CHM 3217 – Organic Chemistry/Biochemistry 1 (Section 1199 (11072) – 4 credit hours)
Spring 2019: TR 3-4 (9:35-11:30am) in JHH 221

Instructor: Dr. Tammy A. Davidson
Office Hours: T and R 11:45am-12:30pm, W 10:40-11:30am (or other times by appointment)
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Course Description and Prerequisites: This course is a rigorous, one-semester overview of the structure, properties, and reactions of organic compounds, and is equivalent to taking the CHM2210/2211 sequence. This is the first half of the CHM3217/3218 sequence – CHM3217 is the organic chemistry component, whereas CHM3218 is the biochemistry portion. 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, 3rd Edition," Cengage (2015)

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

Canvas Site: http://elearning.ufl.edu. Login with Gatorlink ID and password. This site will be updated periodically 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.

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.

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

Quizzes: January 17, January 31, February 14, March 21, and April 4
Progress Exams: February 28 (during class class) and April 29 (12:30-2:30pm)

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.) need to contact the instructor **within 24 hours of missing the exam to discuss their makeup options, and also need to provide proper documentation (doctor's excuse, funeral program, etc.) for the absence**. 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 grading policies are provided at https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx.

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

Dates	Reading/Activity	Topics
January 8	Ch. 1	Ch. 1: Structure and Bonding
January 10	Ch. 1, 2	Ch. 2: Polar Covalent Bonds: Acids and Bases
January 15	Ch. 2	
January 17	***Quiz 1,*** Ch. 3	Ch. 3: Organic Compounds: Alkanes and Their Stereochemistry
January 22	Ch. 3, 4	Ch. 4: Organic Compounds: Cycloalkanes and Their Stereochemistry
January 24	Ch. 4	
January 29	Ch. 5	Ch. 5: Stereochemistry at Tetrahedral Centers
January 31	***Quiz 2***, Ch. 5	
February 5	Ch. 6	Ch. 6: An Overview of Organic Reactions
February 7	Ch. 6, 7	Ch. 7: Alkenes and Alkynes
February 12	Ch. 7	
February 14	***Quiz 3***, Ch. 8	Ch. 8: Reactions of Alkenes and Alkynes
February 19	Ch. 8	
February 21	Ch. 9	Ch. 9: Aromatic Compounds
February 26	Ch. 9	
February 28	***Progress Exam 1***	***Chapters 1-9***
March 5 and 7	***Spring Break – no classes***	
March 12	Ch. 10	Ch. 10: Structure Determination: Infrared Spectroscopy
March 14	Ch. 11	Ch. 11: Structure Determination: Nuclear Magnetic Resonance Spectroscopy
March 19	Ch. 12	Ch. 12: Organohalides: Nucleophilic Substitutions and Eliminations
March 21	***Quiz 4***, Ch. 12	
March 26	Ch. 13	Ch. 13: Alcohols, Phenols, and Thiols: Ethers and Sulfides
March 28	Ch. 14	Ch. 14: Aldehydes and Ketones: Nucleophilic Addition Reactions
April 2	Ch. 14	
April 4	***Quiz 5***, Ch. 15	Ch. 15: Carboxylic Acids and Nitriles
April 9	Ch. 16	Ch. 16: Carboxylic Acid Derivatives: Nucleophilic Acyl Substitution Reactions
April 11	Ch. 16, 17	Ch. 17: Carbonyl Alpha-Substitution and Condensation Reactions
April 16	Ch. 17	
April 18	Ch. 18	Ch. 18: Amines and Heterocycles
April 23	Ch. 18	(lecture on Polymer Chemistry if time allows)
April 29	***Progress Exam 2***	***Chapters 1-18 (Note: exam is 12:30-2:30pm in JHH 221)***

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 a day or two 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 OCLC in Hernandez Hall.

TA Office Hours: In addition to my own office hours, teaching assistants will be available in the Organic Chemistry Learning Center in JHH 205, Monday through Friday. The daily schedule will be posted on the Canvas 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.*

Accommodations: Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, http://www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester. Note that DRC accommodations cannot be applied retroactively.

Evaluations: Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at https://evaluations.ufl.edu. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results/.

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