

CHEM 16 Chemical Problem-Solving Fall 2009

PREREQUISITE: NONE

NUMBER OF UNITS: 3 TOTAL HOURS OF LECTURE: 54

COURSE INSTRUCTOR: Cliff Gottlieb, Phone: 530-242-2323. e-mail cgottlieb@shastacollege.edu
web page <http://www.cliffschemistry.com>

Office Hours: : T 1PM – 2PM; W 11AM – 2PM ; F 8AM –9 AM and by at almost any time by appointment to meet your needs in 1412 or in the Science Learning Center, 1626. **Please come and visit**; lots of good stuff happens.

CATALOGUE COURSE DESCRIPTION:

An introductory chemistry course for students who plan to major in a scientific field and need preparation for General Chemistry 1A. The major emphasis of the course will be on chemical problem-solving.

The online 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!!! Plan to spend at least 9 hours per week on the lecture/discussion part of this course. I will do everything I can to help you succeed in this course!!

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. **YOU must WORK for your SUCCESS. Practical applications will be emphasized!!! Let's LEARN and have some FUN!!!!**

REQUIRED TEXTS & MATERIALS:

Basic Chemistry, 5th ed. by Steven S. Zumdahl At the Shasta College Bookstore this has no ISBN but you can get this text at any online book seller and the ISBN# is 978-0618-393-091 and that includes a CD which is not necessary. You will also need the solutions manual and that ISBN# is 978-0618-305-308

Scientific calculator: I recommend a TI-86 because pre-calculus, statistics, and calculus courses require a TI-86 but any scientific calculator is acceptable for this course

All required and optional texts and materials as well as other written material, computers and software, and free tutoring are available in the Science Learning Center, room 1626. Hours are Mon - Thurs - 8:00 AM to 4:00 PM & Fri - 8:00 AM to 3:00 PM Pacific Time. I have provided numerous resources on my web sites. Lectures notes, practice worksheets with answers, and links to other websites will assist you in learning the subject matter of this class

INTERNET DELIVERY ISSUES:

The entire course will be delivered over the internet using a program called Shasta College Online (Angel). This delivery system allows students the freedom to set their own schedule for completing the coursework. Most documents are 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 9 hours per week on this class.

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).

Course schedule, timelines, and deadlines can be viewed in this syllabus and on the course calendar. I will try to accommodate your scheduling needs as situations arise. If you cannot meet these conditions and timelines then you should not enroll in this internet course! Due times are at 11:55 PM Pacific Time.

Exam 1 9/11 – 13; Exam 2 10/4 – 6; Exam 3 10/25 – 27; Exam 4 11/19 – 22; Exam 5 12/13 – 15

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. Five exams are 100 points each for a total. No make-up exams are permitted. Exams will be given online using Shasta College Online. If I deem necessary, exams may need to be taken in an agreeable proctored situation.
2. Quizzes will count 10 points each. No make-ups allowed. There will be fourteen quizzes worth 140 class points. The sum of these fourteen assignments will count as your grade for this section. It is possible to earn up to 140 points out of 110 points. This is like having the opportunity to earn 30 "extra credit" points. Quizzes will be given online using Shasta College Online
3. Graded homework/practice quizzes will be done online using the Shasta College Online program and are worth 30 points.
4. 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 for each chapter counts 1 point.
5. There may be other required or optional assignments or in class questions worth up to 100 points each.

The "curve" is: A = 90-100%; B = 80-89%; C = 70-79%; D = 60-69%; F <60%.

There are 670 points possible. A = 603 B = 536 C = 469 D = 402

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 Angel 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: 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. 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 you cheat, you will receive a 0 for the work involved and a penalty of a 150 point deduction from your final course grade. All work is to be completed by you individually. No copying or group work unless explicitly stated. **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 a mix of calculations, multiple choice, fill in, true-false, and short answers. They will typically be administered online using the Shasta College Online program, but I reserve the right to require you to take a proctored exam at a mutually agreeable time and place. If we cannot mutually agree, I reserve the right to set the time and place.

QUIZZES will be multiple choice, or fill in the blank, or submitting a list of at home observations. Each quiz is worth 10 points.

No late or make-up quizzes permitted with no exceptions other than health or legal situations or emergencies. You will take a practice syllabus quiz to make sure that you will have no problems. The syllabus quiz will not count toward your grade but you must score 100% on it to remain in the course. For the syllabus quiz you will get 4 tries to get 100%. For all other quizzes, you will get only one try.

HOMEWORK ASSIGNMENTS will be available online using the Shasta College Online program and must be completed in the specified time.

TECHNICAL PROBLEMS

If technical problems occur, call me immediately at my office phone 530-242-2323 or e-mail me using the Shasta College Online program or at cgottlieb@shastacollege.edu. 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” homework assignments cause you no technical problems.

ATTENDANCE DISCUSSIONS will occur on the class discussion board and include 2 kinds for each topic we cover.

The first type is to write a brief paragraph for EACH CHAPTER explaining a concept you understand 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 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 your 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 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 usually on the weekends, 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 9 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, class discussion board, or chat room. In case of emergency you can call me at my office, use the Shasta College Online e-mail, or use my general e-mail address cgottlieb@shastacollege.edu Please put Chem 16 as your subject if you use my general e-mail in an emergency. Do not use my general e-mail for non-emergency situations!!!

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>

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 16 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 16 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 16 worksheets and answer sheets : I have provided practice worksheets and answer sheets to help you practice and learn some of the nuts and bolts of chemistry. You do not have to hand them in, they are just for practice.

Chem 16 exam study guides: These have the concepts and information that you need to master for each exam.

Chem 16 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 16 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.

Tentative Lecture Schedule

Week starting	Chapters	Suggested problems (evens)	Week starting	Chapters	Suggested problems (evens)
8/17	1 & 2	1.10-14; 2.4 – 144 & 147	10/19	9	
8/24	2 & 3	3.2 - 94	10/26	Exam III & 10	10.4 – 118 omit 100
8/31	3 & 4	4.8 - 108	11/2	10 & 11	11.8 - 120
9/7	4 & Exam I		11/9	11& 12	12. 8 - 148
9/14	5	5.1 - 92	11/16	12 & Exam IV	
9/21	6	6.8 - 76	11/23	13	13.8 - 82
9/28	7	7.4 - 92	11/30	14 omit normality	14.8 – 128 omit 14.76 - 88
10/5	Exam II & 8	8.2 - 126	12/7	15 omit buffers	15. 2 – 104 omit 60 & 62
10/12	8 & 9	9.2 - 92	12/14	Exam V	

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 even problems is suggested because the answers to them are in your text. Answers to all problems can be found in the Instructors Manual in the Science Learning Center.

Detailed calendar

Day/month/year

16/8/2009,click on dates for more info,

17/8/2009,Practice Discussion Post Introduce yourself,

17/8/2009,Start Chapt 1 text & notes,

17/8/2009,Take practice syllabus quiz,Click on the quiz icon or on the word quizzes on the course menu to the left. Then click on the practice syllabus quiz. Take it until you get 100% and you get 3 tries. This is the only quiz that you will get to take more than once.

17/8/2009,E-mail me using Shasta College Online ,Send me your city and state residence, contact phone, and non- Shasta College Online e-mail address. Also send me the brand and model of your calculator

18/8/2009,First day handout quiz due. Introductions due.,

18/8/2009,Ch 1 discussions available.,

19/8/2009,Ch 2 discussions & homework available,

20/8/2009,syllabus quiz due.,

21/8/2009,Ch 1 homework & discussions due.,

21/8/2009,Ch 1 10 point quiz available.,

24/8/2009,Ch 2 10 pt quiz available,

25/8/2009,Ch 1 10 point quiz due

25/8/2009,Ch 2 disc & homework due,

27/8/2009,Ch 2 10 pt quiz due,

27/8/2009,Ch 3 homework & disc. available,

31/8/2009,Ch 4 disc. & homework available,

3/9/2009,Ch 3 10 pt quiz available,

4/9/2009,Ch 3 homework and disc. due,

8/9/2009,Ch 3 10 pt quiz due,

8/9/2009,Ch 4 10 pt quiz available,

9/9/2009,Ch 4 homework & disc. due,

10/9/2009, Ch 4 10 pt quiz due,

11/9/2009,Exam 1 Ch 1-4 available,

13/9/2009,Exam 1 due,

14/9/2009,Ch 5 disc. & homework available.,

15/9/2009,Ch 5 10 pt quiz available.,

17/9/2009,Ch 5 disc. & homework due.,

19/9/2009,Ch 5 10 pt quiz due.,

21/9/2009,Ch 6 disc & homework available,

22/9/2009,Ch 6 10 pt quiz available,

24/9/2009,Ch 6 disc & homework due,

25/9/2009,Ch 6 10 pt quiz due,
28/9/2009,Ch 7 disc. & homework avail,
29/9/2009,Ch 7 10 pt quiz available,
1/10/2009,Ch 7 homework & disc due,
2/10/2009,Ch 7 10 pt quiz due,
4/10/2009,Exam II, Ch 5-7 available,
6/10/2009,Exam II due,
7/10/2009,Ch 8 homework & disc available,
7/10/2009,Ch 8 10 pt quiz available,
13/10/2009,Ch 8 homework & disc due,
14/10/2009,Ch 8 10 pt quiz due,
15/10/2009,Ch 9 homework & disc available,
16/10/2009,Ch 9 10 pt quiz available,
21/10/2009,Ch 9 homework & disc due,
23/10/2009,Ch 9 10 pt quiz due,
25/10/2009, Exam III Ch 8 – 9 available.,
27/10/2009, Exam III Ch 8 – 9 due.,
28/10/2009,Ch 10 homework & disc available,
29/10/2009,Ch 10 10 pt quiz available,
1/11/2009,Ch 10 homework & disc due,
2/11/2009,Ch 10 10 pt quiz due,
3/11/2009,Ch 11 homework & disc available,
4/11/2009,Ch 11 10 pt quiz available,
9/11/2009,Ch 11 homework & disc due,
10/11/2009,Ch 11 10 pt quiz due,
10/11/2009,Ch 12 homework & disc available,
11/11/2009,Ch 12 10 pt quiz available,
13/11/2009,Veterans' Day Holiday,
17/11/2009,Ch 12 homework & disc due,
18/11/2009,Ch 12 10 pt quiz due,
19/11/2009, Exam IV Ch 10 – 12 available.,
22/11/2009, Exam IV Ch 10 – 12 due.,
23/11/2009,Ch 13 homework & disc available,
24/11/2009,Ch 13 10 pt quiz available,
26/11/2009, Happy Thanksgiving!,
30/11/2009,Ch 13 homework, disc, quiz due,
30/11/2009,Ch 14 homework & disc available,
1/12/2009,Ch 14 10 pt quiz available,
3/12/2009,Ch 14 homework & disc due,
4/12/2009,Ch 14 10 pt quiz due,
7/12/2009,Ch 15 homework & disc available,
8/12/2009,Ch 15 10 pt quiz available,
10/12/2009,Ch 15 homework & disc due,
11/12/2009,Ch 15 10 pt quiz due,
13/12/2009, Exam V Ch 13 – 15 available.,
15/12/2009, Exam V Ch 13 – 15 due.,
16/12/2009, Happy Holidays!!,

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, will be assigned a course grade.