

CHM 3217 – Organic Chemistry/Biochemistry 1 (Section 1199 – 4 credit hours)
Spring 2014: TR 3-4 (9:35-11:30am), T in Little 223, R in Flint 113

Instructor: Dr. Tammy A. Davidson
Office Hours: T and R 12:50-1:40pm, F 9:35-10-25am
(or other times by appointment)

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

Text: *Organic Chemistry with Biological Applications*, by John McMurry, 2nd Edition," Brooks/Cole (2011)

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

Sakai Site: <http://lss.at.ufl.edu>. Login with Gatorlink ID and password. This site will be updated regularly with announcements, lecture notes, practice materials, exam scores, and other information.

Attendance and Lecture Etiquette: This is a fast paced, 4-credit course. 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 lecture regularly. You'll also find that you will do better if you are actively engaged in the classroom. Please no personal electronics or texting during the lecture. We will have a short break after the first hour for you to reconnect.

Quizzes and Progress Exams: Five quizzes and two exams will be given in class on the following dates during the semester:

Quizzes: January 16, January 30, February 13, March 20, and April 3

Exams: February 27 and April 22

Quizzes and Progress Exams will be given only at the scheduled times. There will be no makeup quizzes given in this course. Students who miss an exam due to extreme, unusual circumstances (serious illness requiring doctor's attention, death in the family, etc.) will be given the option to take a comprehensive, cumulative makeup exam at the end of the semester, and that score will be used to replace the missed progress exam. This option is only available **if I am notified within 24 hours of missing the exam and if proper documentation (doctor's excuse, funeral program, etc.) is provided**. Please note that inadequate preparation because of other academic or extracurricular obligations is not considered to be a viable excuse for special consideration.

Grading Information: Grades will be calculated using your best 4 quiz scores (at 25 points each), and your two progress exam scores (at 100 points each), for a total of 300 points available in this course. Final grades in the course will be assigned using the following grading scale: A ≥ 90.0%, A- = 87.0-89.9%, B+ = 84.0-86.9%, B = 77.0-83.9%, B- = 73.0-76.9%, C+ = 70.0-72.9%, C = 63.0-69.9%, C- = 60.0-62.9%, D+ = 57.0-59.9%, D = 50.0-56.9%, E < 50.0%. There will not be a curve beyond that already included within the grading scale. UF policies for assigning grade points can be found on the Registrar's webpage.

Re-Grades: To ensure academic honesty and accuracy in grading, all quizzes and exams will be photocopied after grading and prior to being returned to students. All re-grade requests must be submitted in writing to Dr. Davidson in Sisler 429 and must have a cover sheet (available on the Sakai site) that details your concerns. **Note:** The entire quiz or exam will be re-graded to ensure accuracy, and your score may go up or down with the re-grade. All re-grade requests must be made within three days from the date that the exam is returned in class.

Course Schedule: The course will cover chapters 1 through 18, with roughly 1.5 lecture days per chapter. The following schedule will be followed as closely as possible.

Dates	Reading/Activity	Topics
January 7	Ch. 1	Ch. 1: Structure and Bonding
January 9	Ch. 1, 2	Ch. 2: Polar Covalent Bonds: Acids and Bases
January 14	Ch. 2	
January 16	Quiz 1 , Ch. 3	Ch. 3: Organic Compounds: Alkanes and Their Stereochemistry
January 21	Ch. 3, 4	Ch. 4: Organic Compounds: Cycloalkanes and Their Stereochemistry
January 23	Ch. 4	
January 28	Ch. 5	Ch. 5: Stereochemistry at Tetrahedral Centers
January 30	Quiz 2 , Ch. 5	
February 4	Ch. 6	Ch. 6: An Overview of Organic Reactions
February 6	Ch. 6, 7	Ch. 7: Alkenes and Alkynes
February 11	Ch. 7, 8	Ch. 8: Reactions of Alkenes and Alkynes
February 13	Quiz 3 , Ch. 8	
February 18	Ch. 8, 9	Ch. 9: Aromatic Compounds
February 20	Ch. 9	
February 25	Ch. 10	Ch. 10: Structure Determination: Mass Spectrometry and Infrared Spectroscopy
February 27	Midterm Exam	Chapters 1-10
March 4 and 6	Spring Break – no classes	
March 11	Ch. 11	Ch. 11: Structure Determination: Nuclear Magnetic Resonance Spectroscopy
March 13	Ch. 12	Ch. 12: Organohalides: Nucleophilic Substitutions and Eliminations
March 18	Ch. 12, 13	Ch. 13: Alcohols, Phenols, and Thiols: Ethers and Sulfides
March 20	Quiz 4 , Ch. 13	
March 25	Ch. 14	Ch. 14: Aldehydes and Ketones: Nucleophilic Addition Reactions
March 27	Ch. 14	
April 1	Ch. 15	Ch. 15: Carboxylic Acids and Nitriles
April 3	Quiz 5 , Ch. 16	Ch. 16: Carboxylic Acid Derivatives: Nucleophilic Acyl Substitution Reactions
April 8	Ch. 16, 17	Ch. 17: Carbonyl Alpha-Substitution and Condensation Reactions
April 10	Ch. 17	
April 15	Ch. 17, 18	Ch. 18: Amines and Heterocycles
April 17	Ch. 18	
April 22	End-of-Term Exam	Chapters 1-18

Plan for Success, or Who's "Brilliant" Idea Was It for Me to Take Organic Chemistry, Anyway? Good question! What is the problem with organic chemistry that causes students to view the course with so much anxiety? Maybe you've heard comments from students who have recently finished the course. Something like: "You have to memorize five gazillion reactions, and then they don't even ask you the ones you've had in class on the exams!" Everybody has heard the horror stories of memorizing, and to be honest, there is some truth to it. You *will* have to memorize some things, but you shouldn't try to memorize everything - what a waste of time! Instead, you will need to learn some basic properties of atoms and molecules, principles that describe how and why reactions take place, and a number of reaction types that can later be generalized to include the various reactions of organic compounds that you will encounter throughout the

course. You'll be expected to learn about and *really understand* the ground rules so that you can apply them in a logical way to completely new kinds of situations, and come up with sensible answers. **Note:** This course is cumulative by nature – the ideas and concepts you learn in Chapter 1 will still be important when we get to Chapter 18, and as you advance into Biochemistry. Do your best to really understand the fundamentals and it will make your experience with organic chemistry better, and maybe even fun.

So what is the secret? Actually, there is nothing secret about it. You'll need to be ready to work hard and develop a good study plan. Cramming the day before the exam does not work for this course. At the very least, do something for this class every day (OK, maybe you can skip one day a week), maybe even an hour or two each day. Ideally, you should read ahead before class, you should go over your notes as soon as possible after class to fill in missing information, and every day you should work problems. Lots and lots of problems. In chapter problems, end of chapter problems, problems you make up for each other. Do as many as you can – really do them – and come ask for help when you are confused. This book has great practice problems and you should use them to your advantage. I will provide a list of suggested problems for each chapter as the semester goes along. Additional help with the problems can be obtained during office hours and in the CLC in Flint Hall.

TA Office Hours: In addition to my own office hours, teaching assistants will be available in the Organic Chemistry Learning Center in Flint 258, Monday through Friday. The daily schedule will be posted on the Sakai site. Please take advantage of these office hours – we're here to help you learn as much as you can.

Honor Code: The following statements taken from the University of Florida Honor Code apply to all work in this course.

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

On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied:

On my honor, I have neither given nor received unauthorized aid in doing this assignment.

Special Needs: Any student with a special need for an accommodation in test-taking or note-taking should register with the Disability Resource Center through the Dean of Students Office. The DRC will provide the student with documentation for presentation to the instructor. Anyone anticipating the need for special accommodation should speak with the instructor early in the semester.

Good luck, work hard, and don't be afraid to ask for help when you need it!!