

Organic Chemistry Semester I Class information and syllabus, 2008

Faculty contact information

Dr. Rachel Jameton rajameton@lcsc.edu 792-2268 Office: MLH 311 Office
hours: M 1:30-2:30, T/Th 10:30-11:30, F 9:00-10:00 and by appointment

Introduction

Welcome to your first semester of organic chemistry. In this course, you will gain an understanding of the molecular structure of our natural and industrial worlds, and the reactions that are going on in and between them. For those of you who are planning a career in chemistry, this course will be an introduction to structure, characterization, synthesis and mechanism. For those of you planning a career in biology, environmental science, toxicology or medicine, this will be an introduction to the molecules and reactions found in nature.

This semester is the first of a two semester series. In this class, we will focus on the basics of structure and toward the end of the semester, we will begin to examine how structure determines reactivity. Next semester, we will study a wider variety of reactions, with the goals of gaining a general appreciation of how different structures react, designing increasingly complicated synthetic routes and identifying products.

This is a writing intensive course, meaning that skills that you have acquired in your core English classes will be reinforced and built upon here. Whether you plan on applying to medical or graduate school, or entering the workforce immediately after graduation, you will be expected to write coherently and persuasively. Organic chemistry is highly conceptual and an excellent vehicle for practicing your writing skills.

Goals

- (1) To improve skills in critical thinking and visualization.
- (2) To attain a working knowledge of characteristic functional group structure and reactivity, methods of characterization and stereochemistry.
- (3) To understand how the structure of a molecule determines its function.
- (4) To gain experience in scientific writing, collaboration and communication.
- (5) To understand how organic chemistry fits into our understanding of the world around us.

- (6) To connect organic chemistry to your professional goals.

Text and other supplies

Janice Gorzynski Smith, Organic Chemistry, 2008 (McGraw Hill), ISBN 0-07-304986-7 and the accompanying solution manual.

In addition to the text, you will also need to purchase a molecular model kit, a lab notebook and goggles. These items are available in a wide variety of prices and styles.

Attendance, assignments and tests

Classes are composed of brief lectures and guided-inquiry exercises. You can expect to work in groups and have particular tasks to undertake during each class period. Typically, your group will hand in a work summary sheet at the end of each class period. Because so much of the work is done during the class time, 20% of your grade will be based on attendance, participation and the work you hand in at the end of each class time. Two unexcused absences will not affect your grade, but more than two will result in the lowering of your grade.

There are several types of assignments for this course, as follows:

A weekly problem set: These will come from your text. You will hand all of your problems in and be asked to write rationales for selected problems. These rationales are a few paragraphs that describe your thought process in arriving at your answer. The purpose of asking you to write rationales is twofold. First, I want to make sure that you are using a thought process that is generally applicable to a variety of circumstances. Second, I want to make sure that you can clearly communicate your process.

As part of your text package, you have the complete solutions to the problems that I assign. There are useful and not so useful ways of using this solution book. Useful includes checking your answers or getting help when you are truly stuck. Not so useful involves checking the solutions prematurely, before you are actually stuck. *You will receive a zero on any assignment in which solutions are copied from the solution guide.*

The problem sets are 20% of your final grade. Each will be scored out of 25 points, with 8 points awarded for completing the assignment, 12 points for your rationales and 5 points for your class preparations (see below).

Class preparation: Every week, with your problem set, I will ask you to hand in a paragraph about the material that we will be covering that week and two questions. In other words, you will need to look through the chapter yourself and pick out topics that look important and identify questions you may have. The purpose of doing this is to make sure that you have an idea of the material before you come to class. You may find that this makes the in-class portion of this course easier for you by helping you identify which areas you have questions about. You will receive 5 points for each of your class preps: 3 points for the summary (about a half-page, typed, single-spaced, any less will receive partial credit) and a point for each question.

Brief essays: You will write five reflections on class material, connections between class and your life, readings that will be handed out in class, and connections between lab and course material. Each of the essays will be about a page long (single-spaced, typed) and you can receive a maximum of 20 points for each.

Exams: We will have four cumulative exams. These tests will be formatted identically with a multiple choice section, a short answer section and an essay question. Your exam scores will be averaged and not curved. Instead of grading on a curve, I will make sure that tests are fair and are written toward having a 75% average score.

Grade distribution

Class attendance, participation and in-class assignments 20% Problem sets and class preparations 20% Short essays 15% Four tests 45%

Grading scale

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

Plagiarism policy

The vast majority of students are honest. However, in the rare instance that plagiarism (or cheating, fabrication or collusion) is apparent, it will be dealt with in accordance with college policy. You will receive a zero on any assignment in which solutions are copied from the solution guide.

Class accessibility

If you have a documented learning disability or other situation that limits your access or ability to participate in class or lab, please discuss the situation with me as soon as possible so we can make appropriate arrangements. Assistance with accommodations can also be found at the Office of Student Life, room 111 Reid Centennial Hall.

Late homework, making up exams, incompletes and drops

Late homework will not be accepted after the day that it is due. If you must miss an exam, discuss your situation with me *before* the exam to make alternate arrangements. It may not be possible to arrange an exam time if you do not notify me before the exam. No student will be allowed to make-up more than one exam.

There will be no incompletes awarded for students with less than an 80% average at the time of the incomplete. The course cannot be dropped after November 2.

Email contact and the website

Your campus e-mail account is the official method of communication between the college and yourself and so you should check your account daily. If you have trouble accessing your account, make sure you work out the problems as soon as you can by calling or stopping by the computer help desk (located at SGC B102 or phone 792-2231). On BlackBoard, you can find this syllabus, handouts and lectures.

Course timeline

Week Of...	Sections	ChemActivity
8/25	Prologue, chapter 1	ChemActivity 2
9/1	<i>Labor day – no class Monday</i> Chapter 1 continued	ChemActivity 3
9/8	Brief essay 1 due: bond breaking article Chapter 2	ChemActivity 4
9/15	Test 1 Chapter 3	
9/22	Chapter 3 continued and chapter 4	ChemActivity 6a and 6b
9/29	Brief essay 2 due: choose an organic molecule and write about structure, history, use, etc. Chapter 4	ChemActivity 7
10/6	Chapter 5	ChemActivity 12
10/13	Test 2 Chapter 6	
10/20	Brief essay 3 due: chemistry in your life (see Uncle Tungsten example) Chapter 6 continued	
10/27	Chapter 7	ChemActivity 13
11/3	Chapter 8	ChemActivity 14
11/10	Test 3 Chapter 9	
11/17	Chapter 9 continued	
11/24	<i>Thanksgiving break – no class</i>	
12/1	Brief essay 4 due: revision of essay 3 Chapter 10	ChemActivity 8
12/8	Chapter 10 continued	ChemActivity 9
12/15	Brief essay 5 due: study and class comments 10:30 am Final	