Chemistry 730: Chemical Biology  
Spring 2013

Prerequisites  
Chemistry 430, Introduction to Biological Chemistry or equivalent. *This prerequisite is freely waived for students willing to learn independently the underlying biochemistry needed to understand course material.*

Course Meets  
Tues-Thurs 9:30 – 10:45  
G307 Venable

Faculty Instructor  
Marcey Waters  
Caudill 219  
mlwaters@unc.edu

Office Hours  
By appointment. Please email me with “Chem 730” in the subject line and suggest 2-3 times that would work for you. Tues and Wed afternoons will generally work best for me.

Literature  
We will focus on 1-2 key literature articles per week, plus a review article for orientation. PDF copies of all papers and other class information will be posted on Sakai:  
https://www.unc.edu/sakai/

To access journal articles in the UNC electronic databases from off-campus (requires an onyen login), you can either use a special version of PubMed, linked to a UNC proxy:  

or place the following URL in front of the link to the article of interest:  
http://libproxy.lib.unc.edu/login?url=

Course Goals  
The overall objective of this course is to facilitate development of students into strong scientific thinkers and writers, while focusing on the broad field of Chemical Biology. Students, under the guidance of the faculty advisor, will make many of the class presentations. Intensive, short, writing assignments interperse the literature discussions.

Writing  
Scientists write concise, accurate and persuasive arguments often. Such "arguments" include research summaries, manuscripts, graduate student fellowships, research proposals and grants, dissertation proposals, and doctoral theses. Such writing requires that one understand a scientific problem, analyze the most important intellectual issues, and communicate succinctly and accurately.

To develop these skills, we will focus primarily on writing scientific abstracts. For this class, abstracts are limited to 200 words and should be turned in using double-spacing, 1.25 inch margins, and with the student author and Abstract title provided clearly at the top of the page.
Abstracts must be written *in the student's own words* without copying or paraphrasing the initial work.

A second type of assignment will be to review a manuscript. Critical analysis of others’ research is an essential skill. We will discuss strengths and weaknesses of the literature covered in the course in preparation for this type of writing assignment.

**Student Presentations**
In the final third of the course, significant elements of the course material will be presented by student groups, with guidance by the faculty advisor. Each group will present their paper(s) over approximately 1.5 hours, spanning two class periods. Prior to giving their presentation, group members need to meet with the faculty advisor at least twice. In the first meeting, the group needs to have already met and created a detailed draft outline of the main points they intend to cover. By the second meeting, the class notes should be completely written out, in detail. Each group is welcome to meet with the faculty advisor as many times as necessary. All group members should contribute equally to the presentation to the class.

**Final Exam**
*May 7 (Tuesday) at 8am.* The final exam will consist of 4 questions from a list of about 6, given to you in advance. The required questions will be answered during class in "essay" format without notes. A clean copy of the required questions will be provided. Each question is evaluated separately.

**Evaluation**
Students will be evaluated based on four criteria, each worth 25% of the course grade. The components are: the class presentation, writing assignments, the cumulative final exam, and class preparedness and participation. To help shy folks (and others), the faculty advisor will routinely call on students in class.

**Honor Code**
Policy adopted by the faculty of the Department of Chemistry (9 Sept 97): *Since all graded work (including homework to be collected, quizzes, papers, mid-term examinations, final examinations, research proposals, laboratory results and reports, etc.) may be used in the determination of academic progress, no collaboration on this work is permitted unless the instructor explicitly indicates that some specific degree of collaboration is allowed. This statement is not intended to discourage students from studying together or working together on assignments which are not to be collected.*

Students are encouraged to work together at any time and copiously, except on written assignments and the final exam.