



SYLLABUS
ORGANIC CHEMISTRY II CHM 2211
Summer 2015

Professor: Dr. Andrew Frazer

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Office hours: Monday and Wednesday 9:00-11:00 am, *by appointment only!*
Meeting Times: MTWR 8:00 – 8:50 pm; CB1 Room104

COURSE DESCRIPTION: The second semester of organic chemistry studies:

- The properties, reaction mechanisms, syntheses, nomenclature, structure, and stereochemistry of organic functional groups: aromatics, alcohols, ethers, thiols, aldehydes, ketones, acids, esters and amines.
- Spectroscopy – IR, MS, NMR as applied to simple organic compounds.

Course goals:

- Understand and appreciate how organic chemistry relates to Biology, Medicine, Forensic Science, Chemistry, Pharmacy, etc.
- Prepare for course that has Organic Chemistry II as a prerequisite.
- Gain understanding and problem solving ability in organic chemistry sufficient to pass an American Chemical Society standardized test.

Textbooks: Klein. *Organic Chemistry*, 2nd Edition, Wiley (2013).
Hardcover (ISBN- 978-1118452288)
Student Study Guide & Solutions Manual

Coverage: Chapters 15-24. You should already be familiar with these topics from Organic 1; reaction mechanism, alkenes, alkynes, alkyl halides, alcohols, ethers, SN and E reactions.

Course Requirements:

- CHM 2210 (Organic Chemistry I) is a prerequisite. All students must have already earned passing grades in CHM 2210 or the equivalent and have sufficient current mastery of that material to build on it this semester.
- Take all tests and the final exam at scheduled times. Exceptions are rare but can sometimes be made in advance if a test is to be taken early (but not late). No "make up" tests will be given.
- Class attendance is required. Please plan to attend every class. Arrive on time and be ready to contribute.
- Read each chapter before it is covered in lecture. Be ready to respond to questions in class.
- Retrieve and correct each grade before the next class period after tests are returned.

Grading:	6 progress tests (5 x 100)	=	500
	Cumulative Final Exam	=	<u>200</u>
			700 points

A = 100-90%, B = 89-80%, C = 79-70%, D = 69-60%, F = < 60%

Your Final exam score can replace your lowest progress test score if your final exam score is higher. *No make-up tests will be given.* If you miss a progress test for any reason it will be your dropped/replaced score. Earning an "A" requires you to be among the highest students in the class. To earn a "C" or better requires scores not far below the middles of the class, etc.

Tentative tests dates (any changes will be announced in class):

Textbook assignments: Please read each chapter before it is covered in lecture. Recommended textbook exercises are listed at the end of this syllabus. It is assumed you will work a sufficient number of these to insure your mastery. These will not be collected or graded. For maximum benefit, please work through these early and for understanding rather than memorization. Test questions are often taken directly from these exercises.

Lecture notes: Partial copies of lecture notes will be made available to you. These are optional and are intended to free you to focus on learning in class rather than rushing to copy everything down. These notes are not a substitute for attendance.

In-class Quizzes: On some class days the first few minutes before lecture will be devoted to a short in-class quiz that will not be collected or graded. These are for your benefit and are intended to help you monitor your mastery of what we have already covered and whether you are staying current. Problems come from recent material and most are assigned textbook problems or items from old tests. Solutions to these problems will not be given in class but the instructor will circulate through the room to offer advice for those students who may need it or to verify correct responses on request.

<u>Week</u>	<u>Lectures</u>	<u>Tests</u>
<u>1</u>	<u>Chapter 15 – Infrared Spectroscopy and Mass Spectrometry</u>	
<u>2</u>	<u>Chapter 16 – Nuclear Magnetic Resonance Spectroscopy</u>	<u>Test 1.</u>
<u>3</u>	<u>Chapter 17 – Conjugated π-Systems and Pericyclic Reactions</u>	
<u>4</u>	<u>Chapter 18 – Introduction to Aromatic Compounds</u>	<u>Test 2</u>
<u>5</u>	<u>Chapter 19 – Aromatic Compounds</u>	
<u>6</u>	<u>Chapter 19 – Aromatic Compounds (Cont.)</u>	<u>Test 3.</u>
<u>7</u>	<u>Chapter 20 - Aldehydes and Ketones</u>	
<u>8</u>	<u>Chapter 20 – Aldehydes and Ketones (cont.)</u>	<u>Test 4</u>
<u>9</u>	<u>Chapter 21 – Carboxylic Acid Derivatives</u>	
<u>10</u>	<u>Chapter 21 – Alpha Carbon Chemistry: Enols and Enolates</u>	<u>Test 5</u>
<u>11</u>	<u>Chapter 23 - Alpha Carbon Chemistry: Enols and Enolates (cont.)</u>	
<u>12</u>	<u>Chapter 24 - Amines and Heterocyclics</u>	<u>Test 6</u>
<u>FINALS</u>		

Supplemental Instruction: There are several separate opportunities for you to attend SI sessions throughout the week.

<http://www.sarc.sdes.ucf.edu/sischedule.html>

Tutoring: Free tutoring is available at the Student Academic Resource Center (SARC) in Phillips Hall, Rm 115. Contact that office to inquire about available times. Phone 407.823.5130. No appointment is needed.

<http://www.sarc.sdes.ucf.edu/turorschedule.html>

Academic honesty: Complete academic honesty is expected in all matters. Any act of cheating will be fully prosecuted according to university regulations. See the current *UCF catalog* and *The Golden Rule* for definitions and policies.

Distractions: In consideration of others, please silence all cell phones in class and refrain from audible talking to those around you.

Note: the instructor reserves the right to add to and/or change the schedule and other policies and information in the syllabus at any time.