Chem 213 Syllabus

Chemistry 213: Organic Chemistry Lab

Fall 2010

Fall Lab Courses:

Chem 213 Class Time/Location:

Section 101: T/R 1:25 – 4:25 pm
Section 102: T/R 6:30 – 9:30 pm
Section 103: T/R 9:05 am - 12:05 pm
Section 104: MW 1:25-4:25 pm

Location: 205, 215, 216 Whitmore

Course Location: 205 Whitmore Lab

Faculty in charge:

Dr. Jackie Bortiatynski
Laboratory Director
Office: 211D Whitmore
Phone: 865-2772
Email: jackie@chem.psu.edu
Office Hours: By appointment

Dr. Sheryl Rummel
Director of Instrumentation
Office: 211B Whitmore
Phone: 867-2658
Email: sad270@psu.edu
Office Hours: By appointment

Course Website: ANGEL

Required Materials:

3. Eye Protection - Eye Protection is required at all times in the Organic Laboratory! See Information on Eye Protection in Chapter 2
4. Organic Lab Equipment Kit of expendable items including 2 NMR tubes, 15 TLC plates, 12 vials, etc. This kit is available at the Penn State Bookstore.
5. Combination or key lock

If you wear shorts or a top that exposes your midriff, you must purchase and wear a plastic lab apron to protect your midriff and legs. You CANNOT wear open-toe shoes in the lab even during check in and check out!

Course Objective: To learn and master fundamental organic chemistry laboratory techniques, to perform synthetic reactions, work-ups, and purifications, to learn how to operate instrumentation and analyze spectral data, and to write original lab reports in a professional manner.

Breakdown of Points:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Quizzes/Tests</th>
<th>PreLab &amp; Notebook Pages</th>
<th>Formal Final Report</th>
<th>Total Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation Exercises</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>100</td>
</tr>
<tr>
<td>Check Out Activities</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>100</td>
</tr>
<tr>
<td>Chapter 4</td>
<td>Yes</td>
<td>100</td>
<td>---</td>
<td>100</td>
</tr>
<tr>
<td>Chapter 5</td>
<td>Yes</td>
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<td>100</td>
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<tr>
<td>Chapter 6</td>
<td>Yes</td>
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<td>100</td>
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<tr>
<td>Chapter 7</td>
<td>Yes</td>
<td>100</td>
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<td>100</td>
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<tr>
<td>Chapter 8</td>
<td>Yes</td>
<td>75</td>
<td>100*</td>
<td>175</td>
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<tr>
<td>Chapter 10, Spectral Unknown</td>
<td>No</td>
<td>NA</td>
<td>100**</td>
<td>100</td>
</tr>
<tr>
<td>Chapter 9 4 Synthetics/Isolations</td>
<td>Yes</td>
<td>4 x 75</td>
<td>4 x 125</td>
<td>800</td>
</tr>
<tr>
<td>Quizzes</td>
<td>6 X 50</td>
<td>---</td>
<td>---</td>
<td>300</td>
</tr>
<tr>
<td>Final Exam</td>
<td>100</td>
<td>---</td>
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<td>100</td>
</tr>
</tbody>
</table>

*Chapter 8’s formal final report will have two drafts. One-half of the points deducted in the first draft can be earned back in the second draft; **the assignment for Chapter 10 is not a formal final report. You will be required to submit forms for this experiment; the forms with instructions are on ANGEL. The weighting of the assignments were as follows: Technique experiments- 35%, Synthetic experiments- 35%, Orientation/Checkout Activities- 5%, Quizzes- 10%, Final- 15%.
Lab Assignments/Grading:

- The assignments to be completed by each student are listed in the table above.
- There will be five (5) techniques experiments requiring prelabs and notebook pages, one (1) spectral unknown experiment, and five (4) synthetic experiments.
- Each technique and synthetic experiment will have one PreLab/Notebook Pages assignment.
- Formal Final Reports will be submitted for Chapter 8 and Chapter 9 experiments. The Chapter 8 final report will be submitted twice for grading. One half of the points deducted in the first submission can be earned back in the final submission if you follow the grading suggestions.
- You will submit a spectral unknown report form found on Angel.
- You will have six (6) quizzes throughout the semester (see schedule for dates); each is worth 50 points. Quizzes 1 through 5 will consist of several questions that will test your preparedness for the experiment you are starting that day. Quiz 6 will focus on spectroscopy (i.e. sample preparation for spectral analysis, predicting signals in spectra, etc) and Chapter 9 information.
- The Final Exam is a test your practical knowledge of all lab techniques that you used during the semester; it is worth 100 points and is worth 15% of your final grade.
- The average final grade per section is typically in the B range. If the average for your section falls in the B range, traditional grade lines will then be used to assign final grades (for example, 93-100 is an A; 90-92 is an A-; 87-89 is a B+; 83-86 is a B; 80-82 is a B-, etc). If your sections’ average is low (in the C range), then the average may be curved up.
- Your % grade will be calculated using a weighting formula. The formula is as follows: Final Grade = ((Total Technique Points (notebook and reports)/575)*0.35 + (Total Synthetic Points (notebook and reports)/800)*0.35 + (Total Orientation and Check Out Points/200)*0.05 + (Total Quiz Points (including spectral unknown assignment)/400)*0.10 + Final Exam*0.15)*100. You can use this formula to calculate your final grade.
- Your TA should provide the class with averages for each report and quiz; use this average as a reference point to gauge your progress. Your TA should also hand back your reports no later than one week after the due date. If this is not being done, please see the course instructor.
- **Please Note:** Your time spent in lab does not include time to analyze the compounds you synthesize or isolate throughout the semester. You will need to devote some additional time for analysis in our Instrument Room (206 Whitmore). There are several very important Instrument Room policies (posted on ANGEL) implemented by our Director of Undergraduate Instrumentation, Dr. Sheryl Rummel. To help make this room run in an educational and efficient manner, please familiarize yourself with these policies. You will also be required to complete an Instrument Room Worksheet as part of your orientation activities.

Registrar Dates:

Start Dates:  
Sections 101 – 103: August 31st, End Date: December 9th  
Section 104: August 25th, End Date: December 10th
Add Deadline:  
Sections 101 – 103: September 9th  
Section 104: September 2nd
Drop Deadline:  
Sections 101 –103: September 8th  
Section: 104: September 1st
Late Drop Deadline:  
Sections 101 – 103: November 14th  
Section: 104: November 12th
Thanksgiving Recess:  
November 22nd – 28th

Absences and Catch-Up Day Policy: If you are not able to attend lab for an excusable reason (e.g. sickness, family emergency), you are to notify your TA and Dr. Bortiatynski immediately by email. You have a 24-hour period of time to notify us regarding your absence. You will not be granted extensions on work due that day or on future assignments linked to work you missed if you do not contact us during the 24-hour period starting when lab meets. The Catch-Up days (two are offered this semester) are on the schedule for you to catch up on missed work or to complete unfinished lab work. If you finish your lab.
work on a Catch-Up day and you have been granted an extension on an assignment, the final report for that experiment will be due 2 lab periods after that Catch-Up day (if the due date already passed). Note if an assignment is due on a Catch-Up day you are required to turn in your assignment at the start of lab even if you do not need to make up any work. Remember, Catch-up days are not to be used to make up work because you did not feel like coming to lab. All TAs will be present during Catch-Up days, but they are not required to stay more than 15 minutes after the last student in their section leaves the lab. If you miss a lab period during the synthetic portion of the classes there are no Catch-Up days. Again extensions on written assignments will only be granted if you have notified your TA and Dr. Bortiatynski or Dr. Rummel about your absence.

Late Policy: For the first late day you will lose 10% of the total possible points and each additional day you will lose 5% of the total possible points. The late days include weekends and holidays. This late policy applies to all Prelabs, Notebook Pages, and Formal Final Reports. See Late Policy in Section of the Lab Guide.

Course Schedule of Assignments: See course schedule attached to this syllabus.

Academic Integrity: Academic dishonesty includes, but is not limited to, the following situations:
- Giving the electronic file of your final report to another current student or future student via e-mail, flash drive, CD, etc.
- Using someone else’s data, not citing other student’s data or fabricating data.
- Using phrases or sentences directly or paraphrasing from the lab guide or any other source (book, journal, or website) and not referencing that source or not using quotes.
- Using phrases or sentences directly from the lab guide or any other source (book, journal, or website), referencing that source, but not using quotes.
- Using more than one sentence directly from or paraphrasing from the lab guide or any other source (book, journal, or website) even if you reference it and use quotes. You are required to have all your written work in your own words!

If you are found to be involved with academic dishonesty on a final report, you will be given a zero for that report. The second offense will involve receiving an F or an XF for the course. Please see Chapter 1, Section 1.6 for a detailed discussion on academic dishonesty.

All University and Eberly College of Science policies regarding academic integrity/academic dishonesty apply to this course and to the students enrolled in this course. Refer to the following URL for further details on the academic integrity policies of the Eberly College of Science: http://www.science.psu.edu/academic/integrity/index.html, http://www.sa.psu.edu/ja/conduct.shtml

The Code of Mutual Respect and Cooperation:
The Eberly College of Science Code of Mutual Respect and Cooperation pertains to all members of the College community; faculty, staff, and students. http://www.science.psu.edu/climate/code-of-mutual-respect-and-cooperation-1

The Code of Mutual Respect and Cooperation was developed to embody the values that we hope our faculty, staff, and students possess, consistent with the aspirational goals expressed in the Penn State Principles. The University is strongly committed to freedom of expression, and consequently, the Code does not constitute University or College policy, and is not intended to interfere in any way with an individual’s academic or personal freedoms. We hope, however, that individuals will voluntarily endorse the 12 principles set forth in the Code, thereby helping us make the Eberly College of Science a place where every individual feels respected and valued, as well as challenged and rewarded.

The 12 Principles of the Code are:

1. Treat everyone equally and with respect
2. Be courteous
3. Be ready to communicate
4. Encourage others and share your expertise with them
5. Give and accept constructive criticism
6. Be receptive to change
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7. Be a team player
8. Get involved
9. Have a positive attitude
10. Be honest and accept responsibility
11. Recognize other people’s priorities
12. Strive to do your best

Procedure to obtain a Letter of Recommendation:
Letters of recommendation are composed by your TA and Dr. Bortiatynski or Dr. Rummel. It is recommended that you only seek a letter of recommendation if your current course grade is A- or better. Your TA will supply Dr. Bortiatynski with a personal statement that reflects your performance and your professional attitude as it pertains to the Code of Mutual Respect and Cooperation. When requesting a letter or recommendation please follow this procedure or your letter will not be written:

1. Inform your TA of your intent to request a letter of recommendation and ask him/her to please draft a personal statement for you.
2. You must fill out the Request Letter of Recommendation Form posted on Angel and bring it to Dr. Bortiatynski’s Office where you will log into the Request for Recommendation Book, providing the following information: date of request, name, TA name, course taken, semester taken, destination of letter, date letter is due.
3. Follow up with your TA to make sure the personal statement has been sent to Dr. Bortiatynski. When the letter is complete you will receive an email from Dr. Bortiatynski letting you know the letter has been sent to the recipient. Please allow at least 1 month lead time for me to compose the letter. Approximately 40 requests for letters are receive each semester and it is impossible to write all the letters in one or two weeks.

Email Correspondence with Dr. Bortiatynski and Dr. Rummel:
We will try to check email at least twice a day. We will check it by no later than 9 a.m. and again before leaving the office in the afternoon. We will not answer email from home in the evenings, and we will not answer email on the weekends. If you send email after 5 pm on a weekday, we will try to answer it first thing the following morning. Please make sure you include the name of your TA, your lab section, and the name of the experiment or specific procedure in all correspondence. Numerous emails are received without such information and it delays the response time.

Clean up and Check out:
You are required to assist in lab clean up and check out at the end of the semester. If you cannot attend the last day of lab then you must make other arrangements with Dr. Bortiatynski or Dr. Rummel at least one week in advance. Remember your lab final will also take place on the last day of lab.