

CASPER COLLEGE COURSE SYLLABUS
CHEM 2300 Introduction to Organic Chemistry

Semester/Year: Fall 2015

Lecture Hours: 4

Lab Hours: 0

Credit Hours: 4

Class Time: 01: 11-11:50 AM

Days: MTWF

Room: PS317

Instructor: Mitchel D. Millan, Ph.D., PS333, 307-2683017, mmillan@caspercollege.edu

Office Hours: MWF 10-11 AM, W 1-3 PM

Course Description: A one-semester introduction to organic chemistry with a biological emphasis. Topics covered are bonding, structure, intermolecular attractions, common and systematic nomenclature, hydrocarbons, alcohols, phenols, mercaptans, ethers, aldehydes, ketones, carboxylic acids and their derivatives, amines, stereochemistry, carbohydrates, lipids, amino acids, proteins, nucleic acids, heterocycles, natural products, and polymers. Students needing organic laboratory credit should enroll concurrently in CHEM 2325.

Statement of Prerequisites: Chem 1005 or Chem 1025

Goal: This class will introduce students to the principles of organic chemistry, in preparation for Organic Chemistry I / II or advanced courses requiring an organic chemistry background. Skills involved will include (but will not be limited to) drawing structures, recognizing structure and reaction patterns, and predicting reaction products.

Outcomes:

1. Learn to use the Scientific Method in this course and in the corresponding lab course.
2. Solve problems using critical thinking.
3. Use analytical skills to evaluate and process qualitative organic chemistry problems.

Course Objectives: Upon successful completion of this course, students will be able to:

- 1) understand the basic concepts of bonding, hybridization as they relate to organic chemical structures
- 2) understand the basic concepts of acids and bases, acid-base conjugate pairs, and acid-base equilibria
- 3) identify the various functional groups in organic chemistry when provided with the appropriate chemical formula or Lewis structure and vice-versa
- 4) understand the concepts of bonding, structure, nomenclature, synthesis, and chemical transformations for each of the organic functional groups

Methodology: Lectures will be delivered using Powerpoint and various websites as necessary. To help students prepare for class, the Powerpoint slides will be posted as pdf files in the Moodle class shell. Moodle will also be used to deliver announcements and assignments (for student download, with submission on paper). Chapter Quizzes will be administered using the OWL system (see below).

Evaluation Criteria:

- Four REGULAR TESTS (200 pts each; 600 pts total). The nature of the course necessitates that each succeeding Test be somewhat cumulative. However, each Test will focus *mainly* on the coverage in the Schedule below. Make-up Tests *may* be given: (i) at your instructor's discretion, and (ii) when *reasonable* and *unavoidable* circumstances are involved, and (iii) when notice is given to your instructor. **Advanced notice that you can't take an Test as scheduled is appreciated. Otherwise, you must**

contact your instructor by phone or email on the same day of the missed Test. A coach's/doctor's/police certificate will be required as appropriate. Under all other circumstances, you get zero for the test. The three highest Tests will be credited, after dropping the lowest score. Three tests will be counted, even if you have a zero in one or more of them.

CHAPTER QUIZZES (10 pts each; adjusted to 200 pts total). These are quizzes administered at the end of each chapter of the textbook, using **Mastering Chemistry**. Quizzes are open for 72 consecutive hours. Each Quiz is worth 10 pts. The total points for Quizzes at the end of the semester will be adjusted to a total of 200 points. Nine attempts will be allowed per item per quiz.

Go to <http://masteringchemistry.com/> and click on **Students** in the **Register Now** box. (If you have used MC before, log in with your current credentials).

Click on **In US or Canada** in the **Select your location box**.

In **Do you have a Course ID from your instructor?** click **Yes, I have a course ID**. In the box type **CHEM2300F15** click **Go** then **Next**. Note that this Course ID is valid only for the Fall of 2015 and for this course only. Any other Course IDs will not work for this term, and this Course ID will not work for other courses even during the Fall of 2015.

If you purchased a new textbook with an accompanying MC access code, click **Yes, I have an access code**, then **Next**. Follow the remaining instructions to complete your registration for the course.

If you did not purchase a textbook, or purchased a used book without an MC access code, click **No, I need to buy access**, then **Next**.

In **Select your book**, keep clicking on the Right arrow (>) until you see the cover of your text, click on **Bruice, Essential Organic Chemistry, 3/e**. This should be the rightmost image you see after only one click of the > button. Click on the image and **Next**. Follow the remaining instructions to complete your registration for the course.

Please be aware of the cost associated with Mastering Chemistry, when not purchased with a new textbook, which is currently \$66.00.

Under **Do You have a Pearson Education account?** you should *probably* click **Not sure if you have an account?** if you've never dealt with Pearson before. Continue providing all other information that the system will require.

- **HOMEWORK** (10 pts each; adjusted to 100 pts total). HW will also be administered through the **Mastering Chemistry** system described above. HW are open within the duration of each lecture chapter. Each HW is worth 10 pts. HW with more or less than 10 questions will have a score that will be converted to an equivalent of 10 pts. Unlimited attempts will be allowed per HW, within the time period allotted.
- **Comprehensive Take-Home FINAL TEST** (100 pts). You may opt not to take the Final if you have a Pre-Final grade of B or better.

<i>GRADE DISTRIBUTION</i>	<i>Your Scores:</i>	<i>GRADING SCALE</i>
4 Regular Tests: 60%	600 pts	A: 900-1000 pts
Quizzes: 20%	200 pts	B: 800-899 pts
Homework: 10%	100 pts	C: 640-799 pts
Final Test: 10%	100 pts	D: 550-639 pts
Attendance: 1%	10 pts	-----

Casper College may collect samples of student work demonstrating achievement of the above outcomes. Any personally identifying information will be removed from student work.

Required Text, Readings, and Materials:

Essential Organic Chemistry (3rd Edition) by Paula Yurkanis Bruice.

Mastering Chemistry system.

Class Policies: Last Date to Change to Audit Status or to Withdraw with a W Grade:

- By registering for, and staying in, this class, you agree to (i) abide by the policies, and (ii) fulfil all the requirements, described in this syllabus. Your instructor reserves the right to make revisions and modifications to this syllabus as needed, subject to sufficient notice to the class of such changes. You are responsible for all announcements (verbal or written in class, posted on the PS 330 bulletin board, or on Moodle), homework assignments, quizzes, and Tests, as well as changes in the schedule, whether or not you are in class. Absence neither excuses you from responsibility, nor entitles you to special opportunities or extra notification.
- Review sessions will not be held during class time. Your instructor will post (Moodle) “Need-To-Know” Sheets that outline what to expect in each Test and the Finals. Also, your instructor has office hours, an email address, and a phone- use them. Your Tests will be returned and discussed, typically within two meetings after the test. You may discuss your test results and grade with your instructor during office hours.
- Attendance will be checked using a sign-up sheet passed around at the beginning of class. Come to class on time. Coming late *can be* disruptive, and *is* disrespectful to your classmates and instructor. Your instructor reserves the right to deny attendance sign-up to latecomers.
- Your instructor reserves the right to initiate an RA after three consecutive no-shows, and an FIW after two continuous weeks of absence.
- **Turn your cell phones off prior to class, unless you are a firefighter, EMT, the parent of a child for whom you must be available, or waiting for an emergency call. If so, keep your phones on vibrate and step outside the classroom to take the call. You must inform your instructor on a per-meeting basis about your potential incoming call. Text Messaging during class is extremely rude, and will not be allowed at any time. Your instructor reserves the right to take appropriate action if this policy is violated.**
- **Laptops are allowed in class if you use it to take notes. None-class (i.e. not of this particular class) material viewed or written on your laptop, whether notes, homework, or Internet is not allowed. Your instructor reserves the right to check that your laptop is being used appropriately during class.**

The last day for withdrawal (a grade of W) without instructor permission is Nov 12.

Student Rights and Responsibilities: Please refer to the Casper College Student Conduct and Judicial Code for information concerning your rights and responsibilities as a Casper College Student.

Chain of Command: If you have any problems with this class, you should first contact the instructor to attempt to solve the problem. If you are not satisfied with the solution offered by the instructor, you should then take the matter through the appropriate chain of command starting with the Department Chair (Dr. Eric Mechalke), the Dean of the School of Science (Dr. Grant Wilson), and lastly the Interim Vice President for Academic Affairs (Dr. Shawn Powell).

Academic Dishonesty - Cheating & Plagiarism: Casper College demands intellectual honesty. Proven plagiarism or any form of dishonesty associated with the academic process can result in the offender failing the course in which the offense was committed or expulsion from school. See the Casper College Student Code of Conduct for more information on this topic.

Official Means of Communication: Casper College faculty and staff will employ the student's assigned Casper College email account as a primary method of communication. Students are responsible to check their account regularly.

ADA Accommodations Policy: If you need academic accommodations because of a disability, please inform me as soon as possible. See me privately after class, or during my office hours. To request academic accommodations, students must first consult with the college's Disability Services Counselor located in the Gateway Building, Room 344, (307) 268-2557, bheuer@caspercollege.edu. The Disability Services Counselor is responsible for reviewing documentation provided by students requesting accommodations, determining eligibility for accommodations, and helping students request and use appropriate accommodations.

Calendar: Chapters are from the required text by Bruice.

	Dates	Topics
Aug	24,25,26,28,31	Introduction, Ch 1 Electronic Structure and Bonding
Sep	1,2,4	Ch 2 Acids and Bases
	7	Labor Day: No Meeting
	8,9,11,14	Ch 3 An Introduction to Organic Chemistry
	15,16,18,21	Ch 4 Isomers
	22	TEST 1 (Chs 1-4)
	23,25,28,29	Ch 5 Alkenes
	30, Oct 2,5,6	Ch 6 The Reactions of Alkenes and Alkynes
Oct	7,9,12,13	Ch 7 Delocalized Electrons
	14,16,21,23	Ch 8 ... Alkyl Halides
	19,20	Fall Break: No Meeting
	26,27,28,30	Ch 9 ... Alcohols, Ethers, Epoxides, Amines and Thiols
Nov	2	TEST 2 (Chs 5-9)
	3,4,9,10	Ch 11 ... Carboxylic Acids and ... Derivatives
	6	Advising Day: No Meeting
	12	Last Day to Withdraw without instructor permission
	11,13,16	Ch 20 The Organic Chemistry of Lipids
	17,18,20	Ch 17 The Organic Chemistry of Amino Acids, Peptides, and Proteins
	23	TEST 3 (Chs 11, 20, 17)
	24,30, Dec 1,2	Ch 12 ... Aldehydes and Ketones
	Nov 25-27	Thanksgiving Break: No Meetings
Dec	4,7,8	Ch 16 The Organic Chemistry of Carbohydrates
	9	TEST 4 (Chs 12, 16)
	11	General Review / Assessment
	14-17	Final TBA