Organic Chemistry II Syllabus  
Chemistry 322  
University of Alaska Fairbanks  
Spring 2014

Course Information
Chemistry F322, Organic Chemistry II, 3.0 Credits  
Murie Auditorium, MWF 10:30 – 11:30 am  
Prerequisite: Chem 321, Organic Chemistry I, with grade of C- or better.

Instructor
Thomas Green, Professor of Chemistry  
Reichardt 174, Phone: 474-1559, Email: tkgreen@alaska.edu  
Office Hours: Tues 1-5 pm, Wed 1-5 pm.  
Website: http://www.uaf.edu/chem/faculty/tgreen/tgreen.htm

Course Materials


Course Description
This course will focus on the theory of organic chemistry (or chemistry of molecules containing carbon) from the viewpoint of structure/reactivity relationships. Topics covered will be bonding, functionality, reactivity, synthesis, spectroscopy, nomenclature, and computer modeling. Homework and Exams will constitute the majority of the points earned in class.

Course Goals
1. Know reaction chemistry of major functional groups of organic molecules (molecules with carbon).
2. Know how to write mechanisms for organic reactions.
3. Know how to write organic reactions in a logical sequence to demonstrate how a molecule might be synthesized in the laboratory.

Student Learning Outcomes
At the end of this course, students should be proficient in:
1. Understand fundamental concepts of bonding in organic functional groups.
2. Know how to name simple organic compounds.
3. Be able to predict the reactivity of aromatic compounds, alcohols, phenols, aldehydes, ketones, carboxylic acids and their derivatives, and amines.
4. Understand the basic concepts of stereochemistry and apply it to reaction chemistry.
5. Be able to predict and write mechanisms of reactions based on fundamental concepts of acid/base chemistry (nucleophiles and electrophiles).
6. Know how to write out synthetic pathways using the correct order of reactants and reagents in order to arrive at a target molecule.

**Instructional Methods**

1. The instructor will lecture on the theoretical aspects of organic chemistry, using a combination of Power Point slides and Chalkboard, providing copies of notes to the students via the web.
2. Selected Online assignments (Sapling) relevant to the course material will also be required.

**Lecture Schedule and Coverage**

<table>
<thead>
<tr>
<th>Date</th>
<th>Chapters</th>
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<tbody>
<tr>
<td>Jan 17 - Feb 3</td>
<td>11, 14</td>
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<tr>
<td>Feb 7 - Feb 21</td>
<td>15, 16</td>
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<tr>
<td>Feb 26 - Mar 12</td>
<td>17, 18</td>
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<tr>
<td>Mar 24 - Apr 7</td>
<td>19, 20</td>
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<tr>
<td>Apr 11 - Apr 23</td>
<td>25, 26</td>
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<td>April 30, May 2, 5 - Review for Final</td>
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**Evaluation**

1. **Exams (5 @ 100 pts = 500 pts).** The lowest exam grade of Exams 1-5 will be dropped. The Final Exam grade will not be dropped.

   Exam 1, Feb 5 (Wed); Chapters 11, 14
   Exam 2, Feb 24 (Mon); Chapters 15, 16
   Exam 3, Mar 14 (Fri); Chapters 17, 18
   Exam 4, April 9 (Wed); Chapters 19, 20
   Exam 5, Apr 28 (Mon); Chapters 21, 22
   Final, May 7 (Wed), Comprehensive Final 10:15 am-12:15 pm

2. **Homework (160 pts)**

   **Sapling Online (160 pts) - 10 chapters @ 16 pts = 160 pts**
   You will need to have login access to the website. [http://saplinglearning.com](http://saplinglearning.com)

   End of Chapter Problems 10 chapters x 10 pts = **100 pts**

3. **Point Totals and Grade Assignment**

   5 exams @ 100 pts each = 500 points
   Sapling HW = 160 points
   End of Chapter Homework = 100 pts
   Total = **760 pts**
<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Points per Credit</th>
<th>Percentage required</th>
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<tr>
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<td>97</td>
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<tr>
<td>A</td>
<td>4</td>
<td>93</td>
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<tr>
<td>A-</td>
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<tr>
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Notes and Policies:

1. Molecular models are allowed during the exam. The Final is May 7 (Wed) 10:15am – 12:15 pm in Murie Auditorium
2. Class attendance is expected and role will be taken.
3. Make-up exams are only allowed in the event of a legitimate excuse as determined by the instructor. Oversleeping is not an excuse. Exams must be made up as soon as possible.
4. Cheating will result in a grade of F for the course.
5. The course will move quickly and it is important to keep up on a daily basis. The best way to do this is to read the text and to work the problems.

Disabilities Services

The Office of Disability Services implements the Americans with Disabilities Act (ADA), and insures that UAF students have equal access to the campus and course materials. Students with documented disabilities who may need reasonable academic accommodations should discuss these with me during the first two weeks of class. I will work with the Office of Disabilities Services (*208 WHIT, 474-5655) to provide reasonable accommodation to students with disabilities. You will need to provide documentation of your disability to Disability Services.