

# Advanced Biochemistry/Chemical Biology – CHM 4034 Syllabus

CHM 4034-5250, Fall 2011, Tuesday and Thursday, 4:05 pm

Classroom: LEI 242

Professor Rebecca A. Butcher, butcher@chem.ufl.edu, Office LEI 340

TA: Colin Conerly, conerly@chem.ufl.edu, Office LEI 148

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**Course Description.** We will cover advanced topics in biochemistry and chemical biology.

**Prerequisites.** CHM 3218 (or its equivalent).

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**Topics to be covered:** Physical properties of nucleic acids, amino acids and proteins; DNA/RNA synthesis; Translation; Enzymes and point mutagenesis; Peptide synthesis; Unnatural amino acids; DNA damage & repair; Directed evolution of enzymes; Natural product biosynthesis; Antibiotics; Chemical genetics; Small-molecule/drug discovery

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**Textbook:** Readings will come from review articles and research articles (references will be provided in class). **Principles of Biochemistry** by David Nelson and Michael Cox, 5<sup>th</sup> Edition, WH Freeman and Company, 2008 will provide a review of basic background, but is not necessary for the course.

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**Problem Sets.** There are no graded problems sets. However, I will provide a problem set approximately a week before each exam that will help you to study the material. We will go over the answers in review sessions, and an answer key will be provided.

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**Grading.** There will be 3 midterm examinations and one final exam. The lowest midterm score will be dropped. Your grade will be based on the two remaining midterm scores (25% each), the final exam (25%), as well as a literature presentation (15%) and an in-class participation grade (10%). The midterms are not designed to be cumulative; but you may expect some natural amount of material from a previous midterm to be important and necessary.

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**Office Hours.** Proposed office hours are Fridays 3-4 pm in Leigh Hall 340.

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**Makeup Examinations.** Since the lowest exam score will be dropped, no makeup examinations will be given.

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**UF grading policies for assigning grade points.** Information can be found on the undergraduate catalog web page <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

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**Accommodations for students with disabilities.** Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.

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**UF Honor Code:** We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.

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“The university requires all members of its community to be honest in all endeavors. A fundamental principle is that the whole process of learning and pursuit of knowledge is diminished by cheating, plagiarism and other acts of academic dishonesty. In addition, every dishonest act in the academic environment affects other students adversely, from the skewing of the grading curve to giving unfair advantage for honors or for professional or graduate school admission. Therefore, the university will take severe action against dishonest students. Similarly, measures will be taken against faculty, staff and administrators who practice dishonest or demeaning behavior.”

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