

COEN 1550-800: YOU'RE@CU Seminar

Instructor

Dr. Beth Myers, Ph.D.

Office ECAD 124

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Classroom: ECCR 118

Monday, 5-5:50pm

Office Hours: Monday 4-5:00pm, ECAD 124 or by appointment

Course Description

This course is part of the undergraduate research experience called “Your Own Undergraduate Research Experience at CU (YOU'RE@CU).” This course provides undergraduate engineering students with a research experience and provides them with the opportunity to learn how they can use their engineering skills to address real-world problems. Working with graduate student mentors, students learn how to develop hypotheses, collect and interpret data and communicate their results to an interdisciplinary audience. Students will be exposed to a variety of research careers in academia and industry that are available to engineers and the skills needed to be successful researchers.

Objectives

- Provide a very broad introduction to engineering research
- Understand that research can be part of an engineering career
- Know how to carry out research, create and test a hypothesis, publish and present research
- Introduce and practice research skills and habits necessary to be a successful researcher
- Learn about college and national research opportunities in engineering

Class sessions / Participation

Your weekly attendance and participation is critical to accomplishing the course objectives. The assignments depend heavily on the content of the class sessions. You are expected to attend all sessions. You are also expected to complete an online, short, weekly reflection essay.

Weekly Research Work Sessions

Your weekly research experience is the reason why you are here! You are expected to perform 3-5 hours of research alongside your graduate student mentor per week. This may include performing searches of the scientific literature, going to the library, performing work in the laboratory and analyzing data. Your experience will be more fulfilling as you learn more – so start by looking at the faculty advisor's web page, look up basic background material and concepts on Wikipedia, and ask your graduate student mentor for 1-2 papers that describe (in as general terms as possible) the background of the research on which you will work.

Assessment and Grading

Your course evaluation will be based on turning in all assignments and reflection essays.

Grading

Seminar Attendance (includes participation and professionalism)

25%

Research Reports, Assignments & Reflections	25%
Research Attendance (in lab notebook or by mentor)	25%
Lab Notebook	10%
Poster and Poster Session (Monday, April 29 @ 5pm)	15%

An overall grade of 80% on all assignments and deliverables is required to receive a “pass” in this class. Grades will be earned as follows:

- Attend all lectures and seminars (one absence is permitted, but please email me at least 2 hours before class time).
- Perform 3-5 hours / week (no more and no less) of research time.
 1. Notify your graduate student mentor at least 2 hours ahead of time if you will not show up due to illness.
 2. You must plan ahead and be prepared for time to study for exams and your other classes. Only one week of < 3 hours research time during this research experience is permitted with advance permission from me AND your graduate research mentor.
- Attend two meetings with the graduate mentor and their faculty advisor (this may be individual meetings or a group meeting).
- Complete all assignments
- Complete all reflective questions and assessments
- Keep lab notebook to record your hours worked, research notes, etc. Notebooks will be submitted and graded upon instructor's request – so keep them handy.
- Complete a poster and attend the entire poster session

Lab Notebook

A lab book is required (either paper or digital depending on your research area). You will record all technical activity in your lab book. The content in the lab book will vary with each student's project but can include (as appropriate): literature review, laboratory methods, programming code or simulation runs, data collection and analysis and any other relevant technical information. This could also include notes, discussion notes with your mentor, data, lab procedures, analysis and any other relevant information. Printouts of abstracts, articles, data, graphs, data sheets, figure, pictures, etc. and other information should be included as well.

Professional behavior

- Come to class on time.
- This is a professional seminar series and research experience. Please act and dress appropriately for class and when working with your research team.
- You should only leave in the middle of a seminar or lecture if you have to go to the bathroom (but you do not have to ask permission!).
- Do not talk or read unrelated material (phone, laptop, newspaper, etc.) during lectures or seminars (even in a large lecture hall we and our guest speakers notice such things).
- Turn-off the cell phones!
- Do not talk during guest speaker presentations.
- Ask questions of guest speakers by raising your hand.
- Be professional in your verbal and written conversation skills; this includes email.
- Be professional in your conduct in class, research meetings, and in the laboratory.

Distracting behaviors are disrespectful to the professor, guest presenters, industry reps, and your fellow students.

Electronic Communication & Canvas

The electronic version of the syllabus as well as all assignments are located on the class Canvas site. Since email is recognized as an official mode of university correspondence, you are responsible for reading your email for university and course related information and announcements.

Use of electronic devices in the classroom

While some course content may be accessible in electronic format, use of electronic devices such as cell phones, tablets or laptop computers is permitted only to access course readings and other materials or to take class notes, and only with the instructor's consent. Failure to request permission or to comply with these rules of use will result in your instructor counting the date of occurrence as an unexcused absence. If you feel you need to use any type of electronic device during class for any other purpose outside these parameters, please speak with your instructor.

Honor Code

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the Honor Code. Violations of the policy may include: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, submitting the same or similar work in more than one course without permission from all course instructors involved, and aiding academic dishonesty. All incidents of academic misconduct will be reported to the Honor Code (honor@colorado.edu (<mailto:honor@colorado.edu>)); 303-492-5550). Students who are found responsible for violating the academic integrity policy will be subject to nonacademic sanctions from the Honor Code as well as academic sanctions from the faculty member. Additional information regarding the Honor Code academic integrity policy can be found at the [Honor Code Office website \(https://www.colorado.edu/osccr/honor-code\)](https://www.colorado.edu/osccr/honor-code).

Classroom Behavior

Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. For more information, see the policies on [classroom behavior \(http://www.colorado.edu/policies/student-classroom-and-course-related-behavior\)](http://www.colorado.edu/policies/student-classroom-and-course-related-behavior) and the [Student Code of Conduct \(http://www.colorado.edu/osccr/\)](http://www.colorado.edu/osccr/).

Accommodation for Disabilities

If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to your faculty member in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting accommodations is located on the [Disability Services website \(http://www.colorado.edu/disabilityservices/students\)](http://www.colorado.edu/disabilityservices/students). Contact Disability Services at 303-492-8671 or

dsinfo@colorado.edu (<mailto:dsinfo@colorado.edu>) for further assistance. If you have a temporary medical condition or injury, see [Temporary Medical Conditions](http://www.colorado.edu/disabilityservices/students/temporary-medical-conditions) (<http://www.colorado.edu/disabilityservices/students/temporary-medical-conditions>) under the Students tab on the Disability Services website.

Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation

The University of Colorado Boulder (CU Boulder) is committed to fostering a positive and welcoming learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct (including sexual assault, exploitation, harassment, dating or domestic violence, and stalking), discrimination, and harassment by members of our community. Individuals who believe they have been subject to misconduct or retaliatory actions for reporting a concern should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127 or cureport@colorado.edu. Information about the OIEC, university policies, [anonymous reporting](https://cuboulder.qualtrics.com/jfe/form/SV_0PngVK4kkIJZnf) (https://cuboulder.qualtrics.com/jfe/form/SV_0PngVK4kkIJZnf), and the campus resources can be found on the [OIEC website](http://www.colorado.edu/institutionalequity/) (<http://www.colorado.edu/institutionalequity/>).






Please know that faculty and instructors have a responsibility to inform OIEC when made aware of incidents of sexual misconduct, discrimination, harassment and/or related retaliation, to ensure that individuals impacted receive information about options for reporting and support resources.




















Religious Holidays










Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. Please contact me with any concerns about your ability to participate due to religious observances.

See the [campus policy regarding religious observances](http://www.colorado.edu/policies/observance-religious-holidays-and-absences-classes-andor-exams) (<http://www.colorado.edu/policies/observance-religious-holidays-and-absences-classes-andor-exams>) for full details.

Course Summary:

Date	Details
Mon Jan 28, 2019	 Lab Notebook Selection (https://canvas.colorado.edu/courses/26244/assignments/388126) due by 5pm
	 Reflection 1 (https://canvas.colorado.edu/courses/26244/assignments/388044) due by 5pm
Mon Feb 4, 2019	 Lab Notebook 1/27-2/2 (https://canvas.colorado.edu/courses/26244/assignments/388268) due by 5pm
	 Research Aim and Research Objectives (https://canvas.colorado.edu/courses/26244/assignments/388363) due by 5pm
	 Timesheet 1/27-2/2 (https://canvas.colorado.edu/courses/26244/assignments/388512) due by 5pm

Date	Details	
Mon Feb 11, 2019	 Lab Notebook 2/3-2/9 (https://canvas.colorado.edu/courses/26244/assignments/388274)	due by 5pm
	 Research Tools, techniques, hypothesis, questions, methods (https://canvas.colorado.edu/courses/26244/assignments/388504)	due by 5pm
	 Timesheet 2/3-2/9 (https://canvas.colorado.edu/courses/26244/assignments/388514)	due by 5pm
Mon Feb 18, 2019	 Lab Notebook 2/10-2/16 (https://canvas.colorado.edu/courses/26244/assignments/388278)	due by 5pm
	 Reflection 2 (https://canvas.colorado.edu/courses/26244/assignments/388578)	due by 5pm
	 Timesheet 2/10-2/16 (https://canvas.colorado.edu/courses/26244/assignments/388515)	due by 5pm
Mon Feb 25, 2019	 Lab Notebook 2/17-2/23 (https://canvas.colorado.edu/courses/26244/assignments/388282)	due by 5pm
	 Reflection 3 (https://canvas.colorado.edu/courses/26244/assignments/388585)	due by 5pm
	 Timesheet 2/17-2/23 (https://canvas.colorado.edu/courses/26244/assignments/388516)	due by 5pm
Mon Mar 4, 2019	 Draft #1 Research Paper (https://canvas.colorado.edu/courses/26244/assignments/388366)	due by 5pm
	 Lab Notebook 2/24-3/2 (https://canvas.colorado.edu/courses/26244/assignments/388284)	due by 5pm
	 Timesheet 2/24-3/2 (https://canvas.colorado.edu/courses/26244/assignments/388518)	due by 5pm
Mon Mar 11, 2019	 Lab Notebook 3/3-3/9 (https://canvas.colorado.edu/courses/26244/assignments/388295)	due by 5pm
	 Timesheet 3/3-3/9 (https://canvas.colorado.edu/courses/26244/assignments/388519)	due by 5pm
Mon Mar 18, 2019	 Lab Notebook 3/10-3/16 (https://canvas.colorado.edu/courses/26244/assignments/388311)	due by 5pm
	 Timesheet 3/10-3/16 (https://canvas.colorado.edu/courses/26244/assignments/388520)	due by 5pm
Mon Apr 1, 2019	 Draft #2 Research Paper (https://canvas.colorado.edu/courses/26244/assignments/388399)	due by 5pm
	 Lab Notebook 3/17-3/23 (https://canvas.colorado.edu/courses/26244/assignments/388318)	due by 5pm
	 Timesheet 3/17-3/23 (https://canvas.colorado.edu/courses/26244/assignments/388521)	due by 5pm

Date	Details	
Mon Apr 8, 2019	 Draft #1 Poster (https://canvas.colorado.edu/courses/26244/assignments/388464)	due by 5pm
	 Lab Notebook 3/31-4/6 (https://canvas.colorado.edu/courses/26244/assignments/388321)	due by 5pm
	 Timesheet 3/31-4/6 (https://canvas.colorado.edu/courses/26244/assignments/388522)	due by 5pm
Mon Apr 22, 2019	 FINAL Poster (https://canvas.colorado.edu/courses/26244/assignments/388466)	due by 5pm
	 Lab Notebook 4/14-4/20 (https://canvas.colorado.edu/courses/26244/assignments/388326)	due by 5pm
	 Lab Notebook 4/7-4/13 (https://canvas.colorado.edu/courses/26244/assignments/388324)	due by 5pm
	 Timesheet 4/14-4/20 (https://canvas.colorado.edu/courses/26244/assignments/388524)	due by 5pm
	 Timesheet 4/7-4/13 (https://canvas.colorado.edu/courses/26244/assignments/388523)	due by 5pm
Mon Apr 29, 2019	 Poster Presentation Participation (https://canvas.colorado.edu/courses/26244/assignments/388469)	due by 5pm