CBEMS 249B: Colloid Science and Engineering  
Winter Quarter, 2008

Course Schedule:  (Tu, Th) 9:30 – 10:50 AM in HICF 100Q

Web Page:  https://eee.uci.edu/08w/15350/

Instructor:  Professor Ali Mohraz  
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Office Hours:  Wednesday, 3:00 – 4:30 PM in 744F Engineering Tower, or by appointment

Topics:  Course topics include chemistry of colloids, thermodynamics of surfaces, basic molecular and colloidal forces, phase behavior of colloidal suspensions, Brownian motion and suspension dynamics, rheology of complex fluids, structural and dynamical probes, and advanced topics.

References:  We do not have a required textbook for this course. Your lecture notes, supplemental handouts distributed during lectures, and materials provided via the course website, will be your primary source of information. However, the following books may be used as references for additional reading, and are available at the Science Library reserve desk:

1. Foundations of Colloid Science by R.J. Hunter, Oxford University Press.

Prerequisites:  A basic understanding of physics and mechanics, general chemistry, thermodynamics, and transport phenomena is necessary for this course.

Grading Criteria:  
Midterm………………………………………………………………………………25%
Final…………………………………………………………………………………35%
Homework…………………………………………………………………………15%
Project…………………………………………………………………………………25%

Academic Honesty:  The complete policy statement on academic honesty is available at: http://www.editor.uci.edu/catalogue/appx/appx.2.htm
There is also a link to this policy on the course website. You are strongly encouraged to read through this policy, which will be strictly enforced. Any occurrence of academic dishonesty will result in no credit for the assignment or exam in question.
In this class, student discussions regarding the lecture topics are allowed. However, the homework submitted for grading must be the student’s individual work.
The instructor will not tolerate ANY acts of academic dishonesty.
Exams: There will be a 90-minute midterm exam tentatively scheduled for the week of February 4-8, and a 2-hour final exam on Thursday, March 20 at 8:00 AM. Both exams will be close-book, but you will be allowed to use your lecture notes and handouts. Cellphones, text-messaging and other communication devices, and laptops are not allowed during the exams. If extraordinary circumstances require that you use these devices, prior approval of the instructor must be obtained.

Homework: Several homework sets will be given throughout the term. General discussions regarding the homework problems are allowed only before you start working out the solution on paper. Direct collaboration, copying, or accessing any printed solution manuals are considered violations of academic honesty, and will be treated as such.

Homework solutions must be written out neatly so that they are easy to follow. The instructor reserves the right to assign a grade of zero to a homework that is difficult to follow. All steps in the solution must be included in the write-up for full credit to be received. All disputes over grading of homework or exams must be referred to the instructor within 7 days after materials are returned. Homework that is submitted late will be docked 15% of the maximum points for each day the assignment is late.

Project: The project will involve reading and analysis of an advanced topic of your choice from the colloids literature. Example topics will be provided, but you are not limited to the examples and are welcome to choose your own topic. Details to follow throughout the quarter.