

CHE 507 (1 Cr.) – Seminar

Fall Quarter 2014

School of Chemical, Biological, and Environmental Engineering

Oregon State University

2014.10.17

COURSE SYLLABUS

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School Manager: Elisha BrackettEmail: elisha.brackett@oregonstate.edu

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Dates: 2014.09.29-2014.12.05**Time:** M 1400-1550**Classroom:** Owen 106 (Rogers 230 starting 2013.10.06)**Course Description:** (CRN: 10410) One-credit seminar. Graded P/N. This course is repeatable for a maximum of 16 credits.**Website:** <http://my.oregonstate.edu> (Please make sure you have access to the My Oregon State site since all course materials and announcements will be available here.)**Textbook:** CBEE 2014-2015 Graduate Student Handbook; Oregon State University Graduate Student Success Guide (http://oregonstate.edu/dept/grad_school/docs/student-success-guide.pdf)**Grade Policy:** P/N – a passing grade is contingent on completing the required tasks below.**Grading:** Attendance is mandatory, and only one (1) absence will be allowed. I expect that you will be in class, every time. If you cannot be in class for some reason, I expect that you will notify me ahead of time (in person or via email) that you will not be in class on a certain date and give me some idea of the reason. Most valid excuses are known ahead of time, and in the rare instance that an emergency arises, I expect that you contact me after class to let me know why you were absent. As part of the participation portion of your grade, you are expected to be punctual and minimize disruptions. Cell-phones need to be off during class. Also, no use of laptops or other electronic devices for activity outside of its use in this class will be tolerated. A passing grade is contingent on completing the required tasks.

Course Overview & Objectives: This course is designed to provide incoming graduate students seeking a research based M.S. or Ph.D. with an orientation to the School of Chemical, Biological, and Environmental Engineering. Throughout the course, students will become familiar with the research and research opportunities available in CBEE. By the end of the term, student will identify and rank faculty with whom they are interested in working. In addition, students will learn useful skills including, but not limited to, reading scientific literature, using available tools for literature searching, organizing references, and managing citations within a document. By the end of the course, students will be able to do the following:

- Rotate through two research rotations;
- Identify and rank three research opportunities they are most interested in pursuing for their graduate work (including project topic and faculty member);
- Submit a fellowship grant application;
- Locate and complete paperwork required by the Graduate School (e.g., program of study, graduate committee, exam scheduling, etc.);
- Use available technology to perform searches of the scientific literature and the OSU library;
- Use software to organize and manage references and to insert and format citations in a document; and
- Identify and describe the key components of scientific journal articles.

Required Tasks (most of the information is copied from the Graduate Student Handbook):

- Attend every seminar.
- Complete (and presumably submit if eligible) a fellowship grant application.
 - 2014.10.06: Bring five (5) different research ideas to class for discussion.
 - 2014.10.13: Bring a draft research proposal on one (1) targeted research idea to class for peer review.
 - 2014.10.20: Bring a penultimate research proposal to class for peer review.
 - Submit your fellowship grant application – NSF: 2014.10.29
- Complete the research *Advisor Selection* process.
 - 2014.11.30: Submit a completed Advisor Selection Form to the Graduate Committee Chair (including a list of top three most preferred advisors).
- Complete *Ethics Training*.
- Complete *Safety Training*.
- Complete a preliminary *Program of Study*.

Advisor Selection: To file a graduate study program, a student must find a research advisor. Prior to the Fall term, all of the faculty members in CBEE with active research programs will provide a seminar and a research poster in which they will present their current research projects. Their

interests and needs for students on projects will be described in each presentation.

During the fall term, students should make appointments to meet with those faculty members with whom they share interests. Be sure to discuss financial support options with the faculty member when determining a proper fit and project.

After meeting with the faculty members, the student must present a completed Advisor Selection Form to the Graduate Committee Chair (including a list of top three most preferred advisors) by 2014.11.30. The selection process will be finalized prior to the start of Winter term. The Graduate Committee Chair will send a letter to each student to inform him/her of the results of this process. The student must sign the "letter of intent" to work with the specific advisor. No students are allowed to change his/her advisor after signing the letter, unless the student is placed under extraordinary circumstances. If a student needs to change his/her advisor because of funding reasons, the student must file a petition with the Graduate Committee. The Graduate Committee will make a decision on a case-by-case basis.

If a student fails in finding a research advisor, the student may seek for a research advisor outside the School of CBEE. However, any research project offered in a different program must be approved by the School of CBEE to obtain an advanced degree in chemical or environmental engineering. If no advisor is determined, the student may transfer degrees to an MEng (coursework only) course of study and complete the program without a project.

For MS and PhD students, the Graduate Committee Chair is the advisor for all the new graduate students until they find their own research advisors. Whenever students have problems, they should refer all the problems to either the School Manager or Graduate Committee Chair.

Ethics Training: As an OSU and CBEE graduate student you will be required to complete the Responsible Conduct or Research for Engineers course offered by the Collaborative Institutional Training Initiative (CITI). OSU has contracted with this organization to offer ethics training for all graduate researchers. To complete the ethics course, find the CITI home page at the following url, and register as a new user. You will need your OSU ID number and our campus address, which is 102 Gleeson Hall, Corvallis OR, 97331.

<https://www.citiprogram.org/default.asp?language=english>

Register for the Responsible Conduct for Research for Engineers course, which contains 14 modules with a quiz after most of the modules. Modules should take about 30-45 minutes to complete. Send your completion report to Elisha Brackett (Elisha.brackett@oregonstate.edu), and she will note the training in your graduate student file. You will also have to provide this information on your program of study form under the ethical research training box. Your Program of Study will be held from submission to the Graduate School until completion of this training.

Safety Training: OSU's Environmental Health and Safety department has prepared 8 modules related to safety training for researchers working in laboratories. CBEE is committed to a safe work

environment and is using these modules to facilitate safety training.

As a CBEE graduate student you will be required to watch, learn and reflect on these training videos. These videos can be found at the following url:

http://oregonstate.edu/ehs/training/lab_safety_training.

Below is a list of the videos of the videos, which total 97 minutes.

- Modules 1 and 2: Program Overview and Safety Concepts (37 minutes)
- Modules 3 and 4: Safety Equipment and Supplies (29 minutes)
- Modules 5 and 6: Chemical Use and Hazardous Waste (19 minutes)
- Modules 7 and 8: Emergency Response and Additional Information (12 minutes)

Over the Fall term watch each of these videos and prepare a summary of the important concepts and information in each video (four summaries total) using the template found in the Graduate Student Handbook to the Graduate Committee Chair. The chair of the graduate committee will review your summaries and note in your file when you have completed the training.

After you have completed the watching the four videos, acknowledge your training by completed the EH&S web acknowledgement form:

http://oregonstate.edu/ehs/training/lab_safety_training_acknowledgement

Program of Study: All students are required to complete a Program of Study outlining the courses they will take to complete their degree requirements. The Program of Study is a contract between the student, the School, and the University (Graduate School). For degrees within the Master of Science (M.S.) Program, students must consult and receive approval (signature) from the individual major professor and minor professor. In the case of Doctoral Program (Ph.D.) degree seeking students, all committee members must approve the Program of Study. Students must then receive the signature of the School Head prior to submitting the form to the Grad School (see Sections: Master's Program and Doctoral Program). The Program form must be completed before you complete 18 credit hours of graduate study.

Prepared forms signed by the advisor can be dropped off in the main office with the School Manager to obtain the School Head's signature and be turned in to the Graduate School.

Visit the Grad School's "Forms" website for a blank form and instructions on how to fill out the Program of Study. You may need to reference the Graduate Catalog for further details.

http://oregonstate.edu/dept/grad_school/forms.php#program

Tenative Course Outline (2014.10.17):

Date	Time	Topic	Presenter
2014.09.29	1400-1430	Introduction, Rotation Signup	Travis Walker
	1430-1500	Navigating Graduate School	Jeff Nason
	1500-1550	Fellowship Overview: Financing Your Graduate Education	Fran Saveriano & Valery King
2014.10.06	1400-1500	Fellowship Workshop	Joe Baio
	1500-1550	Literature Review*	Margaret Mellinger
2014.10.13	1400-1500	Peer Reviews	GSA
	1500-1550	Bibliographic Management [†]	Margaret Mellinger
2014.10.20	1400-1550	Peer Reviews	GSA
2014.10.27	1400-1550	TBA	Jodie L. Lutkenhaus
2014.11.03	1400-1500	The merging of nanoscale engineering and fundamental science for advanced functionality	David McIlroy
	1500-1550	The physics of electronic transport in 1D-nanostructures: From one to a disordered array of many	David McIlroy
2014.11.10	1400-1500	Post Grad School Job Hunt	Phil Harding, Lynn Ekstedt, & Skip Rochefort
	1500-1550	TBA	Carmem Pfeifer
2014.11.17	1400-1500	Ethics	Lewis Semprini
	1500-1550	Lab Safety	Karl Schilke & EH&S
2014.11.24	1400-1430	4th Year Presentation	Anna Herring
	1430-1500	4th Year Presentation	
	1500-1550	IT	Paul Montagne
2014.12.01	1400-1550	TBA	Norm Morrow

* Autzen Classroom, Valley Library 2082

[†] Autzen Classroom, Valley Library 2082