

2023-SP-CHM2045-01: General Chemistry I

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Instructor: Mark Taylor

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Philosophy:

Chemistry is a challenging subject that many students fail at before they actually start the class. They find the idea of an advanced science scary, unnecessary, time consuming, or any other excuse to give up before they begin. My job is to keep you interested and involved. Anyone can learn this topic but my goal is that you learn it well. There is a rule of thumb that instructors like to use that states that for every credit hour a course offers, you should study three. Most students will find themselves studying at least 12 hours per week. PLAN FOR IT! Don't get behind and ASK QUESTIONS!

Class Times:

Tuesdays and Thursdays 3:30pm-4:45pm Room 2-114

Office Hours:

Click on Canvas Calendar and the "Find Appointment" or come to my office (2-218A)

Monday 2:00pm-4:30pm

Tuesday 10:00am-12:00am and 1:00pm-2:00pm

Wednesday 9:30am-11:00am and 2:00pm-4:30pm

Thursday 1:00pm-2:00pm

Friday 9:30am-11:00am

Extended Emergency Closure. "For emergency campus closings (natural disasters, etc.) call 352-291-4499 or 800-831-9244 or check our website www.CF.edu."

Prerequisite:

CHM1025 or equivalent with MAC1105, or higher with a grade of C or better.

Course Description:

This course may include an expanded review of CHM1025. The course covers atomic structure, bonding, formulas, nomenclature, reactions, stoichiometry, gas, solid, and liquid states.

Textbook:

"Open-Stax Chemistry" Content Leaders: Flowers, Theopold, & Langley, Rice University, Houston, Texas.

ISBN 978-1-947172-62-3.

Online version available.

Canvas:

All course materials will be available on Canvas.

Calculator:

A simple non-programmable scientific calculator with capabilities for square roots, logarithms, and exponential operations is required. An online version will be available during testing.

Course Agenda

[Chapter 1 \(https://cf.instructure.com/courses/1795020/pages/Chapter%201?titleize=0\)](https://cf.instructure.com/courses/1795020/pages/Chapter%201?titleize=0): Essential Ideas

[Chapter 2 \(https://cf.instructure.com/courses/1795020/pages/Chapter%202?titleize=0\)](https://cf.instructure.com/courses/1795020/pages/Chapter%202?titleize=0): Atoms, Molecules, and Ions

Test 1

[Chapter 3 \(https://cf.instructure.com/courses/1795020/pages/Chapter%203?titleize=0\)](https://cf.instructure.com/courses/1795020/pages/Chapter%203?titleize=0): Composition of Substances and Solutions

[Chapter 4 \(https://cf.instructure.com/courses/1795020/pages/Chapter%204?titleize=0\)](https://cf.instructure.com/courses/1795020/pages/Chapter%204?titleize=0): Stoichiometry of Chemical Reactions

Test 2

[Chapter 5 \(https://cf.instructure.com/courses/1795020/pages/Chapter%205?titleize=0\)](https://cf.instructure.com/courses/1795020/pages/Chapter%205?titleize=0): Thermochemistry

[Chapter 6 \(https://cf.instructure.com/courses/1795020/pages/Chapter%206?titleize=0\)](https://cf.instructure.com/courses/1795020/pages/Chapter%206?titleize=0): Electronic Structure and Periodic Properties of Elements

Test 3

[Chapter 7 \(https://cf.instructure.com/courses/1795020/pages/Chapter%20%207?titleize=0\)](https://cf.instructure.com/courses/1795020/pages/Chapter%20%207?titleize=0): Chemical Bonding and Molecular Geometry

[Chapter 8 \(https://cf.instructure.com/courses/1795020/pages/Chapter%208?titleize=0\)](https://cf.instructure.com/courses/1795020/pages/Chapter%208?titleize=0): Advanced Theories of Covalent Bonding

Test 4

[Chapter 9 \(https://cf.instructure.com/courses/1795020/pages/Chapter%209?titleize=0\)](https://cf.instructure.com/courses/1795020/pages/Chapter%209?titleize=0): Gases

[Chapter 10 \(https://cf.instructure.com/courses/1795020/pages/Chapter%2010?titleize=0\)](https://cf.instructure.com/courses/1795020/pages/Chapter%2010?titleize=0): Liquids and Solids

Test 5

Final

[Tests \(https://cf.instructure.com/courses/1795020/quizzes\)](https://cf.instructure.com/courses/1795020/quizzes) (60% of grade):

There will be five tests during this semester. The lowest test score will be dropped. For one test missed, there are no questions asked and no make-up test. This applies to ALL reasons for missing tests. Any other tests missed will be averaged as zeros. Tests will be completed during class time. Scantrons are required.

[Periodic Table for the tests](#)

[\(https://cf.instructure.com/courses/1795020/files/146611608?wrap=1\)](https://cf.instructure.com/courses/1795020/files/146611608?wrap=1) ↓
 [\(https://cf.instructure.com/courses/1795020/files/146611608/download?download_frd=1\)](https://cf.instructure.com/courses/1795020/files/146611608/download?download_frd=1)

[Final \(https://cf.instructure.com/courses/1795020/quizzes\)](https://cf.instructure.com/courses/1795020/quizzes) (10% of grade):

There is a comprehensive final for this course. The final makes up 10% of your grade. Absolutely no makeups will be possible for the final. The test will be similar to the tests above but will cover the entire semester and will have a two hour time limit. Scantron is required.

Practice Tests:

For each test there will be practice tests available. These tests contain previously used questions and are generally longer than the actual test. These will be online under Quizzes and will be open to taking them multiple times.

[Worksheets](#)

[\(https://cf.instructure.com/courses/1795020/assignments\)](https://cf.instructure.com/courses/1795020/assignments)

(30% of grade):

There will be a number of worksheets throughout the semester consisting. Take-home assignments are due as posted on the worksheets and will lose 5% of their value each day after that point. The worksheets will be graded utilizing the rubric attached to the assignment. These are to be turned in via Canvas by clicking on the assignments themselves.

Lectures:

Lectures will provide you with a general list of topics and goals and will be provided via YouTube. Some areas will be covered in more detail than others but it is your responsibility to know and understand them all. The test will be made up from questions coming from both the lecture and the textbook. I will provide lecture notes via CANVAS but you should add your own though notes. The textbook has many questions than you should consider as good practice for the tests. Click on the appropriate chapter above for links to the lecture notes and YouTube videos.

Attendance:

Attendance is expected for every class section. Any missed assignments will be given zeros when graded. Attendance verification will be completed using the results of the first weeks assignment.

Disputing Grades:

If you feel that an error was made in grading any of your assignments, labs, tests, etc., you have one week from the time the graded work was handed back to you to dispute your grade. After one week all grades are final.

Incomplete:

Incomplete will be given only when a student, who has been successfully participating in class, has an emergency at the end of a semester that prevents that student from completing the course.

Returned Assignments:

Worksheets and Tests will be returned at the beginning of the lecture immediately following a test. If you are unable to pick up your assignment you may do so during office hours. Any work left with the instructor after Finals Week will be shredded before disposal. If you desire to keep your assignments but cannot pick them up prior to that date please contact the instructor.

Right to Change Syllabus:

If necessary, some components of this syllabus (such as exam dates, chapters/topics covered, etc.) may change. However, any such changes will be announced to students in class. The student is responsible for any such announced changes.

Privacy Rights:

The college adheres to all federal and state laws and rules pertaining to the privacy rights of students. Grades will not be posted nor will a student's grades be discussed with anyone other than the student, unless directed to do so by a college official or administrator or if given written permission by the student. Due to recent privacy laws, I cannot give out grade information over the telephone.







Learning Outcomes:















Learning Outcomes

Learning Outcome	Homework	Tests	Classroom Activity
Quantitative and Analytical Reasoning: The student will understand and apply mathematical and scientific principles and methods.			
Perform accurate computations using order of operations with and without technology	X	X	X
Identify and organize relevant information and complete the solution of an applied problem	X	X	X

Interpret and communicate understanding of visual representations of data	X	X	X
Demonstrate mathematical number sense and unit sense	X	X	X

Course Summary:

Date	Details	Due
Mon Jan 9, 2023	 Office Hours (https://cf.instructure.com/appointment_groups/12387)	2pm to Jan 31 at 2pm
Thu Jan 12, 2023	 WS01 (https://cf.instructure.com/courses/1795020/assignments/13461987)	due by 4:45pm
Tue Jan 17, 2023	 Office Hours (https://cf.instructure.com/appointment_groups/12407)	10am to Jan 31 at 12pm
Thu Jan 19, 2023	 WS02 (https://cf.instructure.com/courses/1795020/assignments/13461989)	due by 4:45pm
Tue Jan 24, 2023	 Test 1 (https://cf.instructure.com/courses/1795020/assignments/13461977)	due by 4:45pm
Tue Jan 31, 2023	 WS03 (https://cf.instructure.com/courses/1795020/assignments/13461991)	due by 4:45pm
Wed Feb 1, 2023	 Office Hours (https://cf.instructure.com/appointment_groups/12409)	9:30am to Feb 23 at 2pm
Tue Feb 7, 2023	 WS04 (https://cf.instructure.com/courses/1795020/assignments/13461993)	due by 4:45pm
Thu Feb 16, 2023	 Test 2 (https://cf.instructure.com/courses/1795020/assignments/13461979)	due by 4:45pm
Thu Feb 23, 2023	 WS05 (https://cf.instructure.com/courses/1795020/assignments/13461995)	due by 4:45pm
Thu Mar 2, 2023	 WS06 (https://cf.instructure.com/courses/1795020/assignments/13461997)	due by 4:45pm

Date	Details	Due
Thu Mar 9, 2023	 Test 3 (https://cf.instructure.com/courses/1795020/assignments/13461981)	due by 4:45pm
Thu Mar 23, 2023	 WS07 (https://cf.instructure.com/courses/1795020/assignments/13461999)	due by 4:45pm
Thu Mar 30, 2023	 WS08 (https://cf.instructure.com/courses/1795020/assignments/13462001)	due by 4:45pm
Thu Apr 6, 2023	 Test 4 (https://cf.instructure.com/courses/1795020/assignments/13461983)	due by 4:45pm
Thu Apr 13, 2023	 WS09 (https://cf.instructure.com/courses/1795020/assignments/13462003)	due by 4:45pm
Thu Apr 20, 2023	 WS10 (https://cf.instructure.com/courses/1795020/assignments/13462005)	due by 4:45pm
Thu Apr 27, 2023	 Test 5 (https://cf.instructure.com/courses/1795020/assignments/13461985)	due by 4:45pm
Thu May 4, 2023	 Final (https://cf.instructure.com/courses/1795020/assignments/13461975)	due by 4:45pm
	 Final (https://cf.instructure.com/courses/1795020/assignments/13461965)	
	 Test 1 (https://cf.instructure.com/courses/1795020/assignments/13461963)	
	 Test 2 (https://cf.instructure.com/courses/1795020/assignments/13461969)	
	 Test 3 (https://cf.instructure.com/courses/1795020/assignments/13461967)	
	 Test 4 (https://cf.instructure.com/courses/1795020/assignments/13461973)	
	 Test 5 (https://cf.instructure.com/courses/1795020/assignments/13461971)	