Course: Introduction to Chemical Principles II

Text: “General, Organic and Biological Chemistry”, 4th ed., by Stephen Stoker
http://college.hmco.com/chemistry/gob/stoker/gob_chemistry/4e/student_home.html

Lecture: Section 001: MW 1:00 PM – 2:15 PM TBE-A 107
Section 002: TR 11:30 AM – 12:45 PM BPB 102


Labs: All Labs will meet during the second week of classes, January 22, 24 and 25, 2007.
   Section L01: M 8:30 AM – 11:20 AM
   Section L02 M 2:30 PM – 5:20 PM
   Section L03 W 8:30 AM – 11:20 AM
   Section L04 W 2:30 PM – 5:20 PM
   Section L05 R 8:30 AM – 11:20 AM
   Section L06 R 2:30 PM – 5:20 PM

Instructor: Dr. Larry Tirri

Office: CHE 218

Office Hours: TR 2:00 PM – 3:30 PM, W 2:30 PM – 3:30 PM, and by Appointment

Phone: 895-4281

E-mail: larry.tirri@unlv.edu

Course Description: Survey of elementary principles of organic chemistry and biochemistry. For students in programs such as nursing and allied health.

Prerequisites: The prerequisite for this course is CHE 110.

Necessities: • A calculator will be required.
           • An alert state of mind will be most helpful.
           • A sense of humor will be appreciated by everyone.

Expectations: 1. Students are expected to attend class. If you are ill and miss class on an exam day please contact me by email or phone as soon as possible, or in person prior to the next class meeting. If you miss class on a quiz day, there will be NO Make UP Quizes. There will be a sufficient number of quizzes to drop the lowest one or two quiz scores.
              2. If you must be absent from class due to a religious holiday observance, you must notify your instructor of this fact in writing no later than the end of the second week of classes. E-mail notification is
preferred. Please put “Religious Holiday Observance” in the Subject Line.

3. If you have a documented disability that may require assistance, you will need to contact the Disability Resource Center to coordinate your academic accommodations. The Disability Resource Center is located in the Reynolds Student Services Complex in Room 137. The phone number is 895-0866 (TDD 895-0652).

4. Class participation and questions will be welcome. However, please be courteous and respectful of others during discussions, and question and answer sessions. Inappropriate or rude behavior will not be tolerated.

Policy:

1. This course will be composed of lectures, ungraded homework (see suggested practice problems), graded in-class and on-line quizzes, four-one-hour exams, a final exam and laboratory experiments. See the tentative class calendar.

2. Generally, short class quizzes will occur every class, sometimes every other class. Each quiz will cover the concepts discussed in class since the last quiz. Each will be timed for 5-10 minutes depending upon the nature of the quiz questions. There will be sufficient quizzes to drop the lowest one or two quiz scores. There will be NO Make Up Quizes.

3. The four – one-hour exams will be timed for 60 minutes. Should the dates for the exams change, however unlikely, there will be at least 1 weeks notice.

4. The topics covered in this course form the foundation for future topics. Thus all of the material is cumulative and each exam may have questions for which you will need to draw upon information covered by previous chapters or exams. The final exam will also be cumulative, covering the entire course.

5. The class quiz average will be equivalent in value to one of the one-hour exams.

6. Your Final Course Grade will be determined by the following distribution:

   Exam 1 12%
   Exam 2 12%
   Exam 3 12%
   Exam 4 12%
   Quiz Avg 12%
   Final Exam 20%
   Laboratory 20%

   and be based upon the following scale:

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<th>100.00-93.00</th>
<th>92.99-91.00</th>
<th>90.99-89.00</th>
<th>88.99-81.00</th>
<th>80.99-79.00</th>
<th>78.99-77.00</th>
<th>76.99-69.00</th>
<th>68.99-67.00</th>
<th>66.99-65.00</th>
<th>64.99-57.00</th>
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<tbody>
<tr>
<td>Grade</td>
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<td>B+</td>
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<td>B-</td>
<td>C+</td>
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<td>D+</td>
<td>D</td>
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7. Although unlikely to happen, this grading scale may be expanded to broaden or lower the percentage points needed for a particular letter grade, but may be considered to be guaranteed minimums.

8. There are normally no make-up exams given. An exception to this policy may be granted due to extreme circumstances. Please see your instructor as soon as possible to present your petition and documentation for your exception request.
9. The “15 minute rule” will prevail. If for any reason your instructor cannot make a class or appointment and you have waited 15 minutes, then you may assume that the class or appointment has been cancelled and will be rescheduled at a later time.

10. You must register in the WebCT part of the class, because grades, on-line quizzes, announcements and discussions will be posted on the site. Registering for WebCT will be covered during the first and second week of the semester.

11. Cellular phones and pagers must be turned to **OFF** or **SILENT** while in class.

**Course Objectives:**

Upon completion of this course, you will be able to:

1. Recognize the structures of various organic and biochemical compounds,
2. Write structural formulas and names for these compounds,
3. Write a balanced chemical equation for the various reactions that will be covered in this course,
4. Develop an understanding of the significance of carbohydrates, lipids, proteins nucleic acids, and vitamins have in biochemical systems and how these relate to energy production,
5. Learn the fundamentals of enzymology, how enzymes work and how they are controlled,
6. Learn the fundamentals of the biochemistry of nucleic acids and how they operate in living systems,
7. Learn the fundamentals of carbohydrate, lipid and protein metabolism,
8. Given sufficient time, develop a fundamental understanding of how the various metabolic pathways interact.

**Tips for Success:**

1. Attend **ALL** lectures and lab sessions, or you may miss a quiz.
2. **KEEP UP** with the concepts presented in class and lab. Study as often as possible, at least several times each week. A typical rule of thumb is to devote two hours of study for each hour of lecture. **CHEMISTRY IS CUMULATIVE!** The concepts we learn this week will build on those we covered last week. If you did not understand the concept the first time it is covered, you need to put in additional effort to learn it, either on your own, or come in for additional help during office hours. Unlike other courses, you can’t skip over concepts, plan on doing poorly on the exam and do better on the next one. If you don’t learn the concept now, you will have continued difficulty with future concepts. Don’t be afraid to ask for help. It is available for the asking. To not know or understand something is ok because you can get help and learn it. **BUT** to not ask for help, especially when it is offered, is just plain foolish. If you get stuck, get help! Bring your notes or attempts on solving practice problems with you and together we will get you back on track. Get help ASAP, do not wait until a day or two before an exam to ask for help. Help may not be available at that time.
3. The purpose of end of chapter practice problems and homework is to allow you to practice the kinds of questions that will help you gauge your understanding of the concepts covered in lecture. The suggested problems are the minimum number of problems that you should work in order to master the course concepts. They will **NOT** be collected or graded. They are for your benefit. You will find that many exam questions will be similar to these problems. Do your homework practice problems as if you were taking a test. Only check your answers after you
have completed a series of questions. This will allow you to identify the 
areas that you need to focus upon.
4. Check out the textbook web page. There are reviews, sample 
problems, flash cards, and animations for each chapter, as well as 
multiple choice practice problems.
5. If possible, study with others outside of class. There is great strength 
in numbers. Working with others can be very helpful if each member of 
the group takes a turn to explain a concept. To explain a concept, you 
must first understand the concept. Explaining concepts helps the person 
doing the explaining by re-enforcing their understanding. In addition, 
groups are welcome during office hours. If many students in the class 
are having difficulty, it would be more appropriate to review the concept 
during lecture or during a special group study session outside of 
scheduled lectures.
6. You may find studying with a tutor to be helpful. One on one attention 
may work better for you than working with a group. You can contact the 
Center for Academic Enrichment and Outreach in the Reynolds Student 
Services Complex (895-4777), or at their homepage: 
http://www.unlv.edu/studentserv/caeo/ for information regarding tutors.

Academic Dishonesty:
Cheating will not be tolerated in this course, either in lecture or laboratory 
classes. See the UNLV Undergraduate Catalogue for a discussion of university 
policies related to academic dishonesty.

Lecture:
As stated above, attendance at lectures is essential and expected. You are 
responsible for all announcements and concepts covered in lecture. During 
lecture, concepts will be presented, animations/movie clips and demonstrations 
may be shown. You will be provided an opportunity to begin to practice your new 
skills both individually and through some group activities. To get the most out of 
lecture, read the chapters and/or suggested pages in your text before coming to 
lecture. Lecture notes will be available on our UNLV WebCampus course site. 
You may find it helpful to print out the lecture notes, and bring them to class. 
During lecture, you can take notes on your outlines. Study tip: After lecture, read 
the text again along with your notes and work the relevant end of chapter 
problems. Learning objectives for each chapter will also be posted on our UNLV 
WebCampus course site at least a few days before we begin the chapter.

Practice Problems:
A list of suggested practice problems will be posted for each chapter on our 
UNLV WebCampus course site.
Laboratory: **Laboratory classes begin on January 22, 2007. Do NOT miss your first lab class.**

**Lab lecture.** A pre-lab discussion will be held at the beginning of each lab period to discuss the experiment you will perform that day and a lab quiz may be given on the current lab experiment. Each experiment will have pre-lab questions that are designed to prepare you for doing the experiment. **You should complete the prelab report before the beginning of the lab period.**

**Lab reports.** Lab report sheets are found at the end of each experiment. In addition to the prelab, reports consist of two sections: Data and Questions. The Prelab report, Data and Questions part of the report are all due at the end of your laboratory class. There will be sufficient time to complete the reports. Late reports will NOT be accepted. If you are absent and do not perform the experiment, you will not be able to turn in the report for the experiment. There will be no makeup labs.

**Lab classes:** You will be assigned a desk with a set of equipment. You will work with a lab partner on each experiment. There will be only groups of two students. In the event that there are an uneven number of students, one group may consist of no more than three students. You will share your lab data only with your lab partner. Do not share your data with another group. You are free to leave the lab when you have completed the experiment, cleaned up your equipment and work area and handed in your completed lab report. You must check-out with your lab instructor before leaving. If you fail to check-out, you may not receive full credit for that week’s lab.

**Safety:** Eye protection and lab coats must be worn at all times when working in the lab. Bare feet and sandals are not allowed in the lab. You must wear shoes that cover your entire foot. You will not be allowed to work or complete an experiment if you are not dressed properly for lab participation. It is strongly recommended that if you need to leave the laboratory for a comfort break, you wash your hands prior to leaving the lab. No food or drink will be allowed in the lab at any time. Failure to follow these safety rules or others that are presented during lab class may result in being asked to leave the lab and receiving a zero for that day’s work.
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<td>Carbohydrate Metabolism</td>
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<td>Apr 23, 24</td>
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<td>Apr 25, 26</td>
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<td>May 2, 3</td>
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<td>May 7</td>
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