Elementary Chemistry

CHEM 1110

Course Description

Introductory course in general inorganic chemistry. For health science students and other non-chemistry majors. It is recommended that students take CHEM 1115 in the same semester as this course.

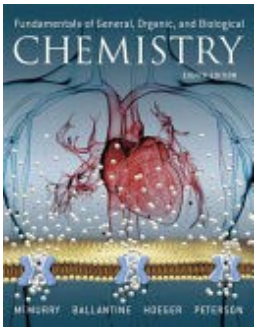
Pre-Requisite(s): MATH 1010 w/C grade or higher or appropriate placement into MATH 1050

Semester: All

Course Student Learning Outcomes

Students taking this course will gain substantive chemistry knowledge, be able to communicate with chemical, names, formulas, and models, will develop quantitative literacies related to the chemistry discipline, scientific notation, and predict properties of individual compounds as well as simple chemical reactions.

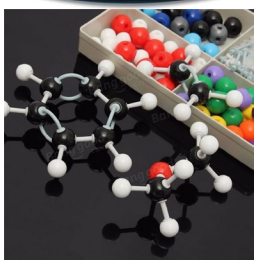
Required Text or Materials



Title: Fundamentals of General, Organic, and Biological Chemistry
Subtitle: You do not have to purchase this. An electronic copy is included with your course fee.
Authors: John McMurry, David S. Ballantine, Carl A. Hoeger, Virginia E. Peterson
Publisher: Prentice Hall
Publication Date: 2017-01-01
Edition: 8th

Title: Calculator

Subtitle: Can be graphing or scientific. You should be able to get one for ~$20 on Amazon or Walmart. It is recommended to get your calculator early so you can practice doing the homework with the same calculator you plan to use for the exams so you will be familiar with how to use the functions available. If you have a scientific or graphing calculator you are already familiar with, use it! Familiarity will save you some headaches later.



Title: Molecular Modeling Kit

Subtitle: Optional. You may find it helpful to purchase a small molecular modeling kit, they are allowed on the exams. All other course materials should be available through Canvas!

For more information on textbook accessibility, contact Accessibility & Disability Services at ads@slcc.edu.

Brief Description of Assignments/Exams

Participation (5% of your grade) - You must post in the discussions an average of three times per week for a total of 48 posts for the semester. The easiest way to get these is to check the forums regularly (2-3 times per week) and post 1-2 times each time you are present.

Homework (15% of your grade) - Your homework is completed via the embedded Mastering Chemistry software. If you don't like your homework score, you can always re-work an assignment for a better grade: up to 5 times!

Practice exams (15% of your grade) - These can each be taken twice. The first time it will tell you which ones you got wrong but not the correct answers. They should be helpful in preparing for the tests.

Six Exams (65% of your grade) - The course includes five unit exams and one final exam. All students registered for all sections (face to face and online) must take them on campus at any of the available SLCC online testing centers. Students outside of the Salt Lake valley may also be able to arrange for proctoring at a local university or college. While the average time to take the unit exams is usually about 1 hour, you should plan for 2 hours to take your exam. Your lowest exam score will be dropped - this includes the final exam!

Grading Scale

≥ 93.00% A
≥ 90 and < 93 A- ≥ 87 and < 90 B+
≥ 83 and < 87 B
≥ 80 and < 83 B- ≥ 77 and < 80 C+
≥ 73 and < 77 C
≥ 70 and < 73 C- ≥ 67 and < 70 D+
≥ 63 and < 67 D
≥ 60 and < 63 D-
< 60 E

The grade cutoffs will be no higher than these values. However, if the class average falls below 70%, the cutoffs may be lowered to raise the average.

Keys for Success (how to succeed in the course)

If you are registered for an online section, you have access to .pdf lecture notes which represent what will be presented in class for those attending. All of these .pdf lectures are also accompanied by video lectures, if you prefer that format. There are also .pdf worksheets with accompanying keys to practice the material covered. You can find the links to these documents on the front page of the Canvas course. They are also in the modules, accessible via the left-hand sidebar.

Whether or not you choose to utilize the recorded video lectures or come to the in-person class, it is recommended to follow along on the .pdf lectures, pause at appropriate places to work

through the worksheet examples, and use the textbook as a reference for material which doesn't feel like it is explained adequately for you.

If you are in a face-to-face section, you do not need to engage with any of these materials on your own, but rather the bulk of the learning will be in class. If, however, you miss a class section, you can follow along with the materials posted online.

Once this is done you can work on the homework problems provided. In the meantime, you should post in the discussion forums and follow conversations happening there; these will help clear up errors, dispel misconceptions, and answer any questions you might still have.

As you approach the date scheduled for your exam, you should prepare for and take the practice exam provided (under 'assignments' here in Canvas), learn from your mistakes, and take it again.

What Is Expected Of You

This course has several heavy web-based components which are required. It is presumed that you have a computer, internet access, and are comfortable and competent using a web browser and other common software.

If you meet the exam deadlines you may work your way through this course at your convenience. All the assignments and materials are posted well in advance of the due dates so you may work well ahead of the class if you prefer.

The average student will need to dedicate at least 12 hours a week of time to this course to be successful. If you struggle with chemistry, then you may need to plan on more time!!

You are expected to be fully engaged with the lectures, worksheets, discussions, homework, & practice materials given and in a timely manner. Insofar as discussion posting is concerned, an average of at least 3 posts per week are required for full points.

Course Resources

Learning chemistry can be hard. If you run into trouble and find you need extra help, you are expected to take advantage of the support systems available as soon as possible! Some good ones include the following:

The **discussion forums** are meant to be a place where any student may ask questions and get relatively quick feedback, because other students can respond and help give useful answers in addition to the instructor. By including the whole class, everybody gets help with common questions that only one student may be brave or thoughtful enough to ask, feedback is quicker than if relying on email to the teacher alone, and students who can provide answers learn the material better as they articulate the material they think they know.

Your instructor may be available for **scheduled student hours** via zoom.

Mastering Chemistry maintains a set of guided tutoring modules called dynamic study modules. They are not assigned, but you can access them when you access your Mastering Chemistry account. These are not arranged by chapter but rather organized by topic. These are useful tools for students struggling with a particular content topic, and they are often recommended as a last resort for students who have not been able to master the material with the tools already provided.

The **STEM learning center** on three campuses hosts workshops, study space, and drop-in tutoring for a wide variety of subjects. They also have textbooks and molecular model kits, among other learning aids, available for students to use. Find out more at https://www.slcc.edu/stem/.

SLCC maintains an account to provide free **online tutoring** through Tutor.com. There is a link in your course in the left-hand sidebar to access this material 24 hours a day.

Online Tutoring

Students at SLCC have access to online tutoring through Canvas. From your Canvas course click Online Tutoring in the course navigation and follow the steps to set up an appointment. If this is your first time using the Online Tutoring you are recommended to click "Take a Tour" to familiarize yourself with the service.

Note that students only receive 480 minutes of tutoring time each semester. After that you are encouraged to use the resources found through this link: https://www.slcc.edu/tutoring/index.aspx

If you have any additional questions reach out to elearningsupport@slcc.edu.

Learning Support and Tutoring Services

SLCC is pleased to offer a range of tutoring and learning support services to help you achieve your academic goals. Whether you need assistance with a specific subject or want to improve your study skills, you have many options for tutoring or other support.

To learn more about the services offered and how to access them, please visit the Institutional Syllabus under the Tutoring and Learning Support tab: https://slcc.instructure.com/courses/530981/pages/institutional-syllabus. You are encouraged to take advantage of these resources to help you succeed in your studies. If you have any questions or would like to schedule a tutoring session, please don't hesitate to reach out. Tutoring and Learning Support services are here to support you in any way possible.

Assignment Schedule

DueDate	AssignmentName	AssignmentType	Points
	Ch.0 – Introduction to Chemistry, Science, and Matter	Discussion	0
	Ch. 1 - Math & Measurements	Discussion	0
	Ch. 10 - Acids & Bases	Discussion	0
	Ch. 11 - Nuclear Chemistry	Discussion	0
	Ch. 2 - Atomic Theory & The Periodic Table	Discussion	0
	Ch. 3 - Ionic Compounds	Discussion	0
	Ch. 4 - Covalent Compounds	Discussion	0
	Ch. 5 - Chemical	Discussion	0

	Reactions		
	Ch. 6 - Chemical Quanitities	Discussion	0
	Ch. 7 - Energy & Equilibrium	Discussion	0
	Ch. 8 - Gases	Discussion	0
	Ch. 9 - Solutions	Discussion	0
	Class Business	Discussion	0
	Course/College/Transfer/Life Success Forum	Discussion	0
	Current Campus Events: Clubs, etc.	Discussion	0
	Evaluation Extra Credit	Discussion	0
	Exam 1 Preparation	Discussion	0
	Exam 2 Preparation	Discussion	0
	Exam 3 Preparation	Discussion	0
	Exam 4 Preparation	Discussion	0
	Exam 5 Preparation	Discussion	0

	Exams Information & Discussion	Discussion	0
	Introductions	Discussion	0
	Off-Topic	Discussion	0
	Study Groups	Discussion	0
8/20	Intro to Chemistry 1110 and Canvas	Quiz	7.5
8/21	Ch. 0: Good Science, Bad Science, & Fraud	Quiz	7.5
8/23	Introduction to MasteringChemistry	Assignment	7.5
8/26	Ch. 0: Introduction to Matter	Assignment	7.5
8/28	Ch. 1: Units and the Metric System	Assignment	7.5
8/30	Ch. 1: Formulas and Conversions	Assignment	7.5

9/4	Ch. 2: Atoms and Elements	Assignment	7.5
9/6	Ch. 2: Electronic Structures and the Periodic Table	Assignment	7.5
9/7	Practice Exam 1	Quiz	25
9/9	Exam 1, Chs. 0-2: Science, Matter, Math, and Atoms	Quiz	100
9/13	Ch. 3: Ions and Ionic Compounds	Assignment	7.5
9/14	Extra Credit - Periodic Table	Assignment	0
9/18	Ch. 3: Ionic Compounds: Properties and Nomenclature	Assignment	7.5

9/20	Ch. 4: Covalent Compounds: Properties, Structures, and Shapes	Assignment	7.5
9/27	Ch. 4: Covalent Compounds: Polarity, Forces, and Nomenclature	Assignment	7.5
9/28	Practice Exam 2	Quiz	25
9/30	Exam 2, Chs. 3-4: Ionic & Covalent Compounds: Properties, Nomenclature, Structures	Quiz	100
10/2	Ch. 5: Balancing and Classifying Chemical Reactions	Assignment	7.5

10/4	Ch. 5: MORE Chemical Reactions	Assignment	7.5
10/9	Ch. 6: The Mole	Assignment	7.5
10/16	Ch. 6: Stoichiometry	Assignment	7.5
10/18	Ch. 7: Collision Theory and Equilibrium	Assignment	7.5
10/23	Ch. 7: Energy	Assignment	7.5
10/26	Practice Exam 3	Quiz	25
10/28	Exam 3, Chs. 5-7: Chemical Reactions: What, How, and Why	Quiz	100
10/30	Ch. 8 Introduction to Gases	Assignment	7.5
11/1	Ch. 8: Ideal Gases, Partial Pressures, and Phase Changes	Assignment	7.5

11/1	Discussion Points	Assignment	50
11/2	Extra Credit - Ice Cream	Assignment	0
11/6	Ch. 9: Soubility and Concentration Units	Assignment	7.5
11/8	Ch. 9: Dilutions and Colligative Properties	Assignment	7.5
11/9	Practice Exam 4	Quiz	25
11/11	Exam 4, Chs. 8-9: Gases & Solutions	Quiz	100
11/13	Ch. 10: Introduction to Acids and Bases	Assignment	7.5
11/20	Ch. 10: pH, Titrations and Buffers	Assignment	7.5
11/22	Ch. 11: Introduction to Nuclear Chemistry	Assignment	7.5
11/27	Ch. 11: More Nuclear Reactions	Assignment	7.5
11/30	Practice Exam 5	Quiz	25

12/2	Exam 5, Chs. 10-11: Acids, Bases, & Nuclear Reactions	Quiz	100
12/7	Pre-Exam Mega Self Test (Practice Final Exam)	Quiz	72
12/9	Final Exam - EVERYTHING!	Quiz	100
12/14	Extra Credit: Course Evaluations	Assignment	0

Institutional Policies

Please review the Institutional Syllabus which covers important policies and procedures. This document contains important links for students on the code of student rights and responsibilities, academic integrity, and grading policies, Title IX and other important acknowledgements. By familiarizing yourself with this information, you can help us create a safe and respectful environment for everyone.

You can access the document by clicking on the following link:
https://slcc.instructure.com/courses/530981/pages/institutional-syllabus

Advising and Counseling Support Services

The college offers a range of advising and counseling services to help you navigate the challenges of college life. To learn more about the resources available to you and how to access them, please visit the Institutional Syllabus under the Advising and Counseling Support Services tab: https://slcc.instructure.com/courses/530981/pages/institutionalsyllabus. Our advising team and the support centers across campus are here to support you in achieving your goals and overcoming any obstacles you may face.

Student Academic Calendar

As students you should be aware of all important dates in the semester, such as the day that courses begin and end, as well as the drop date and the last day to withdraw. To learn more about those dates, navigate to the Student Academic Calendar below:

SLCC Student Academic Calendar