Chemistry 232

COURSE TITLE Organic Chemistry II

DATES, TIMES, AND LOCATION OF COURSE MEETING
MWF 9:00-9:50 am, Jewish Studies Center 333 (Section 1, 20260)
MWF 10:00-10:50 am, Jewish Studies Center 333 (Section 2, 20261)

NAME OF INSTRUCTOR
Dr. Timothy Barker
Office: 312 School of Science and Math Building (SSMB)
Phone: (843)953-7182
Email: barkertj@cofc.edu (this is the best way to contact me)

OFFICE HOURS (312 SSMB)
Monday 3:15-4:15 PM, Wednesday 12:30-1:30 PM, Thursday 8:30-9:30 AM,
Friday 8:00-8:45 AM or by appointment

TEXTS (required)
textbook must include access to McGraw Hill’s online learning Connect
Optional:

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

COURSE 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
Chapter 18: Reactions of Aromatic Compounds
Chapter 20: Introduction to Carbonyl Chemistry; Organometallic Reagents; Oxidation and
Reduction
Chapter 21: Aldehydes and Ketones-Nucleophilic Addition
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
Chapter 25: Amines
Chapter 26: Carbon-Carbon Bond-Forming Reactions in Organic Synthesis
Chapter 27: Pericyclic Reactions
STUDENT LEARNING OUTCOMES
By the end of this course, students will be able to:

• 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

TESTS AND QUIZZES
Exams: 100 points each
Exam 1 Monday February 1st
Exam 2 Wednesday February 24th
Exam 3 Friday March 25th
Exam 4 Wednesday April 20th
No late or make-up exams will be given.

Quizzes:
There are no scheduled quizzes, but I reserve the right to give pop quizzes if attendance is poor or I feel more regular feedback and evaluation is needed after the first exam. If quizzes are given their score will become 10% of the grade for the upcoming exam.

Final Exam:
The ACS standardized final exam is cumulative with material from 231 and 232 and will be held on Friday April 29th from 9-11 AM for the 9 AM class, section 1 and Monday April 25th from 9-11 AM for the 10 AM class.

Homework/Group Homework:
There will be 3-4 group homework assignments. These must be completed in groups of 2-5 students. No individual assignments will be accepted. All homework assignments are due at the beginning of class the day they are due. Homework will be graded. Homework assignments will be posted on OAKS at least one week before it is due. No late homework will be accepted.

Extra Credit:
There will be online assignments on Connect that may be completed to earn up to 8 points of extra credit for each of the four 100 pt exams. The extra credit will be directly applied to your exam score. Connect assignments will be graded on the assigned due date. Your completion percentage for the assignments will be averaged for all assignments before the related test and
multiplied by 0.08 and rounded to the nearest integer. (Example, average homework completion percentage 85% x 0.08 = 6.8 = 7 points of extra credit; raw test score = 62/100, with extra credit score = 69/100).

Connect URL (please sign up for the correct section):
http://connect.mheducation.com/class/t-barker-chem-232-spring-2016-section-1-9-am
http://connect.mheducation.com/class/t-barker-chem-232-spring-2016-section-2-10-am

Reading the course textbook is encouraged to supplement material discussed in class. Working additional homework problems is strongly encouraged and recommended homework problems from the textbook will be posted on OAKS, but NOT collected.

**GRADING** Final course grades will be assigned based on the following distribution:
Midterms – 19% each (quizzes, if applicable will be 10% of the exam grade for the following exam)
Final Exam – 19%
Homework/Group Homework – 5%

If your ACS final exam score is higher than the average score of your four exams, I will replace your lowest exam score with your final exam score. In order to take advantage of this policy, you must take all four exams.

**Grading Scale:**
A      92-100
A-     89-91.99
B+     87-88.99
B      81-86.99
B-     79-80.99
C+     77-78.99
C      70-76.99
C-     67-69.99
D      63-66.99
F      below 63

**POLICY ON:**
**Attendance:** Students will work in small groups during portions of the lecture to provide students an opportunity to work together solving problems and discussing the class material. Material will be covered in class that may not be present in the textbook so attendance is encouraged and mandatory.

**Late Work:** Homework and extra credit assignments are due the day assigned. Late homework assignments will receive no credit.

**Extensions:** Extensions will only be granted when the student has contacted the Dean’s office because of extenuating circumstances that prevent the student from attending class or completing assignments on time.

**Exam Corrections:** As a human there are times when I have made a mistake grading an exam question or tallying up an exam score. If you find a mistake, please let me know so I can correct
your grade. You have 3 weeks from when the test was handed back to notify me of the error, so I don’t end up with an unmanageable amount of corrections at the end of the semester.

**Electronic Devices in Class:** You are expected to turn off or silence your cellphone before the beginning of class. Please be courteous of your fellow classmates and use any other electronic devices responsibly during class so as not to distract other students and degrade the classroom experience for everyone.

**SNAP:** If you are in need of any special accommodations for this course, please see the Student Guide to SNAP Services for more information: [http://disabilityservices.cofc.edu/documents/student-guide.pdf](http://disabilityservices.cofc.edu/documents/student-guide.pdf)

The Center for Disability Services should provide you with a Professor Notification Letter that should be shared with me during office hours, preferably early in the semester and at least one week before the first exam.

**Academic Dishonesty and Plagiarism:** Academic honesty is strictly enforced on quizzes and exams. You are responsible for reading, understanding and adhering to the College of Charleston Student Honor Code Policy, please see: [http://studentaffairs.cofc.edu/honor-system/index.php](http://studentaffairs.cofc.edu/honor-system/index.php)

All incidents of suspected academic dishonesty will be reported to the Honor Board. Students found responsible by the Honor Board for academic dishonesty will receive a XF grade.

The Department of Chemistry and Biochemistry has a Facebook page (Chem and BioChem at the College of Charleston) to announce opportunities for Chemistry and Biochemistry students that you may want to check out (but not during class).

The syllabus is subject to change with appropriate notice.