**Organic Chemistry/Biochemistry I** Fall 2016
CHM 3217 section 064B T/Th 8:30-10:25 Turl L011

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**Instructor:** Steven Bruner bruner@ufl.edu Office: Leigh Hall 404

**Office hours:** T 2-3pm, W 10-11am and F 3-4pm.

**Text:** *Organic Chemistry with Biological Applications*, by John McMurry, 3rd Edition, Cengage (2015)

*Recommended*: Molecular model kit (Kit #1 suggested): http://www.darlingmodels.com

**Course Description:** This is a rigorous, one-semester overview of the structure, properties, and reactions of organic compounds with a focus of biologically relevant systems. This is the first half of a two-semester sequence in organic/biochemistry. The prerequisites for this course are CHM 2046 or CHM2047 or CHM2051 and CHM 2046L, or the equivalent.

**Attendance:** You should plan to arrive at class on time and attend all lectures – you'll find it is easier to keep up if you are attending regularly and are actively engaged in the classroom. Make-up exams will only be granted for absences consistent with UF policy. See UF policy: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.

**Course grading**: There will be 5 short quizzes (~20 minute), two exams and one cumulative final given in class on the dates indicated on the schedule. The lowest quiz grade will be dropped (no make-up quizzes) and the remaining four will count toward 25% on the final grade. The two exams will count for 50% and the final, 25%. Course grades will be assigned on a curve with the following percentages used for guidance: 100-85% A, 84-72% B, 71-60% C, 59-50% D, 50-00% F. For information on UF's Grading Policy, see: http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html

**Practice problems:** Suggested problems relevant to the quizzes and exams will be listed every week. Practice at problem solving is a common and proven way to succeed in this course.

**Academic honesty**: Any act of academic dishonesty will be reported to the Dean of Students, and may result in failure of the assignment in question and/or the course. For University of Florida's honor code, see http://www.dso.ufl.edu/sccr/ honorcodes/honorcode.php.

**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. Contact the Disability Resources Center (http://www.dso.ufl.edu/drc/) for information about available resources for students with disabilities.

**TA office hours:** There are two teaching assistants for this course (Prabhanshu Tripathi, ptripathi@chem.ufl.edu and Sandy Guntaka, nguntaka@chem.ufl.edu. In addition to their office hours (TBA), teaching assistants will be available in the Organic Chemistry Learning Center in Flint 258, Monday through Friday.

Approximate Course Schedule

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| **1** | 8/23/2016 | | Intro, Ch 1 Structure & Bonding |
| **2** | 8/25/2016 | | Ch 1 & 2 lecture Polar covalent bonds; Acids/Bases |
| **3** | 8/30/2016 | | Ch 1 & 2 lecture |
| **4** | 9/1/2016 | | Ch 3 Organic Compounds: Alkanes & Stereochemistry |
| **5** | 9/6/2016 | quiz #1 | Ch 3 & 4 Organic Compounds: Cycloalkanes & Stereochemistry |
| **6** | 9/8/2016 | | Ch 4 lecture |
| **7** | 9/13/2016 | | Ch 5 Stereochemistry at Tetrahedral Centers |
| **8** | 9/15/2016 | | Ch 6 An overview of Organic Reactions |
| **9** | 9/20/2016 | | Ch 7 Alkenes and Alkynes |
| **10** | 9/22/2016 | quiz #2 | Ch 7 lecture |
| **11** | 9/27/2016 | | Ch 7 & 8 lecture Reactions of Alkenes and alkynes |
| | 9/29/2016 | exam #1 | |
| **12** | 10/4/2016 | | Ch 9 Aromatic Compounds |
| **13** | 10/6/2016 | | Ch 9 lecture |
| **14** | 10/11/2016 | | Ch 10 Structure Determination: Mass Spec and IR Spectroscopy |
| **15** | 10/13/2016 | | Ch 11 Structure Determination: Nuclear Magnetic Resonance |
| **16** | 10/18/2016 | | Ch 12 Organohalides: Nucleophilic substitutions and eliminations |
| **17** | 10/20/2016 | quiz #3 | Ch 12 & 13 Alcohols, Phenols and Thiols: Ethers and Sulfides |
| **18** | 10/25/2016 | | Ch 13 lecture |
| **19** | 10/27/2016 | | Ch 14 lecture Aldehydes and Ketones: Nucleophilic addition Reactions |
| **20** | 11/1/2016 | | Ch 14 lecture |
| **21** | 11/3/2016 | | Ch 15 lecture Carboxylic Acids & Nitriles |
| **22** | 11/8/2016 | quiz #4 | Ch 16 lecture Carboxylic acid derivatives: Nucleophilic acyl substitution |
| **23** | 11/10/2016 | | Ch 17 lecture Carbonyl -substitution and Condensation Reactions |
| | 11/15/2016 | exam #2 | |
| **24** | 11/17/2016 | | Ch 17 & 18 lecture Amines and Heterocycles |
| **25** | 11/22/2016 | | Ch 18 lecture |
| **26** | 11/29/2016 | quiz #5 | Ch 19 Biomolecules |
| **27** | 12/1/2016 | | Ch 19 Biomolecules |
| | 12/6/2016 | Final exam | |