



TO: The Engineering Faculty
FROM: The Faculty of the School of Engineering Education
RE: New graduate course – ENE 68600, Preparing to be an Engineering Professor

The Faculty of the School of Engineering Education has approved the following new graduate course. This action is now submitted to the Engineering Faculty with a recommendation for approval.

FROM (IF ALREADY OFFERED WITH TEMPORARY NUMBER):

ENE 69500 – Succeeding as an Engineering Professor


Semester Offered:	FALL SEMESTER		
Total Number of Credits	3	Credits Broken Down by Schedule Type	3 LEC
Prerequisite(s):	NONE		
Previous Offerings with Enrollment:	15 TIMES (TWICE A YEAR) – AVG. 9 STUDENTS/OFFERING		

TO:
ENE 68600 - Preparing to be an Engineering Professor

Semester Offered:	FALL SEMESTER		
Total Number of Credits	3	Credits Broken Down by Schedule Type	3 LEC
Prerequisite(s):	NONE		
Previous Offerings with Enrollment:	NONE		

RATIONALE:

The course has been taught on an experimental basis for several semesters, has been well received, and is in demand both on-campus and online. It is a component of the ENE graduate certificate, Teaching and Learning in Engineering, which is available to any Engineering Ph.D. student at Purdue as well as to others online.


Edward J. Berger
Interim Head, School of Engineering Education
Professor of Engineering Education

Link to Curriculog entry:
<https://purdue.curriculog.com/proposal:26103/form>

SYLLABUS
Engineering Education 68600, Preparing to be an Engineering Professor

Course Time: Tuesdays 1:30 – 4:20 p.m.

Course Location: ARMS 3109

Credit: 3 credit hours

Instructors: Prof. Audeen W. Fentiman
e-mail: fentiman@purdue.edu
Phone: 765-494-7781
Office: ARMS 1353
Office hours: By appointment

Course Description & Goals: This course is one of four required for a graduate certificate in Teaching and Learning Engineering. The other three courses are devoted to educational methods and practice. This course is designed to provide students with an opportunity to learn and practice the skills that complement and enhance teaching and learning in a tenure-track faculty position either at a research-intensive university or at an institution that focuses on undergraduate engineering education. Teaching a course is only one aspect of helping students to learn. Obtaining funding for research, mentoring graduate and advanced undergraduate students, and building a network that continually provides new information related to doing the job well all contribute to a faculty member's ability to help students learn.

Learning Objectives: At the conclusion of this course, students will be able to:

1. State what is typically expected of an engineering faculty member and what additional opportunities for growth and contribution are available within and beyond a faculty position.
2. Write a professional development plan outlining the knowledge, skills, and abilities they should develop to succeed in a faculty position.
3. Write a research statement (including potential sources of funding) which is typically required in a faculty application.
4. Write an abbreviated CAREER grant proposal, including a realistic budget and budget justification.
5. Explain how to find faculty and postdoc openings, evaluate the position requirements, and prepare an application package, including a cover letter, that matches their skills to the requirements.
6. Summarize techniques for managing projects, people, and conflict.
7. Summarize how to make effective use of professional organizations to advance their careers.
8. Describe contents of a typical diversity commitment statement.
9. State how graduate students are recruited, selected, and funded.
10. Describe their mentoring philosophy and specific plans for mentoring undergraduate and graduate students from various backgrounds and cultures.

11. Prepare a teaching or diversity statement that might be included in an application for a faculty position.
12. Provide constructive peer feedback on written documents and oral presentations.

Grading: Students will be graded on six written assignments, one oral presentation, class participation, portfolio, and attendance. There will be no quizzes or mid-term exams. Students will prepare a portfolio of revised course assignments in lieu of a final exam.

Assignment	Percent of course grade
<i>Written assignments</i>	
Professional development plan	10%
Draft research statement	10%
Proposal	30%
Outline (6%)	
Project summary (6%)	
Project description (12%)	
Budget and justification (6%)	
Draft teaching or diversity statement	10%
Cover letter	10%
<i>Oral assignment</i>	
Identifying appropriate positions	10%
Portfolio with revised documents (due December 5)	10%
Class participation, including student-led discussions	10%

Attendance will be graded as follows: after 3 unexcused absences, each unexcused absence from a lecture will result in a 5% reduction of the student's final grade. If you are ill, please do not attend class. Send an e-mail to the instructor before class stating that you are ill. The absence will be excused. Written assignments due the day of the absence should be submitted electronically on time unless other arrangements have been made with the instructor. Presentations missed due to an excused absence will be rescheduled.

Numerical ranges for letter grades: A 90-100, B 80-89, C 70-79, D 60-69

Plagiarism is a serious offense. Any document that includes materials that have been plagiarized will receive a grade of zero.

Plagiarism is defined in "Academic Integrity: A Guide for Students" (<https://www.purdue.edu/odos/osrr/academic-integrity/index.html>) as follows:

"Plagiarism is a special kind of academic dishonesty in which one person steals another person's ideas or words and falsely presents them as the plagiarist's own product. This is most likely to occur in the following ways:

- using the exact language of someone else without the use of quotation marks and without giving proper credit to the author
- presenting the sequence of ideas or arranging the material of someone else even though such is expressed in one's own words, without giving appropriate acknowledgment.
- submitting a document written by someone else but representing it as one's own".

Emergency Provisions:

In the event of a major campus emergency, course requirements, deadlines and grading percentages are subject to changes that may be necessitated by a revised semester calendar or other circumstances. Here are ways to get information about changes in this course. Brightspace web page or the instructor’s email address (fentiman@purdue.edu).

In case of a fire alarm, students will leave the building and assemble in the grassy area in front of the School of Nursing. Do not leave that area until you have checked in with your course instructor.

In case of tornado, assemble in the basement of Armstrong Hall. Use stairs with as few windows as possible to get to the basement. Check in with your instructor.

CAPS Information:

Purdue University is committed to advancing the mental health and well-being of its students. If you or someone you know is feeling overwhelmed, depressed, and/or in need of support, services are available. For help, such individuals should contact Counseling and Psychological Services (CAPS) at (765)494-6995 and <http://www.purdue.edu/caps/> during and after hours, on weekends and holidays, or through its counselors physically located in the Purdue University Student Health Center (PUSH) during business hours.

Course Schedule – with brief descriptions of assignments

Date	Topic
8/22/23	Purpose of this class Student introductions How on-campus and online versions will be coordinated Syllabus/safety Weekly student-led discussions of current topics Faculty ranks Discussion of what is expected of a faculty member Outline of a promotion and tenure document
8/29/23	What you think a faculty member does Discussion of why you want to be a faculty member Opportunities faculty members have to grow within a faculty position Preparing a professional development plan

Written Assignment #1: Professional Development Plan – Each student will prepare their own professional development plan. The document will include an overview of the student’s career goals, knowledge/skills/abilities (ksa) the student needs to develop, why each ksa is important, opportunities to develop each ksa while in graduate school, and a timeline for each ksa’s development (in grad school or beyond). **(Due in Brightspace on September 5 by 1:29 p.m., 3-5 pages, Word document, double spaced.)**

9/5/23 Discuss professional development plans
Thinking beyond the first position - opportunities faculty members have to grow and contribute beyond the faculty position
University administrative structure

9/12/23 How faculty members select research topics
Preparing a research statement
Thinking about what is needed to carry out your research
Brainstorming on research topics

Written Assignment #2: Research Statement – Each student will prepare a research statement that could be used as part of an application package for a faculty position – either at a research-intensive university or at one primarily focused on undergraduate engineering, depending on the type of position the student is likely to pursue. The statement should contain all of the elements discussed in class including a summary of your past research-related activities, discussion of future research goals and plans, and possible funding sources as well as a discussion of how your research will fit in the hiring department. This is designed to be a document you will use in an actual application. If you know where you will be applying or might apply, discuss your fit in that department. Otherwise, assume you would be applying to your department here at Purdue. **(Due in Brightspace on September 19 by 1:29 p.m. 3-5 pages, Word document, double spaced.) Also bring a hard copy to class** for peer feedback and discussion.

9/19/23 Peer review and discussion of research statements
Finding funding sources
Writing effective proposals

Written Assignment #3: Students will prepare a proposal in response to a real funding opportunity. All students will do an abbreviated NSF CAREER proposal unless other arrangements are made with the instructor. More details will be provided in class and on the Brightspace site. **(Outline and one-page Proposal Summary due in Brightspace on September 26 by 1:29 p.m. Draft Budget and Budget Justification due in Brightspace on October 3 by 1:29 p.m. Draft Project Description due in Brightspace on October 17 by 1:29 p.m. Final draft of the entire proposal due in Brightspace on October 31 by 1:29 p.m., Word Document, double spaced.)** Bring a hard copy of Project Summary to class on September 26 for peer feedback.

9/26/23 Questions and answers about the proposals
Peer review and discussion of one-page project summaries
Preparing a budget for your proposal

- 10/3/23 Questions and answers about the proposals
 Questions and answers about budget
 Managing projects
- 10/10/23 OCTOBER BREAK – NO CLASS
- 10/17/23 Managing yourself
 Managing people
 Managing conflict
- 10/24/23 Making effective use of conferences
 Taking full advantage of professional organizations
 Networking tips
- 10/31/23 Final draft of entire proposal due this day
 Working and teaching across cultures
 Preparing a teaching statement
 Preparing a commitment to diversity statement

Written Assignment #4: Draft Teaching Statement or Draft Diversity Statement. Students may choose which to submit, based on which they want feedback on. (Students may submit both if they want feedback on both.) Each student will prepare a draft teaching or diversity statement they might use in an application for a faculty position. A teaching statement should focus on student learning and include topics such as how you have facilitated or will facilitate student learning, create a supportive learning environment, build rapport with students, assess student learning, continuously improve your teaching, and create an inclusive environment. It should discuss courses you would like to teach at the university and new courses you would like to create. If the student decides to submit a draft diversity statement, it should cover the topics discussed in class, including importance of diversity in engineering and in the classroom, awareness of dimensions of diversity, concrete examples of past efforts to promote/support diversity, and commitment to promoting diversity in the new position. **(Due in Brightspace on November 7 by 1:29 p.m., 3-4 pages, Word document, double spaced.)**

- 11/7/23 Recruiting and selecting students for your group
 Mentoring graduate students (and funding them)
 Mentoring across cultures
- 11/14/23 Identifying and interpreting postdoc or faculty positions
 Matching your skills to the position description

Presentation Assignment #1: Identifying Appropriate Positions – Each student will give a 10-minute presentation, with visual aids, on at least three currently open faculty or postdoc positions that are of interest to them, providing an analysis of why this position is attractive and how their skills match the position. The student will also give at least three examples of places/methods to identify positions of special interest to them. **(Due in class on November 21.)**

- 11/21/23 Presentations on finding faculty or postdoc positions with feedback

Startup packages

- 11/28/23 Preparing a cover letter for your application package
Other practical communication skills for faculty members
 Writing reference letters
 Inviting and introducing speakers
 Exploring collaboration opportunities

Written Assignment #5: Application Cover Letter. Students will prepare a cover letter to accompany their application for a faculty position to one of the three institutions they identified in their presentation on positions of interest to them. The letter will contain the components discussed in class and should be based, in part, on the information presented in class on November 21. **(Due in Brightspace on December 5 by 1:29 p.m., 2-3 pages, Word document, double spaced.)**

Assignment: Portfolio. The portfolio will contain all written assignments (except the proposal) which will have been revised after taking into consideration comments by classmates and the instructor. The portfolio will also contain a copy of the slides used for the presentation on faculty or postdoc positions. No more than 2 slides per page. **(Due in Brightspace on December 5 by 1:29 p.m.)**

- 12/5/23 Selected additional topics students have requested will be covered today
Portfolio with semester's work due in class today
Feedback to the instructor on course improvements

Additional Information from the Provost's Office

Mental Health/Wellness Statement sample language:

If you find yourself beginning to feel some stress, anxiety and/or feeling slightly overwhelmed, try [WellTrack](#). Sign in and find information and tools at your fingertips, available to you at any time.

If you need support and information about options and resources, please contact or see the [Office of the Dean of Students](#). Call 765-494-1747. Hours of operation are M-F, 8 am- 5 pm.

If you find yourself struggling to find a healthy balance between academics, social life, stress, etc., sign up for free one-on-one virtual or in-person sessions with a [Purdue Wellness Coach at RecWell](#). Student coaches can help you navigate through barriers and challenges toward your goals throughout the semester. Sign up is free and can be done on BoilerConnect.

If you're struggling and need mental health services: Purdue University is committed to advancing the mental health and well-being of its students. If you or someone you know is feeling overwhelmed, depressed, and/or in need of mental health support, services are available. For help, such individuals should contact [Counseling and Psychological Services \(CAPS\)](#) at 765-494-6995 during and after hours, on weekends and holidays, or by going to the CAPS office on the second floor of the Purdue University Student Health Center (PUSH) during business hours. The [CAPS website](#) also offers resources specific to situations such as COVID-19.

Academic Guidance in Event of Q/I sample language:

If you must miss class at any point in time during the semester, please reach out to me via Purdue email so that we can communicate about how you can maintain your academic progress. For COVID-19 concerns, please see the [Fall 2022: What you need to know guidance published July 27](#). If you find yourself too sick to progress in the course, notify your adviser and notify me via email or Brightspace. We will make arrangements based on your particular situation.

Attendance Policy sample language

Citing the University Senate guidelines

This course follows Purdue's academic regulations regarding attendance, which states that students are expected to be present for every meeting of the classes in which they are enrolled. Attendance will be taken at the beginning of each class and lateness will be noted. When conflicts or absences can be anticipated, such as for many University-sponsored activities and religious observations, the student should inform the

instructor of the situation as far in advance as possible. For unanticipated or emergency absences when advance notification to the instructor is not possible, the student should contact the instructor as soon as possible by email or phone. When the student is unable to make direct contact with the instructor and is unable to leave word with the instructor's department because of circumstances beyond the student's control, and in cases falling under excused absence regulations, the student or the student's representative should contact or go to the [Office of the Dean of Students \(ODOS\) website](#) to complete appropriate forms for instructor notification. Under academic regulations, excused absences may be granted **by ODOS** for cases of grief/bereavement, military service, jury duty, parenting leave, or emergent or urgent care medical care.

Basic Needs Security:

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact the Dean of Students for support. There is no appointment needed and Student Support Services is available to serve students 8 a.m.-5 p.m. Monday through Friday. Considering the significant disruptions caused by the current global crisis as it relates to COVID-19, students may submit requests for emergency assistance from the [Critical Need Fund](#)