

ENGR 49400

PURDUE UNIVERSITY
REQUEST FOR ADDITION, EXPIRATION,
OR REVISION OF AN UNDERGRADUATE COURSE
(10000-40000 LEVEL)

201520

DEPARTMENT Women in Engineering Program EFFECTIVE SESSION Spring 2015

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

- | | |
|---|---|
| <input checked="" type="checkbox"/> 1. New course with supporting documents | <input type="checkbox"/> 7. Change in course attributes (department head signature only) |
| <input type="checkbox"/> 2. Add existing course offered at another campus | <input type="checkbox"/> 8. Change in instructional hours |
| <input type="checkbox"/> 3. Expiration of a course | <input type="checkbox"/> 9. Change in course description |
| <input type="checkbox"/> 4. Change in course number | <input type="checkbox"/> 10. Change in course requisites |
| <input type="checkbox"/> 5. Change in course title | <input type="checkbox"/> 11. Change in semesters offered (department head signature only) |
| <input type="checkbox"/> 6. Change in course credit/type | <input type="checkbox"/> 12. Transfer from one department to another |

PROPOSED:

Subject Abbreviation ENGR

Course Number 49400

Long Title Women in Engineering Senior Seminar: Gender in the Workplace

Short Title Women Engr Sr Seminar

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:
 Summer Fall Spring

CAMPUS(ES) INVOLVED

- | | |
|---------------------------------------|--|
| <input type="checkbox"/> Calumet | <input type="checkbox"/> N. Central |
| <input type="checkbox"/> Cont Ed | <input type="checkbox"/> Tech Statewide |
| <input type="checkbox"/> Ft. Wayne | <input checked="" type="checkbox"/> W. Lafayette |
| <input type="checkbox"/> Indianapolis | |

CREDIT TYPE

1. Fixed Credit Cr. Hrs. 1
2. Variable Credit Range: _____
Minimum Cr. Hrs. _____
(Check One) To Or
Maximum Cr. Hrs. _____
3. Equivalent Credit: Yes No

COURSE ATTRIBUTES: Check All That Apply

- | | | | |
|---|--|-------------------------------------|---|
| <input type="checkbox"/> 1. Pass/Not Pass Only | <input type="checkbox"/> 6. Registration Approval Type | Department <input type="checkbox"/> | Instructor <input checked="" type="checkbox"/> <i>Jig</i> |
| <input type="checkbox"/> 2. Satisfactory/Unsatisfactory Only | <input type="checkbox"/> 7. Variable Title | | |
| <input type="checkbox"/> 3. Repeatable | <input type="checkbox"/> 8. Honors | | |
| Maximum Repeatable Credit _____ | <input type="checkbox"/> 9. Full Time Privilege | | |
| <input type="checkbox"/> 4. Credit by Examination | <input type="checkbox"/> 10. Off Campus Experience | | |
| <input type="checkbox"/> 5. Fees <input type="checkbox"/> Coop <input type="checkbox"/> Lab <input type="checkbox"/> Rate Request | | | |
- Include comment to explain fee

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

Cross-Listed Courses

RECEIVED
OCT 17 2014

COURSE DESCRIPTION (INCLUDE REQUISITES/RESTRICTIONS)

05, 06, 07, 08 CLASS *Jig*
College Engr *Jig*

OFFICE OF THE REGISTRAR

*COURSE LEARNING OUTCOMES

Calumet Department Head _____ Date _____	Calumet School Dean _____ Date _____
Fort Wayne Department Head _____ Date _____	Fort Wayne School Dean _____ Date _____
Indianapolis Department Head _____ Date _____	Indianapolis School Dean _____ Date _____
N. Central Faculty Senate Chair _____ Date _____	Vice Chancellor for Academic Affairs _____ Date _____

<i>Bethany</i> _____ Date <i>9/9/14</i>	<i>Michael Y. Harris</i> _____ Date <i>10/17/14</i>	<i>Joseph</i> _____ Date <i>11/5/14</i>	_____ Date _____
West Lafayette Department Head	West Lafayette College/School Dean	West Lafayette Registrar	

OFFICE OF THE REGISTRAR

Jig 10/23/14 ✓

TO: The Faculty of the College of Engineering
FROM: The Department of Women in Engineering Program
RE: New Course ENGR 49400

The Department of the Women in Engineering Program (WIEP) has approved the following new ENGR course. This action is now submitted to the Engineering Faculty with a recommendation for approval.

ENGR 49400 Women in Engineering Senior Seminar: Gender in the Workplace

Sem. 2. Class 1. Cr. 1

May not be repeated. Registration approval for non-engineering students must be obtained from the course instructor.

Professional Development course, coordinated by the Women in Engineering Program.

Description: This course provides junior and senior engineering students an opportunity to maximize their earning potential, promotion opportunities, and retention within engineering or related fields. Enrolled students will 1) become aware of and discuss solutions for internal and external barriers which can prevent women from reaching their greatest potential in the workforce; 2) enhance professional development and transition skills required to move successfully from an academic to professional environment; and 3) acquire skills and knowledge to serve as engineering role models/ambassadors for diverse populations. The content and activities of the course may be of particular interest to women.

Reason: Research has shown that women earn less than men for the same job in which both candidates are equally qualified. Salary rate increase and possible promotions may also be hindered from a lack of understanding or adjustment to the workforce climate. This course engages students in the practice of professional development skills to maximize the earning potential and promotion opportunities of female engineers while studying the transition in climate and culture from academia to the workforce. Understanding and adapting to this new environment early will improve our engineering graduates' workforce experience, promotion and professional growth opportunities, and overall retention of women in engineering and related fields. This course may not be repeated.



Beth Holloway, Director
Women in Engineering Program

APPROVED FOR THE FACULTY
OF THE SCHOOLS OF ENGINEERING
BY THE ENGINEERING
CURRICULUM COMMITTEE

ECC Minutes

Date

Chairman ECC

10/17/2014

10-17-14



Course: ENGR 49400 Women in Engineering Senior Seminar: Gender in the Workplace

Prerequisite: None.

Format: 1 hour/week Lecture

Credit hours: 1

Status: Junior/Senior in Engineering. Non-engineering students interested in taking this course are required to obtain consent from the course instructor.

Offered: Spring

Course Instructor: Dr. Jennifer Groh

Textbook: Carter, C. , G. Izumo. 2013. *The Career Toolkit: Skills for Success* (4th ed.). Pearson Education, Inc., USA.
In addition, individual required readings will be provided.

Course Goals:

Upon completion of this course each student will be able to:

- Identify and develop solutions to internal and external barriers which prevent attainment of career trajectory
- Define and apply professional and transition skills to move from an academic to professional environment in order to improve the workforce experience and promotion opportunities
- Recognize and engage in engineering stewardship opportunities to build general public knowledge about the field of engineering
- Utilize coaching skills developed in class to assist themselves and others in making decisions/taking action

Assessment:

Assignments (and % of final grade)

- Class participation (20%)
- Journal entries (20%)
- Coaching sessions (20%)
- Course Project – (40%)

Class Overview

Part 1- Identifying barriers: Internal/external barriers to success and retention for female engineers

Part 2 – Addressing barriers: putting knowledge and skills/techniques to work – what works best for you?

Part 3 –Supporting peers/colleagues and the next generation of female engineers: engineering stewardship opportunities

AssignmentsClass Participation

Each week will include reading assignments. All assigned readings are due the following week unless indicated otherwise by syllabus or instructor. Come prepared to participate in class discussion on the readings/topic based on 1) what you have read; 2) personal experiences related to the topics and/or 3) from other sources you have encountered on the topic (e.g., peers, the media, etc.).

Journal Entries

Journals are an expression of your thoughts and reactions to academic and social experiences that shape you and will help or hinder your progress toward your degree and a fulfilling career. You will be required to submit journal entries (9, including the final reflection) by 4 pm on specified dates electronically on Blackboard. Specific topics will be posted on Blackboard. Length: at least one page double-spaced. See below for special instructions for the final journal reflection. Journal entries will also include completion of and reflection on the implicit bias test (<http://implicit.harvard.edu/>), listening skills assessment, and two “self-discovery” surveys (e.g., Myers-Briggs, StrengthsQuest, Gregoric Learning Styles).

Coaching sessions

You and a coaching partner will be required to meet together at least 5 times during the semester. One of these 5 sessions will be with the course instructor and should take place within the first 11 weeks of the semester. You may elect to meet more often as a pair. Specific topics for each coaching session will be posted on Blackboard the week a coaching session is assigned. Plan to meet for at least one hour for each session. You are required to complete this session and submit on Blackboard a Coaching Reflection Form (done as a pair – one submission for both of you) by 4 pm the day before the next coaching session is assigned. The coaching session you do together with the course instructor can be scheduled any time during the semester but must be done before Dead Week begins. Contact Cathy Deno (denoc@purdue.edu) to schedule one hour with Dr. Groh. This meeting will take place in ARMS 1245.

Course Project

Over the course of the semester, you will select a project of interest to you AND which relates to at least one topic presented in this course. You will also prepare a rubric by which a classmate (randomly assigned by the instructor and will NOT be your coaching pair) will assess your project for 40% of the project grade. The course instructor will assign 60% of the project grade. Project and rubric need approval from the course instructor according to the schedule on the course syllabus. Examples are listed below with suggestions for minimum criteria to be met. We will share what we learned from our projects during our class Final Exam time.

Possible project ideas

Research paper/presentation: Pose a topic of interest to you in the form of a question. The topic should relate to any current research on topics in this class, including gender issues, professional development, corporate/academic culture, gender and/or multiculturalism issues in STEM, etc. You should include sources from peer-reviewed journals (ideal search terms: STEM, engineering, etc.), reputable websites (e.g., not Wikipedia), or other scholarly articles and writings.

Engineering Professionals Interviews: Do informational interviewing of at least three engineering professionals (e.g., engineers in academia, industry, government, non-profits, etc.). You may choose who you interview or you may ask the course instructor or others within your network for suggestions (I only ask that you go outside your comfort zone and NOT interview a family member!). Interview projects should include a list of questions you generate in preparation for your interview and some way of relaying responses and what you learned (e.g., develop a general theory based on what you have learned – similar to a qualitative research study).

WIE course: You are an instructor in a College of Engineering and have the opportunity to create a class for women in engineering students. What would your course look like? How would you either redesign this course or what would a different offering look like? Course development includes putting together (typically in the form of a syllabus): goals, class expectations, grading, class schedule, assignments, and assessment (look at class syllabi you have received for examples). You might also consider who is the target audience and how will you know if students will want to take your class? How will you market the class to students? What literature/supporting material would you choose for the class participants to read/use and why?

What other creative project ideas do you have? Must 1) relate to at least one topic presented in this course and 2) incorporate the impact of the topic on gender in the workforce. See Class Topics/Discussion list on course schedule for topics. For example, feel free to incorporate your passions/interests in art, dance, theater, etc.

Draft schedule

Week	Class topics/discussion	Homework/project/readings
1	Networking & course introduction <i>Coaching introduction</i>	Assigned reading Journal reflection #1
2	Changing the Culture vs. Changing the woman: Part I <i>Coaching pair assignments</i>	Assigned reading <i>Coaching Commitment Form</i>
3	Changing the Culture vs. Changing the woman: Part II <i>Coaching and the Engineering Design Process - Sample role play and debrief</i>	Assigned reading <i>Coaching Session #1</i>
4	Imposter Syndrome	Assigned reading Implicit Bias test Journal reflection #2
5	Implicit Bias & Stereotype Threat	Project proposal due Listening skills assessment Journal reflection #3
6	Gendered Communication <i>Coaching: powerful questions and acknowledging</i>	Assigned reading <i>Coaching Session #2</i>
7	Playing Devil's Advocate	Assigned reading Self-Discovery task Journal reflection #4
8	Professional development/advancement: Managing your career	Project rubric due Assigned reading Journal reflection #5
9	Academic/Corporate culture: Part I <i>Coaching pairs</i>	<i>Coaching Session #3</i>
10	Spring Break	N/A
11	Academic/Corporate culture: Part II	Assigned reading Journal reflection #6
12	Confidence/self-promotion/sponsorship	Assigned reading <i>Coaching Session #4</i>
13	Leadership	Project due for Peer Assessment Journal reflection #7

14	Presenting your best self in the workplace	Assigned reading Journal reflection #8
15	Resources beyond WIEP: Creating a Culture of Inclusion <i>Coaching: what's next & resources</i>	<i>Coaching Session #5</i>
16	Outreach and messaging: maximizing your elevator speech	Peer Assessments Due Final journal reflection
	Finals week: Class Projects (2 hours)	

Possible assigned readings include excerpts from:

- Carter, C. , G. Izumo. 2013. *The Career Toolkit: Skills for Success* (4th ed.). Pearson Education, Inc., USA.
- Fouad, N., R. Singh (2011). *Stemming the Tide: Why Women Leave Engineering*. Supported by the National Science Foundation, award Number 0827553.
- Kaplan, K. 2009. Unmasking the Imposter. *Nature*, 459, 468-469.
- National Research Council. *Changing the Conversation: Messages for Improving Public Understanding of Engineering*. Washington, DC: The National Academies Press, 2008.
- Purcell, K. (2012). *Unlocking Your Brilliance: Smart Strategies for Women to Thrive in Science, Technology, Engineering and Math*. Austin, TX: Greenleaf Book Group Press.
- Sandberg, S. 2013. *Lean In: Women, Work and the Will to Lead*. New York, NY: Alfred A. Knopf.
- Young, V. 2011. *The Secret Thoughts of Successful Women: Why Capable People Suffer from the Imposter Syndrome and How to Thrive in Spite of It*. New York, NY: Crown Business.