

2013 SPRING COURSE SYLLABUS

NOTE: This syllabus is subject to change during the semester. Please check this syllabus on a regular basis for any updates.

Department : Physical Sciences
Course Title : General Inorganic Chemistry II
Section Name : CHEM_1312_12
Scheduled : 09:30AM - 10:50AM
Start Date : 08/22/13
End Date : 12/16/13
Modality : FACE-TO-FACE
Credits : 3

Instructor Information

Name : Robert A. Morris
OC Email : rmorris@odessa.edu
OC Phone # : (432) 335-6596

Course Description

A lecture course that is a continuation of CHEM 1311, which includes: solutions, chemical kinetics, acids and bases, equilibrium, electrochemistry, thermodynamics, coordination chemistry, nuclear chemistry, organic chemistry, etc. The student will be involved in reading information or problems and using critical thinking skills and mathematics to organize the information or to arrive at an answer; also requires student writing skills in order to communicate the information acquired in a written format.

Prerequisites/Co requisites

Math 1314 and a minimum grade of "C" in CHEM 1311
Co requisite: CHEM 1112

[Scans](#)

1, 3, 6, 9

Course Objectives

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

Course Attendance

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

Required

Simple Scientific calculator (Programmable calculators cannot be used on quizzes or exams)

Cell Phone

No cell phone will be operating during lecture to include text messaging. Violators will be asked to leave the class. YOUR PHONE CANNOT BE USED AS A CALCULATOR ON QUIZZES OR EXAMS.

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 after 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.

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.

Examinations

There will be three exams prior to the FINAL EXAM, which will be given on Thursday, May 16th, at 08:00AM-10:30AM, consisting of material from CHEM I and CHEM II.

Required Readings/Materials

You must purchase the following required readings/materials:

Chemistry: The Molecular Science, 4th edition, J. W. Moore, C. L. Stanitski, and P.C. Jurs, Brooks/Cole, 2011.

Course Requirements (Lectures, Assignments and Assessments)

Chapter	Type	Description
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ELEVEN: Liquids, Solids, and Materials	QUIZ	Particle interactions
THIRTEEN: Chemical Kinetics: Rates of Reactions	QUIZ	Rate Laws
FOURTEEN: Chemical Equilibrium	QUIZ	Le Chatelier's Principle
Eleven, Thirteen, and Fourteen	EXAM	
FIFTEEN: The Chemistry of Solutes and Solutions	QUIZ	Solubility
SIXTEEN: Acids and Bases	QUIZ	Ionization Constants
SEVENTEEN: Additional Aqueous Equilibrium	QUIZ	Buffer Solutions
Fifteen, Sixteen, and Seventeen	EXAM	
EIGHTEEN: Thermodynamics: Directionality of Chemical Reactions	QUIZ	Gibbs Free Energy
NINETEEN: Electrochemistry and it's Applications	QUIZ	Standard Potentials
TWENTY ONE: The Chemistry of the Main Group Elements	QUIZ	Metals, Halogens
Eighteen, Nineteen, and Twenty One	EXAM	

Homework Set

Chapter: Title	Quantity	Description
ELEVEN: Liquids, Solids, and Materials	14	8, 21, 28, 30, 32, 39, 40, 49, 51, 55, 58, 61, 86, 106
THIRTEEN: Chemical Kinetics: Rates of Reactions	15	9, 23, 25, 29, 31, 34, 37, 56, 57, 75, 76, 77, 85, 86, 130
FOURTEEN: Chemical Equilibrium	19	6, 14, 15, 20, 25, 33, 38, 40, 45, 50, 57, 59, 64, 67, 82, 84, 87, 99, 135
FIFTEEN: The Chemistry of Solutes and Solutions	15	15, 26, 27, 31, 38, 46, 49, 60, 69, 76, 81, 84, 102, 108, 121
SIXTEEN: Acids and Bases	24	7, 12, 14, 19, 20, 23, 25, 34, 36, 42, 47, 48, 52, 69, 70, 75, 77, 82, 84, 86, 97, 100, 111, 119
SEVENTEEN: Additional Aqueous Equilibria	15	3, 5, 15, 16, 24, 28, 33, 42, 49, 51, 53, 56, 60, 84, 90
EIGHTEEN: Thermodynamics: Directionality of Chemical Reactions	16	5, 10, 15, 21, 22, 29, 32, 35, 47, 48, 63, 65, 78, 82, 87, 125
NINETEEN: Electrochemistry and it's Applications	7	6, 10, 12, 32, 33, 34, 38
TWENTY ONE: The Chemistry of the Main Group Elements	6	3, 8, 12, 29, 30, 57

Grading Policy

Course Grading

1. Chapter exams will be: 60% of your grade.
2. Chapter Quizzes will be: 10% of your grade.
3. Homework will be: 10% of your grade.
4. Final Exam will be: 20% of your grade.

Percentage %	Grade
>89.5	A
89.4-79.5	B
79.4-69.5	C
69.4-59.5	D
<59.4	F

Special Needs

Odessa College complies with Section 504 of the Vocational Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. If you have any special needs or issues pertaining to your access to and participation in this or any other class at Odessa College, please feel free to contact me to discuss your concerns. You may also call the Office of Disability services at 432-335-6861 to request assistance and accommodations.

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 students and instructors' right to academic freedom can be found in the [Odessa College Student Handbook](#).

EXPECTATIONS FOR ENGAGEMENT – FACE TO FACE LEARNING

To help make the learning experience fulfilling and rewarding, the following Expectations for Engagement provide the parameters for reasonable engagement between students and instructors for the learning environment. Students and instructors are welcome to exceed these requirements.

Reasonable Expectations of Engagement for Instructors

1. As an instructor, I understand the importance of clear, timely communication with my students. In order to maintain sufficient communication, I will
 - provided my contact information at the beginning of the syllabus;
 - respond to all messages in a timely manner through telephone, email, or next classroom contact; and,
 - notify students of any extended times that I will be unavailable and provide them with alternative contact information (for me or for my supervisor) in case of **emergencies during the time I'm unavailable.**
2. As an instructor, I understand that my students will work to the best of their abilities to fulfill the course requirements. In order to help them in this area, I will
 - provide clear information about grading policies and assignment requirements in the course syllabus, and
 - communicate any changes to assignments and/or to the course calendar to students as quickly as possible.
3. As an instructor, I understand that I need to provide regular, timely feedback to students about their performance in the course. To keep students informed about their progress, I will
 - return classroom activities and homework within one week of the due date and
 - provide grades for major assignments within 2 weeks of the due date or at least 3 days before the next major assignment is due, whichever comes first.

Reasonable Expectations of Engagement for Students

1. As a student, I understand that I am responsible for keeping up with the course. To help with this, I will
 - attend the course regularly and line up alternative transportation in case my primary means of transportation is unavailable;
 - recognize that the college provides free wi-fi, computer labs, and library resources during regular campus hours to help me with completing my assignments; and,
 - understand that my instructor does not have to accept my technical issues as a legitimate reason for late or missing work if my personal computer equipment or internet service is unreliable.

2. As a student, I understand that it is my responsibility to communicate quickly with the instructor any issue or emergency that will impact my involvement with or performance in the class. This includes, but is not limited to,
 - missing class when a major test is planned or a major assignment is due;
 - having trouble submitting assignments;
 - dealing with a traumatic personal event; and,
 - having my work or childcare schedule changed so that my classroom attendance is affected.
3. As a student, I understand that it is my responsibility to understand course material and requirements and to keep up with the course calendar. While my instructor is available for help and clarification, I will
 - seek out help from my instructor and/or from tutors;
 - ask questions if I don't understand; and,
 - attend class regularly to keep up with assignments and announcements.