

CHM 3217 – Organic Chemistry/Biochemistry 1 (Section 11053 – 4 credit hours)
Fall 2024: TR 3-4 (9:35-11:30am) in SFH 221

Instructor: Dr. Tammy A. Davidson

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Office Hours: Dr. Davidson: Tuesdays and Thursdays, 11:45am-12:45pm in Sisler 429
Teaching Assistants: TBA (will be posted in Canvas)

Course Information

Course Description: 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.

Prerequisites: CHM 2046 or CHM2047 or CHM2051 or CHM2096 and CHM 2046L (or the equivalent)

Required Materials: **ALEKS 360 for Organic Chemistry** which includes access to the textbook, “Organic Chemistry, 7th Edition” by Janice Smith, and the ALEKS Course for online homework/quizzes. Please visit the UF Bookstore All Access Site to Opt In and purchase your required ALEKS code, which will provide access to the ebook of the Smith text as well as the ALEKS platform.

Recommended Materials: Molecular model kit: see <http://www.darlingmodels.com> (Kit #1 suggested, approx. \$25)

E-Learning (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. You will also access the ALEKS system from the link in Canvas in order to complete online assignments. It is your responsibility to check Canvas frequently to make sure that you do not miss important announcements and to ensure that your gradebook is accurate. For computer assistance, visit <https://helpdesk.ufl.edu/>.

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 will find it is easier to keep up if you are attending lecture regularly. You will also find that you will do better if you are actively engaged in the classroom.

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that [can be found here](#).

All students are expected to treat their classmates and instructors with respect while in the classroom and when communicating on Canvas or via email. Please no personal electronics or texting during the lecture. We will have a short break after the first hour for you to reconnect.

Course Communication Policy: We will use the Announcements page in Canvas to post information that is relevant to the class as a whole. Please be sure to check the Canvas announcements regularly for updates. Please use the Canvas email tool or your official UF email for all correspondence. We cannot discuss grading or any other course related issues via external email. We will do our best to respond to emails within 24 hours during the work week (Monday-Friday). You should not expect a reply to any email sent after 5pm or over the weekend (or on a holiday) until the next business day.

Assignments and Grading

Your grade will be based on the following items:

| <u>Item</u> | <u>Weighting</u> |
|--------------------------|------------------|
| ALEKS Adaptive Modules | 20% |
| ALEKS Quizzes | 15% |
| Self-Assessment Wrappers | 5% |
| Midterm Exam | 30% |
| Final Exam | 30% |

Final grades in the course will be assigned using the following grading scale: A \geq 90.0%, A- = 87.0-89.9%, B+ = 84.0-86.9%, B = 81.0-83.9%, B- = 78.0-80.9%, C+ = 75.0-77.9%, C = 72.0-74.9%, C- = 69.0-71.9%, D+ = 66.0-68.9%, D = 63.0-65.9%, D- = 60.0-62.9%, F = 57.0-59.9%, E = 54.0-56.9%, E- = 51.0-53.9%, F- = 48.0-50.9%, F- = 45.0-47.9%, F- = 42.0-44.9%, F- = 39.0-41.9%, F- = 36.0-38.9%, F- = 33.0-35.9%, F- = 30.0-32.9%, F- = 27.0-29.9%, F- = 24.0-26.9%, F- = 21.0-23.9%, F- = 18.0-20.9%, F- = 15.0-17.9%, F- = 12.0-14.9%, F- = 9.0-11.9%, F- = 6.0-8.9%, F- = 3.0-5.9%, F- = 0.0-2.9%. There will not be a curve beyond that already included within the grading scale. [UF grading policies can be found in the Undergraduate Catalog.](#)

ALEKS Assignments: You will complete multiple ALEKS Adaptive Modules to help you master the course content, as well as five ALEKS Quizzes to periodically evaluate your progress in the course. Due dates for each of these items can be found in ALEKS and Canvas.

Self-Assessment Wrappers: These brief assignments will help you evaluate your own preparation and performance in the course. Self-assessing your progress and adjusting your strategies accordingly is what effective learners tend to do. Your responses on these “wrappers” are solely to help you improve and are graded only for completion.

Midterm and Final Exam: These exams are designed to test your mastery of the course content. The exams will be cumulative but will emphasize material covered since the previous exam. Exam dates are given in the course schedule below.

Exam Absence Policy: This course administers all conflicts with scheduled exams in accordance with university policy. University recognized conflicts include, but are not limited to, religious observances, participation in official university activities, military obligations, and court-imposed legal obligations. Students will be given the opportunity to take an early (conflict) exam, which will be given shortly before the scheduled exam provided that the conflict is a) properly documented and b) disclosed to the instructor at least one week before the scheduled exam.

Unpredicted Absences due to medical or sudden family emergencies are not covered under the above conflict exam policy. A student who is absent for an exam due to one of the reasons listed above must contact the instructor as soon as they are able and must [submit documentation to the Dean of Students Office](#). Once the instructor is provided with proper documentation, a make-up exam will be scheduled after a reasonable amount of time, i.e., before the end of the semester. If the student’s documentation is deemed insufficient to excuse the absence, a score of zero will be assigned for the missed exam. Exams missed without any documentation will be assigned a score of zero. Please note that inadequate preparation because of other academic or extracurricular obligations is not considered to be a viable excuse for special consideration.

Course Schedule

The course will cover chapters 1 through 23 (excluding chapters 13, 15, and 16), with roughly 1 lecture day (2 class periods) per chapter. The schedule below will be followed as closely as possible.

| Dates | Reading/Activity | Topics |
|--------------------------------|---|---|
| August 22 | Ch. 1 | Introductions, Learning Strategies, Structure and Bonding |
| August 27 | Ch. 1, 14 | Structure and Bonding, Conjugation and Resonance |
| August 29 | Ch. 2 | Acids and Bases |
| September 3 | Ch. 3 | Organic Molecules and Functional Groups |
| September 5 | Ch. 4, ALEKS Quiz 1 | Alkanes |
| September 10 | Ch. 4, 5 | Stereochemistry |
| September 12 | Ch. 5 | Stereochemistry |
| September 17 | Ch. 6 | Understanding Organic Reactions |
| September 19 | Ch. 7, ALEKS Quiz 2 | Alkyl Halides and Nucleophilic Substitution |
| September 24 | Ch. 7, 8 | Alkyl Halides and Elimination Reactions |
| September 26 | Ch. 8, 9 | Alcohols, Ethers, and Related Compounds |
| October 1 | Ch. 9 | Alcohols, Ethers, and Related Compounds |
| October 3 | Ch. 9, 10/11, ALEKS Quiz 3 | Alkenes and Alkynes |
| October 8 | Ch. 10/11 | Alkenes and Alkynes |
| October 10 | Ch. 12 | Oxidation and Reduction |
| October 15 | Midterm Exam | Chapters 1-12, 14 |
| October 17 | Spectroscopy B and C | IR and NMR Spectroscopy |
| October 22 | Spectroscopy B and C, Ch. 17 | Introduction to Carbonyl Chemistry |
| October 24 | Ch. 17 | Introduction to Carbonyl Chemistry |
| October 29 | Ch. 18 | Aldehydes and Ketones |
| October 31 | Ch. 18, ALEKS Quiz 4 | Aldehydes and Ketones |
| November 5 | Ch. 19 | Carboxylic Acids and Nitriles |
| November 7 | Ch. 20 | Carboxylic Acids and Their Derivatives |
| November 12 | Ch. 21 | Substitution Reactions of Carbonyl Compounds |
| November 14 | Ch. 22, ALEKS Quiz 5 | Carbonyl Condensation Reactions |
| November 19 | Ch. 22 | Carbonyl Condensation Reactions |
| November 21 | Ch. 22 | Carbonyl Condensation Reactions |
| November 25-29 | ***Thanksgiving Break all week – no classes*** | |
| December 3 | Ch. 23 | Amines |
| Friday, December 13 | Final Exam | Chapters 17-23 and Spectroscopy (Note: exam is 10:00am-12:00pm in SFH 221) |

Other Important Information

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 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 23, 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 also be posting reading and homework assignments in McGraw-Hill Connect for each chapter to make sure you are keeping up with the material. Additional help with the problems can be obtained during office hours.

Academic Honesty Guidelines: UF students are bound by The Honor Pledge which states “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. 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.” The Conduct Code specifies a number of behaviors that are in violation of this code and the possible sanctions. [See the UF Conduct Code website for more information.](#) If you have any questions or concerns, please consult with the instructor in this class.

Accommodations: Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center. [See the “Get Started With the DRC” webpage on the Disability Resource Center site.](#) It is important for students to share their accommodation letter with their instructor and discuss their access needs as early as possible in the semester.

Evaluations: Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluer.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

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