PURDUE UNIVERSITY | Environmental and Ecological Engineering

Memorandum

To: The Faculty of the College of Engineering

From: Environmental and Ecological Engineering

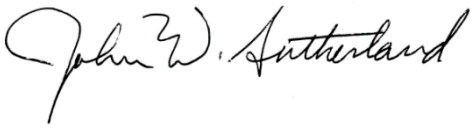
Date: March 14, 2023

RE: Fast track EFD 117-23, Changes to EEE Minor

We are making some minor changes to the EEE minor. The changes are:

1. For Required courses ABE 32500 was removed as an option, only CE/EEE 35000 are options.
2. For Life Cycle Assessment course, EEE 43000 was removed and EEE 23000 was added.
3. For the Ecology course additional courses were added to be consistent with the BSEEE requirements.

Attached is the new minor document.



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

ENVIRONMENTAL AND ECOLOGICAL ENGINEERING
Potter Engineering Center
500 Central Drive, Room 364, West Lafayette, IN, 47907-2022
Office: 765-496-9697

EEE Minor – Current requirements at
https://catalog.purdue.edu/preview_program.php?catoid=15&poid=22921

EEE offers a minor in **Environmental and Ecological Engineering**, as an opportunity for students in any discipline to gain knowledge in EEE topics. The minor is most appropriate for students who have particular environmental interests in engineering, or who want to develop a career at the interface of EEE and their chosen major field. Environmental concerns touch all aspects of engineering, making this an attractive credential for many students.

The minor consists of six courses, and is available to any student at Purdue who has met the co- and/or pre-requisites for courses in the EEE minor. Students should carefully review the co- and/or pre-requisites for the required courses listed.

Learning Outcomes

- Define the principles of Environmental and Ecological Engineering
- Describe key concepts that relate to Environmental Sustainability
- Describe key ecological concepts and how they impact engineered and natural systems
- Develop basic computational skills to process data that inform environmental systems
- Describe the basic inputs and outputs in the life-cycle of a natural or engineered process

# Required Courses (11-12 credits)

---

- EEE 35000 - Introduction To Environmental And Ecological Engineering or
  CE 35000 - Introduction To Environmental And Ecological Engineering

- CE 35500 - Engineering Environmental Sustainability or
  EEE 35500 - Engineering Environmental Sustainability

- EEE 23000 or
  EEE 53000 - Life Cycle Assessment: Principles And Applications

- BIOL 28600 - Introduction To Ecology And Evolution or
  FNR 58600 - Urban Ecology or FNR 20100 Marine Biology or FNR 24150 Ecology And Systematics Of Fishes, Amphibians And Reptiles or FNR 25150 Ecology And Systematics Of Mammals And Birds or BIOL 48300 Great Issues: Environmental And Conservation Biology or BTNY 30200 Plant Ecology or ENTM 31100 - Insect Ecology

# Selective Courses (6 credits minimum)

Environmental and Ecological Engineering Minor Selectives

–

- ABE 32500 - Soil And Water Resource Engineering
- ABE 42500 - Water Quality Engineering
- ABE 42600 - Ecological Restoration Engineering
- ABE 52700 - Computer Models In Environmental And Natural Resources Engineering
- 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 54000 - Geographic Information System Application
- BIOL 48300 - Great Issues: Environmental And Conservation Biology
- BIOL 54900 - Microbial Ecology
- CE 31100 - Architectural Engineering
- CE 38300 - Geotechnical Engineering I
- CE 41300 - Building Envelope Design And Thermal Loads
- CE 41400 - Building Mechanical And Electrical System Design
- CE 44000 - Urban Hydraulics
- CE 44200 - Introduction To Hydrology
- CE 44300 - Introductory Environmental Fluid Mechanics
- CE 45600 - Wastewater Treatment Processes
- CE 45700 - Air Pollution Control And Design
- CE 49700 - Civil Engineering Projects - Title: Water Treatment
- CE 51200 - The Comprehensive Urban Planning Process
- CE 51501 - Building Energy Audits
- CE 54000 - Open Channel Hydraulics
- CE 54300 - Coastal Engineering
- CE 54500 - Sediment Transport Engineering
- CE 54900 - Computational Watershed Hydrology
- CE 55000 - Physico-Chemical Processes In Environmental Engineering I
- CE 55700 - Air Quality Management
- CE 59300 - Environmental Geotechnology
- CE 59700 - Civil Engineering Projects - Titles: Environ Analytical Chemistry; Geographic Information Systems; Sustainable Building Design Construction & Operations; Polymers In Infrastructure & Environment; Water Chemistry Environmental Ecological Engineering
- CHE 59700 - Special Topics In Chemical Engineering - Title: Advanced Solar Conversion
- CM 51000 - Topics In Environmentally Sustainable Construction, Design And Development
- EAPS 30900 - Computer-Aided Analysis For Geosciences
- EAPS 58300 - Geology Of Landfills
- EAPS 58400 - Hydrogeology
- EDCI 50600 - Environmental Education
- EEE 30000
- EEE 36000 - Environmental And Ecological Engineering Laboratory
- EEE 45600 - Wastewater Treatment Processes
- EEE 38500 Environmental Soil Chemistry
- EEE 53000 Life Cycle Assessment: Principles And Applications *
- EEE 54400 Environmental Organic Chemistry
- EEE 55000 Physico-Chemical Processes In Environmental Engineering I
- EEE 55201 Environmental Biotechnology
- EEE 57000
- EEE 49800 - Environmental And Ecological Engineering Projects - (Indiv. Research proposal required; 3 credits maximum may be applied toward minor)
- EEE 59500 - Environmental And Ecological Engineering Projects
- FNR 35700 - Fundamental Remote Sensing
- FNR 54300 - Conservation Biology I
- FNR 55800 - Remote Sensing Analysis And Applications
- FNR 58600 - Urban Ecology*
- ME 41300 - Noise Control
- ME 43000 - Power Engineering
- ME 51400 - Fundamentals Of Wind Energy
- ME 59700 - Advanced Mechanical Engineering Projects I - Title: Solar Energy Technology
- MET 42200 - Power Plants And Energy Conversion
- MSE 59700 - Selected Topics In Materials Engineering - Title: Lean Manufacturing
- NRES 38500 - Environmental Soil Chemistry
- NRES 45000 - Soil Conservation And Water Management
- NUCL 30000 - Nuclear Structure And Radiation Interactions
- NUCL 47000 - Fuel Cell Engineering