

Chemistry 225

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Section: CRN: 22375
Office Hours: MW 10-11-10, chem.233
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Course Objectives

The goal of Chemistry 225 is to provide the student with the continuation of a foundation in the basic principles of organic chemistry, skills in problem solving and critical thinking thus, preparing the student for further study in chemistry. Topics include but are not limited to: organic compounds, reactions, mechanisms, kinetics and spectroscopy.

STUDENT LEARNING OUTCOMES:

The student will be able to:

1. Use IUPAC nomenclature rules to provide a systematic name for a chemical structure or a chemical structure from a systematic name for dienes, aromatic rings, aldehydes, ketones, carboxylic acids, esters, amides, amines, and carbohydrates.
2. Predict the products, including stereoisomers and regioisomers, and provide the appropriate reagents for common reactions of functional groups including dienes, aromatic rings, aldehydes, ketones, carboxylic acids, esters, amides, amines, and carbohydrates.
3. Generate a reaction mechanism that explains the regiochemistry and stereochemistry for reactions of functional groups including dienes, aromatic rings, aldehydes, ketones, carboxylic acids, esters, amides, amines, and carbohydrates.

Class Policies and Philosophy on Learning and Teaching

Students with Disabilities: A student with a verified disability may be entitled to appropriate academic accommodations. Please contact your instructor or the Disabled Students' Center for further information.

Classroom Conduct and the Right to Education: All students have the right to fair and equal education without bias or discrimination. Inappropriate behavior towards other students or the instructor will not be tolerated. Please observe the following courtesies at all times:

- Please turn off your cell phones while in class. This means you should not be text messaging either as this is distracting for your instructor and everyone around you.
- When your instructor is speaking, please refrain from talking to your neighbors--the noise is distracting and disruptive to your instructor and your classmates.
- Please do not gather your books in preparation for leaving the class until your instructor has concluded class--again the noise is distracting and disruptive to others.
- When working with other class members, please be encouraging, positive, and helpful. Be sensitive to the feelings of others. Please avoid criticism and teasing or joking that might be hurtful to others.

Attendance and Dropping: Attendance is absolutely critical to understanding the material to be covered in chemistry. In addition, there will be in-class activities and participation in these is crucial to your grade. If you are absent, please obtain information about the class and any notes from another student. Missing four or more class hours may result in you being dropped from the class. It is **your responsibility** to formally withdraw from the class through Admissions and Records should you decide you no longer wish to be enrolled.

Academic Honesty: I fully support Orange Coast College's belief that academic honesty is a cornerstone of the educational community. To that end, I expect academic honesty of my students. Students who bring unauthorized material to a test or copy from another's test will receive a zero on that test. Removal of reserve materials from the LRC is considered an act of academic dishonesty. Doing your homework in groups is encouraged, however copying someone else's homework or allowing someone else to copy your homework is considered an act of academic dishonesty.

Succeeding in Chemistry: Chemistry is a subject that requires active learning to master. You must come to class and then apply the principles you have learned by working through many, many problems. Often, it will take multiple attempts at a problem to solve it. Remember, a good rule is to set aside twelve hours per week to do your homework assignments and to complete other study and learning tasks. **Do not allow yourself to fall behind in your work because catching up before a test is an essentially impossible in organic chemistry.**

It will help you understand the lectures if you come to class prepared- read the sections to be covered before you come to that lecture. I have assigned homework problems for you to do, but be aware that you may need to spend time solving extra problems to master certain topics. In summary, you should:

1. Read all material before coming to class.
2. Come to all classes.
3. Do not fall behind.
4. Complete all homework problems punctually.
5. Complete all handouts and review exercises.
6. Learn definitions and understand concepts.
7. Work extra problems.

Getting Help:

1. Your instructor: E-mail and office hours.
2. Extra practice and review.
3. Study groups: Get together with other class members and form a study group which meets regularly to do homework and study.
4. Tutoring is available

Class Meetings M, W 11:10AM-12:35 PM

Required Materials: Organic Chemistry, 6th or 7th Edition, by L.G. Wade, Jr.
Solutions Manual to Organic Chemistry, by Jan W. Simek (for 6th or 7th editions)

Optional Supplement Organic Chemistry as a Second Language, by David R. Klein
Prentice-Hall Molecular Model Set

Website Important information be posted on the website for this class. If you do not have access to a computer at home, you can use the computer lab that is on campus to access the web-page.

Prerequisite Chemistry 220 (first semester organic chemistry) with grade of 'C' or better.

Exams (90%)

Three exams will be given during the semester and will account for 63% of your final grade. In addition, there will be a final exam at the end of the semester that will be worth 27% of your final grade. Please be aware of the *tentative* exam dates on your class schedule. Mark them in your calendar, and be sure that you don't schedule any conflicting event. Exams may be given early to students if the circumstances warrant. Please see me at least one week before the scheduled exam date if you wish to take an exam early.

Homework,, Worksheets, and In-Class Assignments (10% of your grade)

Homework: Homework assignments will be collected in class at the announced times during the semester (usually Monday). Homework includes problems from the text and worksheets. **Late homework is not accepted.**

Full credit is given if:

- 1) All problems are completed and
- 2) All work is clearly shown.

You will receive no credit for homework if it is not absolutely clear that you did the work rather than copy it from the solution manual. **BE AWARE THAT NO CREDIT IS GIVEN FOR ANSWERS ONLY.**

The completion of **every** homework assignment is essential to your success in this class. Chemistry is a "learn by doing" subject. Do not allow yourself to fall behind in your work. Catching up before a test is an extremely difficult task and is essentially impossible in organic chemistry.

You may be given very short quizzes in lecture that are copied directly from your homework problems. In the event that these are given, your HW grade for those chapters will be replaced and/or supplemented with your HW quiz grade.

Worksheets: There will be multiple worksheets assigned in this course. They are written by your instructor and are therefore good practice and review for exams. Worksheets will be collected along with your homework.

In-Class Assignments: Collaborative and/or individual in-class work may be assigned during the semester during the lecture. **There are no make-ups of in-class assignments if you are absent or late to class.**

Grading

1. Course grades will be determined by the percentage of total points earned on exams and assignments according to the following scale:

90 - 100%	A
76 - 89%	B
62 - 75%	C
52 - 61%	D
0 - 51%	F
2. The instructor reserves the right to modify the grading schedule if necessary.
3. **The student must receive a minimum of average EXAM score of 62% in order to receive a passing grade ("C" or higher) in the course.**

MAKE-UP EXAMINATIONS

1. Students will only be permitted to make up **one** missed midterm examination.
2. No Exams will be dropped at the end of the semester.
3. Students will only be permitted to make up examinations missed in cases of doctor-verified illnesses on the day of the exam.
4. To be eligible to make up a missed examination, the student must complete all of the following requirements:
 - The student must notify Mr. Congleton **prior to the start of the examination**
Notification should either be in writing, by a telephone message on his voice mail (714-432-0202), or by e-mail (jcongleton@occ.cccd.edu).
 - The student must present written verification of the illness by a doctor.
5. Make-up exams must be taken within one weeks of the original exam date.
6. The instructor reserves the right to substitute different examinations in place of the original exams when make-up exams are administered. No accounting will be made for differences in levels of difficulty between substitute and original exams.
7. Make-up exams will not be administered for exams missed because of exams in other classes.
8. There will be no make-up examination for the final exam.

225 Tentative Lecture Schedule

Week	Date	Monday	Date	Wednesday
1	8/30	Introduction, Syllabus, Review Chapter 15: Conjugation	9/1	Chapter 15: Conjugation
2	9/6	SCHOOL HOLIDAY	9/8	Chapter 15: Conjugation and Reactions
3	9/13	Chapter 16: Aromaticity	9/15	Chapter 16: Aromaticity Chapter 17: Reactions of Aromatic Rings
4	9/20	Chapter 17: Reactions of Aromatic Rings	9/22	Chapter 17: Reactions of Aromatic Rings
5	9/27	Chapter 17: Reactions of Aromatic Rings	9/29	Chapter 17: Reactions of Aromatic Rings
6	10/4	Chapter 18: Aldehydes and Ketones	10/6	EXAM #1: Chapters 15, 16, 17
7	10/11	Chapter 18: Aldehydes and Ketones	10/13	Chapter 18: Aldehydes and Ketones
8	10/18	Chapter 19: Amines	10/20	Chapter 19: Amines
9	10/25	Chapter 19: Amines	10/27	EXAM #2: Chapters 18, 19
10	11/1	Chapter 20: Carboxylic Acids	11/3	Chapter 20: Carboxylic Acids Chapter 21: Derivatives of Carboxylic Acids
11	11/8	Chapter 21: Derivatives of Carboxylic Acids	11/10	Chapter 21: Derivatives of Carboxylic Acids
12	11/15	Chapter 22: Enolate Reactions	11/17	EXAM #3: Chapters 20, 21
13	11/22	Chapter 22: Enolate Reactions	11/24	Chapter 22: Enolate Reactions
14	11/29	Chapter 22: Enolate Reactions	12/1	Chapter 22: Enolate Reactions
15	12/6	Chapter 23: Carbohydrates	12/8	Chapter 23: Carbohydrates
16	12/13	Review for final exam	12/15	Final Exam