Course Syllabus
Intro to Organic and Biochemistry / Chem 2450
Fall 2012

Instructor: Lori Isom
Office Hours: M,F 10:50 – 12:00;
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Phone: 450-5794
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Web Site: http://faculty.uca.edu/lorii/home.html

Class Times:

Lecture: M, W, F 10:00 – 10:50 am (Laney 101)
Lab Section: Thursday 10:50 – 12:40 (Laney 206)

Course Description and Objectives:

Course Description
Intro to Organic and Biochemistry is the second part of a two semester survey course providing an overview of organic and biochemistry. General chemistry is taught in the first semester course (General Chemistry for Health Sciences/CHEM 1402) and enrollment in Intro to Organic and Biochemistry/CHEM 2450 requires a grade of C or better in General Chemistry for Health Sciences/CHEM 1402. Because of the health science focus, this course will differ significantly from a typical college chemistry course. Specifically, the course will include information concerning clinical aspects of chemistry, including biological processes and illnesses and medical diagnostic procedures as they are related to the chemistry information. You will be responsible for the clinical topics as well as the chemistry information covered in this course. Because we will also be discussing forensics and the biochemical basis of physiological processes, some students may find these topics disturbing or offensive. Consider yourself forewarned that much of the material in the course requires a mature consideration of a variety of topics ranging from erectile dysfunction and breast-feeding to post-mortem bodily processes and death. Regardless of the topic, students will be expected to learn the information presented in the class.

NOT ALL INFORMATION COVERED IN THIS COURSE WILL BE IN YOUR TEXT BOOK!!! Supplemental information will be covered in lectures and you will be responsible for understanding these additional topics also.

Prerequisites:
You must have an active email account and access to the Internet. Each student has an email account assigned to them free of charge upon registration. Contact computer services (450-3107) or visit their web site to activate your account. Internet access is available through computer clusters throughout the campus.

Intro to Organic and Biochemistry (CHEM 2450) has a pre-requisite of completion of CHEM 1402 with a grade of C or better.
Course Materials
Fundamentals of General, Organic, and Biological Chemistry, 6th edition, by McMurry and Castellion
Lab Manual – purchase from bookstore
Approved Lab safety goggles

Course Strategy
Learning chemistry requires the development of certain thinking skills that are unique to chemistry and the other physical sciences. Studying and learning chemistry can be difficult, especially at first. The suggestions below should help you spend your study time wisely.
Generally, you should set aside 2-3 hours of study time per hour of class time (lecture period). This does not include the extra study time that will be required around exam time.

The best way to study for this course is described below:
1) Before lecture, read chapter summaries and topics to be covered.
2) Attend class lectures. Some of the information included in my lectures will not be found in your text. While attending class is your choice, you will be held responsible for material presented in class, regardless of whether it is included in your text book or not. More so than possibly any other subject, students who do not attend class are unlikely to succeed in this course.
3) After lecture, read the text in detail and review lecture notes. Both will re-emphasize the material, helping to clarify it in your mind. Emphasize areas that were unclear to you after lecture.
4) PRACTICE, PRACTICE, PRACTICE!! Working examples in the text and problems at the end of the chapter are extremely important tools for transforming concepts into concrete knowledge. This is possibly the most important transition that much occur to succeed in this course.
5) Ask questions and get help! If you are confused about a topic or have questions PLEASE ASK for help or clarification!! If you have a question during lecture, please ask it. If you get lost at one point in the lecture it is unlikely that the remaining part of the lecture will make any sense. Don’t be embarrassed – if you have questions it means you are paying attention. I am also available to answer questions during my office hours.

Class Attendance
Class attendance is strongly recommended. Those students who attend class regularly are the most likely to succeed in this course. Also, quizzes will be given regularly and if you don’t attend class you will likely miss one or more quizzes. As mentioned above, a significant part of the material presented in this course will not be in the textbook. So attending class is necessary to obtain all the information that you will be held responsible for on the tests. If you miss 4 or more class periods (whole or in part) you may be dropped from the course at the discretion of the Instructor.

Make-up Policy
Make-up exams will be given only at my discretion. If you must miss an exam for an unavoidable, significant and validated reason (I decide what is unavoidable, significant, etc), contact me by email or phone (leave a message) BEFORE the time of the scheduled exam.
Any student who is absent from class for two consecutive weeks or misses more than nine classes during the semester may be dropped from the course with a WF.
No make-up quizzes or labs will be given (except under extreme circumstances that I deem appropriate).

**Course Evaluations**
Student evaluations of a course and its professor are a crucial element in helping faculty achieve excellence in the classroom and the institution in demonstrating that students are gaining knowledge. Students may evaluate courses they are taking starting on the Monday of the twelfth week of instruction [November 12th] through the end of finals week by logging in to myUCA and clicking on the Evals button on the top right.

**Academic Dishonesty**
The penalties for cheating (ie. representing someone else’s work as your own) are SEVERE!! Penalties include, but are not limited to, assigning an “F” for the work and/or the course to expulsion from the University.

The University of Central Arkansas affirms its commitment to academic integrity and expects all members of the university community to accept shared responsibility for maintaining academic integrity. Students in this course are subject to the provisions of the University’s Academic Integrity Policy, approved by the Board of Trustees as Board Policy No. 709 on February 10, 2010, and published in the Student Handbook. Penalties for academic misconduct in this course may include a failing grade on an assignment, a failing grade in the course, or any other course-related sanction the instructor determines to be appropriate. Continued enrollment in this course affirms a student's acceptance of this university policy.

**Grading**
The following is a tentative description of the exams/quizzes/laboratory reports included in this class. Specific numbers may be changed if deemed necessary. Four Exams will be given in addition to a number of quizzes both announced and unannounced (in lab and in class). Quizzes are intended to help keep you up to date on your studies. Homework may also be assigned and collected if I deem necessary. Whether homework will be graded or not is also left to my discretion. Final exam will be comprehensive.

Exam grades will not be curved in the traditional sense of the word. A curve involves adding points to exam grades to raise the class average to a "C". Therefore, the average grade on an exam in this course will not necessarily be a C. However I do reserve the right to adjust exam scores when I deem necessary.

The following grading scale and assessments may be altered at any time by the instructor as seen fit and appropriate for a given class. However, a student will always have the option to apply the following scale and take the maximum number of exams (3 plus final) below if they deem it would be beneficial for their grade. The scale and number of exams reflects a maximum and will not be increased. For instance, a student whose average at the end of the semester is 90% is
guaranteed an A. This threshold will not be raised, it may however be lowered at the instructor’s discretion.

Optional quizzes and miscellaneous assignments are included at the discretion of the instructor and therefore a range of potential points is listed. If assigned, the points will be included in grade calculation and are not optional.

If a student decides to drop a class, this decision is solely the responsibility of the student and should be made understanding the grade calculation methods explained and the instructor’s right to adjust these when grades are assigned.

| Exams (3) | 3 exams @ 100pts | 300 points |
| Quizzes (0-4) | 0-4 quizzes @ 10pts | 0-40 points |
| Miscellaneous | (participation, unannounced quizzes, other assign) | 0 to 60 points |
| Final Exam (comprehensive) | | 200 points |
| **Total** | | **500-600 points** |

| Laboratory | (11, drop lowest one) | 10 labs @ 10pts | 100 points |

**Overall Average (course grade) = 0.90 (Lecture Average) + 0.10 (Lab average)**

Tentative Scale (subject to change):
- A = 90% +
- B = 80 – 89%
- C = 68 – 79%
- D = 60 – 68%
- F = < 60%

**Important Dates**
- Aug 29, last day to register or add a class
- Oct 17, mid-term grades due to registrar
- Nov 2, last day to drop with “W”;
- Nov 30, last day to drop with “WP” if passing; otherwise a grade of “WF” will be assigned.

**Drop policy**
The last day to drop with a “W” is Nov 2nd. If a student drops on or before this date, a “W” is assigned regardless of the student’s grade in the course. Students may officially drop the course until Nov 30th, **however, the grade assigned after Nov 2nd will depend on the student’s grade status in the course at the time of the withdraw.** For example, if the student withdraws from the course on Nov 3rd and at that time has earned a “C” or better in the course up to that point, a grade of “WP” will be assigned. If, however, the student’s grade is below a “C” at the time of withdraw (after Nov 2nd but on or before Nov 30th) then a grade of “WF” will be assigned (at the discretion of the instructor). **This designation is punitive and will negatively affect your grade point average!**
Students not attending class for whatever reason for more than four class periods may be dropped from the course by the instructor, at the instructor’s discretion.

**Disability Disclosure**
The University of Central Arkansas adheres to the requirements of the Americans with Disabilities Act. If you need an accommodation under this Act due to a disability, contact the UCA Office of Disability Services at 450-3135.

**Student Handbook Policies**
You should familiarize yourself with the policies listed in the 2011-2012 UCA student handbook, especially those related to academics (p. 37-43) and the sexual harassment policy (p. 112-115).

**Laboratory**
Lab goggles are required for all students and may be purchased in the bookstore. A student will be dismissed from lab and assigned a zero for the report if caught without eye protection more than once during a lab period. While in lab, pay attention, use common sense and exercise caution. Some of the experiments involve techniques that can be dangerous if proper procedures are not followed.

The pre-lab portion of each assigned lab must be completed prior to the date the experiment will be performed. I may periodically check for completed pre-labs at the beginning of the lab period. If a student has not completed the pre-lab portion of the lab report, the student may be asked to leave lab without performing the lab and/or points will be deducted from the final lab grade (Instructor’s discretion). Unannounced lab quizzes may also be given if I deem necessary.
### Tenative Class and Lab Schedule

*all dates/topics are subject to change!*

Thursday 10:50-12:40pm (Laney 206)

<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture</th>
<th>Lab</th>
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<tbody>
<tr>
<td>Aug 23</td>
<td>Introduction</td>
<td>No Lab</td>
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<tr>
<td>Aug 27</td>
<td>Chap 12 &amp; 13: Hydrocarbons</td>
<td>Quiz Review</td>
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<td>Sept 3</td>
<td>Chap 12&amp;13 / Chap 14-17 Fnc Grps</td>
<td>STRC 435 Chemical Models</td>
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<td>Sept 10</td>
<td>Chap 14-17 Fnc Grps</td>
<td>Exam Review Session</td>
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<tr>
<td>Sept 17</td>
<td>Chap 14-17 Fnc Grps</td>
<td><strong>EXAM 1</strong> Blood Alcohol Determination</td>
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<td>Sept 24</td>
<td>Acid/Base and Thermodynamics</td>
<td>SYNT 628 Synthesis of Aspirin</td>
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<tr>
<td>Oct 1</td>
<td>Chap 18: Proteins</td>
<td>Protein Construction</td>
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<tr>
<td>Oct 8</td>
<td>Chap 18: Proteins</td>
<td>Exam Review Session</td>
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<tr>
<td>Oct 15</td>
<td>Chap 18: Proteins</td>
<td><strong>EXAM 2</strong> ANALY 242 DNA Extraction</td>
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<tr>
<td>Oct 22</td>
<td>Chap 19: Enzymes/Fall Break</td>
<td>No Lab</td>
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<tr>
<td>Oct 29</td>
<td>Chap 19: Enzymes</td>
<td>TBA</td>
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<tr>
<td>Nov 5</td>
<td>Chap 19: Enzymes</td>
<td>Drugs 1</td>
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<tr>
<td>Nov 12</td>
<td>Chap 19: Enzymes</td>
<td>Drugs 2</td>
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<tr>
<td>Nov 19</td>
<td>Chap 22: Carbs/Thanksgiving</td>
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<td>Nov 26</td>
<td>Chap 21 &amp; 23: Metabolism</td>
<td>Exam Review Session</td>
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<tr>
<td>Dec 3</td>
<td>Chap 21 &amp; 23: Metabolism</td>
<td><strong>EXAM 3</strong> TBA</td>
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******* Final Exam: Wednesday, December 12th 8:00 – 10:00 am**********