Information and Policies

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Office hours: To be determined to maximize student attendance. When my office door is open, I am ready and willing to take questions (or just chat about chemistry!). If my office door is closed and/or I am not in the office, I am likely working on research and other tasks and cannot meet at the moment. In that case, please come by at another time, or contact me by email to set up an appointment.

Lecture: Honors 293, Section 01. CRN: 11396. Class meets Monday, Wednesday, and Friday from 9:00am - 9:50am in the School of Science and Mathematics Building, Room 245. See you there!

Important dates during the semester: Monday, August 29th, 2016 – last day to drop/add; Thursday, October 27th, 2016 – last day to withdraw with a grade of W; Monday, November 7th, 2016 – no class due to fall break; Wednesday, November 23rd and Friday, November 25th – no class due to Thanksgiving break; Tuesday, December 6th, 2016 – Reading Day.

Exam dates: All exams are in the regular classroom at normal class time on the listed day. Should an exam date require a change, students will be notified in advance by email.

Exam 1: Monday, September 19th  
Exam 2: Wednesday, October 12th  
Exam 3: Friday, November 4th  
Exam 4: Monday, December 5th

Final Exam: Wednesday, December 14th, 8am-11am; this is the standardized ACS Organic Chemistry Exam, which will be administered to all sections of second-semester organic chemistry.

Required text:


Optional texts:


Co-requisite: You must be concurrently registered for or have previously taken Honors 293 laboratory (293L) and taken and received passing grades in your first-semester lecture and laboratory courses.

Attendance: Attendance is strongly encouraged! Lectures may include material that is not in the text and you will be responsible for all material covered in lectures and in your text on exams and problem sets. Missed unannounced quizzes will receive a grade of zero. You are expected to take each exam in class as scheduled. Makeup exams will not be available. In cases of officially documented absences resulting in a missed exam, a student may replace the missed exam score with their final exam score.
Students with Disabilities: Please contact me and stop by my office hours (as early as possible in the semester) if you have been approved to receive accommodations through SNAP Services. Please consult the Student Guide to SNAP Services for more information: http://disabilityservices.cofc.edu/documents/student-guide.pdf

Academic Integrity: Many instances of academic dishonesty arise from students feeling overwhelmed in a course or by external pressures. College can be an overwhelming time, and if you are feeling this way about my class, please contact me! I would much rather work with a student at office hours and/or by appointment than see them compromise their academic values. The results are upsetting for all involved. As such, I will strictly enforce academic honesty and integrity in all facets of this course. The course is conducted under the Honor Code of the College of Charleston. You are responsible for reading, understanding, and strictly adhering to this policy, as am I. For more information, please see the College’s policy information at http://studentaffairs.cofc.edu/honor-system/ and the Department of Chemistry and Biochemistry’s policy at http://chemistry.cofc.edu/documents/Scientific_Integrity_2011.pdf.

Email and contact: As stated, my office hours are open-door times. I may need to email the class list should changes to the course be required or other circumstances arise. Email is considered an official communication method at the College of Charleston, and all students are expected to frequently if not daily check their official CofC email account to ensure that no announcements or messages regarding this course (or any other for that matter) are not missed. With regard to any extenuating circumstances, you must contact me in advance. After-the-fact notice for a missed exam or assignment will not be accepted, excepting instances where the student has contacted the Dean’s office according to College policy.

Electronic devices in the classroom: Please be respectful and keep your phones turned off during lectures. So long as they are not a distraction to others in the class, using a laptop or tablet to assist you with taking notes is completely fine – this policy is subject to change should circumstances require it. However, during exams, all non-calculator electronic devices are prohibited (this means smartphones, tablets, laptops, etc.). Smartphones may not be used as calculators during exams.

Grading and Evaluation

Components:

- **Exams**: Students will be given four midterm exams in addition to the ACS Organic Chemistry Exam. Each midterm will be out of 100 points. If a student completes all of the midterms, then the final exam grade may replace their lowest exam score, provided it is higher than the average score of their other exams.

- **Unannounced quizzes**: There will be four unannounced quizzes during the semester, worth ten points each. These will correspond to one quiz given during the unit of lectures prior to each exam. The quizzes will be focused on recent lecture material and are meant to provide students with a check on their grasp of course material and study methods out of the classroom – e.g. “Are you keeping up with the end of chapter problems?”

- **Graded Homework**: The end of chapter problems will not be graded, however, I strongly suggest that you do these regularly to give yourself as much practice as possible. In order to familiarize students with exam format and question types, four take-home problem sets, one in advance of each exam, will be given out and collected one week after they are assigned at the beginning of class. Late assignments will not be accepted. Four online problem sets will also be assigned through Connect – these will be available via the link at the top of the first page of this syllabus. The combined graded homework will be scaled to 60 points of the semester total.

- **Final Exam**: The final is the American Chemical Society Organic Chemistry Exam and all sections will take it at the end of the semester. It will be weighted to 150 points.
Honors 293 Syllabus – Honors Organic Chemistry II Fall 2016

- **Extra Credit**: Students can earn up to five points of extra credit for each exam by preparing a “student-solved problem” from the end of one of the chapters covered in the lead up to that given exam. Students are expected to provide a ChemDraw answer to a synthesis or mechanism problem and a written explanation of the answer in the technical language of organic chemistry. Problem selection and answer submission instructions can be found on OAKS.

**Final Grade Calculation:**

Option 1 – All exam scores are used.  
- 4 midterm exams = 400 points  
- Final exam = 150 points  
- Unannounced quizzes = 40 points  
- Scaled homework = 60 points

Option 2 – Final exam score replaces lowest score.  
- 3 highest midterms = 300 points  
- Final exam = 250 points  
- Unannounced quizzes = 40 points  
- Scaled homework = 60 points

**650 points total** (20 points possible extra credit via a student-solved problems)

**Grading Scale**: There will be no rounding of scores. A score of 92.99 remains an A-, an 89.99 remains a B+.

A 93-100 %  B- 80-82 %  D+ 67-69 %  
A- 90-92 %  C+ 77-79 %  D 63-66 %  
B+ 87-89 %  C 73-76 %  D- 60-62 %  
B 83-86 %  C- 70-72 %  F < 60 %

**Student Learning Outcomes and Topical Outline**

**Student Learning Outcomes:**

- Demonstrate intermediate communication skills within organic chemistry for example structure, nomenclature, mechanisms, reaction schemes.
- Draw and interpret mechanisms for organic reactions of increased sophistication.
- Integrate knowledge and principles of organic reactions and reactivities to make reasonable predictions about likely outcomes when presented with related chemistry or retrosynthetic schemes.

**Course Topics Outline:**

- Chapter 14: Nuclear Magnetic Resonance Spectroscopy  
- Chapter 16: Conjugation, Resonance, and Dienes  
- Chapter 17: Benzene and Aromatic Compounds  
- Chapter 19: Carboxylic Acids and the Acidity of the O-H Bond  
- Exam 1  
- Chapter 18: Reactions of Aromatic Compounds  
- Chapter 20: Introduction to Carbonyl Chemistry; Organometallic Reagents; Oxidation and Reduction  
- Chapter 21: Aldehydes and Ketones – Nucleophilic Addition  
- Exam 2  
- Chapter 22: Carboxylic Acids and Their Derivatives – Nucleophilic Acyl Substitution  
- Chapter 23: Substitution Reactions of Carbonyl Compounds at the α-Carbon  
- Chapter 24: Carbonyl Condensation Reactions  
- Exam 3  
- Chapter 25: Amines  
- Chapter 26: Carbon-Carbon Bond-Forming Reactions in Organic Synthesis  
- Chapter 27: Pericyclic Reactions (or a special topics unit)  
- Exam 4
In this course we continue your journey and training in organic chemistry in light of reactions of increasing mechanistic complexity and increasing usefulness in the context of building organic molecules. You may ask, as my best friend once did in college “I want to be a surgeon, why in the world do I need this?” Just as we consider first semester organic chemistry to be training for your mind, so then is this semester. A good surgeon must be able to make the proper incisions with the proper tools and in the proper order; a successful organic chemist makes the right bonds with the right reactions and in the right sequence to yield a target molecule (thankfully, the stakes are much lower!). This course will encompass and build upon the information you learned previously and expand it to new reactions and powerful spectroscopic techniques.

As an Honors course, this class seeks to further peel back the veneer in several units to reveal the fascinating underpinnings behind a reaction. For example, why do we draw arrows in mechanisms in a specific way, or put another way, what is it about molecular structure that allows us to draw arrows from nucleophiles to electrophiles? You may have had some of this in your first-semester course, and in Honors 293, we will see how even more advanced reactions are beholden to the same rules that govern the most fundamental of introductory topics. Further, we will use this more advanced grasp of fundamental physical organic chemistry wherever we can in the course - be it mechanism, as mentioned above, or multi-step syntheses derived from the chemical literature. To put it more simply – we’re going to get into the “gory details” of mechanism and synthesis and it’s going to be fun! Here are a few tips and words of advice:

- Review old material throughout the course. You will have learned by now that this subject is very cumulative and very easy to get behind in. Be proactive about going over old material as it arises. In this light, I’ve supplied my old exams and problem sets as PDF files on our OAKS page that you can use for practice and review early in the semester.

- **Do problems!** *Repetitionem est mater studiorum* – Repetition is the mother of all learning. This saying is a LOT older than I am, and it is as true today as it ever was. The more practice you give yourself, the better your grasp of the material. You have the problem sets I write, resources on Connect, and the problems in your textbook. If you need/want more – come ask me, I have textbooks full of them!

- Go to class! I’ll be presenting the material to you, including some things that are not found in your text. Furthermore, each class is a chance for you to get better at taking notes and see the material in a different format.

- Go to your Peer Mentoring sessions. This is yet another venue for you to gain exposure to the material and is a great resource. Use it!

- **Read the book and read it before the material is covered in class.** Reading a few sections ahead will better position you to ask questions during lecture – *I will always try to stop and make time to answer questions.* The text is a great primary resource where everything is laid out in writing in front of you. I recommend working the in-text problems as you read on a notepad or in a notebook next to you. That physical process of writing out the problems while reading can really help with your retention of the material.

- **Do more problems!** I meant what I said – the more you do, the better you’ll do.

- Give the course and material the time it requires. To be successful and really learn the material, you will need to spend 3-5 hours outside of class for each hour that you are in it. At first this seems like a lot, but between reading the book and working problems, this amount of time will be easily met.

- Use me as a resource as well. I have three office hours per week and will meet by appointments that we set up through email. Please come by if you have questions on material that you may need reinforced (this is not a substitute for class, however). Please come by if you want to work through a couple problems. Please come by if you just think chemistry is cool and want to know more about something!

- **DO MOAR PROBLEMZ!** There is a theme here, I swear….