Syllabus for Chemistry 2251, Fall 2019

Instructor: Dr. Robert-André F. Rarig
Office: Beury 202
e-mail: rarig@temple.edu

Dr. Rarig’s Office Hours: Monday & Wednesdays 8:00-9:30 AM or by appointment in 202 Beury

Teaching Assistant: TBA Office Hours: TBA

Lecture: Mondays, Tuesdays, Wednesday, & Thursdays 9:30–10:50 AM in 133 BioLife
Recitation: Mondays 1:00-1:50 PM in 133 BioLife

Required Texts: Organic Chemistry 9th Edition by Wade w/ mastering chemistry package
Recommended (strongly): Molecular Model Set

Recommended: Many benefit from the use of “Organic Chemistry as a Second Language,” by Klein.

Course Summary: Organic chemistry is one of the hardest undergraduate subjects to study because it has linguistic, artistic, and conceptual aspects that require memorization, application, visualizations and even manual dexterity, not unlike a medical school curriculum. A lot of commitment goes into learning organic chemistry on a short time-frame, and success comes to those who are disciplined, detail-oriented, and not easily intimidated.

This course is designed to condense the standard two semesters of material into a one semester course, emphasizing MCAT/DAT/PCAT subject matter and the fundamental understanding you will need as you progress to biochemistry and medical school.

Tips for Success:
- Attend all lectures and stay focused. Try to think of it as a vacation from everything else.
- Keep up. It is extremely easy to fall behind in the class, and once behind it is extraordinarily difficult to catch up. Commit to reading 30-45 minutes per day for this course.
- Keep perfection as an aspiration, but not an expectation. The expectation of perfection in this course is an unrealistic one that historically causes more depression than motivation.
- Identify your weaknesses and turn them into strengths. Embrace mistakes as learning opportunities.
- Work a few of the assigned problems every day at a pace to cover them all over the course of a week. It is much more effective to ask a question about material you have already tried to apply; that way your instructors can help pinpoint and trouble shoot your specific misunderstanding.
Course Resources

Canvas: There will be a course Canvas site. I will use this site to post solutions to problems sets as well as the practice exams and their solutions.

The Book & Its Problems: Working problems regularly is—without a doubt—the most crucial aspect to succeeding in this course! Solutions to the book problems will not be posted on Canvas, though they are available in the “Solutions Manual” or via the online homework (you needn’t do the homework online if you’d rather do it on paper and hand it in). That said, should you need a more thorough explanation than is provided in the Solutions Manual or online, please do ask! Your TA and Professor Rarig will be prepared to discuss this material in recitation or office hours.

Lecture: Mondays, Tuesdays, Wednesday, & Thursdays 9:30–10:50 AM in 133 BioLife

Recitation Sessions: These will be run by Dr. Rarig. These sessions will review material covered from the previous week. The format will be question & answer-type, not a lecture format. You will get the most out of recitation if you have tried the problems before attending. There might be a short quiz at the end of each recitation.

Text: Organic chemistry text is admittedly not like reading a fantastic novel...or perhaps even a middling to poor novel. It can be brutally information-dense. To combat this, break the reading into small bits each day. Additionally, pay special attention to graphs, charts, tables and pictures. These visual aids often can relay much more information and do so in an easier-to-understand format. The in-chapter questions are great opportunities to confirm that you understand the basic fundamentals you just read.

Practice Exams: Practice Exams and their answer keys will be posted on the course Canvas site 1 week before all exams. The proper way to utilize this resource is to mimic the exam conditions. Do not use your notes. Do not use your textbook. Most certainly, do not even look at/download/print out the answer key until after you have “taken the test.” Allot yourself at least 90 minutes of uninterrupted time. After you have completed the exam, download the answer key and assess your work. Be honest with yourself! In fact, if you had a classmate with whom to exchange exams, so much the better.

Dr. Rarig: I have weekly office hours Monday & Wednesdays 8:00-9:30 AM. Additionally, you are welcome to arrange time to meet with me to discuss course content, your current performance, to solicit suggestions on improving your learning experience, or anything else pertaining to Chem 2251. Email (rarig@temple.edu) or youcanbookme (rarig.youcanbook.me) is the best way to arrange such appointments.
Assessment

Your final grade will be awarded based on your performance on recitation quizzes and homework (10 x 8 points) four midterm exams (4 x 70 points), and one final exam (140 points).

Weekly Recitation Quizzes (top 9 quiz scores) & Homework ................................................................. 80 points

Exam 1 – Monday, September 16th 7:50-10:50 AM ................................................................. 70 points
Exam 2 – Monday, October 14th 7:50-10:50 AM ................................................................. 70 points
Exam 3 – Monday, November 4th 7:50-10:50 AM ................................................................. 70 points
Exam 4 – Thursday, November 21st 7:50-10:50 AM ................................................................. 70 points
Final Exam – Friday, December 13th .......................................................................................... 140 points

Total: 500 points

Grading

Grading cutoffs: The worst grade you can earn with the following course percentages are as follows:
100%-90% (A-); 89%-80% (B-); 79%-70% (C-); 69%-60% (D); <60% (F).

No make-up exams are given and no examination grades will be dropped. If you must miss an exam, valid written excuses from a doctor or from a family member in the event of personal tragedies are required. If at all possible, notify me in advance of the examination. If you know you must miss a scheduled examination due to the observation of a religious holiday, you should make arrangements to take the exam at an alternate time. These arrangements must be made by September 16th. Students missing an exam will have their final exam prorated to make up the point difference.

Exams will begin promptly at 6:30 p.m. and last exactly 90 minutes. If you are late for any reason, you relinquish that time.

Plan to arrive 5-10 minutes before the exam begins. You will need your Temple ID with you and your identity will be checked as you hand in the exam. Failure to provide proper identification results in a grade of zero for the exam.

Unexcused absences from an exam will result in a grade of zero.

Final examinations that must be postponed for legitimate reasons will be held during the time designated by the University. Students missing a final examination must obtain permission to take the make-up exam the following semester from an advisor in the SAS office.
Any re-grade requests must be received at the next class period after the exam is returned. Questions must be directed to the instructor, in writing, and given in person at the beginning or end of class. To submit a re-grade request, you must submit your exam along with a separate piece of paper and a written statement as to why your answer should be re-graded. **DO NOT write on the exam paper.**

**Note:** When exams are submitted for re-grades, the entire examination may be re-graded.

**Violations of the Code of Academic Integrity:** Any case of suspected cheating on any of the examinations or on a re-grade of an examination will be directed to the Judicial Inquiry Officer. Any student found guilty of cheating will receive an F for the course and whatever further action deemed necessary by the Judicial Inquiry Officer.

**Drops, Withdrawals, & Incompletes:** The last day to drop the course is 9/11/2017. Petitions for withdrawal will not be granted after Tuesday, October 24th 2017. An Incomplete will not be given in place of a poor grade.

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**Detailed Breakdown of What Book Sections to (not) Focus on**

*Organic Chemistry 9th Edition by Wade*

**Chapters 1& 2:** read it all  
**Chapter 3:** You can skip 3.4-3.6 & 3.16.  
**Chapter 5:** Read all except 5.15&5.16. 5.4-5.5 & 5.7 should be reviewed for MCAT but not emphasized on my exams. I won’t test you on section 5.9.  
**Chapter 6:** I will not test you on 6.2-6.6. You needn’t worry about section 15 on midterm 1.  
**Chapter 7:** Sections 7.3-7.7 are not on midterm 2.  
**Chapter 8:** You can skip 8.3B, 8.10, 8.11, 8.15-17.  
**Chapter 10:** You can skip 10.4, 10.5, 10.12.  
**Chapter 11:** You can skip 11.4, 11.12, 11.13.  
**Chapter 15:** You can skip 15.7, 15.10-15.12, 15.14&15.  
**Chapter 16:** You can skip 16.10-16.11, 16.14.  
**Chapter 18:** You can skip 18.1-18.6, 18.7B&C, 18.18; emphasis on sections 14,15,16, 17, 20c-Wolff-Kishner Reduction.  
**Chapter 20:** Focus on sections 8,10,12,14,15; Sections 20.1-7&9 are review  
**Chapter 21:** Focus on sections 5-7,8c,10-14.  
**Chapter 22:** I won’t test you on sections 5 and 6  
**Chapter 23:** Section 6 is review; Skip sections 7,9,13, &17.  
**Chapter 24:** I won’t test you on electrophoresis or sections 5B, 6, 7C, 8C, 9, 11, & 13
<table>
<thead>
<tr>
<th>Date</th>
<th>Chapter</th>
<th>Subject (MCAT Category)</th>
<th>Recommended Book Problems</th>
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<tr>
<td>Try before class starts</td>
<td>1-3</td>
<td>Review / Transition</td>
<td>1-27, 1-31, 1-34, 1-38, 1-59, 2-29, 2-32, 2-34, 2-56, 2-57, 3-34 (a,b,d), 3-36 (a,d,e), 3-39 (a,b)</td>
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<td>3</td>
<td>Nomenclature (5)</td>
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<td>Sep 2 - 5</td>
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<td>Reactive Intermediates (5E)</td>
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<td>Sep 9 - 12</td>
<td>5</td>
<td>Stereochemistry (5D)</td>
<td>5-25, 5-26, 5-28, 5-29, 5-30, 5-31</td>
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<td>Sep 16* - 19</td>
<td>6,7</td>
<td>SN1, SN2, E1, E2 (5D)</td>
<td>6-33, 6-34, 6-35, 6-40, 6-42, 6-43, 6-45, 6-52</td>
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<td>Sep 23 - 26</td>
<td>8,10,11</td>
<td>Alcohols (5C, 5D)</td>
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<td>Sep 30 - Oct 3</td>
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<td>IR, MS, NMR (4D, 4E)</td>
<td>8-46 (a,c,p), 8-47 (a,b,h,l), 8-49, 8-56 (b,c), 8-64, 8-79, 10-36, 10-38, 10-43, 10-41, 10-49, 11-40, 11-48, 11-55, 11-58, 11-60, 11-63(a)</td>
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<td>Oct 7 - 10</td>
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<td>Conjugation &amp; UV (4D)</td>
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<td>Oct 28 - 31</td>
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<td>Acids and derivatives (5D)</td>
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<td>Lipids (3A, 5D)</td>
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<td>Nov 11 - 14</td>
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<td>Aldol Reactions (5D)</td>
<td>18-37, 18-41, 18-43, 18-50, 18-52, 18-56</td>
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<td>Nov 18 - 21*</td>
<td>23</td>
<td>Carbohydrates (1D, 5D)</td>
<td>18-61, 18-63, 18-67, 18-70, 18-72</td>
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<td>Nov 25 - 29</td>
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<td><strong>Fall &amp; Thanksgiving Breaks</strong>: No Class</td>
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<td>Dec 13</td>
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<td><strong>Final Exam</strong></td>
<td>21-44, 21-49, 21-50, 21-59, 21-60</td>
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<td>Room TBA</td>
<td>22-72, 22-80, 22-85</td>
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* An Exam is scheduled for 7:50 – 10:50 AM in 133 BioLife on these days