Chemistry 2410 (section 001): Organic Chemistry  

Instructor: Dr. Laura Serbulea  
Office: Chemistry Bldg. 229  
Phone: (434) 924-0924  
Email: lls3s@virginia.edu  
Office Hours: Mo 12:00 - 2:00 pm  
We 3:00 - 5:00 pm

Teaching Assistant: Joseph Houck jdh4y@virginia.edu

Course Meetings:
- Lecture (#10456) Tu & Th 12:30 - 1:45 pm, Clark Hall 108  
- Discussion (#10460) We 7:30-9:30 pm, Physics 203

Course Objectives:

During this course students will learn concepts and principles of organic chemistry with reference to nomenclature of organic compounds, classification of organic molecules by functional group, molecular geometry and isomerism, reactivity and mechanisms of reaction specific for various classes of organic compounds.

At the conclusion of the course students will be able to:

- Draw condensed and skeletal structures of organic molecules, as well as conformational structures using the wedge –dash formalism and Newman projections  
- Name organic molecules using IUPAC nomenclature  
- Represent reactions and reaction mechanisms using the appropriate arrow formalisms  
- Differentiate between constitutional isomers and stereoisomers  
- Analyze the stability of organic molecules based on bond strengths as well as electronic and steric interactions  
- Evaluate molecular reactivity using molecular orbital theory, resonance theory and reaction coordinate diagrams  
- Compose the synthesis of an organic compound by evaluating multiple pathways and using learned reactions

Required Materials:

- Sapling Learning access for online homework assignments

Recommended Materials:

- Molecular model set
Attendance/ Course Deadlines:

It is your responsibility to attend all class meetings. Please arrive on time and turn off any ringing tones of pagers and cellular phones while in class. In case that you decide to drop the course, it is your responsibility to take the necessary steps to drop/withdraw from the class by the university deadlines.

The last day to drop without a penalty is September 12, 2012.

The last day to withdraw from the course (“W” recorded) is October 23, 2012.

Course Website

Course materials such as lecture notes, practice exams, announcements as well as additional learning resources will be available through UVACollab.

Grading Policy:

The following items and their corresponding weights will be used in the calculation of the grade for the course:

<table>
<thead>
<tr>
<th>Items</th>
<th>% Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam I</td>
<td>15%</td>
</tr>
<tr>
<td>Exam II</td>
<td>15%</td>
</tr>
<tr>
<td>Exam III</td>
<td>15%</td>
</tr>
<tr>
<td>Final exam (cumulative)</td>
<td>40%</td>
</tr>
<tr>
<td>Homework (Sapling Learning assignments)</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

All items will receive a % score (0-100%). The % score for the homework will be calculated as the average of the scores obtained on the 13 homework sets assigned during the semester. The final % grade for the course is calculated as shown below:

\[
\text{% Grade} = \sum (\text{score} \times \frac{\text{Weight}}{100})
\]

The letter grade will be determined based on your final % grade, according to the following scale (+/- assigned):

A = 90-100%  B =80-89%  C = 70-79%  D =60-69%  F =0-59%

All examinations will be based on the material covered in lectures and discussions. During any type of examination you will be allowed to use only a non-programmable, non-graphing calculator. You must bring your own calculator - no sharing allowed, or be prepared to take the exam without it. You may use your own molecular modeling kit during exams; however, no sharing will be allowed. Only scratch paper provided by the instructor will be allowed during
exams. Three midterm exams are planned for September 19th, October 17th, and November 14th. All midterm exams will be administered during discussion session time. The final examination is cumulative and is scheduled for Friday, December 14, 2012, 2:00-5:00 pm in Clark Hall 108.

**Homework**

The homework assignments are created and administered through Sapling Learning. To register, do the following:


2a. If you already have a Sapling Learning account, log in, click "View Available Courses", then skip to step 3.

2b. If you have a Facebook account, you can use it to quickly create a SaplingLearning account. Click "create account" located under the username box, then click "Login with Facebook". The form will auto-fill with information from your Facebook account (you may need to log into Facebook in the popup window first). Choose a password and timezone, accept the site policy agreement, and click "Create my new account". You can then skip to step 3.

2c. Otherwise, click "create account" located under the username box. Supply the requested information and click "Create my new account". Check your email (and spam filter) for a message from Sapling Learning and click on the link provided in that email.

3. Find your course in the list (listed by school, course, and instructor) and click the link. Use the following enrollment key (case sensitive) to access the course: **001uv**

Once you have registered and enrolled, you can log in at any time to complete or review your homework assignments. During sign up - and throughout the term - if you have any technical problems or grading issues, **send an email to support@saplinglearning.com** explaining the issue.

There will be 13 graded homework assignments. You have multiple attempts available to answer each question; however, there will be a 5% penalty for each incorrect answer. Each assignment becomes available on **Monday at 12 am** and will be due the following **Sunday at 11:55 pm**. Homework problems must be completed by the due dates listed online for each assignment (also see the homework due dates schedule on the last page of the syllabus).

**The Honor System**

"On my honor, I pledge that I have neither given nor received help on this assignment."

The principles of truth and honesty are recognized as fundamental to a community of teachers and scholars. The University expects that students will honor these principles and in so doing will protect the integrity of all academic work and grades. **Students are expected to do all work assigned to them without unauthorized assistance and not to give unauthorized assistance.** While collaboration among students in preparation for an examination is encouraged, discussion of the homework questions among students is not acceptable. **All assignments (exams and online homework sets) must be completed without assistance of other students, and must be pledged at the time of submission.**
<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture Date and Topic</th>
<th>Exam Date/Time/Location</th>
<th>Sapling Homework Due Dates</th>
</tr>
</thead>
</table>
| 1    | 08/28 Course Intro & Chapter 1  
|      | 08/30 Chapter 2         |                         |                          |
| 2    | 09/04 Chapter 2         |                         | 09/09 HW1/ Ch.1           |
|      | 09/06 Chapter 3         |                         |                          |
| 3    | 09/11 Chapter 3         |                         | 09/16 HW2/ Ch.2           |
|      | 09/13 Chapter 4         |                         |                          |
| 4    | 09/18 Chapter 4         | 09/19 Exam I  
|      | 09/20 Chapter 5         | 7:30-9:30 pm, Physics 203 | 09/23 HW3/ Ch.3           |
| 5    | 09/25 Chapter 5         |                         | 09/30 HW4/ Ch. 4          |
|      | 09/27 Chapter 5         |                         |                          |
| 6    | 10/02 Chapter 6         |                         | 10/07 HW5/ Ch. 5          |
|      | 10/04 Chapter 6         |                         |                          |
| 7    | 10/09 Reading day       |                         | 10/14 HW6/ Ch. 6          |
|      | 10/11 Chapter 7         |                         |                          |
| 8    | 10/16 Chapter 7         | 10/17 Exam II  
|      | 10/18 Chapter 7         | 7:30-9:30 pm, Physics 203 | 10/21 HW 7/ Ch.7-p1       |
| 9    | 10/23 Chapter 8         |                         | 10/28 HW 8/ Ch.7-p2       |
|      | 10/25 Chapter 8         |                         |                          |
| 10   | 10/30 Chapter 9         |                         | 11/04 HW 9/ Ch.8          |
|      | 11/01 Chapter 9         |                         |                          |
| 11   | 11/06 Chapter 10        |                         | 11/11 HW 10/ Ch.9         |
|      | 11/08 Chapter 10        |                         |                          |
| 12   | 11/13 Chapter 10        | 11/14 Exam III  
|      | 11/15 Chapter 11        | 7:30-9:30 pm, Physics 203 | 11/18 HW 11/ Ch. 10       |
| 13   | 11/20 Chapter 11        | 11/22 Thanksgiving Holiday |                        |
|      | 11/22 Thanksgiving Holiday |                     | 11/25 No homework due    |
| 14   | 11/27 Chapter 11        |                         | 12/02 HW 12/ Ch. 11      |
|      | 11/29 Chapter 12        |                         |                          |
| 15   | 12/04 Chapter 12        | 12/14 Final Exam  2:00 pm – 5:00 pm, Clark Hall 108 |
|      | 12/06 Chapter 12        |                         | 12/09 HW 13/ Ch. 12      |

**Note:** Any changes to this schedule remains at the discretion of the instructor and will be announced in class and/or posted on the course site in UVACollab.