Bioorganic Chemistry (Chem 468)
Nguyen Engineering Building, Room 1107
Monday Nights, 4:30-7:10
Instructor: Barney Bishop
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Office Hours: Thursday afternoons 3:00-4:30 or by appointment

Recommended Texts: No specific text is recommended. However, Biochemistry and Organic Chemistry texts would provide good supplemental reading for several lectures. Selected books will be placed on reserve in the library (Johnson Center) throughout the semester.

This course is intended to provide students with a basic understanding of the chemical nature of biomolecules and biomacromolecules. As part of this course, students will be introduced to biomolecules such as amino acids, proteins, carbohydrates and lipids. Specifically, lectures will focus on their biophysical properties, synthesis and modification. Throughout the semester, practical examples and visual aids will be employed in order to emphasize the significance and ramifications of the subject matter.

Goals of this course:
1.) Introduce/reintroduce students to amino acids, peptides, proteins and their biochemical and physical properties.
2.) Introduce students to the chemistry behind peptide synthesis, peptide mimetics, combinatorial chemistry, protein modification and applications for enzymes in chemical synthesis.
3.) Introduce/reintroduce students to carbohydrates and their biochemical properties
4.) Introduce students to the chemistry behind carbohydrate chemistry and oligo/polysaccharide chemical synthesis.

The bulk of the material presented in lectures will be drawn from several sources, and where appropriate reference information for primary source material will be given to the students. When lectures are drawn primarily from a text book that has placed on reserve, it is recommended that students read this material before lecture if possible and revisit sections in the chapter that are stressed in the lecture.

Grading and Examination Policy
For students enrolled in CHEM 468, grades will be based on:
• Two in-class or take-home exams (03/04 and 04/22) and a non-cumulative final exam. Students are primarily responsible for material covered in the lectures and selected reading material. Each of these exams will contribute equally (25%) to your final grade in the class. A grade of 0 (zero) will be assigned for missed exams.
• Papers will be assigned to be read and then discussed in class, with paper discussion being lead by assigned graduate students. Students will be expected to come to class having read the papers. Class participation and contribution in these discussions will contribute the remaining 25% of your final grade.

For graduate students enrolled in CHEM 568, grades for will be based on:
• Two in-class or take-home exams and a final exam as described above for CHEM 468.
• In addition to the exams, graduate students will be assigned to write short reports for selected papers, and will be required to lead the in class discussion on those paper(s).
• The exams will each contribute 25% of your final grade and the reports/paper discussions will account for the remaining 25% of your grade for the class.

Note: Please turn off cell phones and beepers in this class.