ORGANIC CHEMISTRY 108B-WINTER QUARTER 2012

Instructor: Bakthan Singaram; ext. 3154; singaram@chemistry
Office: PSB 348
Office Hours: MTWF 2:00-4:00 PM
Class Time: TTh 10:00 AM - 11:45 AM
Class Room: EMS B 206
Teaching Assistants: Chris Murphy, PSB 398; ext. 93479; cmurphy1@ucsc
Chris Bailey, PSB 398; ext. 93479; clbailey@ucsc

Prerequisites: Pass in Chem. 108A or Chem. 112A or equivalent.

Problem Sets: Assigned problems are attached to this sheet. All problems should be solved, but they are not to be turned in. Myself and the TAs are at your disposal during our office hours to discuss these homework problems and any other problems or questions you may have with this course. A minimum of 50% of the questions on the exams will be strongly based on these problems.

Discussion Sections: Attendance required

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<tbody>
<tr>
<td>A</td>
<td>Tu</td>
<td>6:00P-7:10P</td>
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<tr>
<td>B</td>
<td>Tu</td>
<td>7:30P-8:40P</td>
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<td>C</td>
<td>W</td>
<td>8:00A-9:10A</td>
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<td>D</td>
<td>W</td>
<td>9:30A-10:40A</td>
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<td>E</td>
<td>F</td>
<td>11:00A-12:10P</td>
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<td>F</td>
<td>F</td>
<td>3:30P-4:40P</td>
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<td>G</td>
<td>Tu</td>
<td>12:00A-1:10P</td>
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<td>H</td>
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<td>9:30A-10:40A</td>
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<td>I</td>
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<td>12:00A-1:10P</td>
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<td>J</td>
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<td>K</td>
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<td>2:00P-3:10P</td>
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<td>L</td>
<td>Th</td>
<td>2:00P-3:10P</td>
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Exams: Your mastery of this Organic Chemistry course will be determined by means of two hour-long exams and a compulsory final exam. No make-up exams are administered.

Grading: Grading will be based on your performance in the two hour-long exams (100 pts. each), and the final exam (100 pts.). The grading will be based on the best of 400 pts. This means that your best exam (either one of the two hour-long exams, or the final) score will be counted twice. An exam missed for any reason will be considered the "lowest". Final Exam is mandatory.

An Approximate Grading Scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>90-100%</td>
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<tr>
<td>B</td>
<td>80-89%</td>
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<tr>
<td>C</td>
<td>55-79%</td>
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<tr>
<td>D</td>
<td>45-55%</td>
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<tr>
<td>F</td>
<td>&lt;45%</td>
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If there is any disagreement over grading, consult your TA or myself within 2 days of receiving your exam. No changes will be made after that time.

### Lecture Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Text Chapter</th>
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<tbody>
<tr>
<td>Jan 10</td>
<td>Alcohols and Phenols</td>
<td>17</td>
</tr>
<tr>
<td>Jan 12</td>
<td>Ethers and Epoxides;</td>
<td>18</td>
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<tr>
<td>Jan 17</td>
<td>Aldehydes and Ketones</td>
<td>19</td>
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<tr>
<td>Jan 19</td>
<td>Aldehydes and Ketones</td>
<td>19</td>
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<tr>
<td>Jan 24</td>
<td>Carboxylic Acids and Nitriles</td>
<td>20</td>
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<tr>
<td>Jan 26</td>
<td>Carboxylic Acid Derivatives</td>
<td>21</td>
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<tr>
<td>Jan 31</td>
<td><strong>First Hour-long Exam</strong></td>
<td>17-20</td>
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<tr>
<td>Feb 2</td>
<td>Carbonyl Alpha-Substitution Reactions</td>
<td>22</td>
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<tr>
<td>Feb 7</td>
<td>Carbonyl Condensation Reactions</td>
<td>23</td>
</tr>
<tr>
<td>Feb 9</td>
<td>Carbohydrates</td>
<td>25</td>
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<tr>
<td>Feb 14</td>
<td>Carbohydrates</td>
<td>25</td>
</tr>
<tr>
<td>Feb 16</td>
<td>Carbohydrates</td>
<td>25</td>
</tr>
<tr>
<td>Feb 21</td>
<td><strong>Second Hour-long Exam</strong></td>
<td>21-23, 25</td>
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<tr>
<td>Feb 23</td>
<td>Amines and Heterocycles</td>
<td>24</td>
</tr>
<tr>
<td>Feb 28</td>
<td>Amines and Heterocycles</td>
<td>24</td>
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<tr>
<td>Mar 1</td>
<td>Amino Acids, Peptides and Proteins</td>
<td>26</td>
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<tr>
<td>Mar 6</td>
<td>Amino Acids, Peptides and Proteins</td>
<td>26</td>
</tr>
<tr>
<td>Mar 8</td>
<td>Amino Acids, Peptides and Proteins</td>
<td>26</td>
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<tr>
<td>Mar 13</td>
<td>Lipids</td>
<td>27</td>
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<tr>
<td>Mar 15</td>
<td>Lipids</td>
<td>27</td>
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<tr>
<td>Mar 20</td>
<td><strong>Final Exam  12-3 pm</strong></td>
<td>17-27</td>
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### Assigned Problems:

- **Chapter 22**: Problems 22.1, 22.7, 22.10, 22.13, 22.14, 22.22, 22.25, 22.29, 22.37, 22.45.
- **Chapter 23**: Problems 23.1, 23.8, 23.10, 23.12, 23.16, 23.17, 23.29, 23.35, 23.39, 23.41, 23.45, 23.46, 23.60, 23.62.

Chapter 27: Problems 27.1, 27.2, 27.3, 27.5, 27.8, 27.9, 27.15, 27.17, 27.18, 27.22, 27.25, 27.34, 27.35, 27.36, 27.39, 27.42, 27.46.

Sections that will not be covered in Chem. 108B:

Chapter 17: 17.1, 17.8, 17.9, 17.10, 17.11.

Chapter 18: 18.1, 18.4 18.7, 18.8, 18.9.


Chapter 23: 23.4, 23.7, 23.8, 23.9, 23.11, 23.12, 23.13.

Chapter 25: 25.8, 25.9, 25.10, 25.11.

Chapter 24: 24.1, 24.10.

Chapter 26: 26.8, 26.9, 26.10, 26.11.

Chapter 27: 27.7.

1. Compete with yourself and not with each other.

2. An excellent strategy for study is to skim or read the chapter summary before the lecture. During the lecture, you can then pay more attention to those topics which were not clear in your initial reading and ask questions accordingly.

3. You are encouraged to ask questions at any time during lecture. If a concept is unclear to you, please feel free to speak out.

4. Students can learn organic chemistry readily if they develop an understanding of the cause of chemical change, rather than attempting to master organic chemistry by memorization.

5. You are urged to consult with your TAs or myself should you have any difficulties with this course. Even if you have no difficulties, we hope you will consult with us, share your thoughts, and permit us to get better acquainted. The sooner you act in this regard, the better. Often, students procrastinate until the end of the quarter to seek help and by then no time remains for adequate assistance.

6. It is our sincere desire to assist you in every possible way, not merely to pass this course, but to obtain the maximum benefit from the subject matter presented.