

SPRING 2013 LAB SYLLABUS

Department : Physical Sciences
Course Title : General Inorganic Chemistry Lab II
Section Name : CHEM_1112_D (0542)
Scheduled : Wednesday _ 01:00pm-03:50pm
Start Date : 01/28/13
End Date : 05/06/13
Modality : FACE-TO-FACE
Credits : 1

Instructor Information

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

Course Description

A laboratory course that illustrates and reinforces principles and concepts of CHEM 1312 through the use of qualitative and quantitative experiments that emphasizes interpreting and reporting of data. The student will focus on handling scientific equipment.

Prerequisites/Co requisites

Co requisite: CHEM 1312

Individual Course Objectives

1, 3, 6, 8, 9

Course Objectives

The objective is to gain working knowledge in handling scientific equipment safely and emphasize interpreting and reporting data in the scientific format.

UPON COMPLETION OF THIS COURSE, STUDENTS WILL:

- (1) Understand safety in a laboratory
 - (2) Understand the kinetics of how fast a reaction will occur
 - (3) Be able to interpret titration curves
 - (4) Be able to use problem-solving skills to determine an unknown
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Cell Phone

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

Pre-lab Exercises:

Before coming to lab that week read through the procedure for the specific experiment and outlines it on one of the handout sheets that was given. This exercise for each experiment is due when you come to the laboratory and must be completed before you can enter the laboratory. They will be worth 10 points of your report grade.

Reports

Report sheets with the experimental data, calculations, and assigned post laboratory questions will be due at the beginning of the following Thursday laboratory. These pages should be legible and problems should show units and logic. Points will be deducted for late papers turned in after this deadline. Papers more than 2 class days late will NOT be accepted unless special permission has been obtained. Points will also be deducted for unsafe conduct in the laboratory.

Missed Laboratory Sessions

You are responsible for making up any missed laboratory sessions. This must be done before the laboratory supplies are put away. Be sure to make arrangements with your instructor on make-ups. The laboratory report is still due at the same time as the rest of your class. If you can't make-up the lab before it is disassembled, special arrangements may have to be made. Remember the mid-semester exam and final exam will include information from laboratories that you have missed. You will only be allowed to make up 2 missed experiments regardless of the reasons.

Laboratory Notebook

A laboratory notebook will be kept during the Qualitative Analysis section of the semester. This notebook will be collected and is worth one lab grade (10 points) each time it is collected. Instructions for keeping the notebook can be found in your lab manual on page 47.

Required Readings/Materials

You must purchase the following required readings/materials:

Taylor & Russell, Chemistry 1112, Odessa College, Department of Chemistry

Course Requirements (Lectures, Assignments and Assessments)

Mid-Semester Exam:

Cover the experiments of the first half of the semester. The test will have a short practicum with the rest of the exam being short answer format similar to the pre and post lab questions.

Final Exam:

Cover the experiments of the second half of the semester. The test is short answer format, similar to the pre and post lab questions.

Topic/Overview: This week focuses on

SECTION D: MONDAY LABORATORY ASSIGNMENTS

| Date (Tentative) | Experiment | Experiment Description | Post-lab Quest. |
|--|---|--|--------------------------------------|
| 01/28 | Check-out, Safety Rules, Math Review | Math skills and Chem 1111 skills needed for the lab. | p. 13-16; omit #9 |
| 02/04 | Graphing in Excel | In LRC | Handouts |
| 02/11 | Water Analysis p. 31 | Omit part A. Can work in pairs. | p. 31 # 6 p. 34 # 7 |
| 02/18 | Colligative Properties: Molar Mass of a Solid p.173 | All parts. Can work in pairs. | p. 178 #1-4 |
| 02/25 | Calorimetry p. 179 | All parts. Can work in pairs. | p. 185 #1-4 |
| 03/04 | Colorimetric Determination of Iron p. 17 | All parts. Can work in pairs. | p. 23 # 7, 8, 9 p. 26 # 1, 2, 6 |
| SPRING BREAK (OFFICES CLOSED – NO CLASSES) MAR 11-16 (MON-SAT) | | | |
| 03/18 | Qualitative Analysis Overview p. 35 | Will cover labs of 1 st half | p. 57 # 1,2,3,4,5,7,8,9, 10,11,12,13 |
| Mid-semester Exam | | | |
| 04/01 | Qualitative Analysis Group I p. 61 | Work singly. All work to be kept in laboratory notebook. | p. 67 # 1, 2, 3, 6, 7 |
| 04/08; 04/15 (2 wks) | Qualitative Analysis Group III p. 87 | Work singly. All work to be kept in laboratory notebook. | p. 99 # 1, 3, 4, 8, 9 |
| 04/22 | Ionization Constant of Weak Acid p. 121 | All parts. Can work in threes. | p. 127 # 5 p. 131 # 1 - 6 |
| 05/29 | Prep of Iron Oxalate Complex p. 133 | Must complete Period 1; Harvesting your crystals from Period 2 must also be done. Can work in pairs. | p. 139 # 3, 4, 5, 6 p. 141 # 1- 3 |
| OPEN | Redox Titration of Oxalate p. 143 | All parts. Work in same pairs as last lab. | p. 147 # 1, 3, 4 p. 151 # 4, 5, 6 |
| 05/06 | Final Exam | Check-in equipment | |

Grading Policy

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|-------------------------------|--------------------|
| 1. Reports will be: | 70% of your grade. |
| 2. Mid-semester Exam will be: | 15% of your grade. |
| 3. Final Exam will be: | 15% of your grade. |

| Percentage % | Grade |
|--------------|-------|
| 89.5+ | A |
| 89.4-79.5 | B |
| 79.4-69.5 | C |
| 69.4-59.5 | D |
| <59 | 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.