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

DEPARTMENT	School of Engineering Education	EFFECTIVE SESSION	Fall 2016

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:
Subject Abbreviation: ENE
Course Number: 68700
Long Title: Mentored Teaching in Engineering
Short Title: Mentored Teaching in ENGR
Abbreviated title will be entered by the Office of the Registrar if omitted. (30 CHARACTERS ONLY)

EXISTING:
Subject Abbreviation:
Course Number:

TERMS OFFERED
Check All That Apply:
- [x] Fall
- [x] Spring
- [ ] 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: 1
   - (Check One) To [ ] Or [x]
   - Maximum Cr. Hrs: 3
3. Equivalent Credit: Yes [ ] No [ ]
4. Thesis Credit: Yes [ ] No [x]

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

Schedule Type	Minutes Per Mtg	Meetings Per Week	Weeks Offered	% of Credit Allocated
Lecture	50 / 150	1	16	100
Recitation				
Presentation				
Laboratory				
Lab Prep				
Studio				
Distance				
Clinic				
Experiential				
Research				
Ind. Study				
Pract/Observ				

Cross-Listed Courses

COURSE DESCRIPTION (INCLUDE REQUISITES/RESTRICTIONS):

Mentored experience in the teaching of engineering, with structured opportunities for individual reflection. All students create a scholarly teaching portfolio. Students who register for three credits conduct a scholarship of teaching and learning project. Prerequisites: Registration in or completion of ENE 50600 (Content, Assessment and Pedagogy) or ENE 68500 (Educational Methods in Engineering); or permission of the Instructor. Significant concurrent responsibility for teaching an engineering course.

*COURSE LEARNING OUTCOMES:

Think critically about the relationships between your teaching experiences and the readings in this course and the prerequisite courses; Use reflection, mentoring, and student feedback to learn from teaching experiences; Explain the reasons for choices of teaching methods; Analyze evidence of student learnin; Identify and address ethical issues in teaching situations; Through the SoTL project, plan and carry out a scholarly investigation of teaching and learning

	Date		Date		Date
Calumet Department Head		Calumet School Dean		Calumet Director of Graduate Studies	
Fort Wayne Department Head		Fort Wayne School Dean		Fort Wayne Director of Graduate Studies	
Indianapolis Department Head		Indianapolis School Dean		IUPUI Associate Dean for Graduate Education	
North Central Department Head		North Central School Dean		North Central Director of Graduate Studies	
West Lafayette Department Head	2/15/16	West Lafayette College/School Dean	4/5/16	Date Approved by Graduate Council	
Graduate Area Committee Convener		Graduate Dean		Graduate Council Secretary	
				West Lafayette Registrar	

OFFICE OF THE REGISTRAR

(Grad Form 40G [Excel format] - Does not include the Graduate Council's required supporting document. See pdf version of Form 40G)

TO: The Faculty of the College of Engineering

FROM: The Faculty of the School of Engineering Education

RE: New Graduate Course: ENE 68700 – Mentored Teaching in Engineering

The faculty of the School of Engineering Education have approved the below new graduate course. This action is now submitted to the Engineering Faculty with a recommendation for approval.
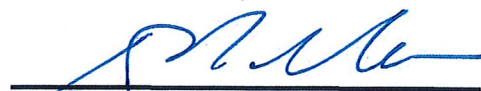
ENE 68700 – Mentored Teaching in Engineering

Sem. 1 or 2, Lecture 1-3, Cr. 1-3

Pre-requisites: Registration in or completion of ENE 50600 (Content, Assessment and Pedagogy) or ENE 68500 (Educational Methods in Engineering) or Instructor approval required.

Description: Mentored experience in the teaching of engineering, with structured opportunities for individual reflection. All students create a scholarly teaching portfolio. Students who register for three credits conduct a scholarship of teaching and learning project.

Reason: Provide a complete and detailed explanation of the need for the course (e.g., in the preparation of students, in providing new knowledge/training in one or more topics, in meeting degree requirements, etc.), how the course contributes to existing majors and/or concentrations, and how the course relates to other graduate courses offered by the department, other departments, or interdisciplinary programs.

David F. Radcliffe
Professor and Head
School of Engineering Education

Approved for the faculty of the Schools
of Engineering by the Engineering
Curriculum Committee

ECC Minutes ___16___ Date 4-5-16
Chairman ECC _____

ENE 69500: Mentored Teaching in Engineering
Fall 2015

Instructor

Michael C. Loui, Dale and Suzi Gallagher Professor of Engineering Education
Office: Armstrong Hall, Room 1331
Telephone: (765) 496-0194. E-mail: mloui@purdue.edu
Office hours: to be determined; and by appointment

Classes

Section 020: Tuesdays, 1:30 to 2:20 p.m., in Armstrong Hall, Room 1028
Section 022: Tuesdays, 1:30 to 4:20 p.m., in Armstrong Hall, Room 1028

Credit

1 credit (section 020) or 3 credits (section 022)

Course Web Site

Blackboard Learn: https://mycourses.purdue.edu/ (under Fall-2015-ENE-69500-M-Loui)

Prerequisites

Registration in or completion of ENE 50600 (Content, Assessment and Pedagogy) or ENE 68500 (Educational Methods in Engineering); or permission of the instructor. Significant concurrent responsibility for teaching an engineering course (e.g., instructor of record, assigned teaching assistant).

Course Overview and Purpose

This course enables graduate students enrolled in any engineering program to deepen their understanding of college teaching and learning through a semester-long teaching experience with mentoring, feedback, and reflection. Most course topics complement topics covered in the prerequisite courses. Students who register for 3 credits will conduct a scholarship of teaching and learning (SoTL) project. The course assignments meet some of the requirements for the graduate teacher certificates offered by the campus's Center for Instructional Excellence, including the Advanced Graduate Teacher Certificate (AGTC). The course will fulfill a requirement of the forthcoming Teaching & Learning in Engineering graduate certificate program (pending approval).

Course Themes and Objectives

We will take a scholarly, professional approach to the teaching of engineering. Because teaching is a scholarly practice, you will relate your teaching activities to the research literature. Students who undertake the SoTL project will learn to contribute to this literature. Because teaching is a professional practice, your teaching experience should resemble an engineering internship. As in an internship, you will work with a mentor to improve your skills. Like practicing engineering

professionals, engineering instructors have the ethical obligations that you will explore during the course.

We will emphasize ongoing reflection to connect the readings with your concurrent teaching experiences. Through the assignments and discussions, in class sessions and online, you will have the opportunity to learn to

- Think critically about the relationships between your teaching experiences and the readings in this course and the prerequisite courses
- Use reflection, mentoring, and student feedback to learn from teaching experiences
- Assemble a teaching portfolio that highlights the quality and scholarship of your teaching in a public form, for possible peer review
- Explain the reasons for your choices of teaching methods
- Analyze evidence of student learning
- Identify and address ethical issues in teaching situations
- Through the SoTL project, plan and carry out a scholarly investigation of teaching and learning

Required Texts

- Svinicki, M. & McKeachie, W. J. (2013). *McKeachie's teaching tips: Strategies, research, and theory for college and university teachers*, 14th ed. Belmont, CA: Wadsworth. The 13th edition (2011) is similar and less expensive; it will be adequate for this course.
- Additional readings as assigned. Available in Blackboard.

Class Sessions

Class sessions will include discussions of the readings, small group activities such as peer review of drafts of papers, and a few short lectures. Most sessions will include "Teachers' Corner": students can ask questions about practical teaching problems, to which we can apply knowledge from the readings and assignments, and we can share the wisdom gained from our diverse experiences. Students who take the course for three credits will be expected to lead the class sessions whose topics are labeled "To be determined."

Assignments

Course assignments will help you achieve the objectives of the course. Brief descriptions of the assignments follow. Detailed instructions and grading rubrics will be provided when each assignment is given. Unless otherwise specified, all written assignments must be submitted in Blackboard. Due dates are specified in the Course Schedule section below.

Weekly Reflections (all students)

Each week, you will write an informal individual reflection of about 300 words on your current teaching experiences. Writing prompts will be provided. Some prompts will invite you to connect

the academic readings in ENE 695 and the prerequisite courses and to your actual experiences in the classroom. Two reflections will respond to the feedback that you receive from your mentor (see below). One reflection will respond to early feedback that you will collect from students. One reflection can result from observing an experienced instructor conduct a class session. Each reflection should take no longer than one hour to complete

You will post part or all of each weekly reflection in the Discussions area in Blackboard, and you will then comment substantively on the postings of at least two other students. A substantive comment requires at least 50 words. The individual reflection is due at 8:00 a.m. on each Tuesday, before the class session. The comments on other students' reflections will be due one week later. Although there will be 12 opportunities for reflections and comments, at most 10 reflections submitted on time will count toward the course grade, and at most 20 comments submitted on time will count.

Mentoring (all students)

You will choose a teaching mentor in your department/school. The mentor will observe you in a classroom teaching situation twice during the semester. The mentor should be an experienced instructor such as a professor or a more advanced graduate student. If you are a teaching assistant for a course, the course's instructor of record could serve as your mentor.

You will meet individually with your mentor four times: before and after a first classroom observation by your mentor, and before and after a second classroom observation by your mentor. Each meeting should take about 30 minutes. During the meetings before the observations, you will discuss your goals for the forthcoming class sessions and review your lesson plans. During the meetings after the observations, you will receive feedback from your mentor. After these meetings, you will write a reflection on the class sessions and on what practices you might change in the future. You may meet your mentor additional times as well; the AGTC requires biweekly meetings with your mentor.

Course Portfolio (all students)

You will assemble a benchmark course portfolio (www.courseportfolio.org), a short version of a teaching portfolio. This portfolio should exhibit the quality and scholarship of your teaching. Your course portfolio will include copies of a syllabus, assignments, quizzes, other assessments, or lesson plans that you develop; examples of student academic work with your feedback (grading); and two essays that

- Justify the choices of teaching methods and activities, with references to the readings
- Analyze evidence of student learning
- Each essay is expected to run from 1,000 to 1,500 words.

The course portfolio will be due at the beginning of Finals Week. You can later use the course portfolio as part of the teaching portfolio that is required for the AGTC. You might submit the course portfolio in an application for an academic position.

Course Synthesis (all students)

At the end of the semester, you will examine how this course has influenced your teaching and your plans for an academic career. Expected length: 1,000 to 1,500 words.

Scholarship of Teaching and Learning Project (3 cr.)

You will develop and complete a scholarship of teaching and learning (SoTL) project. You will formulate a question about your classroom practice, set your question in the context of the relevant research literature, and design and carry out a plan to address the question. The plan will include gathering and analyzing evidence of student learning. Ideally you will be prepared to present your SoTL project at a conference, or to publish your SoTL paper in a scholarly journal.

The SoTL project will be developed in stages throughout the semester. Deadlines for each stage are specified in the schedule below. If you follow this schedule, you will be able to submit a paper to the ASEE Annual Conference in 2016. The final paper on the project is expected to be 4,000 to 5,000 words long.

Expected Time Commitment

The readings and assignments will require an average of two to three hours per week outside class sessions for one credit, and six to eight hours per week for three credits.

Grading

Assignment	Points
Weekly reflections (up to 10)	**30**
Comments on other students' reflections (up to 20)	**20**
Course synthesis paper	**40**
Course portfolio	**60**
Scholarship of teaching and learning project (3 cr.)	**100**
Total for 1 cr. (section 020)	**150**
Total for 3 cr. (section 022)	**250**

Course grades will be assigned on a criterion-reference scale as follows; minimum totals for grades may be lowered, but they will not be raised:

A	A–	B+	B	B–	C+	C	C–	D
93%	90%	87%	83%	80%	77%	73%	70%	60%

Course Policies

We will follow all standard campus policies on accommodations for disabilities and religious practices, academic integrity, student conduct, and nondiscrimination:
http://www.purdue.edu/studentsuccess/academic/drc/
http://www.purdue.edu/studentregulations/regulations_procedures/classes.html
https://www.purdue.edu/odos/osrr/academic-integrity-brochure/
http://www.purdue.edu/studentregulations/student_conduct/index.html
http://www.purdue.edu/purdue/ea_eou_statement.html

Attendance

Although attendance will not be recorded, you are expected to participate actively in class sessions and online. When students share ideas, all students benefit. In class sessions, you will collaborate to analyze readings and cases, and to review each other's draft papers.

Late Submission Policy

You are expected to submit assignments on the due dates. Because graduate students have many important responsibilities outside this course, there are no penalties for submitting assignments late, with the exception of the weekly reflections. You should use this late submission policy only when warranted, and you should tell the instructor about your intention to submit late. You should submit all late assignments by the final class session.

Electronic Devices

During class sessions, you may use laptop and tablet computers for work related to ENE 695. Please silence cell phones. If your cell phone rings during a class session, you will be asked to bring snacks to the following class session.

Emergencies

For any emergency, call 911. If we hear an indoor fire alarm, we will evacuate to Stadium Mall outside the Student Health Center. If we hear an outdoor emergency siren, or if we receive an emergency notification to shelter in place, we will proceed as follows. For a tornado, we will move to the basement of Armstrong Hall. For a civil disturbance, we will remain in the classroom or in an interior hallway.

Course Schedule

Date	Assignments due	Readings due	Classroom activities
Week 1 **Aug. 25**		Svinicki & McKeachie Ch. 1 "Introduction"; Ch. 2 "Countdown for course preparation"; Ch. 3 "Meeting a class for the first time"	All: Course overview; Seven Principles 3 cr.: Starting a SoTL project; data collection
Week 2 **Sep. 1**	Weekly reflection #1	Enerson et al. "An introduction to classroom assessment techniques" 3 cr.: Bass, "The scholarship of teaching" 3 cr.: Savory et al. Ch. 1 "A guide for scholarly inquiry into teaching"	All: Classroom assessment 3 cr.: Work on SoTL project questions
Week 3 **Sep. 8**	Weekly reflection #2 3 cr.: Project question with justification	Svinicki & McKeachie Ch. 5 "Facilitating discussion"; Ch. 15 "Experiential learning"; Ch. 19 "Laboratory instruction" Frederick, "The dreaded discussion"	All: Questioning skills 3 cr.: IRB applications
Week 4 **Sep. 15**	Weekly reflection #3 3 cr.: Project plan	Svinicki & McKeachie Ch. 11 "Motivation in the college classroom" Lewis, "Using midsemester feedback and responding to it"	All: Student motivation 3 cr.: Writing abstracts (for ASEE Conference, due early October)
Week 5 **Sep. 22**	Weekly reflection #4	Svinicki & McKeachie Ch. 13 "Different students, different challenges" 3 cr.: Knopf, "Doing a literature review"	All: Early feedback; classroom incivility 3 cr.: Writing a literature review
Week 6 **Sep. 29**	Weekly reflection #5	Svinicki & McKeachie Ch. 7 "Assessing, testing, and evaluating"; Ch. 9 "Good designs for written feedback for students"; Ch. 10 "Assigning grades"	All: Construct and critique grading rubrics 3 cr.: To be determined
Week 7 **Oct. 6**	Weekly reflection #6 3 cr.: Annotated bibliography	Bernstein et al. Ch. 2 "Capturing the intellectual work of teaching: The benchmark portfolio."	All: Teaching portfolios 3 cr.: To be determined
Week 8 **Oct. 13**	Weekly reflection #7	Svinicki & McKeachie Ch. 12 "Teaching culturally diverse students"	Fall break: No class meeting

Date	Assignments due	Readings due	Classroom activities
Week 9 **Oct. 20**	Weekly reflection #8 3 cr.: Draft of methods section	Svinicki & McKeachie Ch. 20 "Teaching students how to become more strategic and self-regulated learners"; Ch. 21 "Teaching thinking"	All: Individual differences, valuing diversity; promoting metacognition 3 cr.: Peer review of methods sections
Week 10 **Oct. 27**	Weekly reflection #9 3 cr.: Draft of literature review section	Svinicki & McKeachie Ch. 22 "The ethics of teaching" Murray et al., "Ethical principles for college and university teaching" in Fisch	All: Ethics scenarios from Keith-Spiegel et al., *The ethics of teaching* 3 cr.: Peer review of literature review sections
Week 11 **Nov. 3**	Weekly reflection #10 3 cr.: Paper synopsis	Hanson, "Between apathy and advocacy: Teaching and modeling ethical reflection" in Fisch Rodabaugh, "Institutional commitment to fairness in college teaching" in Fisch	All: More ethics scenarios from Keith-Spiegel et al., *The ethics of teaching* 3 cr.: Peer review of paper synopses
Week 12 **Nov. 10**	Weekly reflection #11 3 cr.: Draft of introduction section	Svinick & McKeachie Ch. 23 "Vitality and growth throughout your teaching career" Benton & Cashin "Student ratings of teaching: A summary of research and literature"	All: Teaching evaluations 3 cr.: Peer review of introduction sections
Week 13 **Nov. 17**	Weekly reflection #12 Drafts of course portfolio essays		All: Peer review of course portfolio essays 3 cr.: Discuss interpretations of data
Nov. 24 **Thanksgiving break**			No class meeting
Week 14 **Dec. 1**	3 cr.: Full draft paper		All: Presentations of SoTL projects 3 cr.: Individual project consultations
Week 15 **Dec. 8**	Course synthesis		All: Presentations of SoTL projects; course evaluation 3 cr.: Individual project consultations

Date	Assignments due	Readings due	Classroom activities
Dec. 14	Course portfolio		
Finals week	3 cr.: Final paper		

References and Supplemental Readings

1) Bass, R. (1999). The scholarship of teaching: What's the problem? *Inventio, 1* (1). https://my.vanderbilt.edu/sotl/files/2013/08/Bass-Problem1.pdf
2) Benton, S. L., & Cashin, W. E. (2012). *Student ratings of teaching: A summary of research and literature*, IDEA Paper #50. Manhattan, KS: The Idea Center. http://ideaedu.org/wp-content/uploads/2014/11/idea-paper_50.pdf
3) Bernstein, D., Burnett, A. N., Goodburn, A., & Savory, P. (2006). *Making teaching and learning visible: Course portfolios and the peer review of teaching*, Bolton, MA: Anker
4) Chickering, A. W., & Gamson, Z. F. (1991). Seven principles for good practice in undergraduate education. *New Directions for Teaching and Learning, 47,* 63–69.
5) Cross, K. P., & Steadman, M. H. (1996). *Classroom research: Implementing the scholarship of teaching.* San Francisco, CA: Jossey-Bass.
6) Enerson, D. M., Plank, K. M., & Johnson, R. N. (2007). An introduction to classroom assessment techniques. http://www.schreyerinstitute.psu.edu/pdf/Classroom_Assessment_Techniques_Intro.pdf
7) Fisch, L., ed. (1996). *Ethical dimensions of college and university teaching: Understanding and honoring the special relationship between teachers and students. New Directions for Teaching and Learning, 66.* San Francisco, CA: Jossey-Bass.
8) Frederick, P. (1981). The dreaded discussion: Ten ways to start. *Improving College and University Teaching, 29*(3), 109–114.
9) Keith-Spiegel, P., Whitley, B. E., Balogh, D. W., Perkins, D. V., & Witting, A. F. (2002). *The ethics of teaching: A casebook,* 2nd ed. Mahwah, NJ: Lawrence Erlbaum.
10) Knopf, J. W. (2006). Doing a literature review. *PS: Political Science & Politics, 39*(1), 127–132.
11) Lewis, K. G. (2001). Using midsemester feedback and responding to it. *New Directions for Teaching and Learning, 87.* San Francisco, CA: Jossey-Bass (pp. 33–44).
12) McKinney, K. (2007). *Enhancing learning through the scholarship of teaching and learning: The challenges and joys of juggling.* San Francisco: Jossey-Bass.
13) Nilson, L. B. (2010). *Teaching at its best: A research-based resource for college instructors,* 3rd ed. San Francisco, CA: Jossey-Bass.
14) Savory, P., Burnett, A. N, & Goodburn, A. (2007). *Inquiry into the college classroom: A journey toward scholarly teaching.* Bolton, MA: Anker.

Supporting Document to the Form 40G for a New Graduate Course

To: Purdue University Graduate Council

From: Faculty Member: - Michael Loui

Department: - School of Engineering Education

Campus - West Lafayette

Date: February 4, 2016

Subject: Proposal for New Graduate Course

Contact for information if questions arise:

Name:	Michael C. Loui
Phone:	49-60194
Email:	mloui@purdue.edu
Address:	Armstrong Hall Room 1331

Course Subject Abbreviation and Number: *ENE 68700*

Course Title: *Mentored Teaching in Engineering*

Course Description:

Mentored experience in the teaching of engineering, with structured opportunities for individual reflection. All students create a scholarly teaching portfolio. Students who register for three credits conduct a scholarship of teaching and learning project. Credits: 1 or 3. May be repeated to a maximum of 4 credits.

Semesters Offered:

Fall and Spring Semesters

A. Justification for the Course:

Provide a complete and detailed explanation of the need for the course (e.g., in the preparation of students, in providing new knowledge/training in one or more topics, in meeting degree requirements, etc.), how the course contributes to existing majors and/or concentrations, and how the course relates to other graduate courses offered by the department, other departments, or interdisciplinary programs. Justify the level of the proposed graduate course (500- or 600-level) including statements on, but not limited to: (1) the target audience, including the anticipated number of undergraduate and graduate students who will enroll in the course; and (2) the rigor of the course.

- This experiential learning course approaches college teaching as a scholarly and professional activity, with readings from the scholarly literature and attention to professional ethics. The course enables graduate students enrolled in any engineering program to deepen their understanding of teaching and learning through a semester-long teaching experience with mentoring, feedback, and reflection. To register for this course, students must have significant responsibility for teaching an engineering course, such as a graduate teaching assistantship.

- This course fulfills a requirement of a new graduate certificate program, *Teaching and Learning in Engineering*. This certificate program is offered by the School of Engineering Education for all students enrolled in graduate programs in engineering. In addition, the course assignments meet some of the requirements of the non-transcripted graduate teacher certificates offered by the campus's Center for Instructional Excellence, including the Advanced Graduate Teacher Certificate.

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- This course is proposed at the 600-level because it is intended for advanced graduate students who have significant concurrent teaching responsibilities. This course builds on graduate-level prerequisite courses ENE 50600 and ENE 68500, but the topics in this course complement the topics in the prerequisite courses.

- Because teaching is a scholarly practice, students will justify their teaching decisions with reference to the research literature when they assemble a scholarly teaching portfolio. Students who undertake a scholarship of teaching and learning project will learn to contribute to this literature. Because teaching is a professional practice, teaching experiences should resemble an engineering internship. As in an internship, students will work with a mentor to improve their skills.

- Students who take this course for three credits must complete a scholarship of teaching and learning (SoTL) project. This project requires an original classroom research investigation that is grounded in the current literature. The SoTL paper can be submitted for publication in an engineering education conference. In the fall, students can submit to the American Society for Engineering Education Annual Conference. In the spring, students can submit to the annual Frontiers in Education Conference.

- Anticipated enrollment

Undergraduate   0
Graduate   10

B. Learning Outcomes and Method of Evaluation or Assessment:

Describe the course objectives and student learning outcomes that address the objectives (i.e., knowledge, communication, critical thinking, ethical research, etc.). Expand lists and sub lists as needed.

Objectives and Student Learning Outcomes

Think critically about teaching experiences
- Compare readings with teaching experiences
- Use reflection, mentoring, and student feedback to learn from experiences
- Identify and address ethical issues in teaching situations

Create a portfolio that exhibits the quality and scholarship of teaching
- Explain the reasons for the choices of teaching methods
- Analyze evidence of student learning

Conduct a scholarship of teaching and learning (SoTL) project to investigate a classroom research question (for 3 credits)
- Synthesize previous articles related to the SoTL project
- Gather and analyze data from students
- Report the results of the project in a publishable paper

Methods of Evaluation
Describe the methods of evaluation or assessment of student learning outcomes. (Include evidence for both direct and indirect methods.) Expand table rows as needed.

Learning Objective	Methods of Evaluation
• Compare readings with teaching experiences • Use reflection, mentoring, and student feedback to learn from experiences	Weekly reflections Course synthesis paper

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- Identify and address ethical issues in teaching situation
- Explain the reasons for the choices of teaching methods
- Analyze evidence of student learning
- Synthesize previous articles related to the SoTL project
- Gather and analyze data from students
- Report the results of the project in a publishable paper

Course portfolio essays

SoTL project paper

Grading Criteria

Grading criteria (select from checklist); include a statement describing the criteria that will be used to assess students and how the final grade will be determined. Add and delete rows as needed.

Grading Criteria (replace with check for all that apply)	Weight Toward Final Grade
Weekly reflections	30
Comments on other reflections	20
Course synthesis paper	40
Teaching portfolio artifacts and essays	60
Scholarship of teaching and learning (SoTL) paper	100
(SoTL paper is required for 3 credits)	

Methods of Instruction

Identify the method(s) of instruction and describe how the methods promote the likely success of the desired student learning outcomes. Add and delete rows as needed.

Hours per Week	Method of Instruction	Contribution to Outcomes
3	Lecture-Discussion	Class sessions include short lectures, discussions of the readings and case studies, and small group activities in which students provide feedback to each other on drafts of the course portfolio essays and the SoTL project papers.

C. Prerequisite(s):

List prerequisites and/or experiences/background required. If no prerequisites are indicated, provide an explanation for their absence. Add bullets as needed.

- Registration in or completion of ENE 50600 (Content, Assessment and Pedagogy) or ENE 68500 (Educational Methods in Engineering); or permission of the instructor

- Significant concurrent responsibility for teaching an engineering course

D. Course Instructor(s):

Provide the name, rank, and department/program affiliation of the instructor(s). Is the instructor currently a member of the Graduate Faculty? (If the answer is no, indicate when it is expected that a request will be submitted.) Add rows as needed.

Name	Rank	Dept.	Graduate Faculty or expected date
Michael C. Loui	Professor	Engineering Education	Yes

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E. Course Outline:

Provide an outline of topics to be covered and indicate the relative amount of time or emphasis devoted to each topic. If laboratory or field experiences are used to supplement a lecture course, explain the value of the experience(s) to enhance the quality of the course and student learning. For special topics courses, include a sample outline of a course that would be offered under the proposed course. **(This information must be listed and may be copied from syllabus).**

1. Classroom assessment, early feedback (1 week)
2. Conducting discussions (1 week)
3. Student motivation (1 week)
4. Classroom management (1 week)
5. Grading (1 week)
6. Teaching portfolios (1 week)
7. Student diversity (1 week)
8. Metacognition (1 week)
9. Ethics in teaching (2 weeks)
10. Teaching evaluation and improvement (1 week)
11. Topics chosen by students (3 weeks)

F. Reading List (including course text):

A primary reading list or bibliography should be limited to material the students will be required to read in order to successfully complete the course. It should not be a compilation of general reference material.

A secondary reading list or bibliography should include material students may use as background information.

Primary Reading List

1. Svinicki, M. & McKeachie, W. J. (2013). *McKeachie's teaching tips: Strategies, research, and theory for college and university teachers,* 14th ed. Belmont, CA: Wadsworth.
2. Bass, R. (1999). The scholarship of teaching: What's the problem? *Inventio, 1* (1). https://my.vanderbilt.edu/sotl/files/2013/08/Bass-Problem1.pdf
3. Benton, S. L., & Cashin, W. E. (2012). *Student ratings of teaching: A summary of research and literature,* IDEA Paper #50. Manhattan, KS: The Idea Center. http://ideaedu.org/wp-content/uploads/2014/11/idea-paper_50.pdf
4. Enerson, D. M., Plank, K. M., & Johnson, R. N. (2007). *An introduction to classroom assessment techniques.* http://www.schreyerinstitute.psu.edu/pdf/Classroom_Assessment_Techniques_Intro.pdf
5. Fisch, L., ed. (1996). *Ethical dimensions of college and university teaching: Understanding and honoring the special relationship between teachers and students.* New Directions for Teaching and Learning, 66. San Francisco, CA: Jossey-Bass. (Chapters by Hanson, Rodabaugh, and Murray et al.)

Secondary Reading List

1. Bernstein, D., Burnett, A. N., Goodburn, A., & Savory, P. (2006). *Making teaching and learning visible: Course portfolios and the peer review of teaching,* Bolton, MA: Anker.
2. Savory, P., Burnett, A. N, & Goodburn, A. (2007). *Inquiry into the college classroom: A journey toward scholarly teaching.* Bolton, MA: Anker.

G. Library Resources

Describe any library resources that are currently available or the resources needed to support this proposed course.

- Access to published articles in academic journals for the literature review sections of students' SoTL papers.

H. Course Syllabus

(While not a necessary component of this supporting document, an example of a course syllabus is available, for information, by clicking on the link below, which goes to the *Graduate School's Policies and Procedures Manual for Administering Graduate Student Program.* See Appendix K. **http://www.purdue.edu/gradschool/faculty/ documents/Graduate_School_Policies_and_Procedures_Manual.pdf**