

**CHE 1013
Fall 2010**

**ORGANIC AND BIOLOGICAL CHEMISTRY
FOR ALLIED HEALTH SCIENCES**

Prerequisite: CHE 1003.

A survey of the structures and reactions of some important functional groups of organic chemistry, and the relationship of these functional groups to the chemistry of lipids, carbohydrates, nucleic acids, and proteins. May not be applied to a major in chemistry. Concurrent enrollment in CHE 1021 is recommended.

(Formerly CHE 1203. Credit cannot be earned for both CHE 1013 and CHE 1203.)

COURSE PREREQUISITE: CHE 1003: General Chemistry for Allied Health Sciences
Or CHE 1103: General Chemistry

MEETING TIMES: M, W, F 10:00-10:50 A.M., SB 2.03.08

INSTRUCTOR: Susan Thomas, Ph.D.

OFFICE HOURS: M and W, Noon-2:00pm BSE 1.338 (458-7051)
email susan.thomas@utsa.edu

REQUIRED TEXTBOOK: Bettelheim, Brown, Campbell, and Farrell,
Introduction to General, Organic and Biochemistry, Thompson, 2006 (eighth edition)

And OWL access (On line Web-Based Learning)

This Syllabus is provided for informational purposes regarding the anticipated course content and schedule of this course. It is based upon the most recent information available on the date of its issuance and is as accurate and complete as possible. I reserve the right to make any changes I deem necessary and/or appropriate. I will make my best efforts to communicate any changes in the syllabus in a timely manner. Students are responsible for being aware of these changes.

EXTRA MATERIAL: There will be a Blackboard site available to the students enrolled in this course. Any changes in the syllabus or any announcements concerning this course will be made available on this site. It is the student's responsibility to obtain handouts, notes and any other information in the case of an absence.

Not all material will be posted on Blackboard- examples on the chalkboard or special cases that arise from student questions during the lectures will not be posted.

In addition, one week after each exam, all the lectures leading up to that exam will be removed from the Blackboard site in order to conserve space. They will not be posted again during the semester.

THE OBVIOUS: No cell phones in class- turn them off please. No cheating- this includes homework. Please be courteous to your fellow students and do not come late or leave early.

Please use your class time to ask questions. If you do not understand something you are not alone. Ask about homework problems, class problems, etc..... I am also available in my office hours for any question- PLEASE do not stay confused approach me at any time and I will attempt to help you.

It is the student's responsibility to be on time for lectures and exams. No extra time will be given to students that come in late for exams or in-lecture quizzes. Students must present their UTSA ID (or any picture ID) when handing in their exams.

HOMEWORK: Homework is an important part of this course- it is worth 10% of your grade and thus *you cannot receive an A without submitting your homework*. You will submit your homework electronically through OWL. No partial credit is awarded on homework problems.

It is imperative that you work through as many problems as possible. Problems appearing on the exams will be similar to ones worked out in class as examples and appearing in the text book.

EXAMS: There will be four exams which includes the final. Each exam may contain multiple choice, matching and work/essay problems. The date of the final cannot change.

If you miss an exam, you have to notify the instructor within 48 hours and provide a serious reason in writing. If you know that you have a serious conflict with one of the exams, notify the instructor as early as possible. **THERE WILL BE NO MAKEUP EXAMS GIVEN!**

Exams are not discussed during the lecture period. Students have *one week* from the date the exam is returned to submit questions about their grade and this should be done during the instructor's office hours.

The exams will consist mainly, but not solely, of multiple choice questions to be answered using **Scantron sheets (882E) provided by the student**. Most questions will be similar to the exercises worked during lectures, homework, or problems at the end of each chapter in your textbook. However, students should expect some questions that are considerably different as well.
NO CALCULATORS WILL BE PERMITTED ON THE EXAMS

FINAL EXAM:

The date of the final exam **CANNOT** change.

Wednesday Dec 8, 2008 7:30 A.M.- 10:00 A.M.

You cannot miss the final! In case of a **SERIOUS EMERGENCY**, notify the instructor (or the Chemistry department) as soon as possible.

EXAMS and GRADING: The course will be divided into two parts: The "Organic Chemistry" part and the "Biochemistry" part

There will be four exams including the final:

| | |
|----------------|--|
| First exam | 100 pts |
| Second Exam | 150 points (comprehensive over the first) two days |
| Third Exam | 100 pts |
| Fourth Exam | 150 pts (comprehensive over the third) |
| Homework (OWL) | 50 pts |
| ----- | |
| Total | 550 pts |

The second exam (two parts) will be comprehensive over the first. The two grades combined (first exam + second exam) will give us half of the final grade. If this combined grade is lower than the grade of the second exam, the grade of the second exam will be used instead.

The final exam (the fourth exam) will be comprehensive over the third exam. Their two grades combined will give us the second half of the final grade. If this combined grade is lower than the grade of the second exam, the grade of the final exam will be used instead.

The dates of the first three exams may change if needed.

The date of the final (fourth) exam CANNOT change:

Wednesday Dec 8, 2008 7:30 A.M.- 10:00 A.M.

MAKEUPS for the first and third exams WILL NOT be given for any reason. The grade of the second exam or of the final will be used instead.

Consider the second exam as “half of the final”. If you miss it you should provide proof of a SERIOUS conflict in writing. (Only University sanctioned excuses will be accepted.)

IF YOU MISS THE SECOND EXAM OR THE FINAL notify the instructor as soon as possible. You will need to provide proof of a serious conflict in writing.

NO MAKE UP EXAMS WILL BE GIVEN
NO CURVES ON ANY EXAMS WILL BE GIVEN
NO EXTRA CREDIT WILL BE GIVEN.

A standard curve will be followed in this course (*see #5 under General Policies*).

| | |
|----------|---|
| 100 – 90 | A |
| 89 – 80 | B |
| 79 – 70 | C |
| 69 – 60 | D |
| below 59 | F |

IMPORTANT DATES:

| | | |
|------------|--------------|---------------------------|
| Wed | 8/25 | Introduction |
| Fri | 9/24 | EXAM I |
| Mon | 10/18 | EXAM II |
| Wed | 10/20 | EXAM II (part two) |
| FRI | 11/15 | EXAM III |

COURSE FINAL:

| | | |
|-----|------|-------------------------------|
| Wed | 12/8 | FINAL EXAM 7:30 AM – 10:00 AM |
|-----|------|-------------------------------|

Tentative Schedule for this semester- dates may change

| <u>List of Topics</u> | <u>Chapter</u> | <u>Dates (MAYBE)</u> |
|---|----------------|----------------------|
| Molecular Compounds/Introduction | 10 | |
| Alkanes | 11 | |
| Alkenes, Alkynes | 12 | |
| Aromatics | 13 | |
| Alcohols, Ethers and Thiols | 14 | |
| <u>EXAM I</u> | | |
| Chirality | 15 | |
| Amines | 16 | |
| Aldehydes and Ketones | 17 | |
| Carboxylic Acids and Their Derivatives | 18 | |
| Carboxylic Anhydrides, Esters, and Amides | 19 | |
| <u>EXAM II: part I</u> | | |
| <u>EXAM II: part II</u> | | |
| <hr/> | | |
| Carbohydrates | 20 | |
| Lipids | 21 | |
| Amino acids and Proteins | 22 | |
| Enzymes | 23 | |
| Nucleic Acids and Protein Synthesis And Genomics | 25 & 26 | |
| <u>EXAM III</u> | | |

Highlights of the following chapters:

| | |
|--------------------------------------|----|
| The Generation of Biochemical Energy | 27 |
| Catabolic pathways | 28 |
| Biosynthetic pathways | 29 |
| Chemical Messengers | 24 |

SOME HELPFUL SUGGESTIONS

- This course is fast paced. We have to cover practically all the topics included in the second half of the textbook. The following tips may help you keep up with it.
- Unlike General Chemistry, this course does not include many calculations!!! YEAH! Learning how to name organic compounds, however, is like learning a new language. New types of reactions and complicated structures can be quite challenging to master.
- Read each chapter before it is discussed in class. This way new concepts and terminology will look a little more familiar.
- Review and study the material as it is being introduced to you. Consider that you will have to devote several hours per week to this purpose. Study every day if possible.
- Do as many problems as possible. Reviewing and studying already solved problems is not enough and may give you the false impression that you know the material while you do not.
- The material builds up on itself. Be sure to understand one concept before you move on to the next. Do not leave everything for the days before the exam!
- ASK FOR HELP AS SOON AS YOU NEED IT! DO NOT WAIT UNTIL YOU ARE COMPLETELY LOST

OWL HOMEWORK!!

Dear Students,

We will be using OWL for the second semester this spring. You will need to get OWL access as part of the course to complete your electronic homework. Please choose the scenario below that applies to you and follow the directions to gain access.

Scenario 1: If you used OWL last semester and purchased a 2-Semester (12-Month) Access Code, you still have access. Simply log in at <http://cengage.com/owl> and use the Add/Switch link to put yourself into the correct class section. If you have forgotten your login information, use the Login Help on the login page to have it resent to you.

Scenario 2: If you used OWL last semester and purchased a 1-Semester (6-Month) Access Code, you will be running out of access soon. Go to <http://academic.cengage.com/owl/partners/thomson/epinThomson.html> and click the Purchase Access Code link next to the type of access you want—either 1-semester or 2-semester for the appropriate textbook. You will receive your Instant Access Code by email. (You can also visit www.ichapters.com and use the My Stuff link at the upper right corner to retrieve your Access Code.)

After you have your Access Code, please follow these steps to register it and extend your OWL access:

1. Go to <http://academic.cengage.com/owl> and choose the type of textbook you use in the red **Log In or Register Here** box.
2. Click your textbook name.
3. Choose your school.
4. Click the blue arrow under Student Registration. Choose your section.
5. Complete the form. Be sure to enter the user name, login, and password that matched your previous OWL registration and your newly purchased code in the Access Code space. ****It is very important that you do not create a new login name and password. To extend your OWL access, you must use your previous login name and password. Use the link on the login page to have them sent to you if you have forgotten.****
6. Confirm that your information matches the information on the screen. If no match is found or if the information shown matches a different student, go back to the login page for your school and click Email My Login/Password. Use the Login and Password that are sent to you to register.
7. Press Continue.

Scenario 3: If you are using OWL for the first time for this course, please purchase a new Access Code using one of these three options:

1. Purchase an Instant Access Code online. Go to <http://academic.cengage.com/owl/partners/thomson/epinThomson.html> and click the Purchase Access Code link next to the type of access you want—either 1-semester or 2-semester for the appropriate textbook. You will receive your Access Code by email. (You can also log onto <http://www.ichapters.com> and use the My Stuff link at the upper right corner to retrieve the Access Code you purchased.)
2. If you buy a new textbook, your OWL Access Code will come bundled at a reduced price with the textbook.
3. Purchase an OWL Access Code from your college's bookstore if they are available.

After you have your Access Code, please register it by following these steps:

1. Go to <http://academic.cengage.com/owl> and choose the type of textbook you use in the red **Log In or Register Here** box.
2. Click your textbook name.
3. Choose your school.
4. Click the blue arrow under Student Registration. Choose your section.
5. Complete the Registration Form.

Information on the QEP for Course Syllabi

The Quality Enhancement Plan (QEP) is a course of action designed to enhance student learning and is a required component of the accreditation process conducted by the Southern Association of Colleges and Schools (SACS).

The UTSA QEP *Quantitative Scholarship: From Literacy to Mastery* provides you with the skills needed to evaluate and interpret data, understand risks and benefits, and make informed decisions in your personal and professional lives. The plan focuses on integrating quantitative reasoning and communication skills in **existing** courses across the undergraduate curriculum.

All UTSA students, faculty, and staff are encouraged to learn more about the QEP by visiting the website www.utsa.edu/qep