## CHM 2200 – Fundamentals of Organic Chemistry (3 credit hours) Spring 2025: MWF Period 2 (8:30-9:20), SFH 221, class #16757

Instructor	Email/Office/Phone	Student Hours
Dr. Martina Sumner	Email in Canvas preferred	MWF period 3 and W 12:30 to 1:30
Associate Instructional Professor	m.sumner@chem.ufl.edu 352-392-0517	All student hours will meet in 308 Leigh Hall
I value your input regarding making this course more accessible and inclusive. Please reach out with suggestions.	Leigh Hall 404	I welcome you to contact me outside of class and student hours. You may email me via canvas and/or see me before or after class.

**Course Description:** This is an elementary one semester organic chemistry course that will expose students to the more important aspects of organic chemistry. The course is intended for people in programs requiring only one semester of organic chemistry. It is not appropriate for chemistry majors or pre-professional students who require two semesters of organic chemistry.

**Prerequisites:** A passing grade in the final semester of general chemistry (CHM 2046 or its equivalent) is a prerequisite for this course. This course, CHM 2200, is not a prerequisite for CHM 2210 (the first semester of the 2-semester organic sequence), nor does it permit a student to go directly to CHM 2211 (the second semester of the 2 semester organic sequence).

Text: W.H. Brown, "Introduction to Organic Chemistry, 5<sup>th</sup> Edition," John Wiley and Sons (2014)
 W.H. Brown, "Student Solutions Manual for Introduction to Organic Chemistry, 5<sup>th</sup> Edition," John Wiley and Sons (2014); Wiley Plus (ebook plus HW). Solution manual is available in 214 LEI from 8 to noon and 1 to 4 every day.

**Exams:** Exams in this course will reflect (and sometimes be identical to) the problems given in the text and on the WileyPlus HW.. There will be three progress exams given on the following dates during the term:

Progress Exam 1 – Wednesday, February 5 (ch 1-4) Progress Exam 2 – Monday, March 3 (ch 5-7) Progress Exam 3 – Friday, April 4 (ch 8-10)

Exams will be given <u>only</u> at the scheduled times. There will be no makeup exams 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.) may request that their final exam score 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. *Note:* Any student who anticipates an exam conflict due to religious observance or University-sponsored business should contact the instructor at least one week prior to the exam to arrange for an early exam.

**Final Exam:** The final exam for this course is scheduled on Wednesday, December 12<sup>th</sup> from 10:00-12:00 PM in SFH 221. The final exam will be cumulative and will cover ideas presented throughout the semester.

Grading Information: Assignments weights are as follows:

Assignment Group	Weight %
3 Progress Exams	60%
Final Cumulative Exam	20%
Quizzes on canvas	10%
Pre-lecture assignments	5%
Homework using Wiley Plus	5%
IClicker	1%
TOTAL	101%

**Progress Exams:** Every student can have an off day occasionally. Therefore, this course is designed to allow for some mistakes without drastically affecting your grade. Before final grades are calculated, the average of your three progress exam scores will replace your lowest progress exam score. Please note that any exam not attempted will receive a grade of zero. It's essential to take each exam seriously and do your best, as there will not be any additional grading curve beyond what is already included in the grading scale. For further information on UF policies related to grade points, please visit the Registrar's webpage.

**Quizzes on canvas:** Weekly timed quizzes will be available on Canvas every Thursday and will remain accessible for 48 hours (due on Friday). You are allowed two attempts for each quiz, so be sure to take advantage of this opportunity.

**Pre-Lecture assignments (PLA):** A PLA is due before each class to help prepare you for that day's session. We will work on the end-of-chapter questions in class using the free iClicker app.

Homework (HW): Homework will be assigned on WileyPlus for each chapter.

Iclicker: Class participation for correctness and attendance (1% extra credit)

Grade scale (note: there is <u>no rounding</u> to your score in Canvas):											
Letter	Α	<b>A-</b>	B+	B	B-	C+	С	D+	D	D-	E
Cutoff	90.0	87.0	84.0	77.0	73.0	70.0	63.0	60.0	57.0	50.0	< 50.0

**Attendance and Lecture Etiquette:** You should plan to arrive at class on time and attend all lectures. Although attendance will not be taken, you'll find it is easier to keep up with the course if you

attend 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 – it is distracting for your classmates and disrespectful to your instructor.

**Review Problems and Tentative Schedule:** In order to be successful in this course, you must be able to apply what you have learned to new situations. The best way to acquire this skill is to work review problems every day. A <u>lot</u> of problems. The more problems you attempt, the more you will learn. All of the study problems contained within the main text of the chapter should be worked. Furthermore, it is strongly recommended that you take the "Quick Quiz" at the end of the chapter, and then start working the "Problems". Do as many as you can…try at least three or four problems in each section. (A great way to study is to do the odd numbered problems as we move through the chapter, then go back and do the even numbered ones as a way to review for the exams.) Answers and explanations for the problems can be found in the Solutions Manual. Additional help with the problems can be obtained during student hours. Please note that homework will not be collected or graded. The course will cover chapters 1-10 and 12-14, and the schedule below will be followed as closely as possible:

Week	Class date	Reading and Quizzes	Topics, HW due dates	Brown and Poon
1	Mon 1/13	Syllabus and ch. 1.1-4	Electron configuration, Lewis structures, VSEPR, VB, MO	Ch. 1
	Wed 1/15	Ch 1.5-7	Organic functional groups	Ch. 1
	Fri 1/17	Ch 2.1-4 Acids and Bases	Review of acids/bases	Ch. 2
2	Mon 1/20	HOLIDAY – no class		
	Wed 1/22	Ch 2.5-6	Relationship between structure and acidity	Ch. 2
	Fri 1/24	Ch 3.1-4 alkanes and cycloalkanes Quiz 1 due	Naming and drawing alkanes and cycloalkanes <i>HW over ch 1 and 2</i>	Ch 3
3	Mon 1/27	Ch 3.5-7	Conformations, cis/trans isomers	Ch. 3
	Wed 1/29	Ch 3.8-10	Phys properties, reactions of	Ch. 3
	Fri 1/31	Ch 4.1-2 alkenes and alkynes Quiz 2 due	Naming and structures of alkenes and alkynes	Ch. 4
4	Mon 2/3	Ch 4.3-4	Phys properties and acidity of alkynes	Ch. 4
	Tues 2/4		HW over ch 3 and 4	
	Wed 2/5	EXAM 1 (ch 1 – 4)		Ch. 1-4
	Fri 2/7	Ch 5.1-3 Reactions of alkenes and alkynes	Reaction mechanism, electrophilic additions to alkenes	Ch. 5
5	Mon 2/10	Ch 5.4-5	Carbocation and hydroboration-oxidation	Ch. 5
	Wed 2/12	Ch 5.6-8	Reduction, acetylide ion, alkynes	Ch. 5
	Fri 2/14	Ch 5 Quiz 3 due	HW ch 5	Ch. 5

## DAILY COURSE SCHEDULE: the lecture schedule is tentative, but exam dates will not change

6	Mon 2/17	Ch 6 Chirality: the handedness of molecules	Stereoisomers, enantiomers	Ch. 6
	Wed 2/19	Ch 6		Ch. 6
	Fri 2/21	Ch 7.1-3 Haloalkanes <mark>quiz 4 due</mark>	Haloalkanes naming and characteristics <i>HW ch 6</i>	Ch. 7
7	Mon 2/24	Ch 7.4-6	SN2, SN1 mechanisms	Ch. 7
	Wed 2/26	Ch 7.7-9	E1 and E2 mechanisms	Ch. 7
	Fri 2/28	Ch 7 or review Quiz 5 due	HW ch 7	Review
8	Mon 3/3	Exam 2 (ch 5-7)		Ch. 5-7
	Wed 3/5	Ch 8.1-2 Alcohols, Ethers, and thiols	Naming and structures of alcohols, reactions of alcohols	Ch 8
	Fri 3/7	Ch 8.3-5	Ethers, epoxides, thiols	Ch. 8
9	Mon 3/10	Ch 8.6	Reactions of thiols	Ch. 8
	Wed 3/12	Ch 9.1-4 Benzene and its derivatives	Naming and structures, phys properties <i>HW ch</i> 8	Ch. 9
	Fri 3/14	Ch 9.5-7 Quiz 6 on ch 8	Electrophilic aromatic substitution	Ch. 9
10	3/17 – 3/21	Spring Break		
11	Mon 3/24	Ch 9.8-9	Phenols	Ch. 9
	Tues 2/25		HW ch 9	
	Wed 3/26	Ch 10.1-3 Amines	Naming and phys properties of amines	Ch. 10
	Fri 3/28	Ch 10.4-5 Quiz 7 on ch 9	Reactions and acid-base properties	Ch. 10
12	Mon 3/31	Ch 10.6-7	Arylamines, and amines act as Nuc	Ch. 10
	Wed 4/2	Review Quiz 8 ch 10	HW ch 10	
	Fri 4/4	Exam 3		Ch. 8-10
13	Mon 4/7	Ch 12.1-5 aldehydes and ketones	Naming and phys properties and Grignard reagents	Ch. 12
	Wed 4/9	Ch 12.6-7	Hemiacetals and acetals	Ch 12
	Fri 4/11	Ch 12.8-10 Quiz 9	Keto-enol tautomerism,oxidation and reduction	Ch 12
14	Mon 4/14	Ch 13.1-4 Carboxylic acids	Naming and phys properties, acid-base <i>HW ch 12</i>	Ch. 13
	Wed 4/16	Ch 13.5-8	Reactions of COOH	Ch. 13
	Thurs 4/17		HW ch 13	
	Fri 4/18	Ch 14.1-4 Functional derivatives of carboxylic acids Quiz 10	Reactions of COOH, hydrolysis	Ch 14
15	Mon 4/21	Ch 14.5-8	COOH derivatives react with ammonia and amines	Ch 14
	Tues 4/22		HW ch 14	

Wed 4/2	23 Review Quiz 11	
Thurs 5	/1 Final exam (3 to 5 pm)	cumulative

\*The topics that will be covered from each chapter will be selective and announced on canvas via an announcement.

Holidays (no classes): Monday, January 20, March 17-21 (Spring Break)

**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 Dean of Students Office. That office will provide the student with documentation for presentation to the instructor. Anyone anticipating unique accommodation should speak with the instructor early in the semester.

## Good luck, and don't be afraid to ask for help if you need it!!