

November 29, 2022

TO: The Faculty of the College of Engineering

FROM: The Faculty of Environmental and Ecological Engineering

RE: Curriculum Change for the B.S. Degree in Environmental and Ecological Engineering

The faculty of Environmental and Ecological Engineering has approved the following changes to the curriculum for the B.S. degree in Environmental and Ecological Engineering effective for the students entering the program in the Fall Semester 2023. This action is now submitted to the Engineering Faculty with a recommendation for approval.

The proposed changes are as follows:

- A. Delete EEE 25000 and EEE 43000, combined with the addition of a new course, EEE 23000. - This change is an outcome of significant study and deliberation.
- B. Delete the Free Elective. - The free elective is not serving the original intended objective of providing curriculum flexibility.
- C. Delete the two-credit Technical Elective and replace it with a three-credit Technical Elective. - Three credit courses are the most common. The elimination of the Free Elective permits this change.
- D. Modify EEE 29000 from one-credit to two-credits. This requires a new course number, EEE 29001. - Sophomore students require more development of skills for success and professionalism.
- E. Add EEE 48100 Experiential Learning Reflections. - EEE will require an experiential learning component. EEE has been collecting program data for years about student experiences.
- F. Add a seventh EEE Selective. - This Selective will be designated Engineering Fundamentals with the aim to improve the breadth and rigor of the degree.

No changes are proposed to First Year Engineering, General Education, Mathematics, Chemistry, Statistics, non-EEE engineering requirements, or the total degree credits.

The changes are summarized in the following table:

Current Curriculum			New Curriculum		
<i>Credits</i>	<i>Action</i>	<i>Course</i>	<i>Credits</i>	<i>Action</i>	<i>Course</i>
3	delete	EEE 25000	3	add	EEE 23000
3	delete	EEE 43000	3	add	EEE Selective 7
3	delete	'Free Elective'	1	add	EEE 48100
2	delete	Technical Elective	3	add	Technical Elective
1	modify	EEE 29000	2	modify	EEE 29001

Technical electives - A list of suggested relevant technical electives is maintained in the catalog. Briefly, Technical Electives are broadly defined as any course in a technical field, typically from the Colleges of Engineering, Agriculture, Science, Polytechnic Institute, or Krannert School of Management. AGECE from Agriculture and ECON from Management are excluded as these count as General Education Electives.

EEE Selectives are a constrained list of technical courses with the specific objectives of ensuring the EEE degree complies with ABET Environmental Engineering Program Criteria (more extensive than most

degrees), ensure sufficient Design and Engineering content, and to ensure academic rigor.
<https://engineering.purdue.edu/EEE/Academics/EEESelectives>

Reason: The changes reflect the recommendations of the EEE Academics Committee and EEE faculty awarded a College of Engineering ARC grant. These changes are a culmination of several years of data collection, including from students and employers, and deliberation as part of the faculty's commitment to continuous improvement.

A sample plan of study showing the new proposed curriculum is appended to this document.

Separate EFDs have been submitted for creation of EEE 23000, EEE 29001, EEE 48100.



John W. Sutherland
Professor and Fehsenfeld Family Head
Environmental and Ecological Engineering

Example New EEE Eight Semester Plan of Study

Credits	Fall 1st Year	Prerequisite	Credits	Spring 1st Year	Prerequisite
2	ENGR 13100		2	ENGR 13200	ENGR 13100
4	MA 16500	ALEKS 85, SAT R M 670 or ACT M 29	4	MA 16600	MA 16500
4	CHM 11500	ALEKS 75, SAT R M 620 or ACT M 26	4	CHM 11600	CHM 11500
			4	PHYS 17200	ALEKS 85, MA 16500 ^{CC}
3	University Core (Written Communication)		3	University Core (Oral Communication)	
13			17		

Credits	Fall 2nd Year	Prerequisite	Credits	Spring 2nd Year	Prerequisite
4	MA 26100	MA 16600	4	MA 26200	MA 26100
3	ME 27000 or CE 29700		3	ME 27400 or CE 29800	
3	Technical Elective 1		3	EEE 35000	MA 16600, CHM 11600, PHYS 17200
			3	EEE 38000	CHM 11600, MA 26100
3	EEE 23000	MA 16600, PHYS 172, CHM 116 co-req	3	General Education Elective	
2	EEE 29001	EEE or FYE program			
15			16		

Credits	Fall 3rd Year	Prerequisite	Credits	Spring 3rd Year	Prerequisite
3/1	CE 34000/34300	CE 29800 or ME 27400	2	BIOL 28600	BIOL 11200
2	BIOL 11200		3	STAT 51100	Junior Standing
3	EEE 35500 [†]	Sophomore Class	3	EEE 30000	co-req CE EEE 350, ENGR 132 or CS 159 or 180, MA 262 or 266
3	EEE 36000 or EEE Selective 2–Category B	CHM 11600	3	EEE 36000 or EEE Selective 2–Category B	CHM 11600
3	EEE Selective 2–Category A		1	EEE 39000	EEE 29000, EEE Program
			3	Technical Elective 2	
3	General Education Elective		3	General Education Elective	
18			18		

Credits	Fall 4th Year	Prerequisite	Credits	Spring 4th Year	Prerequisite
3	FNR 58600		2	EEE 48000	Dept Perm
1	EEE 48000	Dept Perm	3	EEE Selective 6	
3	EEE Selective 3–Category C		3	EEE Selective 7	
3	EEE Selective 4		3	General Education Elective	
3	General Education Elective		3	General Education Elective	
3	EEE Selective 5- Category D				
1	EEE 48100 Experiential Learning Reflections	EEE 480 Co- requisite			
17			14		