

## CHEM 2B INTRODUCTION TO ORGANIC AND BIOCHEMISTRY Spring 2010

Total Number of Units: 5  
Hours of Lecture Per Week: 3

Prerequisite: Chem 2A or 1A  
Hours of Laboratory Per Week: 3

Hours of Discussion Per Week: 1

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web page: <http://www.cliffschemsity.com> and Shasta College online.

Office Hours: M W F 9 – 10 AM; W 12 – 1PM; M 1 – 2 PM and by appointment in 1412 or in the Science Learning Center, 1626. Please come and visit; lots of good stuff happens

Catalog Course Description: A survey of the major classes of organic compounds including structure, nomenclature, properties, reactions, and the reaction mechanisms; an introduction to the biochemistry of proteins, carbohydrates, lipids, nuclei acids and their basic metabolic reactions. Suitable for nursing, dental hygiene, agriculture/natural resource and other non-science majors NOTE: Students must provide those materials which are of continuing value outside of the classroom setting (goggles and calculator).

Governing Principle: I will use a variety of techniques to provide the environment to help you learn about the information, thought processes, and methodologies used in all sciences, particularly chemistry, which will allow you to succeed in this class and future classes. Practical applications will be emphasized. **YOU** must **WORK** for your **SUCCESS** while we **LEARN** and have **FUN**.

Materials for the Class: (The text, the solutions manual, and other materials are available in the Science Learning Center.)

General, Organic, and Biological Chemistry, 5<sup>th</sup> ed. McMurry and Castellion. Publisher: Prentice-Hall  
ISBN013187748

Personal Response Cricket can be purchased news at Shasta College Bookstore for about \$35, ask at counter. OR  
it can be purchase used from Science Club in the SLC for around \$10 (no rebate with for used ones)

Scientific Calculator

Lab Safety Goggles – Must meet ANSI Standard 287.1 1989(can be purchased from Science Club on 1<sup>st</sup> day of lab; about \$6)

Laboratory Manual: Catalyt, Cliff Gottlieb Introduction to Organic and Biochemistry ISBN 0-536-93740

Lecture Procedure: You are expected to attend lecture. Come prepared to ask questions and otherwise participate in class. Participation using PRS will count toward your grade. I will assign homework problems from the text. Some homework may be collected, most will not. Collected homework will count toward your final grade. Some homework may include writing assignments. I will give quizzes in the discussion class. You cannot make up homework and quizzes. You will also be required to create an account for this class on webCT which will allow you to access notes, your grades, and other materials pertinent to the class.

Methods of Evaluation/Grading Scale: Each of you has the innate ability to earn an "A". I hope that each of you will **work** to **achieve an "A"!!** All work must be done in **black or blue ink or grey pencil!!**

1. Four exams are 100 points each. No make-up exams are permitted.
2. Quizzes will be count 10 points each. No make-ups allowed. Every twelve assignments are worth 100 final grade points. The sum of each twelve assignments will count as your grade for this section. It is possible to earn up to 120 points out of 100 points possible This is like having the opportunity to earn 20 "extra credit" points.
3. Classroom participation using the personal response system worth 60 points. Typically 2 points per lecture for about 35 lectures. No make-up allowed under any circumstances. Again there is the opportunity to earn 10 extra credit points.
4. Graded homework will be done online using the Shasta College online program and are worth 30 points.
5. Lab is worth 100 points.
6. There may be other required or optional assignments or in class questions worth up to 100 points each.
7. Course grades based on following percentages (690 total points): A ≥ 90% (621 pts); B = 80– 89% (552 pts); C = 70– 79% (483pts); D = 60– 69% (414 pts); F ≤ 60% (≤ 414 pts)

There is **NO EXTRA CREDIT**. **No make-up or LATE exams, quizzes, or homework are allowed unless you have immediate family or personal health or legal emergencies.** Call me as soon as possible, typically the same day, to notify me of your emergency. If you have health, legal, or sports non-emergencies, you may be able to make arrangements to take an exam, quiz or submit homework early. You must contact me with sufficient lead-time to make arrangements. I do not drop exams, nor offer other extra credit. **Keep all graded work!!** Your grades will be available to you periodically online. During the 2 weeks before the last day to drop, I will review grades. Otherwise do not ask me to figure out your grade. Each time you ask me about your grade in the class, I will deduct 5 points from your course total. If you have any corrections or grade questions about any exam, quiz, or other graded assignment, you must notify me within one calendar week after the assignment is returned to the class. No adjustments in grades will be made after this time. I reserve the right to create grading policies to cope with atypical situations.

**CLASSROOM BEHAVIOR/ETIQUETTE:** Come to class on time. In class do not socialize, talk, or engage in any behavior that is unrelated to or distracting from the class. If you must leave class early, notify me at the beginning of class, sit near the door, and exit quietly. Turn off your watches, pages, and cell phones. This is a college classroom and you are expected to behave like adults who wish to learn. You will be **warned one time** regarding any inappropriate behavior. Upon any further inappropriate behavior, I will deduct 500 points from your final grade.

**ACADEMIC HONESTY: DON'T CHEAT!** I will not tolerate cheating which I define to include the one who knowingly gives as well as the one who receives. It also includes "signing" the roll sheet for someone else and copying other's work. The penalty for the first offense is a 500 point deduction from your grade. If you have concerns regarding academic honesty, or any aspect of cheating, please see me. All work is to be completed individually unless explicitly stated otherwise.

Finally, you probably are aware that only you can get your education--no professor can give you an education. **You are responsible for yourself.** I am responsible to help you help yourself. Your success in this class is a reflection of your effort.

Discussion Procedure:

Discussions are question, answer, practice sessions. The hour will conclude with a 10 point quiz. Expect a quiz each week. If you cannot attend your regular discussion in a particular week, try to attend the other discussion section. There are no late or make-up quizzes.

Lab Procedure:

You will need the lab manual. All lab entries must be in blue or black ink or pencil. Do not use other colors. Every lab will require a write-up which you will submit at the end of class. In your submissions you must clearly record and communicate data and your answers. Labs must be handed in at the end of lab period unless you get the lab instructors approval and initials on the lab report. Lab write-ups will not be accepted after 7 calendar days from the date of the lab unless special arrangements are made.

You must attend! Due to lack of space, equipment, and time, make up labs are not permitted. You may be able to attend the other lab section if you must miss your scheduled lab period. The lab periods for chem 2B are T 9-12 and W 1-4 Do not come late!! Some labs may end early but do not plan to leave early. Missed labs are graded as a zero.

You are responsible for knowing and following the safety rules from the safety handouts and lecture and acting in a safe manner at all times. VIOLATION OF SAFETY RULES WILL LEAD TO EXPULSION FROM THE CLASS. If you are not sure, **ASK**.

Lab Evaluation will depend upon your instructor. For my sections, Labs will be worth 10 points each. If your lab work and lab report indicates high quality work, you will receive a 9.5. Errors, omissions or lower quality work will receive lower grades. Extraordinary work may receive a score of 10. Up to 30% of the total lab points may be deducted from your grade based on your behavior, participation, ability to follow directions, and acting in a safe and professional manner.

Tentative Lecture and Lab Schedule: I reserve the right to adjust the schedule as necessary with reasonable notification to you.

Week of	Chapter	Suggested End of Chapter Problems (evens)	Lab Activity
1/20	12 alkanes & 13 alkenes	13.30 - 90	Hydrocarbon structure (handout)
1/25	13 & 14 alcohols	14.24 - 74	The Hydrocarbons (handout)
2/1	14 & 15 amines	15.21 - 64	Alcohols, Phenols, Mercaptans
2/8	15		Amines
2/16	Exam 1 & 16 ketones	Exam 1 covers Ch 12-15; 16.18 - 64	Tie Dye (hand out)
2/22	16 & 17 carboxylic acids	17.30 - 86	Aldehydes and Ketones,
3/1	17 & 18 amino acids-proteins	18.30 - 90	Carb. Acids and esters
3/8	18 & 19 enzymes-vitamins	19.19 - 25 all; 19.26 - 72	Peptides and Proteins
3/15	19 & Exam 2	Exam 2 covers Ch 16-19	Enzymes
3/22	22 carbohydrates	22.21 - 25 all; 22.30 - 94	Types of Carbohydrates
4/5	22 & 24 lipids	24.20 - 24 all; 24.26 - 86	Tests for Carbohydrates
4/12	24 and 21	21.28 - 78	Lipids
4/19	21 & Exam 3	Exam 3 covers Ch 21, 22, 24	Saponification and soaps
4/26	26 nucleic acids	26.19 - 24 all; 26.26 - 74	Analgesics and TLC (handout)
5/3	27 genomics	27.6 - 11 all; 14 - 58	DNA components and extraction
5/10	23	23.16, 17, 20, 21, 22, 24, 26 - 86	Vitamins
5/17	25	25.9, 14 - 60	Digestion of foods; check out
	Exam 4	Exam 4 covers Ch 23, 25-27	

SCIENCE LEARNING CENTER: **Room 1626**

The Science Learning Center offers a comfortable study environment and a variety of resources to assist students in any of the Science classes. There are computer programs and filmstrips that cover specific topics, old tests to look at, microscopes and slides to use and tutors to offer help.

Tutors can help you to initiate good study habits and procedures to maximize your study time. They can also help to clarify any confusing concepts. The tutoring is free and is done by students who have already successfully completed the course, often with the same instructor. When there is interest, we run study groups that are led by tutors.

### ***OTHER RESOURCES AVAILABLE***

**XEROX MACHINE** A copy machine is available in the computer area of the Learning Center for .10 per copy.

**COFFEE CLUB** Coffee is always brewing for Coffee Club Members. To join, there is a 4.50 per month charge or pay .50 by the cup. Occasionally, there is also Hot Chocolate for .15 per packet. Such a deal!

**OFFICE SUPPLIES** For your use, we have a paper cutter, stapler, scissors, and tape. Colored pencils are also available.

**STUDYING IN THE SLC** There are three different study environments available

**GENERAL AREA** This is a quiet area with plenty of room to spread out.

**STUDY GROUP AREA** We have a special area, separated from the rest of the Center by a partition, where groups like to study together.

**SILENT AREA** For those students who don't like distraction but want to make use of the Learning Center, this is a perfect spot. It is not quiet, but SILENT.

The SCIENCE LEARNING CENTER is a friendly, helpful, encouraging environment which can become your home away from home.

### **ADDING A CLASS**

Students may add a full-term class through the fourth week of the term.\* After the first two class meetings, approval of the instructor is required to add the class, which includes both the signature of the instructor and the first date of attendance. **IT IS THE STUDENT'S RESPONSIBILITY** to pick up the form from the Admissions and Records Office and take it to the instructor for approval. The student must then return the form to the Admissions and Records Office or Extended Education Center for processing before the add is finalized.

### **DROPPING A CLASS WITHOUT RECORD**

Students may drop a class, and have no notation appear on their transcripts, through the fourth week\* or 30% of the term for classes less than a semester in length. **IT IS THE STUDENT'S RESPONSIBILITY TO DROP CLASS (ES)**. The necessary forms are available from Admissions and Records, Extended Education Centers, or by mail. If a student intends to drop a class and stops attending but fails to file the necessary forms, a failing letter grade may be assigned by the instructor.

### **WITHDRAWING FROM A CLASS WITH A "W" GRADE**

Students may withdraw from a class after the official "drop" date and up through the fourteenth week or 75% of the term for classes less than a semester in length. The notation "W's" will appear on the student's transcript and will not be used in calculations of grade point average. Excessive "W" shall, however, be used as factors in probation and dismissal procedures. **IT IS THE STUDENT'S RESPONSIBILITY TO OBTAIN FORMS AND SUBMIT THE NECESSARY PAPERWORK TO WITHDRAW FROM A CLASS**. Forms are available from Admissions and Records, Extended Education Centers, or by mail. Students who have not dropped or withdrawn from a class before the end of the fourteenth week or 75% of the term will be assigned a course grade.

### **ATTENDANCE**

Students are expected to attend all class meetings. A student who fails to attend the first meeting of a course without notifying the instructor may be dropped from the class. In addition, an instructor may drop a student during the first 30% of the term for excessive absences. Nevertheless, **IT IS ALWAYS THE STUDENT'S RESPONSIBILITY TO OFFICIALLY DROP OR WITHDRAW** from the class. Students who fail to file the necessary forms, even though they stop attending class