

## CHEM 2B INTRODUCTION TO ORGANIC AND BIOCHEMISTRY – Hybrid F-08

Total Number of Units: 5

Prerequisite: Chem 2A or 1A

Hours of Lecture Per Week: online

Hours of Laboratory Per Week: 3

Hours of Discussion Per Week: online

Course Instructor: Cliff Gottlieb, Phone: 242-2323. e-mail [cgottlieb@shastacollege.edu](mailto:cgottlieb@shastacollege.edu)  
web page: <http://www3.shastacollege.edu/chemistry/Cgottlieb>

Office Hours: MWF 10 – 11 AM WTh 1PM – 2PM and by at almost any time by appointment to meet your needs in 1412 or in the Science Learning Center, 1626. **If you are ever on campus, please come and visit**; lots of good stuff happens.

**The hybrid nature of this course offers students the flexibility in study times to meet individual needs. However, a successful student in an online situation must be motivated, organized, and a self starter. If you do not have these characteristics as a student, save yourself grief and do not enroll in this course!!! The lecture and discussion are online and the lab is in room 1414 at Shasta College. Plan to spend at least 12 hours per week on the lecture/discussion part of this course.**

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 educational 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

ISBN 0132249308 which is the special value bundle including study guide, and rebate coupon for Personal

Response Transmitters which are not needed for this class. Or just the text ISBN 0131877488

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

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)

I have provided numerous resources on my web sites including lecture notes, practice worksheets, and internet links.

### INTERNET DELIVERY ISSUES:

The lecture and discussion sections of this course will be delivered over the internet using a program called Shasta College Online. This delivery system allows students the freedom to set their own schedule for completing the coursework. Most documents are in Microsoft Word format with a few in Adobe Acrobat PDF format. You should download the free Acrobat Reader immediately and install it on your computer. Here is the hyperlink, [Get Acrobat Reader](#). **You must be comfortable with working on computers and using the internet. If you are not, do not enroll in this course. Do not expect significant technical computer assistance from me or Shasta College.**

You also must expect to spend the same amount of time on this course to what you would have spent on the face to face version of this course. **You should log onto this course everyday, check your mail, calendar, any announcements, and discussion boards and make sure all of your work is up to date.** Furthermore you must have sufficient self-discipline to set and adhere to your own and to the course timelines. The internet version of this course is equal to the content and may be more time consuming than the face to face version. Expect to spend at least 12 hours per week on this class in addition to the lab. **DO NOT FALL BEHIND!!**

Learning styles: If your main learning style is audio/listening, an internet course is probably not for you unless you read the notes and text and record that on your mp3 player. Go to <http://www.vark-learn.com> and take a short learning style questionnaire to find your primary learning style(s).

**For your success it is absolutely imperative that you have thoroughly studied the chapters related to each lab BEFORE you come to lab!!!**

**The course schedule is at the end of this syllabus and specific dates will be on the course calendar in the Shasta College Online program.**

**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"!!**

1. Four exams are 100 points each. No make-up exams are permitted. Exams will be given either at the beginning of the lab or in the Science Learning Center.
2. Quizzes/assignments will count 10 points each. No make-ups allowed. There will be thirteen quizzes/assignments worth 100 grade points. The sum of each twelve assignments will count as your grade for this section. It is possible to earn up to 130 points out of 100 points possible This is like having the opportunity to earn 30 "extra credit" points. Quizzes will be given either at the beginning of the lab or in the Science Learning Center.
3. Graded homework/practice quizzes will be done online using the Shasta College Online program and are worth 30 points.
4. Lab is worth 100 points
5. Discussions are worth 30 points. These discussions consist of two types: For one you will have to ask a question about something you don't understand about a topic in each chapter. I will answer it. The other is that you will write a short paragraph about something you do understand about a topic in each chapter. Each discussion is worth 1 point.
6. There may be other required or optional assignments or in class questions worth up to 100 points each.

Therefore out of 660 class points, your course grade is determined as A = 594 points, B = 528, C = 462, D = 396

All work must be done in black or blue ink or gray pencil!!

**There is NO OTHER CREDIT other than outlined above. No make-up or LATE exams, quizzes, or homework are allowed unless you have immediate family or personal health or legal emergencies. Contact me by SHASTA COLLEGE ONLINE e-mail or office phone at 530-242-2323 as soon as possible, typically the same day, to notify me of your emergency. Do not call me at home!! Be prepared to FAX me documentation to verify 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 at least one week before the quiz/exam to make arrangements. I do not drop exams.**

If you work within my parameters, I will do everything I can to accommodate your needs. I do not drop exams, nor offer other extra credit. Keep track of your own total points and grade using the Shasta College Online my grades page. During the week before the last day to drop, I will review your class performance and grades. Otherwise do not ask me to figure out your grade. I will discuss with you at anytime, your progress in the class. 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.

**ACADEMIC HONESTY: DON'T CHEAT! CHEATING is the unauthorized giving or getting of answers to quizzes or exams or having someone else take exams, take quizzes or write discussions for you. All work is to be completed by you individually. No copying or group work unless explicitly stated. It is not fair to you, your classmates, or to me. In life all you really own is your personal integrity. Please for your own peace of mind, do not throw away your integrity for a grade in a course. That would be pathetic. DON'T DO IT!! If discovered, you will be prohibited from participating in the class and have 500 points deducted from your grade. BY ENROLLING IN THIS CLASS, YOU AGREE NOT TO CHEAT BY OATH ON YOUR RELIGIOUS, SPIRITUAL, OR PHILOSOPHICAL BELIEFS !! If you have concerns regarding academic honesty, or any aspect of cheating, please contact me.**

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.

ERRORS, OMISSIONS, or CORRECTIONS on all graded exams, quizzes, and discussions must be submitted to me via e-mail NO LATER THAN ONE WEEK AFTER THE DUE DATE. Check your grades regularly

## THE DETAILS REGARDING EVALUATION

EXAMS will be given during the first hour of lab period . They will be fill in the blank, problems, and short answers questions.

QUIZZES will be open ended answers, problems, multiple choice, fill in the blank, or submitting a list of at home observations. Each quiz is worth 10 points. Quizzes will be offered in person at the beginning of the lab period. No late or make-up quizzes permitted with no exceptions other than health or legal situations or emergencies.

HOMEWORK ASSIGNMENTS will be available online using the Shasta College Online program and must be completed in the specified time. No late or make-up quizzes permitted with no exceptions other than health or legal situations or emergencies. If technical problems occur, call me immediately at my office phone 530-242-2323. **DO NOT CALL ME AT HOME!** You will be required to take a practice first day handout homework assignment to make sure that the “real” assignments cause you no technical problems.

ATTENDANCE DISCUSSIONS will occur on the Shasta College Online discussion board and include 2 kinds for each chapter.

The first type is to write a brief paragraph for EACH CHAPTER explaining a concept you understand in your own words from the text, notes or provided websites. A brief paragraph includes a topic sentence, at least 3 supporting sentences and a concluding sentence.

The second type of attendance discussion is a question for EACH CHAPTER about material covered in the text, notes, or websites which you do not understand. I will answer your question.

You may ask more than one question although that will not affect your attendance grade. I will answer all you questions and check your explanations to ensure that they are correct. **All students in the class are expected to read each explanation, question, and my replies. Any material on these attendance discussion boards can be put on quizzes and exams even if they are not in the text or notes.** Once we complete a chapter, you can no longer get credit for attendance discussions.

OTHER DISCUSSIONS: There will also be two other discussion boards available to you throughout the class. One is for general discussions between you and your classmates. This is the MAIN discussion board. I will look at these discussions infrequently. Another discussion board will be dedicated to any other questions that you might have that you would like me to address. I will check this board regularly.

CHATROOM will be used for online office hours as requested by students in the class. You may always call me, come to my in-person office hours, or make an appointment to see me.

## MY RESPONSIBILITIES

I will provide you with interesting information to you and be available to answer your questions. I will help you hone your understanding of how the world works from a chemical perspective. I will be available for consultation on the phone or in person during office hours, by e-mail from Monday to Friday, and by discussion board almost anytime. I will help you to achieve the best grade that you chose to achieve. I hope that you choose to achieve an “A”.

## YOUR RESPONSIBILITIES

You must read the book, read the notes, complete assignments, and participate in the class discussions. Log onto the class at Shasta College Online EVERYDAY! **Plan to devote at least 12 hours a week on this course.** If you are a slacker, **DO NOT ENROLL.** You need to be self motivated and disciplined to work on your own to complete assignments. You need to work with your classmates on-line to facilitate your learning. Studies show that students who study in groups typically perform better than students who do not work in groups. **I DO NOT FORMALLY DROP STUDENTS FROM THE CLASS. IN ALL CASES YOU MUST DROP THE CLASS YOURSELF THROUGH THE REGISTRAR'S OFFICE!!**

## CLASS COMMUNICATIONS

USE the Shasta College Online E-MAIL PROGRAM. You can also contact me by phone at my office only; **DO NOT CALL ME AT HOME!** If you don't get me live, leave a message. I will communicate with you by individual Shasta College Online e-mail or class discussion board. Classmates will communicate with each other by Shasta College Online e-mail or class discussion board. In case of emergency, call me at my office, use the Shasta College Online e-mail, or my general e-mail address [cgottlieb@shastacollege.edu](mailto:cgottlieb@shastacollege.edu) Please put 2B hybrid as your subject if you use my general e-mail. Do not use my general e-mail for non-emergencies!

## USING THE SHASTA COLLEGE ONLINE PROGRAM:

Learn how to use the Shasta College Online program. Read the student guide under resources. Click on everything to see what it does, you cannot hurt the program.

Brief overview of on the Chem 10 course menu on the top of the page on the Shasta College Online program.

Calendar: This will show you due dates for everything in the course. Click on the date to find out more information for that day.

Lessons: This contains the material for the course and upon clicking on it you will find

Chem 2B Cliff's notes: Here are my course notes in PDF format. You will need to download Adobe acrobat reader. It is free. There are links on my various homepages. I do not provide notes for all the chapters. The later chapters are very complete and well written. I have provided notes for many of the more "nitty-gritty" chemistry in the early chapters.

Chem 2B exam study guides: These have the concepts and information that you need to master for each exam.

Chem 2B homework, quizzes and exams: Here is where you will find the homework, quizzes and exams. Click on them when they are available to take. Once you open it, you must finish it at that time. For each question you must save your answer and then when finished you must hit submit to submit the quiz or exam.

Chem 2B discussions: Click on this and you will see 3 general topics which are not graded: one is for introductions, one is for you to communicate with your classmates and the last is for asking me general questions. There will also be a question topic and explanation topic for each chapter which are graded 1 point for participation. Everyone in the class can see everything posted on the discussion board.

Resources: Here is where you can find help on using the online program.

### Communicate:

E-mail: Here is where you can use the course e-mail program. Please use this program's e-mail for all class communications. Some of you have indicated problems. Norton security may cause problems. Turn it off when using this program and see if it works. The MOST likely problem is the filter setting. Click communicate and click on view inbox. On the upper right side, you see the word Filter with a small horizontal window below it. Make sure that this course shows in the window. Then click compose message, click to, in a pop up window you will see the choices of recipients. Click to highlight one or more, then click on the To> button and you will see those highlighted show up in the box. Click save and you will see the recipients in the To box. Now just type your message and click send.

Discussions: You can also access the discussions here.

Live Chat: This is a live chat room for students who wish to form online study groups.

Reports: Here is where you can see you course participation and grades. To find your grades click on the reports tab, then select grades and click on run. You will also see any comments that I have made.

## OTHER RESOURCES

Shasta College provides a wonderful resource to all science students which is the Science Learning Center. It has tutors and other resources available if you are on campus. It is trying to develop on-line tutoring capabilities. Check it out in room 1612 or at <http://www3.shastacollege.edu/cgrana>

### 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. Lack of clarity will cause grade deductions. No late labs will be accepted without prior approval.

You must attend! Due to lack of space, equipment, and time, make up labs are not permitted. 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**.

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

Week of	Chapter	Suggested End of Chapter Problems (evens)	Lab Activity
8/18	12 & 13 review	12. 18 – 72 13. 24 – 90	Check in. Lab safety; Hydrocarbon structure (handout)
8/25	14	14 .20 – 74	The Hydrocarbons (handout)
9/2	14 & 15	15 .21 – 64	Alcohols, Phenols, Mercaptans
9/8	15		Amines
9/15	Exam 1 & 16	16. 18 – 66	Tie Dye (hand out)
9/22	16 & 17	17. 30 – 86	Aldehydes and Ketones,
9/29	17 & 18	18. 30 – 86, 88a, 92 – 96	Carb. Acids and esters
10/6	18 & Exam 2		Peptides and Proteins
10/13	19	19. 20 – 27 all; 19.26 – 72	Enzymes
10/20	22	22. 21 – 28 all; 30 – 94	Types of Carbohydrates
10/22	22 & 24	24. 19 – 23 all; 24 – 88	Tests for Carbohydrates
11/3	24 and 21	21. 28 – 86	Lipids
11/11	21 & exam3		Saponification and soaps
11/17	26	26. 19 – 24 all; 26 – 74	Analgesics and TLC (handout)
11/25	27	27. 6 – 11 all; 14 – 58	DNA components and extraction
12/1	23	23. 16,17,20,21,22,24, 26 – 76	Digestion of foods
12/8	25	25. 9-11all, 16 – 60	Caffeine lab handout; check out
12/16	Exam 4		Exam 4 12/16 at 6PM

This schedule may be changed at the instructor's discretion. All problems in the text may be included on exams. You should do all the problems in the chapter. The end of chapter odd problems are suggested because the answers to them are in your text. These will not be collected unless specifically announced. Answers to all problems can be found in the Instructors Manual in the Science Learning Center.

Detailed calendar: Day/month/year

17/8/2008, Click the dates to see more info,  
18/8/2008, Review chapters 12 and 13, If you had chem 2A from me last semester, we covered chapters 12 and 13. If you did not, you may not have covered them. Now is the time to get on it ASAP!!! As part of that review and work on the end of chapter problems  
19/8/2008, Lab Alkanes Handout Introductions due , Come ready to do the lab )  
20/8/2008, First day handout quiz available, Take the first day handout quiz. Click on quizzes and Click on the correct quiz. You must get 100% to continue in the course. You get 3 tries. This quiz does not count toward points in the course.  
20/8/2008, Homework ch 12 & 13 available, This is a homework quiz. It is available on the Shasta College Online quiz section. You have two tries and your highest one counts.  
22/8/2008, First day handout quiz due. Introductions due.,  
23/8/2008, Ch 12 disc. & homework due. ,  
25/8/2008, Ch 13 disc & homework due,  
26/8/2008, Lab Rxns of Hydrocarbons Handout . Quiz on ch. 12, 13 in lab,  
27/8/2008, Begin Ch 14 discussions. Ch 14 homework available,  
2/9/2008, Ch 14 homework, discussions due by 2PM,  
2/9/2008, Lab Alcohols; Quiz ch 14,  
3/9/2008, Begin ch 15 discussions. Ch 15 homework available,  
8/9/2008, Ch 15 homework and discussions due,  
9/9/2008, Lab Amines & Amides but omit amides. Quiz Ch 15,  
10/9/2008, Study for exam 1 and ask questions,  
16/9/2008, Exam 1. Lab Tie Dye (bring cotton clothing to dye),  
17/9/2008, Begin chapt 16 disc. Ch 16 homework available ,,  
22/9/2008, Ch 16 disc and homework due,  
23/9/2008, Quiz ch 16. Lab Ald & Ketones,  
24/9/2008, Begin chapt 17 disc. Homework avail,  
29/9/2008, Chapt 17 homework & disc due,  
30/9/2008, Lab Carb. acids & Esters. Quiz Ch 17,  
1/10/2008, Begin chapt 18 disc. Homework avail,  
6/10/2008, Ch 18 homework & disc due,  
7/10/2008, Ch 18 quiz. Lab Peptides & proteins,  
8/10/2008, Begin chapt 19 disc. Homework avail,  
13/10/2008, Ch 19 homework & disc due,  
14/10/2008, Exam 2 Ch 16-19. Lab Enzymes,  
15/10/2008, Begin chapt 22 disc. Homework avail,  
21/10/2008, Lab Types of Carbs. No quiz-),  
22/10/2008, Assignments available both due Nov. 20,  
23/10/2008, Ch 22 Homework & disc due,  
28/10/2008, Lab Tests for Carbs. Quiz Ch 22.  
29/10/2008, Begin chapt 24 disc. Homework avail,  
3/11/2008, Ch 24 Homework & disc due,  
4/11/2008, Lab Lipids. Quiz Ch 24,  
5/11/2008, Begin chapt 25 disc. Homework avail,  
10/11/2008, Ch 21 pract quiz & disc due,  
12/11/2008, Exam 3 Ch 21, 22, 24. Lab Sapon. & soap,  
13/11/2008, Begin chapt 26 disc. Homework avail,  
17/11/2008, Assignments & Ch 26 Homework & disc due,  
18/11/2008, Lab Handout on Analgesics,  
19/11/2008, Begin chapt 27 disc. Homework avail,  
24/11/2008, Ch 27 Homework & disc due,  
25/11/2008, Lab DNA. Quiz Ch 27,  
26/11/2008, Begin chapt 23 disc. Homework avail. Happy Thanksgiving!!,  
1/12/2008, Ch 23 Homework & disc due,  
2/12/2008, Lab Digestion of foods. Quiz Ch 23,  
3/12/2008, Begin chapt 25 disc. Homework avail ,  
8/12/2008, Ch 25 Homework & disc due,  
9/12/2008, Caffeine lab handout; no quiz ),  
16/12/2008, Exam 4 Ch 26 27 23 25

# **SCIENCE LEARNING CENTER**

**Room 1612**

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