineering design" course (Column B).
- e. At least one course (or three credits) must be classified as "EEE Professional Practice" course (Column C).
- f. At least nine credits must together comprise an "EEE Selective Theme". Common themes have included "Environmental Practice in Water, Air & Soil"; "Environmental Impacts of Energy Systems"; "Sustainable Design of Urban Systems". Students are encouraged to propose a selective theme which integrates personal career goals with Purdue coursework. Selective themes require approval from academic advisor and EEE Academics Committee.

Table 1. Universally Approved EEE Selectives.

<b>A: Earth Science</b>	<b>B: Engineering Design</b>	<b>C: Engineering Fundamentals/ EEE Professional Practice</b>
Choose at least 1	Choose at least 1	Choose at least 1
AGRY <a href="#">25500</a> : Soil Science	ABE <a href="#">32500</a> : Soil And Water Resource Engineering	AGRY <a href="#">38500</a> : Environmental Soil Chemistry
AGRY <a href="#">33700</a> : Environmental Hydrology	CE <a href="#">44000</a> : Urban Hydraulics	CE <a href="#">31100</a> : Arch Engineering
CE <a href="#">54200</a> : Hydrology	CE <a href="#">45700</a> : Air Pollution Control And Design	CE <a href="#">38300</a> : Geotechnical Engineering I
EAPS <a href="#">32000</a> : Physics of Climate	EEE 49500 (variable title): <a href="#">Wastewater Treatment Process</a>	CE <a href="#">44300</a> : Introductory Environmental Fluid Mechanics
	ME 59700 (variable title): Sustainbl Dsgn & Manufac	CE <a href="#">55700</a> : Air Quality Management
		CE 59700 (variable title): Water Chemistry Env Eco Eng
		EEE 49500 (variable title): Env Ecol Reg & Compliance
		FNR <a href="#">35700</a> : Fundamental Remote Sensing
		IE <a href="#">34300</a> : Engineering Economics

Table 2. Historically acceptable EEE Selectives. All courses listed below are subject to approval for selective credit.

### EEE Selective List

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ABE [32500](#): Soil And Water Resource Engineering  
ABE [52700](#): Computer Models in Env. 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 [58200](#): Environmental Fate of Pesticides  
AGRY [58500](#): Soils and Land Use  
ASM [33600](#): Environmental Systems Management  
ASM [54000](#): GIS Applications  
BIOL [48300](#): Environmental and Conservation Biology\*  
BIOL [54900](#): Microbial Ecology  
BIOL [58500](#): Ecology\*  
CE [31100](#): Arch Engineering  
CE [38300](#): Geotechnical Engineering I  
CE [40800](#): Geographic Information Systems in Engineering  
CE [44000](#): Urban Hydraulics  
CE [44300](#): Introductory Environmental Fluid Mechanics  
CE [45700](#): Air Pollution Control And Design  
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 [55500](#): Microbial Degradation of Pollutants  
CE [55700](#): Air Quality Management  
CE [59300](#): Environmental Geotechnology  
CE 59700 (variable title): Sustain Bldg Dsgn Constr&Oper  
CE 59700 (variable title): Urban Systems Sustainability  
CE 59700 (variable title): Water Chemistry Env Eco Eng  
CE 59700 (variable title): Water Resources Sustainability  
CHE 59700 (variable title): Advanced Solar Conversion  
EAPS [30100](#): Oil!  
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 Selective List

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EEE [36000](#): EEE Laboratory\*

EEE 49500 (variable title): Env Ecol Reg And Compliance

EEE 49500 (variable title): Independent Study

EEE 49500 (variable title): Urban Water Projects

EEE 49500 (variable title): [Wastewater Treatment Process](#)

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

IE [34300](#): Engineering Economics

ME [41300](#): Noise Control of Acoustic Waves

ME [49200](#): Technology and Values

ME [51400](#): Fundamentals of Wind Energy

ME 59700 (variable title): Sustainabl Dsgn & Manufac

ME 59700 (variable title): Sustainabl Enrgy Options&Analy

ME 59700 (variable title): Solar Energy Technology

MET 58100 (variable title): Fuel Cell Fund, Modl & Diagnstc

NRES [38500](#): Environmental Soil Chemistry

NRES [45000](#): Soil Conservation and Water Management

NUCL [30000](#): Nuclear Structure and Radiation Interactions

NUCL [47000](#): Fuel Cell Engineering

### Notes:

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

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