ENE 68700: Mentored Teaching in Engineering
Spring 2019 (Tentative syllabus, 11/9/18)

Instructor
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   Office hours: to be determined; and by appointment

Classes
   Section 001: Tuesdays, 4:30 to 5:20 p.m., in Armstrong Hall, Room 3109
   Section PEO: Online

Credit
   One credit. The three-credit version will not be offered this semester. If you want to
   pursue a project for additional credits, contact the instructor in the first week of the
   semester.

Course Web Site

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 in the prerequisite courses. The mentoring component could be
   structured to meet a requirement for the Certificate of Practice in College Teaching (CPCT)
   offered by the campus's Center for Instructional Excellence. This course fulfills a
   requirement of the Teaching & Learning in Engineering graduate certificate program.

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. 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 we 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 in the prerequisite courses
- Use reflection, mentoring, and student feedback to learn from teaching experiences
- Assemble a teaching portfolio that shows 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

**Required Texts**

- Additional readings as assigned. Available in Blackboard.

**Class Sessions**

In section 001, class sessions will include discussions of the readings, discussions of cases, 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. In the Discussions area of Blackboard, the “Teachers’ Corner” forum will be shared by students in both sections.

In section PEO, online students will have the opportunity to discuss the same readings and cases asynchronously each week. Lectures will be available as short video segments posted in Blackboard.

**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**

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 your actual experiences in the classroom with the academic readings in ENE 687 and in the prerequisite courses. Two reflections will respond to the feedback that you will 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 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 will be due at 8:00 a.m. on each Tuesday. 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 and at most 20 comments submitted on time will count toward the course grade.

**Mentoring**

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 the first classroom observation by your mentor, and before and after the 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.

**Course Portfolio**

You will assemble a benchmark course portfolio, a short version of a teaching portfolio. This portfolio will show the quality and scholarship of your teaching. Your portfolio will include copies of a syllabus, assignments, quizzes, other assessments, or lesson plans that you develop, examples of student 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 might submit the course portfolio as part of a teaching portfolio if you apply for an academic position.

**Course Synthesis**

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.
**Expected Time Commitment**

The readings and assignments will require an average of two to three hours per week outside class sessions.

**Grading**

You may generally expect to receive feedback on your submissions within one week. More time may be necessary in extenuating circumstances, such as travel to professional conferences.

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
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<tbody>
<tr>
<td>Weekly reflections (up to 10)</td>
<td>30</td>
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<tr>
<td>Comments on other students’ reflections (up to 20)</td>
<td>20</td>
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<tr>
<td>Course synthesis paper</td>
<td>40</td>
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<tr>
<td>Course portfolio</td>
<td>60</td>
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<td><strong>Total</strong></td>
<td><strong>150</strong></td>
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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    93%
- A–  90%
- B+  87%
- B   83%
- B–  80%
- C+  77%
- C   73%
- C–  70%
- D   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/drc/students/accommodations.html](http://www.purdue.edu/drc/students/accommodations.html)
- [http://www.purdue.edu/studentregulations/regulations_procedures/classes.html](http://www.purdue.edu/studentregulations/regulations_procedures/classes.html)
- [http://www.purdue.edu/odos/osrr/academic-integrity/index.html](http://www.purdue.edu/odos/osrr/academic-integrity/index.html)
- [https://www.purdue.edu/provost/teachinglearning/honor-pledge.html](https://www.purdue.edu/provost/teachinglearning/honor-pledge.html)
- [http://www.purdue.edu/studentregulations/student_conduct/index.html](http://www.purdue.edu/studentregulations/student_conduct/index.html)
- [http://www.purdue.edu/purdue/ea_eou_statement.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 687. 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**

<table>
<thead>
<tr>
<th>Date</th>
<th>Assignments due</th>
<th>Readings due</th>
<th>Classroom activities</th>
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<tbody>
<tr>
<td><strong>Week 1</strong></td>
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<tr>
<td>Jan. 8</td>
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<tr>
<td><strong>Week 2</strong></td>
<td>Weekly reflection #1</td>
<td>Enerson et al. “An introduction to classroom assessment techniques”</td>
<td>Classroom assessment</td>
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<td>Jan. 15</td>
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<td><strong>Week 3</strong></td>
<td>Weekly reflection #2</td>
<td>Svinicki &amp; McKeachie Ch. 5 “Facilitating discussion”; Ch. 15 “Experiential learning”; Ch. 19 “Laboratory instruction”</td>
<td>Questioning skills</td>
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<td>Jan. 22</td>
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<td>Frederick, “The dreaded discussion”</td>
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<tr>
<td>Date</td>
<td>Assignments due</td>
<td>Readings due</td>
<td>Classroom activities</td>
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<td>Week 4</td>
<td>Weekly reflection #3</td>
<td>Svinicki &amp; McKeachie Ch. 11 “Motivation in the college classroom”</td>
<td>Student motivation</td>
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<td>Jan. 29</td>
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<td>Week 5</td>
<td>Weekly reflection #4</td>
<td>Svinicki &amp; McKeachie Ch. 13 “Different students, different challenges”</td>
<td>Early feedback; classroom incivility</td>
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<td>Feb. 5</td>
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<td>Lewis, “Using midsemester feedback and responding to it”</td>
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<td>Week 6</td>
<td>Weekly reflection #5</td>
<td>Svinicki &amp; McKeachie Ch. 7 “Assessing, testing, and evaluating”; Ch. 9 “Good designs for written feedback for students”; Ch. 10 “Assigning grades”</td>
<td>Construct and critique grading rubrics</td>
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<td>Feb. 12</td>
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<td>Week 7</td>
<td>Weekly reflection #6</td>
<td>Bernstein et al. Ch. 2 “Capturing the intellectual work of teaching: The benchmark portfolio.”</td>
<td>Teaching portfolios</td>
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<td>Feb. 19</td>
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<tr>
<td>Week 8</td>
<td>Weekly reflection #7</td>
<td>Svinicki &amp; McKeachie Ch. 12 “Teaching culturally diverse students”</td>
<td>Individual differences, valuing diversity</td>
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<td>Feb. 26</td>
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<td>Grant Eldridge case</td>
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<td>Week 9</td>
<td>Weekly reflection #8</td>
<td>Svinicki &amp; McKeachie Ch. 20 “Teaching students how to become more strategic and self-regulated learners”; Ch. 21 “Teaching thinking”</td>
<td>Promoting metacognition</td>
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<td>Mar. 5</td>
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<td>Week 10</td>
<td>Mar. 12</td>
<td>Spring break</td>
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| **Week 11**      | Mar. 19 | Svinicki & McKeachie Ch. 22 “The ethics of teaching”  
                     |         | Ethics scenarios from Keith-Spiegel et al., *The ethics of teaching*  
                     |         | Murray et al., “Ethical principles for college and university teaching” in Fisch |
| **Week 12**      | Mar. 19 | Hanson, “Between apathy and advocacy: Teaching and modeling ethical reflection” in Fisch  
                     |         | More ethics scenarios from Keith-Spiegel et al., *The ethics of teaching*  
                     |         | Rodabaugh, “Institutional commitment to fairness in college teaching” in Fisch |
| **Week 13**      | Apr. 2  | Svinicki & McKeachie Ch. 23 “Vitality and growth throughout your teaching career”  
                     |         | Teaching evaluations  
                     |         | Benton & Cashin “Student ratings of teaching: A summary of research and literature” |
| **Week 14**      | Apr. 9  | To be determined |
| **Week 15**      | Apr. 16 | Drafts of course portfolio essays  
                     |         | Peer review of course portfolio essays |
Week 16  Course synthesis  To be determined
Apr. 23

Finals  Course portfolio

References and Supplemental Readings


http://www.schreyerinstitute.psu.edu/pdf/Classroom_Assessment_Techniques_Intro.pdf


