

# Chemistry 221 - Fundamentals in Organic Chemistry

## Summer 2011

<https://chemmac1.usc.edu/221/>

	Lecturer	Lecturer
	Dr. Rebecca Broyer	Dr. Thomas Bertolini
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<b>Virtual Office hours:</b>	MW 2:35 – 4:00 pm	MW 2:35 – 4:00 pm

This is a distance-learning course that bridges the gap between general and organic chemistry and prepares students for organic chemistry. The material and pace are geared towards students who want a stronger foundation for organic chemistry. The format is a lecture followed by an interactive problem-solving session hosted by the instructor, and the focus will be on problem-solving and the language of organic chemistry.

**Prerequisite:** A passing grade in CHEM 105b (second semester general chemistry) or an equivalent course. Please contact Dr. Erickson [eerickso@usc.edu](mailto:eerickso@usc.edu) for a possible exception.

**Credit:** 2 units, P/NP; this course cannot be taken for major or general education credit

**Lectures:** M - Th 1:00 - 2:35 pm online at the course website: <https://chemmac1.usc.edu/221/>

**Computing:** An internet connection and Flash are required. A webcam, headset and microphone are recommended for increased interactivity during office hours. Online homework is to be submitted via the course website, so students must either download a program to draw chemical structures or have access to a scanner to upload hand-drawn structures. See the "Homework" section of this syllabus for more information. Further details can be found on the course webpage. **If you have technical issues, contact our webmaster Dr. Bruno Herreros, [herreros@usc.edu](mailto:herreros@usc.edu).**

**Text:** There is no required textbook for this class. All required materials are provided electronically, however the following are highly recommended for this class and Chem 322:

- Organic Chemistry as a Second Language* by David Klein; and
- any molecular modeling kit.

**Office Hours:** Office hours will be held online using a video chat program developed at USC. To participate, log in to <http://chemmac1.usc.edu/221/offhours/student.php> during scheduled office hours.

**Attendance:** Students are reminded of their responsibility to drop the course if they choose to stop participating. Any student remaining on the roll sheet after the last day to drop, **July 25, 2011**, must accept a grade (**Credit or No Credit**) and may not be assigned a grade of W. **There will be no make-ups for missed assignments** unless you make prior arrangements with the instructor. The instructor reserves the right to drop any student for excessive absences or for missing an examination without prior notice. Students who miss three or more assignments automatically receive a grade of No Credit for the course regardless of their performance.

**Polling:** Daily in-class participation will be monitored using our polling system (**you do not need a clicker**) to give an immediate response to lecturer's questions in class. This direct feedback from you will allow the lecturer to gauge the class' understanding of new concepts and to help set the pace of the class. Responses will only be recorded if you are logged-in live during the class. A total of 5 points will be awarded per class for in class participation using this polling system. *You will not be awarded points if you view the video of the lecture at a later time.*

**Homework:** Homework is assigned daily to help you apply the skills learned in lecture that day. Homework assignments may be opened at the end of lecture and must be uploaded to the class website before the beginning of the next class period (1:00pm PST). Homework **MUST** be submitted online via the course webpage. It is not acceptable to submit homework assignments by email. Homework submitted after the deadline will be deducted 5 points per day. Late HW will not be accepted 3 days past their due date.

Online homework may be submitted in one of several ways. Students may:

1. Scan handwritten assignments.
2. Use software to draw chemical structures and submit homework electronically.  
A freeware program called ACD/ChemSketch is available for drawing organic structures and can be downloaded to PCs at: <http://www.acdlabs.com/resources/freeware/chemsketch/>  
BKChem may be downloaded for <http://bkchem.zirael.org/>  
Please see course website for more details

**Quizzes:** Weekly web quizzes will be given to assess your understanding of course material. They are multiple-choice and hence do not require a scanner nor chemical drawing software. Quizzes open on Mondays and must be completed by Friday at 11:59 pm PST. **Once you open a webquiz you have only 30 minutes to complete it and may not log on to it again.**

**Final Exam:** The final exam will be administered online **Friday August 5, 2011 from 1:00 pm-3:00 pm PST**. You must be logged in **at this time only** in order to take the exam. The final is multiple-choice and hence does not require a scanner nor chemical drawing software.

<b>Grading:</b>	Participation and in-class assignments	16 classes @ 5 points	80 points
	Homework	11 assignments @ 20 points	220 points
	Quizzes	4 quizzes @ 40 points	160 points
	<u>Final Exam</u>		<u>100 points</u>
	<b>Total:</b>		<b>560 points</b>

**You must earn 330 points in order to pass this class.**

**Bulletin Board:** A bulletin board is available to post questions about course material. Feel free to post questions regarding course material to the bulletin board at any time so that all students can benefit from your questions. Please be reminded that this is a public forum and personal matters should be directed to instructors by email. Instructors will post a reply to student questions within 24 hours.

**Academic Integrity:** USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own. All students are expected to understand and abide by these principles. Scampus, the Student Guidebook, contains the Student Conduct Code in Section 11.00, while the recommended sanctions are located in Appendix A: <http://www.usc.edu/dept/publications/SCAMPUS/gov/>. Students will be referred to the Office of Student Judicial Affairs and Community Standards for further review, should there be any suspicion of academic dishonesty. The Review process can be found at: <http://www.usc.edu/student-affairs/SJACS/>.

**Students with Disabilities:** Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to Dr. Broyer or Dr. Bertolini as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m.–5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776.

**Important Dates:**  
Last day to Add: Thursday, July 14, 2011  
Last Day to Drop Class without a Grade of "W": Thursday, July 14, 2011  
Last Day to Drop Class with a Grade of "W": Monday, July 25, 2011  
Final Examination: online Friday August 5, 2011 1:00 pm-3:00 pm PST

## Tentative Schedule

Week of	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
<b>July 11</b>	Introduction Lewis Structures  <b>HW#1</b>	Hybridization VSEPR Theory  <b>HW #2</b>	Structural Formulas  <b>HW #3</b>	Molecular Geometry and Polarity <b>QUIZ 1</b>	
<b>July 18</b>	Arrow Pushing  <b>HW #4</b>	Resonance  <b>HW#5</b>	Acids and Bases  <b>HW#6</b>	Acids and Bases (cont.)  <b>QUIZ 2</b>	
<b>July 25</b>	Alkanes and Cycloalkanes  <b>HW #7</b>	Functional Groups  <b>HW #8</b>	IUPAC  <b>HW #9</b>	IUPAC (cont)  <b>QUIZ 3</b>	
<b>August 1</b>	Stereochemistry: <i>R/S</i> Notation  <b>HW #10</b>	Stereochemistry: Isomerism  <b>HW #11</b>	Substitution  <b>QUIZ 4</b>	Final Review	<b>Final</b> 1:00 - 3:00 pm online