

Course Syllabus

CHEN 4802 Tissue Engineering and Medical Devices
Spring 2016

Meeting Time: T/Th, 1:00 – 2:15 pm

Meeting Place: BIOT A108

Instructor: Melissa J. Mahoney, Ph.D.

Email address: melissa.mahoney@colorado.edu

Office Hours: Office hours are TBD and will be posted on the course website. I am not regularly on campus so the best way to reach me is to send an email. During the week I usually return emails within 24 hours. On weekends, expect a reply on Monday.

Course Text: Material for this course will be drawn from multiple sources. All material is electronically available for download on the course website. Some files are large. Keep this in mind if you have a slow internet connection (may be best to download them on campus).

Course Purpose: The purpose of this course is to develop a basic understanding of quantitative and qualitative aspects of tissue engineering and medical devices. Particular emphasis will be placed on topics of potential importance and significance to chemical and biological engineers.

Teaching/Learning Methods: Most of what you will learn in this course you will do so through the reading of the electronic resources posted on the course website. Class meetings should be thought of as supplemental to the reading materials. During class, I will emphasize the important and/or confusing concepts and expand upon concepts in the reading assignments as well as present interesting topics that are not in the reading assignments. As such, reading is of utmost importance and class attendance is crucial. You should make every effort to read the assigned reading for each class period prior to coming to class.

Course Website: The website will be invaluable for this course and I will be using it extensively to post announcements, homework tips/clarifications, important documents and links, and updated grades throughout the semester.

Email: Email has been deemed by the University of Colorado as an official method of communication. Please make sure you are having your Colorado.edu email forwarded to your main email if you do not use Colorado.edu email. Therefore, anything I announce via email is official. This may include things such as changes to the syllabus, changes to homework assignments, and other important course announcements.

Grade Distribution:

Clicker questions – In class worksheets	5%
Case studies	15%
Homework	10%
Midterm Exam 1	30%
Midterm Exam 2	30%
Final critique	10%

Grading Scale:

90 < A
80 < B < 89
70 < C < 79
55 < D < 69
F < 55

You are guaranteed the indicated letter grade (with a minus) if you have the minimum numerical grade. For example, if your course average is 80, you are guaranteed no worse than a B- in the course. Depending on the final class average, this grading scale may be adjusted, but only in your favor.

Clicker responses (5%): We will be utilizing the ‘clicker’ system during class. Consequently, every student is required to have a ‘clicker’ (iClicker, available from the CU Book Store). During most class periods there will be clicker questions that I will ask to students. It is your responsibility to answer these questions during class. A correct answer will receive 5 points, an incorrect answer will receive 3 points, and no answer will receive 0 points. If there is more than one question, the scores will be averaged such that each daily clicker score has a maximum of 5 points. The scores accumulated during each class session will be averaged over the semester and the 3 lowest scores will be dropped (to account for illnesses and absences). Scores will be normalized at the end of the semester and will account for 5% of the total semester grade. These ‘clicker’ problems are designed to promote class participation and an active learning environment.

Attendance: Attendance is important. I realize that things come up and students are gone from time to time, but please try to make every class. Because I drop the 3 lowest clicker scores, I do not want doctor’s notes, etc., to try to get credit for clicker scores– it is for these reasons that I drop the clickers.

Case studies (15%): Periodically over the course of the semester you will be required to complete a case study assignment (there are 4 in total). Each case study assignment is an abbreviated primary research article that you are required to read and then to answer questions pertaining to it. These are posted online for you to download. Each case study consists of an electronic assignment that is to be completed INDIVIDUALLY by the beginning of class. During the following class period you will work on the remainder of the case study as a group. In order to successfully complete the group portion of the assignment you will need to do some individual preparation ahead of time. In other words, you will need to come to class with your own individual answers to the group questions written out. You will then be given some time during class to talk about the answers with the goal of coming up with a final set of answers that will be submitted by your group at the end of the class period.

Homework (10%): Homework will be due most often on a Friday by 12:00. The dates that HW assignments are due are posted on the course website. The teaching assistant will designate a location for turning in the homework set each week. All HW assignments are to be completed in groups of 3 to 4.

Exams (60%): There will be two exams that will be administered in class. The exams will be created such that they adequately test students' knowledge. If you understand the homework and the material covered in lecture, then you should do well on the exams. Although challenging, they will not be designed to be 'tricky'. The exams will be given in class on the dates posted on the course schedule. If you have an excused conflict with an exam date please notify me as soon as possible by email so that we can make alternate arrangements.

Final project (10%): After spring break you will be assigned a primary research article that you will read and answer questions pertaining to it. Your final project is due by Sunday May 1st at 7:30 (the time of your final exam). You must email me an electronic copy of your final project if you wish to receive credit for it. I will NOT accept any hard copies.

Honor Code

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to [the academic integrity policy](#) of the institution. Violations of the policy may include: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access, clicker fraud, resubmission, and aiding academic dishonesty. All incidents of academic misconduct will be reported to the Honor Code Council (honor@colorado.edu; 303-735-2273). Students who are found responsible of violating the academic integrity policy will be subject to nonacademic sanctions from the Honor Code Council as well as academic sanctions from the faculty member. Additional information regarding the academic integrity policy can be found at <http://honorcode.colorado.edu>.

Students with Disabilities

If you qualify for accommodations because of a disability, please submit to your professor a letter from Disability Services in a timely manner (for exam accommodations provide your letter at least one week prior to the exam) so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities. Contact Disability Services at 303-492-8671 or by e-mail at dsinfo@colorado.edu. If you have a temporary medical condition or injury, see [Temporary Injuries guidelines](#) under the Quick Links at the [Disability Services website](#) and discuss your needs with your professor.

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. In this class, *please bring any conflicts to my attention as soon as possible so that we can make accommodations.*

See [campus policy regarding religious observances](#) for full details.

Learning Environment

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 differences of race, color, culture, religion, creed, politics, veteran's status, sexual orientation, gender, gender identity and gender expression, age, disability, and nationalities. 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](#) and [the student code](#).

Discrimination and Harassment

The University of Colorado Boulder (CU-Boulder) is committed to maintaining a positive learning, working, and living environment. CU-Boulder will not tolerate acts of sexual misconduct, discrimination, harassment or related retaliation against or by any employee or student. CU's Sexual Misconduct Policy prohibits sexual assault, sexual exploitation, sexual harassment, intimate partner abuse (dating or domestic violence), stalking or related retaliation. CU-Boulder's Discrimination and Harassment Policy prohibits discrimination, harassment or related retaliation based on race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. Individuals who believe they have been subject to misconduct under either policy should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127. Information about the OIEC, the above referenced policies, and the campus resources available to assist individuals regarding sexual misconduct, discrimination, harassment or related retaliation can be found at the [OIEC website](#).