Spring 2011

Chem 202 meets Monday, Wednesday, and Friday, 1:25 – 2:15 pm, in room 108 Forum

Course Instructor:  
Dr. Christine Keating  
Email: keating@chem.psu.edu  
Put “chem. 202” in subject line

Teaching Assistant:  
Sean Haggerty, swh5085@psu.edu  
Office Hours: Mon 4- 5:50 pm & Weds 2:30-5 pm in 211 Whitmore Lab

Office Hours: Mon and Fri 3:00-4:00pm in room 501 Chemistry Building

Note: my office is in 512 Chemistry Building, in case you need to find me outside of office hours

Course Help: Tutors able to assist Chem 202 students will be available in the Chemistry Resource Room (211 Whitmore) after the first week of classes. The hours will most likely be 6:30 to 10:30 pm, Sundays through Thursdays. The course TA, Sean, will hold his office hours in this room (see above). If you’re interested in a private tutor, please see Mike Joyce in 210 Whitmore for a list of available tutors for hire.

Course Website: ANGEL, Chem 202 Section 001, Sp11  
Here you will find the lecture notes, practice exams, etc.

Texts:

Other Materials:
- A molecular model set is required. The following set is recommended and will be carried by the PSU bookstore: Molecular Model Set For General and Organic Chemistry, Prentice Hall, 1998. ISBN: 9780139554445. Other model kits that are designed for organic chemistry are also acceptable.
- A spiral-bound notebook is required for note-taking, especially for writing down reaction mechanisms.

Course Content: For the purpose of exams, the course content is defined by (a) the lectures (b) the relevant chapter readings and problems in McMurry (c) any other assigned material. The material in Chapter 13 of McMurry will not be covered until Chem 203. Note that some sections in McMurry will not be covered, and some material may be presented out of order then it appears in McMurry. Please see the “Outline of Lectures” at the end of this syllabus for the McMurry readings and suggested problems.
Registrar Dates:
Drop/Add Period: Ends on January 19, 2011
Late Drop Deadline: Ends on April 8, 2011

For Students Applying to Medical School:
Drop this course and take the Chem 210, 212, and 213 organic chemistry courses instead!
(Chem 202 and Chem 203 are NOT suitable for medical school application requirements.)

For Students Applying to Veterinary, Optometry, or Dental School:
Check how many credits of organic chemistry are required for the programs you are considering. A lot of these programs require 8 credits of organic chemistry; Chem 202 and Chem 203 will give you only 6 credits combined. Please talk with your academic advisor to determine whether you should take this course or the Chem 210, 212, and 213 organic chemistry courses instead.

Grades
The breakdown of points is as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>In-class exercises (amount and frequency to be determined)</td>
<td>10%</td>
</tr>
<tr>
<td>Mid-semester exams (three at 20% of the final grade)</td>
<td>60%</td>
</tr>
<tr>
<td>Comprehensive final exam</td>
<td>30%</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
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In-class exercises (10% of final grade)
The purpose of these exercises is to get students to participate in the class and for the instructor to get frequent feedback on student understanding of concepts. Questions will be given out, discussed, and collected during lecture. The questions will be worth varying points; they are weighted to equal 10% of the final grade. The lowest three grades (in %) for each individual person will be dropped. Thus, you can miss three lectures or get low scores on three assignments without consequence to this 10% of your final grade. Note: Because extra opportunities to earn these points are provided, *there are no make-ups for in class exercises regardless of the reason you missed class.*

Mid-Semester Exams (each worth 20% of final grade)
Exams 1, 2, and 3 will be offered as 75-minute evening exams. The final exam will be given during finals week. The exams will include short-answer questions and multiple choice questions.

To take the exam you will need pencils/pens and your student I.D. card. You cannot use books, notes, etc. You may, however, use a molecular model kit, providing it does not contain any written materials. Calculators may be used; if a programmable calculator, the memory must be cleared before exams are distributed. Practice questions for the exams will be provided on ANGEL. Our TA, Sean, will offer a review session before each exam.

The exam schedule is:
- Exam 1: Monday, February 7, 6:30-7:45 pm, room 100 Thomas
- Exam 2: Wednesday, March 2, 8:15-9:30 pm, room 121 Sparks
- Exam 3: Wednesday, April 6, 8:15-9:30 pm, room 121 Sparks

*Note that these exams are not all at the same time/place. This is not a typo.*
A make-up exam will be given to students who miss Exam 1, 2, or 3. It is comprehensive to Exam 1, 2, and 3’s material and will be offered near the end of the semester.

Comprehensive Final Exam (30% of final grade)
Our final exam covers all of the material from the entire semester, and will be scheduled by the registrar for sometime during finals week (May 2-6). Do not make plans to leave the university before you know when the final is; only conflicts that are approved by the registrar’s office will be honored. The format of the final exam will follow the previous exams’ formats, that is, short-answer questions and multiple choice questions. It is worth 30% of your final grade.

Suggestions on How to Study for Chem 202 Exams
First, you must do the following before studying for Chem 202 exams:
• Read the textbook before and after lecture!
• Attend all lectures.
• Solve as many end-of-chapter questions as possible (in addition to what’s suggested on the course syllabus).

Once you feel that you’re up-to-date with lecture material (by doing the above), you’ll be ready to prepare for an exam. Here are some different techniques that past students have found effective for this course. I would encourage doing two or more of the techniques to find which one works best for you.
• **Rewrite your notes!** Especially when you’re studying the reaction mechanisms. You’ll be required to write out the mechanisms from lecture; they are NOT given in PowerPoint notes, and this is for a reason. Writing mechanisms will help you remember them and UNDERSTAND them. If you have questions about your notes, come to office hours and ask!
• **Outline the reaction mechanism in words.** Most reaction mechanisms involve several parts. If you can outline the mechanism in WORDS (step-by-step), then you have an understanding of what’s happening in that mechanism.
• **Talk through the mechanisms.** (This is somewhat similar to outlining mechanisms.) If you can explain in WORDS verbally what’s happening, then you’ll understand the mechanism better. It’d be best to talk through them with a study partner.
• **Flashcards.** I’ve seen a lot of students use flashcards as study tools. Although it takes time, it may work well for you. Again, writing out flashcards should reinforce concepts and may bring up questions about those concepts that you can ask during office hours.
• **Make a Reactions Table.** Generate a table to make the associations; make a column for name of the reaction, main starting material (functional group), and the product made (functional group). For instance, a Claisen condensation starts with two equivalents of an ester to make a -keto ester. Of course, you’ll need to know what the structures of these functional groups look like.
• **Come to office hours** to get things cleared up as soon as possible...no matter how small you think it may be!

Exam Regrade Policy
Graded exams (Exams 1, 2, and 3) are handed back so that students can (a) see what kinds of mistakes they made and thus better prepare for future exams, and (b) determine if serious errors were made in grading, adding up points, etc. The purpose of regrading a question is to be certain that, within reason, the same grading standards were applied to all exams. Grade lines must be drawn somewhere. It is unfortunate but inevitable that some students will miss a grade by only a few points, sometimes even just one point. Partial credit may be give for some short answers that are not completely correct but that have significant merit. By comparison to
grading simply right or wrong, assigning partial credit is less precise. With these considerations in mind, the following regrade policy will apply:

A. Regrade requests must be submitted in writing within 3 lectures of the exam being returned.
B. A regrade request must include: (1) the exam, (2) the answer key’s answer, copied on a separate piece of paper, and (3) an explanation in writing of why your answer deserves more credit.
C. If your request involves an arithmetic error in calculating your score, don’t bother with B(2).
D. Failure to follow these directions will result in requests being returned without consideration.

Procedures
One comprehensive make-up exam (material from Exams 1, 2, and 3) will be provided near the end of the semester to students with valid excuses (family emergency, illness, etc.) who have missed any of the first three exams. In order to be permitted to take the make-up exam, you must provide the instructor with a documented, written explanation of your absence within one (1) week of the make-up exam date (TBA). This explanation must include a telephone number for a person who can corroborate the reasons for the absence, but should not include any unnecessary private details. All students permitted to take this exam must sign up with the instructor one week before the exam.

Replacing the lowest exam score: If you perform well on the final exam, then 80% of the final exam grade will replace your lowest exam score if the former is higher.

Citizenship: In order to promote a professional and nurturing learning environment, I set several expectations for my students, my TA, and myself. They include the following:
• Be respectful. No cell phones, newspapers, etc during class.
• Do not whine or complain.
• Be prepared and on time for lecture.
• When composing an email, write it as a professional letter. Use proper grammar.
• Have an open and positive attitude towards learning.
• Ask questions and participate in lecture.

Academic Integrity: Instructors are now asked (Senate Rule 49-20) to provide at the beginning of a course a statement to "clarify the application of academic integrity criteria to that course".

The Senate Rule includes the following:
Academic dishonesty includes, but is not limited to, cheating, plagiarizing, fabrication of information or citations, facilitating acts of academic dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students. (You should also be aware of the extensive parts of this Rule that describe procedures for handling alleged instances of academic dishonesty.) Specific instances of academic dishonesty in this course would include (but not limited to) copying or helping someone else copy during an examination, using unauthorized materials during an examination, stealing or destroying course materials or another student's examination paper, altering answers or grades on graded examinations, having someone take an examination or complete another graded assignment for you, and attempting to do any of the above. Such infractions are considered cause, at a minimum, for awarding a grade of "0" on the exam in question (and not allowing the student to drop the class). Further penalties are possible depending on the nature of the infraction.