To: The Faculty of the College of Engineering
From: Environmental and Ecological Engineering (EEE)
Subject: New Course EEE 59800

The faculty of the Division of Environmental and Ecological Engineering have approved the following new course to offer independent study projects to graduate students. This action is now submitted to the Engineering Faculty with a recommendation for approval.

EEE 59800 Environmental and Ecological Engineering Projects
Sem. 1, 2. SS. Cr. 0-6.

Course description: Topics vary. Arrange Hours and Credit. Permission of instructor required.

Reasons: The Division of Environmental and Ecological Engineering will be offering independent study projects to Purdue graduate students. The goal is to provide graduate students the opportunity to explore environmental and ecological engineering topics.

Submitted by:

John W. Sutherland
Fehsenfeld Family Head
Environmental and Ecological Engineering

Approved for the faculty of the Schools of Engineering by the Engineering Curriculum Committee
ECC Minutes #8 Date 12/13/16
Chairman ECC

Office of the Registrar
FORM 40G REV. 8/16

PURDUE UNIVERSITY
REQUEST FOR ADDITION, EXPIRATION,
OR REVISION OF A GRADUATE COURSE
(50000-60000 LEVEL)

PRINT

DEPARTMENT: Environmental and Ecological Engineering
EFFECTIVE SESSION: Spring 2017

INSTRUCTIONS: Please check the items below which describe the purpose of this request.

- [x] 1. New course with supporting documents (complete proposal form)
- [ ] 2. Add existing course offered at another campus
- [ ] 3. Expiration of a course
- [ ] 4. Change in course number
- [ ] 5. Change in course title
- [ ] 6. Change in course credit/type
- [ ] 7. Change in course attributes
- [ ] 8. Change in instructional hours
- [ ] 9. Change in course description
- [ ] 10. Change in course requisites
- [ ] 11. Change in semesters offered
- [ ] 12. Transfer from one department to another

PROPOSED:		EXISTING:	
Subject Abbreviation	EEE	Subject Abbreviation	
Course Number	59800	Course Number	
Long Title	Environmental and Ecological Engineering Projects		
Short Title	Env and Ecol Eng Projects		

Abbreviated title will be entered by the Office of the Registrar if omitted. (30 CHARACTERS ONLY)

TERMS OFFERED
Check All That Apply:
[x] Fall [x] Spring [x] Summer

CAMPUS(ES) INVOLVED
- [ ] Calumet
- [ ] Cont Ed
- [ ] Ft. Wayne
- [ ] Indianapolis
- [ ] N. Central
- [ ] Tech Statewide
- [x] W. Lafayette

CREDIT TYPE
1. Fixed Credit: Cr. Hrs.:
2. Variable Credit Range:
   Minimum Cr. Hrs: 0
   (Check One) To [x] Or [ ]
   Maximum Cr. Hrs: 6
3. Equivalent Credit: Yes [ ] No [ ]
4. Thesis Credit: Yes [ ] No [ ]

COURSE ATTRIBUTES: Check All That Apply
1. Pass/Not Pass Only [ ]
2. Satisfactory/Unsatisfactory Only [ ]
3. Repeatable [x]
   Maximum Repeatable Credit: [ ]
4. Credit by Examination [ ]
5. Fees [ ] Coop [ ] Lab [ ] Rate Request [ ]
   Include comment to explain fee
6. Registration Approval Type
   Department [ ] Instructor [x]
7. Variable Title [x]
8. Honors [ ]
9. Full Time Privilege [ ]
10. Off Campus Experience [ ]

Schedule Type	Minutes Per Mtg	Meetings Per Week	Weeks Offered	% of Credit Allocated
Lecture				
Recitation				
Presentation				
Laboratory				
Lab Prep				
Studio				
Distance				
Clinic				
Experiential				
Research				
Ind. Study				100
Pract/Observ				

Cross-Listed Courses

COURSE DESCRIPTION (INCLUDE REQUISITES/RESTRICTIONS): (Note: If description will not fit in space provided, please create a separate document and attach to this form.)

Topics vary. Arrange hours and credit. Permission of instructor required.

*COURSE LEARNING OUTCOMES: (Note: If course learning outcomes will not fit in space provided, please create a separate document and attach it to this form.)

Calumet Department Head	Date	Calumet School Dean	Date	Calumet Director of Graduate Studies	Date
Fort Wayne Department Head	Date	Fort Wayne School Dean	Date	Fort Wayne Director of Graduate Studies	Date
Indianapolis Department Head	Date	Indianapolis School Dean	Date	IUPUI Associate Dean for Graduate Education	Date
North Central Department Head	Date	North Central School Dean	Date	North Central Director of Graduate Studies	Date
John W. Sutherland	10/10/16	[signature]	12/14/16		
West Lafayette Department Head	Date	West Lafayette College School Dean	Date	Date Approved by Graduate Council	Date
Graduate Area Committee Convener	Date	Graduate Dean	Date	Graduate Council Secretary	Date
				West Lafayette Registrar	Date

OFFICE OF THE REGISTRAR

Grad Form 40G must include the Graduate Council's supporting document, which is available at http://www.purdue.edu.registrar/forms/form_40_Intro.html

Detailed Graduate Course Proposal for Academic Review

Note: The detailed course proposal is intended for academic review by the appropriate area committee of the Graduate Council. It supplements the Form 40G that is intended for administrative review of the Graduate School and Registrar.

To: Purdue University Graduate Council

From: Faculty Member: John W. Sutherland
Department: Environmental and Ecological Engineering
Campus: West Lafayette

Date: October 10, 2016

Subject: Proposal for New Graduate Course

Contact for information if questions arise:
Name: Nina Robinson
Phone: 67578
Email: nlrobins@purdue.edu
Address: POTR

Course Number: EEE 59800
Course Title: Environmental and Ecological Engineering Projects
Short Title: Env and Ecol Eng Projects

Course Description:

The Division of Environmental and Ecological Engineering will be offering independent study projects to Purdue graduate students. The goal is to provide graduate students the opportunity to explore environmental and ecological engineering topics.

A. Justification for the Course

Justification of the need for the course

- Provide graduate students with the opportunity to conduct independent study projects and explore environmental and ecological engineering topics. This activity will be mentored by a graduate faculty member.

Justification that course will be taught at a graduate level

- Only graduate students will be allowed to enroll in independent study course. Primary literature will be used, the topics will be current, assignments will assess that the students are synthesizing the literature.

Justification of the demand for the course

- Anticipated enrollment
  - Undergraduate 0
  - Graduate 3 to 5

Justification for online delivery

Will not be delivered online

B. Learning Outcomes and Methods of Assessment

http://teachingtomtom.com/2012/11/15/writing-critical-thinking-learning-outcomes/

Conduct an in-depth investigation on environmental and ecological engineering topics – selectively locate and effectively analyze academic literature related to a particular topic.

Effectively present findings of a literature investigation – prepare professional report or oral presentation on literature related to environmental and ecological engineering topic.

Learning Outcomes	Assessment Methods
Conduct an in-depth investigation on environmental and ecological engineering topics – selectively locate and effectively analyze academic literature related to a particular topic.	• Comprehensive level of study will be evaluated by a sponsoring faculty member
Effectively present findings of a literature investigation – prepare professional report or oral presentation on literature related to environmental and ecological engineering topic.	• Written reports meet the standards of writing expected of graduate students. • Oral presentations meet the standards of presentations expected of graduate students.

Final Grading Criteria

Describing the criteria that will be used to assess students and how the final grade will be determined. Add and delete rows as needed.

Assessment Methods (should match method types in the previous table)	Weight Toward Final Course Grade
Papers and Projects	100%

Methods of Instruction

Class Hrs/Week	Method of Instruction	Contribution to Outcomes
1-6	Independent Study	Mostly self-directed investigation of topic of interest. There may be some lectures provided by the faculty member.

C. Prerequisite(s)

- Graduate Student Standing

D. Course Instructor(s)

Name	Rank	School, dept., or center	Graduate Faculty or expected date
Ernest (Chip) Blatchley	Professor	CE/EEE	Yes
Hua Cai	Assistant Professor	EEE/IE	Yes
Abigail Engelberth	Assistant Professor	ABE/EEE	Yes
Brady Hardiman	Assistant Professor	EEE/FNR	Yes
John Howarter	Assistant Professor	EEE/MSE	Yes
Inez Hua	Professor	CE/EEE	Yes
Chad Jafvert	Professor	CE/EEE	Yes
Michael Mashtare	Assistant Professor	AGRY/EEE	Yes
Roshanak Nateghi	Assistant Professor	EEE/IE	Yes
Loring (Larry) Nies	Assistant Professor	CE/EEE	Yes
Lindsey Payne	Courtesy Appointment	CIE/EEE	Oct. 2016
Amisha Shah	Assistant Professor	CE/EEE	Yes
Shweta Singh	Assistant Professor	ABE/EEE	Yes
John Sutherland	Professor	EEE/ME	Yes
Andrew Whelton	Assistant Professor	CE/EEE	Yes
Fu Zhao	Associate Professor	EEE/ME	Yes
Zhi (George) Zhou	Assistant Professor	CE/EEE	Yes

E. Course Schedule or Outline

Option 2: Outline Format

Students will conduct an investigation of literature on topics related to environmental and ecological engineering under the mentorship of a graduate faculty member. There may be a limited number of lectures. Students will then provide a written report or make an oral presentation.

F. Reading List (including course text)

Primary Reading List

- The reading list will vary depending on the topics. Primary literature will be used along with textbooks on advanced topics.

G. Library Resources

Name of journal, proceedings, book, video, or other acquisition	Already in Libraries?
This will be dependent on the topic	If not in libraries it will be available online

H. Course Syllabus (now required)

- Since this is an independent study class a syllabus is not available.