

This is a sample syllabus for CHM1045. Students should reference the section syllabus provided at the beginning of the semester for specifics regarding assignments and grade assignments.

CHM1045 General Chemistry I

Sections 1 – XX Term 20XX

Syllabus

Welcome

CHM1045 is the first of two general chemistry courses designed to provide a strong chemistry foundation for undergraduate students majoring in chemistry, biochemistry and other “hard” science fields. The major objective is to develop a thorough understanding of chemistry and how it relates to everyday life. A great deal of information will be covered over the course of the semester; it is essential that you keep up with the work if you want to do well in the course – I strongly suggest you do the assigned reading in advance of lectures, review lecture notes afterward, and keep up with practice problems. **DON'T FALL BEHIND!**

The *Liberal Studies for the 21st Century Program* at Florida State University builds an educational foundation that will enable FSU graduates to thrive both intellectually and materially and to support themselves, their families, and their communities through a broad and critical engagement with the world in which they live and work. Liberal Studies offers a transformative experience; this course has been approved as meeting the Liberal Studies requirements and thus is designed to help you become a critical appraiser of scientific theories and the facts that support them.

Course Description

CHM 1045. General Chemistry I (3). Prerequisite: MAC 1105 with a grade of "C-" or better or placement beyond MAC 1105. Lecture, three hours; recitation, one hour. This course includes topics such as chemical symbols, formulas, and equations; states of matter; reactivity in aqueous solution; electronic structure, bonding, and molecular geometry. Students taking CHM 1045 after taking CHM 1020 and/or CHM 1032 may register for reduced credit, as indicated in the department's policy on reduced credit.

Course Objectives:

Upon completion of this course students will demonstrate the ability to...

- Think critically and cogently about causal relationships with scientific reasoning. [Homework 1-37]
- Assess previous experimentation and published scientific results. [Homework 1-37]

- Critically examine and evaluate scientific observation, hypothesis or model construction. [Homework 1-37]
- Articulate a variety of issues created by the complex interactions among science, technology, and society. [Homework 1-37]
- Use scientific perspectives to evaluate contemporary problems facing society. [Homework 1-37]
- Differentiate between accuracy and precision in measurements. [Homework 1-3, Exam I, Final Exam]
- Report measurements and calculations to the proper number of significant figures. [Homework 1-3, Exam I, Final Exam]
- Solve problems using the Unit-Label/Dimensional Analysis method. [Homework 1-3, Exam I, Final Exam]
- Discuss the structure of the atom and organization of the periodic table. [Homework 2-7, Exam I, Final Exam]
- Name and write formulas for ionic and molecular compounds. [Homework 2-7, Exam I, Final Exam]
- Solve problems using mole relationships. [Homework 8-12, Exam I, Final Exam]
- Balance chemical equations and predict products of chemical reactions. [Homework 8-12, Exam I, Final Exam]
- Use balanced chemical equations to solve stoichiometry problems. [Homework 8-12, Exam I, Final Exam]
- Write net ionic equations for double replacement reactions. [Homework 13-16, Exam II, Final Exam]
- Identify and balance redox reactions using the half - reaction method. [Homework 13-16, Exam II, Final Exam]
- Solve problems using solution concentration (molarity). [Homework 13-16, Exam II, Final Exam]
- Solve problems using the gas laws. [Homework 17-20, Exam III, Final Exam]
- Solve problems using the First Law of Thermodynamics. [Homework 21-24, Exam III, Final Exam]
- Relate the spectrum of an element to the structure of the atom. [Homework 25-27, Exam IV, Final Exam]
- Write the electron configuration for an element and relate to the structure of the atom. [Homework 25-27, Exam IV, Final Exam]
- Name and identify the four quantum numbers for an element. [Homework 25-27, Exam IV, Final Exam]
- Predict properties of elements based on the trends of the periodic table. [Homework 28-30, Exam IV, Final Exam]
- Differentiate between ionic and covalent bonding. [Homework 31-34, Exam IV, Final Exam]
- Draw Lewis structures and predict molecular geometry of a molecule. [Homework 31-34, Exam IV, Final Exam]

- Predict and explain the polarity of a molecule. [Homework 35-37, Exam IV, Final Exam]
- Explain the geometry of a molecule using one of the bonding theories.[Homework 35-37, Exam IV, Final Exam]

Instructor

Office:

Phone:

E-mail:

Office Hours:

Materials Required –

- (1) Chang and Goldsby, Chemistry, 11th Edition
- (2) Access code for Connect and Learnsmart online Homework System
- (2) A NON-PROGRAMMABLE Scientific Calculator

Assignments and Grading:

Material	Points	Total
Homework	10 pts each chapter	100
Quizzes	10pts each (best 10)	100
Exams	100 each (Best 3 of 4)	300
Final Exam	100	100
LS Assess	25 Points	25
TOTAL		625

Grading Scale:

Final grades in the course will be assigned based on the percentage of total possible points in the course, according to the following percentile scale:

90-100%	A
80-89%	B
70-79%	C
Below 70%	D/F

The above scale represents the minimum grade for that percentile range, and the instructor may modify the grade cut-off percentiles downward if necessary to compensate for problematic exams or other factors. The instructor may also wish to provide modified grading scales for individual exams that deviate from the above scale in order to help students track their performance in the course; however, any adjustments to the final grading scale will be based on point totals at the end of the course.

Typical Course Schedule

Week 1

Introduction (Extra Credit Math Review Due)

Chapter 1 (Read 1.1 - 1.5) (HW1 Due)

Chapter 1 (Read 1.6) (HW2 Due)

Week 2

Chapter 1 (Read 1.7-1.8) (HW3 Due)

Chapter 2 (Read 2.1 - 2.5) (HW4 Due)

Chapter 2 (Read 2.6-2.7) (HW5 Due)

Week 3

Chapter 2 (Read 2.8 - 2.9) (HW6 Due)

Chapter 2 (Read 2.8 - 2.9) (HW7 Due)

Week 4

Chapter 3 (Read 3.1 -3.4) (HW8 Due)

Exam I

Chapter 3 (Read 3.5) (HW9 Due)

Week 5

Chapter 3 (Read 3.6) (HW10 Due)

Chapter 3 (Read 3.7 - 3.8) (HW11 Due)

Chapter 3 (Read 3.9 -3.11) (HW12 Due)

Week 6

Chapter 4 (Read 4.1 -4.3) (HW13 Due)

Chapter 4 (Read 4.4-4.7) (HW14 Due)

Chapter 4 (Read 4.8) (HW15 Due)

Week 7

Chapter 4 (Read 4.9) (HW16 Due)

Exam II

Chapter 5 (Read 5.1-5.3) (HW17 Due)

NOTE: 7th Week Last Day to Drop

Week 8

Chapter 5 (Read 5.4-5.5) (HW18 Due)

Chapter 5 (Read 5.6-5.8) (HW19 Due)
Chapter 5 (Read 5.9-5.11) (HW20 Due)

Week 9

Chapter 6 (Read 6.1-6.3) (HW21 Due)
Chapter 6 (Read 6.4-6.5) (HW22 Due)
Chapter 6 (Read 6.6-6.7) (HW23 Due)

Week 10

Chapter 6 (Read 6.8-6.9) (HW24 Due)
Chapter 7 (Read 7.1-7.2) (HW25 Due)
Chapter 7 (Read 7.3-7.4) (HW26 Due)

Week 11

Chapter 7 (Read 7.5-7.6) (HW27 Due)
Chapter 8 (Read 8.1-8.3) (HW28 Due)

Week 12

Chapter 8 (Read 8.4-8.6) (HW29 Due)
Chapter 8 (Read 8.7-8.9) (HW30 Due)

Week 13

Chapter 9 (Read 9.1-9.4) (HW31 Due)
Chapter 9 (Read 9.5-9.7) (HW32 Due)
Chapter 9 (Read 9.8-9.11) (HW33 & HW 34 Due)

Week 14

Exam IV
Chapter 10 (Read 10.1-10.4)

Week 15

Chapter 10 (Read 10.1-10.4) (HW35 Due)
Chapter 10 (Read 10.5-10.7) (HW36 Due)
Chapter 10 (Read 10.8) (HW37 Due)

Week 16

Final Exam

*****NOTE***** Schedule is subject to change. Changes will be announced in class in advance and corrections to the schedule will be made online.

University Attendance Policy: Excused absences include documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holy days, and official University activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have a valid

excuse. Consideration will also be given to students whose dependent children experience serious illness.

Missed Quiz or Exam Policy:

If you are aware that you must miss an exam or quiz prior to the day of the exam or quiz, contact the instructor or your recitation TA to see if arrangements to take the exam/quiz may be made in advance. If you miss an exam or quiz due to unforeseen circumstances, this missed exam or quiz will count as one of your dropped grades.

If you miss more than one exam or an excessive number of quizzes, the missed exam or quiz may be prorated if you have a documentable and reasonable excuse. The decision as to whether or not to prorate the missing grade is at the discretion of the instructor. Notification of the missed exam or quiz should be made as soon as humanly possible. No make-up exams will be given after the date and time of the regular exam.

Examples of Reasonable Excuses (*Documentation*) Include:

- Illness (*Note from Doctor or Thagard*)
- Jury Duty or Court Date (*Copy of Summons*)
- Car Accident or Breakdown (*Accident report or bill including time of incident*)
- Death in Family (*Copy of Obituary or service Document*)

This is not an all-inclusive list but should give you a general idea of the magnitude of an acceptable excuse and the type of documentation required to substantiate it. Other problems will be dealt with on an individual basis.

Academic Honor Policy

The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. Students are responsible for reading the Academic Honor Policy and for living up to their pledge to ". . . be honest and truthful and . . . [to] strive for personal and institutional integrity at Florida State University."

(Florida State University Academic Honor Policy, found at <http://fda.fsu.edu/Academics/Academic-Honor-Policy>)

Americans With Disabilities Act: Students with disabilities needing academic accommodation should: (1) register with and provide documentation to the Student Disability Resource Center; and (2) bring a letter to the instructor indicating the need for accommodation and what type. This should be done during the first week of class. This syllabus and other class materials are available in alternative format upon request. For more information about services available to FSU students with disabilities, contact the:

Student Disability Resource Center 874 Traditions Way 108 Student Services Building
Florida State University Tallahassee, FL 32306-4167 (850) 644-9566 (voice) (850) 644-
8504 (TDD) sdrc@admin.fsu.edu <http://www.disabilitycenter.fsu.edu/>

Free Tutoring from FSU : For tutoring and writing help in any course at Florida State University, visit the Academic Center for Excellence (ACE) Tutoring Services' comprehensive list of tutoring options - see <http://ace.fsu.edu/tutoring> or contact tutor@fsu.edu for more information. High-quality tutoring is available by appointment and on a walk-in basis. These services are offered by tutors trained to encourage the highest level of individual academic success while upholding personal academic integrity.

SEXUAL HARRASSMENT POLICY:

It is the policy of the University that its employees and students neither commit nor condone sexual harassment in any form.

http://registrar.fsu.edu/bulletin/grad/info/university_notices.htm

STUDENT ELIGIBILITY FOR AN INCOMPLETE GRADE:

Incomplete ("I") grades will not be assigned, except in the case of exceptional unforeseen circumstances that occur within the last three weeks of the semester and your work has otherwise been satisfactory (C average).

Syllabus Change Policy

Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice.