

Chemistry 1312-004 Fall 2011

Contact Information

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Office Hours: MW M 2:00 – 5:00 PM

TTH 9:30 – 11:30 AM; TH 1:30 – 3:30 PM

W 8:00 – 9:00 AM

Course Information

Department: Physical Sciences

Start Date: 08/22/2011

End Date: 12/08/2011

Modality: Face-to-Face

Credits: 3 hour

Lecture: MWF 11:00 – 11:50 am

Required Reading/Material

Chemistry: The Central Science, 12th edition, Brown, T, LeMay, H, Bursten, B, Murphy, C, Woodward, P. Prentice Hall, 2012.

Simple Scientific calculator

(Programmable calculators cannot be used on quizzes or exams)

Course Prerequisites

Math 1314 and a minimum grade of "C" in CHEM 1311

Course Corequisite: CHEM 1112

SCANS

1, 3, 6, 9

Course Description

The overall goal of the General Chemistry courses is to teach students to think about the properties and behavior of the macroscopic world in terms of the structure and arrangement of the constituent molecules and atoms. Specifically in CHEM 1312, aspects of energy and enthalpy are emphasized through problem-solving questions.

Course Objectives & Learning Outcomes

The objective in any chemistry course is to develop problem-solving skills. To find strategies that help you develop the *chemical intuition* needed to understand chemical reasoning.

Upon completion of this course, students will be able to:

- (1) understand the concept of chemical equilibrium, and the energies that drive chemical reactions: an introduction to the field of thermodynamics.
- (2) apply the concept of chemical kinetics and the energy required to initiate a chemical reaction.

(3) recognize oxidation and reduction half-reactions that can occur in electrolytic and galvanic cells

Course Attendance

Attendance is required and will be checked. To effectively master the material, your **attendance** for each class is necessary.

Academic Honesty

Students are responsible for understanding the code of Student Conduct found in the OC Student Handbook. Academic Dishonesty will not be tolerated in this course. Cheating in any form will be handled accordingly.

Students with Disability

Odessa College complies with Section 504 of the Vocational Rehabilitation Act of 1973 and the ADA of 1990. Students with special needs or issues pertaining to access and participation in this class must contact me immediately. Further, you may call the Office of Disability services at 432-335-6861 to request assistance and accommodations.

Cell Phone

When class begins, all phones need to be on silent or vibrate. If it is necessary for you to answer your phone or text message, then you need to step out into the hallway. If you consistently text message while in class, you will be asked to leave the class. Your phone **cannot** be used as a calculator on quizzes or exams.

Course Grading

Exams	60%
Quizzes	10%
Homework	10%
Final Exam	20%

Homework

Assignments will be made, collected and graded for completeness. The homework assignments are to help you prepare for the exams because variations of these will be on the exam. You should attempt to work all of the homework questions. Answer key will be posted the day before it's due. Homework **will not be accepted** more than two class days late.

Quizzes

There will be a short quiz given once each chapter is completed. The quizzes will include questions and problems over the current material but may require some knowledge of the previous material. Your lowest quiz grade will be dropped at the end of the semester. **If you miss a quiz, be prepared to make it up on the day you return to class.** otherwise you will not be allowed to make it up.

Examinations

(tentatively)

First Exam: Monday, September 19th
Second Exam: Friday, October 21st
Third Exam: Monday, November 21st
Final Exam: Wednesday, December 7th, at 11:00 a.m.-1:30 p.m.

Final Exam

The final exam is comprehensive over **both** semesters!!!!!!

Make-Up Exam

A make-up exam will be given on the last day of class before finals. If you miss an exam for any reason you will have the opportunity to take this exam. Any student who may wish to replace a lower exam may also take this exam. The make-up exam will be multiple-choice questions covering the entire semester.

HELP

Please do not wait until the last minute to get help! Come in during office hours or make an appointment to see **ME** as soon as a concept or problem gives you difficulty. I am here to help you make it through this experience.

Learning Resource Center (Library)

The Library, known as the [Learning Resources Center](#), provides research assistance via the [LRC's catalog \(print books, videos, e-books\)](#) and [databases \(journal and magazine articles\)](#). [Research guides](#) covering specific subject areas, [tutorials](#), and the "[Ask a Librarian](#)" service provide additional help.

Student E-mail

Please access your [Odessa College Student E-mail](#), by following the link to either set up or update your account: <http://www.odessa.edu/gmail/>. **All assignments or correspondence will be submitted using your Odessa College email.**

Student Portal

Please access your [Odessa College Student E-mail](#), by following the link to either set up or update your account: <http://www.odessa.edu/gmail/>. **All assignments or correspondence will be submitted using your Odessa College email.**

Technical Support

For Blackboard username and password help and for help accessing your online course availability and student email account contact the Student Success Center at 432-335-6878 or online at https://www.odessa.edu/dept/ssc/helpdesk_form.htm.

Important School Policies

For information regarding student support services, academic dishonesty, disciplinary actions, special accommodations, or student's and instructors' right to academic freedom can be found in the [Odessa College Student Handbook](#).

Course Schedule
(tentatively)

<u>Chapter</u>	<u>Topics</u>	<u>Descriptions</u>	<u>Type</u>
XI	Liquids, and Intermolecular Forces	Liquid Interactions	Quiz
XII	Solids and Modern Materials	Solid Interactions	Quiz
XIII	Properties of Solutions	Solubility	Quiz
XIV	Chemical Kinetics	Rate of Reactions	Quiz
	Eleven, Twelve, Thirteen, and Fourteen		Exam
XV	Chemical Equilibrium	Reversible Reactions	Quiz
XVI	Acid-Base Equilibria	Ionization Constants	Quiz
XVII	Additional Aspects of Aqueous Equilibria	Buffer Solutions	Quiz
	Fifteen, Sixteen, and Seventeen		Exam
XIII	Chemistry of the Environment	Chemistry in the Atmosphere	Quiz
XIX	Chemical Thermodynamics	Gibbs Free Energy	Quiz
XX	Electrochemistry	Electrical Energy	Quiz
	Eighteen, Nineteen, and Twenty-one		Exam
XXIV	Chemistry of Life: Organic and Biological Chemistry	Hydrocarbons	Quiz
	Final Exam		Final Exam

Good Luck this Semester!!!!!!!!!!

1312 HOMEWORK SET

CHAPTER XI

1, 2, 3, 7, 9, 11, 12, 18, 20, 22, 23, 25, 29, 35, 37, 40, 43, 45, 46, 52, 54, 58, 61, 73, 82, 84

CHAPTER XII

7, 9, 11, 12, 35, 46, 49, 61, 62, 64

CHAPTER XIII

1, 5, 7, 9, 15, 16, 25, 29, 33, 41, 45, 57, 62, 71, 73, 75, 81

****EXTRA CREDIT OPPORTUNITY**

CHAPTER XIV

1, 3, 12, 15, 27, 28, 29, 33, 35, 37, 57, 59, 75, 77, 112

CHAPTER XV

7, 11, 16, 21, 23, 33, 35, 45, 51, 53, 57, 61, 67, 80, 83

****EXTRA CREDIT OPPORTUNITY**

CHAPTER XVI

1, 3, 7, 17, 21, 29, 31, 38, 43, 45, 58, 62, 73, 81, 83, 89, 97, 107

CHAPTER XVII

1, 6, 21, 23, 37, 41, 43, 51, 55, 59, 71, 73, 96

****EXTRA CREDIT OPPORTUNITY**

CHAPTER XVIII

6, 29, 41, 42, 48, 51, 76

CHAPTER XIX

4, 11, 15, 21, 25, 37, 43, 47, 53, 59, 61, 65, 78, 81, 97

CHAPTER XXI

5, 6, 8, 16, 17, 21, 27, 37, 43, 55, 91