Information and Policies

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Office Phone: (843) 953-8099
Connect web page: https://connect.mheducation.com/class/m-giuliano-giuliano-tr-925-1040am-spring-2016
SI Leader: Travis Varner (varnertp@g.cofc.edu)

Office hours: Subject to change. Tuesdays and Thursdays 1-2pm, Wednesdays, 10:30-11:30am. 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: Chemistry 232, Section 03. CRN: 20262. Class meets Tuesday and Thursday from 9:25am - 10:40am in Jewish Studies Center Room 333. See you there!

Important dates during the semester: Wednesday, January 13th, 2016 – last day to drop/add; Tuesday, March 8th and Thursday, March 10th, 2016 – no class due to spring break; Friday, March 18th, 2016 – last day to withdraw with a grade of W; Friday, April 22nd, 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: Tuesday, February 2nd
Exam 2: Thursday, February 25th
Exam 3: Tuesday, March 29th
Exam 4: Thursday, April 21st

Final Exam: Tuesday, April 26th, 8am-11am; this is the standardized ACS Organic Chemistry Exam, which will be administered to all sections of Chemistry 232.

Required text:

Optional texts:

ACS Organic Chemistry Study Guide (http://shopping.na1 netsuite.com/s.nl/c.3773982/sc.11/category.191/)

Co-requisite: You must be concurrently registered for or have previously taken Chemistry 232 laboratory (232L) and taken and received passing grades in Chemistry 231 and 231L.

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. 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 midterm exams, then the final exam grade may replace their lowest exam score, provided it is higher than the average score of their other exams.

• **Graded Problem Sets:** The recommended end of chapter problems posted on OAKS will not be graded, however, I strongly suggest that you do these to give yourself as much practice as possible. In order to familiarize students with exam format and question types, three or four problem sets will be given out and collected one week after they are assigned at the beginning of class. Late assignments will not be accepted. If, based on class performance, I feel that you need more problems to practice/more opportunities to earn points, then I may assign an additional problem set. Problem sets will be scaled at the end of the semester to half of an exam grade (50 points).

• **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.

• **Extra Credit:** The Connect link included on this syllabus will bring students to a web-page for the course that contains sets of problems within the adaptive learning software LearnSmart that can be completed each week. They are graded only on completeness and are meant to accompany and reinforce your reading of the textbook. For each exam, you will be eligible for ten points of extra credit based upon the percentage of these online assignments completed. For example, if a student completes 70% of the online assignments prior to an exam, then they will earn 7 extra credit points (0.7*10 = 7). Assignments will activate prior to the lecture covering them and deactivate a few days later – it is your responsibility to check the connect website routinely to ensure you do not miss assignments.
Final Grade Calculation:

Option 1 – All exam scores are used.  
- 4 midterm exams = 400 points  
- Final exam = 150 points  
- Scaled homework = 50 points  
600 points total (40 points possible extra credit through LearnSmart)

Option 2 – Final exam score replaces lowest score.  
- 3 highest midterms = 300 points  
- Final exam = 250 points  
- Scaled homework = 50 points

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

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<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>93-100 %</td>
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<tr>
<td>A-</td>
<td>90-92 %</td>
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<tr>
<td>B+</td>
<td>87-89 %</td>
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<tr>
<td>B</td>
<td>83-86 %</td>
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<tr>
<td>B-</td>
<td>80-82 %</td>
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<td>C+</td>
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<td>C</td>
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<td>C-</td>
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<td>67-69 %</td>
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<td>D</td>
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Student Learning Outcomes

All sections of Chemistry 232 are taught toward the following specific learning outcomes:

- Use IUPAC and common nomenclature for ethers, aromatics, carbonyl containing compounds, and amines
- Draw and interpret mechanisms for complex reactions that might include some or all of the following: electrophilic and nucleophilic aromatic substitution, acyl nucleophilic substitution, Diels-Alder cycloaddition, nucleophilic addition to aldehyde or ketone, enol and enolate chemistries, nucleophilic aromatic substitution, and rearrangement reactions
- Integrate knowledge and principles of organic reactions and reactivities to make reasonable predictions about likely outcomes when presented with related chemistry
- Develop and evaluate multistep retrosynthetic schemes including methods to modify the carbon backbone of a molecule

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
- Exam 4
Course Introduction and Some Tips For Success

As you came to the end of your first semester of organic, you were introduced to a significant number of reactions and the concept of organic synthesis – the use of sequences of reactions in combination to construct more complex molecules. Importantly, this was done only following a rigorous course in the underlying concepts that control organic reactions (recall the first couple units of Chem 231 – bonding models, intermolecular forces, conformation, etc.). 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 in 231 and expand it to new reactions and a powerful spectroscopic technique called Nuclear Magnetic Resonance Spectroscopy, which forever transformed science and medicine as we know them. Just as with 231, 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 231 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, the extra credit LearnSmart problems through Connect, and the problems that I will recommend in your textbook. If you need/want more – come ask me!

• 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 from a book.

• Go to your SI Section. This is yet another venue for you to gain exposure to the material and can be 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 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 PROBLEMS!** There is a theme here, I swear….