

Chemistry 10: Chemistry for the Liberal Arts Internet Summer 2017 Syllabus

Start Date: June 12 PREREQUISITE: Math 101 NUMBER OF UNITS: 3 TOTAL HOURS OF LECTURE: 54

COURSE INSTRUCTOR:

Cliff Gottlieb, Office phone: 530-242-2323 but I am not in my office during summer so don't call.
e-mail cgottlieb@shastacollege.edu but you should use the online Canvas mail function.
web pages: <http://www.cliffchemistry.com> and the Canvas class page

CATALOGUE COURSE DESCRIPTION: An introduction to the major concepts of chemistry involving minimal student friendly math with attention to their relevance to practical and societal problems. This course is intended for non-science majors who wish to gain an appreciation for the application of chemistry to everyday living. The course includes such topics as nuclear energy and energy alternatives; health issues of drugs; food additives, nutrition, hormones, chemicals for household use, chemicals in the environment, and synthetics. This course may include field trips (not in the online format). This course may be offered in a distance education format. This course will meet the general education requirement for a laboratory science if it is taken with CHEM 11.

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. Plan to spend at least 14 hours per week on this course. I will do everything I can to help you succeed in this course!! You just have to ask!! No Freaking Out!!

REQUIRED TEXTS: (The text, other materials, and free tutoring are available in the Science Learning Center, room 1626.)

Chemistry for Changing Times, 14th ed. by John Hill, et al. 9780321972026. Available at the Shasta College Bookstore or any on-line book retailer. I will also accept the 13th ed. 9780321750877 or 12th ed. ISBN 9780136054498. Search for these online using the ISBN number and you will find them much cheaper than the Shasta College Bookstore. The 12 edition will be very cheap. Be careful some 12 editions only have 18 chapters in the text with an online link to the last 4 chapters. **THAT LINK DOES NOT WORK!!!!** The text has 22 chapters and about 640 pages depending on the edition. Here are two links that will connect you to a list of these texts for cheap. The 12th edition: <http://www.directtextbook.com/isbn/9780136054498> and the 13th: <http://www.directtextbook.com/isbn/9780321750877>.

I have provided numerous resources on my web sites. On the Shasta College Online course management program called Canvas are lectures notes; practice worksheets with answers, and links to other websites will assist you in learning the subject matter of this class.

COURSE OVERVIEW:

This course will look at some of the fundamental ideas and principles of scientific thinking and chemistry. I will place an emphasis on practical applications of chemistry to everyday life. This is a college/university level course that is transferable to four year institutions. It is not a high school course. Students who are non-science majors or who are just interested in learning about chemistry in our lives should enroll in this course. If you have any concerns about whether this course is appropriate for you, please contact me immediately.

STUDENT LEARNING OUTCOME:

Students will be able to find, interpret, analyze and apply information and data to solve problems and answer questions in chemistry.

INTERNET DELIVERY ISSUES: This is an internet course. Unless unusual situations occur, there is no face to face component to the course. This version of this course will be delivered over the internet using a program called Canvas. 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. The summer schedule compresses 17 weeks into 7 weeks, so the amount of time per day is much higher in this course than in a longer semester. **You should log onto this course every day, check the course calendar, and make sure all of your work is up to date.** You should expect to spend at least nine hours per week on this course. Furthermore you must have sufficient self-discipline to set and adhere to your own and to the course's timelines. The internet version of this course is equal to or more rigorous than the face to face version. **DO NOT FALL BEHIND!! I AM ALWAYS READY TO HELP YOU.**

TECHNICAL PROBLEMS: If you have technical problems, **NO FREAKING OUT. Freaking out is not allowed.** ☺☺. You just need to communicate with me immediately or as soon as possible. To communicate with me use Canvas's mail. If that is not working, send me an e-mail at cgottlieb@shastacollege.edu and put Chem 10 as the subject.

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”!!**

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| 1. Four exams are 100 points each. There is no cumulative final |
| 2. Quizzes, assignments and graded discussions will count 10 points total to your final score. However you will have the opportunity to earn 120 points. You the opportunity to earn 20 “extra credit” points although nothing will be labeled “extra credit”. |
| 3. There are 3 extra credit quizzes available that involve mathematical and chemical formulas and calculations. They cannot hurt your grade, they only add to your points |

I do not use percent in determining your course grade so ignore the percentage column in the Canvas grade book. Just focus on total points. I use total points at the end of the class to determine your grade.

Course Grades Based on Total course points: A ≥ 450 ; B = 400 – 449; C = 350 – 399; D = 300 – 349
Due to the extra credit available these point values are absolute even if you are just one point short.

I reserve the right to add new assignments. I also reserve the right to create grading policies to cope with atypical situations.

Course schedule, timelines, and deadlines can be viewed in this syllabus and on the course calendar. I avoided scheduling items over the two holiday weekends. Given reasonable notification, I will try to accommodate your summer schedule, however, such accommodations may be limited.

Keep track of your own total points and grade which will be available only to you on the Shasta College Online program. Contact me IMMEDIATELY using the Canvas online program’s e-mail . Immediately means on the day of the exam you need to notify me of your emergency or as soon as the emergency is over. Be prepared to send me documentation to verify your emergency. If you have non-emergency family, legal or medical appointments that will interfere with a quiz or an exam, you must notify at least THE DETAILS REGARDING EVALUATION

EXAMS will be 50 multiple choice with each question worth 2 points. I will post a study guide that will have test type questions on it. All of the questions on each exam will come from the study guide. The study guide will not have the answers. You must find the answers in the text or in my notes. On exam days, I will make each exam available by 5 AM Pacific time and it must be completed on the due date by 11:55 PM, Pacific Time Zone (USA). You will have a 2 or 3 day window in which to take the exam. The exam will be timed No late exams permitted except for health or legal situations or emergencies. **If technical problems occur, use Canvas mail or e-mail me immediately at cgottlieb@shastacollege.edu or as soon as you are able.** I reserve the right to deliver any exam to any student in a paper-pencil format in a proctored environment.

Exam Dates: Exam 1: 6/26-6/27; Exam 2: 7/7 - 7/9; Exam 3: 7/14 -7/16; Exam 4: 7/25 -7/27

QUIZZES/ASSIGNMENTS/ will be multiple choice, fill in the blank, or submitting a list of at home observations. Each quiz is worth 10 points. The quizzes will cover material from the worksheets that I provide on the web. As with exams, quizzes will be available at 12:01 AM Pacific Time and it must be completed by 11:59 on the due date on the Pacific Time Zone (USA). No late or make-up quizzes permitted with no exceptions other than health or legal situations or emergencies. **If technical problems occur, use Canvas mail or e-mail me immediately or as soon as you are able.** You will be required to take a syllabus quiz which does not count toward you final course points (zero points) to make sure that the “real” quizzes cause you no technical problems.

DISCUSSION FORUMS: There will be two discussion boards available to you throughout the class. One is for general discussions between you and your classmates. Generally, I will not look at these discussions. Another discussion board will be dedicated to questions that you might have that you would like me to address. I will check this board regularly. One other discussion board will be dedicated to introducing yourself to the class. Finally two discussions will count as 15 points each. For these you will make an initial post and then reply to 2 of your classmates’ posts.

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.** All submitted exams, quizzes, assignments, and discussions are to be completed individually. No group work unless explicitly stated although I encourage study groups to work on finding the answers to the study guides. 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!! The penalty for cheating is receiving a 0 on the work involved plus a 100 point penalty deduction from your grade.** BY ENROLLING IN THIS CLASS, YOU AGREE NOT TO CHEAT BASED ON YOUR RELIGIOUS-PHILOSOPHICAL-ETHICAL WORD OF HONOR!

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. **Remember No Freaking Out**

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 by e-mail from Monday to Friday, and by discussion board. I will help you to achieve the best grade that you chose to achieve. I hope that you choose to achieve an "A".

Bottom line: I will help you to achieve the best grade that you chose to achieve.

YOUR ROLE: You must read the book, read the notes and complete assignments on time! DON'T FALL BEHIND! It is best to log onto the class EVERYDAY. Click on calendar dates for more information. You need to be self-motivated and disciplined to work on your own to complete assignments.

I will do everything I can to help you succeed in this course!! You just have to ask!! No Freaking Out

ATTENDANCE: If you do not log onto the Shasta College Online page for 4 consecutive school days without notifying me, I reserve the right to make the course non-accessible to you. I DO NOT FORMALLY DROP STUDENTS FROM THE CLASS. IN ALL CASES YOU MUST DROP THE CLASS YOURSELF THROUGH THE ADMISSIONS OFFICE!!

IMPORTANT!!! USING THE SHASTA COLLEGE ONLINE PROGRAM (Canvas): pay close attention!!!

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

Overview of Course Organization on the Shasta College Online program (Canvas)

I organize the course using Modules (folders) listed below. When you enter the course the modules may be collapsed. All you will see is the name with a ► in front of the name. Click on the ► and the module will expand to show you the contents.

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. PLEASE USE THESE! I have omitted much material from the early chapters and have included bits and pieces of information not in the text. You will save yourself time and grief if you use my notes and the text being careful to omit material that I have noted on the schedule and have not included in my notes. I have removed most of the gnarly math and made them part of optional extra credit quizzes

Exam study guides: These contain about 200 questions for each exam. You have to find the answers in my notes or in the text. Each exam will have 50 questions directly off the study guide. Some answers are directly in my notes or the text. Others have to be figured out using the principles that are covered. If you have problems finding the answers, you can ask me. I will not give you the answer, but I will point you in the right direction. Do not wait until the day before the exam to work on the study guides. That is a recipe for failure. ☹

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. Each worksheet covers a set of principles that I have covered in my notes. About half of the quiz questions come straight off these sheets. The remainder covers the same exact principles. You do not have to hand them in, they are just for practice.

Graded Material: Here is where you will find quizzes, assignments, and exams. Quizzes are worth 10 points. Each quiz covers one of the worksheets described above. Click on the quiz that is available to take it. Once you open a quiz, 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. One day after the quiz is over; you may view your corrected submission, by clicking on the quiz again and then clicking on submission. There is a two day window to take quizzes.

Assignments are worth 10 points each: Follow the directions EXACTLY. There is a window of a few weeks to complete these.

Exams: There are four 100 point exams. Click on the exam that is available to take it. Once you open an exam, 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 exam. One day after the exam is over; you may view your corrected submission, by clicking on the exam again and then clicking on submission. There is a two or three day window to take exams.

Notes and Worksheets for Optional Quizzes: These are notes covering the material for optional extra credit quizzes

Optional Extra Credit Quizzes: There are 3 optional extra credit quizzes that involve somewhat involved mathematical calculations. Your grade is based on total earned points, so taking these cannot hurt your grade. They have an extended window to take them. There are notes covering the material for these quizzes.

CLASS COMMUNICATIONS

Use the Shasta College Online Canvas program for class communication. One discussion board will be for general course questions use the "Ask Cliff questions here" discussion board so everyone can benefit. Most course communication are made using the Canvas mail, unless there is a problem or emergency. The discussion forums are public. If there is a personal issue or emergency, send me an e-mail using Canvas. If Canvas is not functioning then send me an e-mail to me at cgottlieb@shastacollege.edu and put CHEM 10 as the subject. Do not use my general e-mail for non-emergency situations. **!!!IMPORTANT!!!! MAKE SURE YOUR CURRENT E-MAIL ADDRESS IS ON FILE AT MY SHASTA.** Classmates can communicate with each other by class discussion board.

IMPORTANT!!!! Using Canvas e-mail: **USE THE INBOX LINK TO SEND ME E-MAIL!!!** Here is how. After you click on the inbox, at the top middle of the page you will see a icon with a on a sheet of paper. Click on it and choose Chem 10. At the far right of the "To:" Box you will see a person icon. Click it and choose your recipient. Type the subject, your message and hit send. NOTE: The help link also has a way to send an e-mail to your instructor. That is !!! :):). PLEASE DON'T USE THE HELP LINK TO SEND E-MAIL.

I will do everything I can to help you succeed in this course!! You just have to ask!! No Freaking Out!!

OTHER RESOURCES

Science Learning Center. It has tutors and other resources available if you are on campus. Information on page 8.
Disabled Student Programs & Services (DSPS) will provide resources for students with disabilities. They will also test students for learning disabilities. 530-242-7790. www.shastacollege.edu/student-services/dsps

NON-DISCRIMINATION STATEMENT

The Shasta-Tehama Trinity Joint Community College District ("Shasta College"), in accordance with applicable Federal and State Law, does not discriminate on the basis of race, color, national origin, sex, religious preference, age, disability (physical and mental), pregnancy (including pregnancy, childbirth, and medical conditions related to pregnancy or childbirth), gender identity, sexual orientation, genetics, military or veteran status or any other characteristic protected by applicable law in admission and access to, or treatment in employment, educational programs or activities at any of its campuses. Shasta College also prohibits harassment on any of these bases, including sexual harassment, as well as sexual assault, domestic violence, dating violence, and stalking. Inquiries regarding equal opportunity and non-discrimination may be directed to:

Laura Cyphers Benson, Associate Vice President of Human Resources, (530) 242-7649, lbenson@shastacollege.edu
 Sandra Hamilton Slane, Associate Dean of Students, (530) 242-7799, sslane@shastacollege.edu

QUESTIONS: If you have questions, please ask me. I am here to help you. And of course, NO FREAKING OUT! Just ask.

COURSE SCHEDULE: Brief version

Week	Chapters	Quizzes	Week	Chapters	Assignments
6/12- 18	1, 2, 3, 4	1-4	7/10 -16	14, 15, 16, 17	
6/19- 25	4, 5, 6 and exam 1	5-8	7/17-23	Exam 3, 18, 19, 20	1,2,3 & Optional quizzes due
6/26-7/2	6, 7, 8, 9, 10		7/24-27	21,22, Exam 4	
7/3 - 9	11, 12, Exam 2, and 13	9			

Detailed Schedule

Note: All assignments, quizzes and exams must be submitted by 11:59PM PDT on the due date

day/month/year

12/6/2017, Practice Discussion Post Introduce yourself,

12/6/2017, Start Chapt 1 text & notes,

12/6/2017, Take 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%. You get four tries. It counts zero points towards your grade. This is the only quiz that you will get to take more than once.

12/6/2017, Start element worksheet,

13/6/2017, Quiz 1 on first 30 elements I will give you 5 names and you give symbol and then I give you 5 symbols and you give me names. Spelling and capitalization count, Due 6/14

13/6/2017, Start Chapt 2 text & be sure to use my simplified notes,

14/6/2017, Syllabus quiz due,

14/6/2017, Practice Discussion-Introduction due,

14/6/2017, Quiz 2 available. Covers isotope worksheet. Due 6/15,

14/6/2017, Start Chapt 3 text & notes,
15/6/2017, Quiz 3 available. Covers atomic and electron structure worksheet. Due 6/16,
16/6/2017, Start Chapt 4 text & notes. Omit section 4.11. Be sure to follow my notes especially sections 4.10 and 4.12,
16/6/2017, Quiz 4 available. Covers periodic table worksheet. Due 6/17,
18/6/2017, Quiz 5 available. Covers ion worksheet. Due 6/19,
20/6/2017, Quiz 6 available. Covers ionic compound worksheet. Due 6/21,
22/6/2017, Quiz 7 available. Covers Dot Structure worksheet. Due 6/23,
22/6/2017, Start Chapt 5 Omit sections 5.2 – 5.4 and molarity in section 5.5. This material will be on the optional extra credit quizzes.
For all other sections, follow my notes.,
24/6/2017, Quiz 8 available. Covers balancing equations worksheet. Due 6/25,
25/6/2017, Start Chapt 6 text & notes. Omit molar volume (p 167) and entire section 6.7. Be sure to follow my notes,
26/6/2017, Exam 1 available and covers chapters 1- 6. 50 questions from the study guide. You can use the class periodic table and ion chart only. You have one try and 60 minutes. Good thinking. Due 6/27,
27/6/2017, Exam 1 due and must be submitted by 11:55 PM,
27/6/2017, Start Chapt 7 text and notes No pH calculations and follow my notes,
27/6/2017, Start on assignment 1 which is due on 7-15. Assignment 1 is a list of inorganic compounds from reading ingredient (not nutritional!) labels from common household products
28/6/2017, Optional EXTRA CREDIT quiz 1 & 2 & 3 available. Due 7-23. Optional quiz 1 is on converting grams and number of atoms to moles and vice versa and simple mole to mole stoichiometry. Optional quiz 2 is on mole to gram and gram to gram stoichiometry you allowed your periodic table and a scientific calculator only. Quiz 3 covers calculating pH from molarity and molarity from pH. It also covers calculations involving the ideal gas law ($PV=nRT$). There are notes just for these and they are heavy calculation type problems. You are allowed your periodic table and calculator only. These are in addition to what is on the syllabus. They can only add to your points. They cannot hurt your grade,
28/6/2017, Start Chapt 8 text and notes,
29/6/2017, Start Chapt 9 text and notes,
30/6/2017, Start Chapt 10 text and notes,
5/7/2017, Start Chapt 11 text and notes,
30/6/2017, Start on Assignments 2 & 3 due 7-15. Assignment 2 is a list of organic compounds classified by functional group by reading ingredient (not nutritional!) labels from common household products. Assignment 3 is a list of recycling codes and polymer names from plastic materials in your house. Due 7-22,
5/7/2017, Quiz 9 available. Covers nuclear decay worksheet. Due 7-6,
6/7/2017, Start Chapt 12 text,
7/7/2017, Exam 2 available and covers chapters 7 – 12. Due 7/9,
9/7/2017, Exam 2 due,
9/7/2017, Start Chapt 13 text,
11/7/2017, Start Chapt 14 text,
12/7/2017, Start Chapt 15 text,
13/7/2017, Start Chapt 16 text,
14/7/2017, Start chapter 17 text,
14/7/2017, Exam 3 available Covers chapters 13-17. Due 7-16,
16/7/2017, Exam 3 due,
18/7/2017, Start Chapt 18,
19/7/2017, Start Chapt 19,
20/7/2017, Start chapt 20,
21/7/2017, Start Chapt 21,
22/7/2017, Assignments 1 & 2 & 3 due,
23/7/2017, Optional extra credit quizzes due,
24/7/2017, Start Chapt 22,
25/7/2017, Exam 4 available. Covers chapters 18 - 22,
27/7/2017, Exam 4 due,
29/7/2017, You're done :) Happy Summer and Life!!

COURSE OBJECTIVES:

1. Apply scientific reasoning in contexts involving chemistry and society.
2. Discriminate between factual and fallacious claims in media and the internet involving chemistry.
3. Find accurate information on chemicals and chemistry.
4. Use chemical theories, principles, concepts and models to analyze socio-cultural phenomena involving chemistry and society.
5. Critique benefits and limitations of applying the scientific method to problems in the analysis of societal phenomena involving chemistry.
6. Independently explore contemporary topics in which chemistry has a significant role.
7. Solve simple chemical calculation problems

SCIENCE LEARNING CENTER

Life Science Building – 1600 Room 1626 530-242-2325

www.shastacollege.edu/ScienceLearningCenter

Margaret Savage, SLC Coordinator

Check the website for summer hours.

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 that cover specific topics, old tests, Text books for most courses and the Solution Manuals that go with them. Microscopes and slides are available for reviewing some labs and FREE TUTORING.

FREE TUTORING is done by students who have successfully completed the course; often with the same instructor Tutors must have a “B” or better in the courses they tutor. They can help you initiate good study habits and organizational skills to maximize your study time. They can also help to clarify any confusing concepts. When there is interest, we run study groups that are led by tutors.

OTHER RESOURCES AVAILABLE

- **Copy Machine** A copy machine is available in the computer area for .10 per copy.
- **Office Supplies** For your use, we have a paper cutter, stapler, scissors, tape and colored pencils .
- **Calculators** We have both basic scientific and graphing calculators. They can be checked out for use in the center and for test-taking. We hold your driver’s license.
- **Computers** We have four internet connected computers with Microsoft Office suite installed. Printing is available off the computer for \$0.10 a page. We also have 2 Laptops to use in the center.

STUDYING IN THE SLC: There is room available for students to study alone or in groups. We have one small room where students can isolate to minimize distractions. You are allowed to eat in the SLC.

The **SCIENCE LEARNING CENTER** is a friendly, helpful, encouraging environment, which could become your home away from home. Come in and check it out.

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

Finally what is the most important thing to remember... **NO FREAKING OUT ☺**