

COURSE # CHEM 1010

Introduction to Chemistry

2018-2019

Instructor

Instructor:

Phone:

Email:

Office Hours:

Course

Course Description

This is a Concurrent Enrollment Course, offering both high school credit through _____ High School and college credit through Utah Valley University. Credit from this course is transferable to all colleges and universities. Contact the receiving institution for how the credits will be applied.

You are not expected to have prior experience in chemistry but are expected to be familiar with basic algebra and general mathematics. If you do not have the necessary math skills, please consider a few developmental math classes before taking chemistry.

Catalog Description

Assumes no previous knowledge of chemistry. Presents the foundations of chemistry to students who need preparation for further study in chemistry as well as to students who only want to take an introductory course. Covers chemical measurements, atomic structure, formulas, chemical reactions and equations, chemical nomenclature, stoichiometry, molecules and chemical bonding, gas laws, liquids, solids, solutions, acids and bases.

Course Prerequisites

This class is available to all high school students in good academic standing. High school prerequisites apply.

Course Objectives or Learning Outcomes

Homework and Studying: It is essential to read, attend lectures, and work problems. There are many problems in the back of each chapter. Work as many as you possibly can. If you fail to work problems, you will likely fail the exams, and therefore fail the class.

Read section(s) that will be covered in the textbook prior to coming to that lecture. Take notes during the lecture; pay particular attention to problems that are solved. After the lecture you can try to work these problems on your own, referring to your notes as necessary. After lecture, re-read the section(s) that was covered in the book. Work the examples as you come to them in a section. Try

to solve the problems without looking at the solution. Be sure to use units. If you can't work the problem, look at the lecture notes or the preceding paragraphs to search for the method to answer the question. If you are still stuck, look at the solution. Try again. If you are still stuck, look at the solution in more detail. Try again. If you are still stuck, get help. Do the YOUR TURN problems as you come to them. You can check answers in the back of the book. Also, supplement your lecture notes from items in the text that help you understand the concepts or work the problems better.

At the end of a chapter, there are more problems. Work all of the assigned problems, or if none are assigned work at least enough of all types of problems to ensure you can solve them. The answers to the odd questions are given in an appendix in the text.

If you cannot complete a problem, then seek help immediately. Get together with a study group, go to chemistry peer tutoring (if available at your school, or come to LA201 on the UVU campus), or visit your instructor during office hours.

Repeat the cycle after every lecture. You should study at least 2 -3 hours immediately after or at least before the next lecture.

PREPARING FOR EXAMS

Review notes, re-read chapters, rework inter-chapter problems. Read the chapter summaries and section goals. Study in depth your areas of weakness.

Work end of chapter problems again and do some that you hadn't done before.

If you cannot work some of the problems, seek help from the sources listed above.

Take the WebCt quizzes for each chapter. Take each quiz like it is a real exam. If you miss problems, figure out why, and practice additional problems that test that concept.

Preparing for exams will help you identify areas of weakness you need to reinforce, and to refresh your knowledge of the concepts you already know. The length of time needed to prepare for exams is variable, but if you have studied as outlined above, it should only take several hours.

TAKING EXAMS

Each exam will probably take between 1 – 1.5 hours, for the average student. Relax while taking the exam. Read each problem thoroughly. If the problem requires solving equations, list everything that is given in the problem (all numerical values with *the units*). Write the equation you need to solve the problem. Work out the problem, paying close attention to the units. After you obtain the answer, read all of the possible answers, paying attention to the units on the answers. If your answer is there, chances are that is the correct answer; however, multiple-choice tests are designed to provide answers that arrive from common student errors in the problem-solving technique. So, you should think of common errors (i.e., unit conversion errors), or errors that you have made while trying to solve similar problems. But don't second-guess yourself. Usually, your first answer is your best attempt. If the problem asks about concepts or definitions, read all of the possible answers before choosing your answer. If you come to a problem you can't answer, come back to it. Your mind can work on solving it even while you are not consciously thinking about it.

If you have no idea on how to work the problem, try to rule out as many of the possible answers as you can. It makes your odds of guessing the correct answer better.

Make sure you have filled in the answer correctly on the ScanTron (or at least the answer that you want to be graded).

Give every exam your best effort. You are being tested on what you know. If you cheat on an exam, you should evaluate what your priorities are, and ask yourself if that is really the type of person you are becoming or want to be. On the enforcement end, cheating will not be tolerated, and if detected, will result in a failing grade for at least the exam, and perhaps the course.

Topics

Introduction
Molecular Reasons
The Chemist's Toolbox
Atoms & Elements
Molecules, Compounds, and Chemical Reactions
Chemical Bonding
Light & Color
The Air Around Us
The Liquids & Solids Around Us
Water
Acids & Bases
Sour and Bitter
Oxidation and Reduction

Required Text and Materials

Chemistry in Focus, A Molecular View of Our World, 6th Ed., by Nivaldo Tro. Brooks/Cole Cengage, 2014

Calculator: A scientific calculator. Programmable calculators will not be allowed in the testing center.

Department Policies

Assessment

There will be daily quizzes drawn from the scheduled reading, previous lectures or applicable homework, and even the current lecture material.

There will be three mid-term knowledge assessment activities (a.k.a. exams). Each exam will consist of multiple choice, and perhaps matching, essay questions, and workout problems. The Final Exam will be comprehensive and will consist about 50 multiple choice and/or other types of questions.

Grading Scale

A = 100-93	B - = 82-80	D+ = 69-67
A - = 92-90	C+ = 79-77	D = 66-63
B+ = 89-87	C = 76-73	D - = 62-60
B = 86-83	C - = 72-70	F = 59-0

Grades and Credit

Your grade for this class will become part of your permanent college transcript and will affect your GPA. A low grade in this course can affect college acceptance and scholarship eligibility.

Grades are determined by instructors, based upon measures determined by the instructor and department and may include: evaluation of responses, written exercises and examinations, performance exercises and examinations, classroom/laboratory contributions, mastery of pertinent skills, etc. The letter grade "A" is an exceptional grade indicating superior achievement; "B" is a grade indicating commendable mastery; "C" indicates satisfactory mastery and is considered an average grade; "D" indicates substandard progress and insufficient evidence of ability to succeed in

sequential courses; "E" (failing) indicates inadequate mastery of pertinent skills or repeated absences from class; "UW" indicates unofficial withdrawal from class.

University Policies

Academic Integrity

Utah Valley University expects all students to maintain integrity and high standards of individual honesty in academic work, to obey the law, and to show respect for others. Students of this class are expected to support an environment of academic integrity, have the right to such an environment, and should avoid all aspects of academic dishonesty. Examples of academic dishonesty include plagiarizing, faking of data, sharing information during an exam, discussing an exam with another student who has not taken the exam, consulting reference material during an exam, submitting a written assignment which was authored by someone other than you, and/or cheating in any form.

In keeping with UVU policy, evidence of academic dishonesty may result in a failing grade in the course and disciplinary review by the college. Any student caught cheating will receive, at minimum, zero points on that particular assignment for the first offense. A second offense can result in failing the course and will entail being reported to Student Advising. Academic dishonesty includes, in part, using materials obtained from another student, published literature, and the Internet without proper acknowledgment of the source. Additional information on this topic is published in the student handbook and is available on the UVU website.

Student Code of Conduct

All UVU students are expected to conduct themselves in an appropriate manner acceptable at an institution of higher learning. All students are expected to **obey the law**, to **perform contracted obligations**, to **maintain absolute integrity and high standards** of individual honesty in academic work, and to observe a **high standard of conduct for the academic environment**.

The Student Rights and Responsibilities Code, or Code of Conduct, outlines for students what they can expect from the University and what the University expects of them.

Students should review their Rights and Responsibilities. The Code of Conduct also outlines the process for academic appeals, and appeals related to misconduct and sanctions. It can be found at <http://www.uvu.edu/studentconduct/students/>

Student Responsibilities

You are expected to take an active role in the learning process by meeting course requirements as specified in written syllabi. Faculty members have the right to establish classroom standards of behavior and attendance requirements. You are expected to meet these requirements and make contact with faculty members when unable to do so.

Withdrawal Policy

If you do not wish to take this course or find that you are unable to continue, you should officially withdraw by the deadline stated in the current semester UVU Student Timetable.

You can officially withdraw from a course by dropping it through the online registration system or the campus One Stop desk (BA 106) by the listed date. If you officially withdraw from a course by the "Last Day to Drop and Not Show on Transcript," the course will not appear on your academic

transcripts. If you officially withdraw from a course by the "Last Day to Withdraw," a "W" will appear on your transcripts. Although your GPA will not be affected — a "W" will indicate that you chose to withdraw. If you fail to complete the course and do not drop it before the "Last Day to Withdraw," a "UW" or "E" (a failing grade) will appear on your transcripts.

Withdrawing from a course may impact your financial aid status. For more information, see: UVU Financial Aid.

Cheating and Plagiarism Policy Procedures

This document was taken from the Utah Valley University Policy 541, The Student Rights and Responsibilities Code

5.4.4 Each student is expected to maintain academic ethics and honesty in all its forms, including, but not limited to, cheating and plagiarism as defined hereafter:

1) Cheating is the act of using or attempting to use or providing others with unauthorized information, materials, or study aids in academic work. Cheating includes, but is not limited to, passing examination answers to or taking examinations for someone else, or preparing or copying another's academic work.

2) Plagiarism is the act of appropriating another person's or group's ideas or work (written, computerized, artistic, etc.) or portions thereof and passing them off as the product of one's own work in any academic exercise or activity.

3) Fabrication is the use of invented information or the falsification of research or other findings. Examples include but are not limited to:

- a) Citation of information not taken from the source indicated. This may include the incorrect documentation of secondary source materials.
- b) Listing sources in a bibliography not used in the academic exercise.
- c) Submission in a paper, thesis, lab report, or other academic exercise of falsified, invented, or fictitious data or evidence, or deliberate and knowing concealment or distortion of the true nature, origin, or function of such data or evidence.
- d) Submitting as your own any academic exercise (written work, printing, sculpture, etc.) prepared totally or in part by another.

Students with Disabilities

Students who need accommodations because of a disability may contact the UVU Office of Accessibility Services (OAS), located on the Orem Campus in LC 312. To schedule an appointment or to speak with a counselor, call the OAS office at 801-863-8747. Deaf/Hard of Hearing individuals, email nicole.hemmingsen@uvu.edu or text 385-208-2677.

Religious Accommodations

At the beginning of each semester, you shall promptly review the course syllabus and class schedule and notify faculty to request an accommodation for sincerely held religious beliefs and practices using the *Religious Accommodation Request Form*.

Dangerous Behavior

The faculty member has the right to demand and secure the immediate removal of any person from the classroom whenever the faculty member determines, to the best of his or her knowledge or belief, that the person's actions are threatening or dangerous to students or themselves. If the

faculty member cannot resolve a disruptive situation, the faculty member may request that the disruptive person(s) leave the classroom. If the disruptive person(s) will not leave voluntarily, the faculty member may call University Police for assistance. The incident shall be reported to the Dean of Students and to the Director of Judicial Affairs in accordance with Policy 541 *Student Rights and Responsibilities Code*.

Discriminatory, Exclusionary, or Disruptive Behavior

Faculty members observing discriminatory, exclusionary, or disruptive behavior follow procedures described in UVU Policy 541 *Student Rights and Responsibilities Code*. 5.6

Attendance

Attendance in this class is not mandatory due to the different learning preferences with each student. However, class will be held according to the schedule on the top of this syllabus. Chapters will be covered in class as listed in the semester schedule below. Class will consist of chapter reviews, discussion and group activities.

Policies/References

1. Policy 541: Student Rights and Responsibilities Code
<https://www.uvu.edu/catalog/current/policies-requirements/student-rights-and-responsibilities.html>
2. Policy 601: Classroom Instruction and Management.
<https://policy.uvu.edu/getDisplayFile/5750ed2697e4c89872d95664>
3. Policy 635: Faculty Rights and Professional Responsibilities.
<https://policy.uvu.edu/getDisplayFile/563a40bc65db23201153c27d>

Definitions

- A. Syllabus: An agreement between faculty and students that communicates course structure, schedule, student expectations, expected course outcomes, and methods of assessment to students.

Dropping the Class

_____ is the last day to drop the course without it showing on your transcript.

_____ is the last day to withdraw from the class.

If you drop the high school class, you must also withdraw from the UVU class to avoid receiving a failing grade.

Due dates and this syllabus may change at the instructor's discretion due to the needs of the class members.