Organic Chemistry Laboratory 2125

SPRING 2013

Contact Information

Instructor: Nichole M. Jackson
Office: WH 126
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Office Hours: M 2:00 – 5:30 p.m
W 2:00 – 4:30 p.m.
TTH 8:30 – 9:30 a.m.; TH 1:30 – 3:30 p.m.

Course Information

Department: Physical Sciences
Start Date: 01/22/2013
End Date: 05/16/2013
Modality: Face-to-Face
Credits: 1 hour
Lab: T 1:00 – 4:50 PM

Courses Prerequisites

Course Corequisite: CHEM 2325
Course Prerequisite: CHEM 2123

ICOs

1, 2, 3, 4

Course Description

Instruction in experimental techniques of modern organic chemistry emphasizing chemical separations and recognizing the functional groups chemically.Stereochemical modeling and the identification of organic unknowns by spectroscopic and chemical methods are also introduced.

Course Objectives & Learning Outcomes

1. Conduct an experiment, collect and analyze data, and interpret results in a laboratorysetting.
2. Be able to use modern instrumentation and classical techniques, to design experiments, and to properly record the results of their experiment.
3. Are skilled in problems solving, critical thinking and analytical reasoning.
4. Organic synthesis, isolation of product, and identification of product.
5. Identify compounds using Mass Spectroscopy, Infrared, C-13 and H-1 NMR.

Course Grade

Reports 70%
Mid-semester Exam 15%
Final Exam 15%

Reports

Report sheets with the experimental data, calculations, and assigned post laboratory questions will be due at the beginning of the following Wednesday 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 **1days** late will **NOT** be accepted unless special permission has been obtained. Points will also be deducted for unsafe conduct in the laboratory.

See separate handouts for Lab Notebook setup

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. 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.

Mid-Semester Exam: Covers the experiments of the first half of the semester. The test will be short answer format similar to the pre and post lab questions.

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

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 lab. Your phone **cannot** be used as a calculator on exams.

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.

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.

LABORATORY ASSIGNMENTS 2125

Date	Experiment	Experiment Description	*Post-lab Quest.*
1/22	Check-out, Safety Rules, Mass Spec review, IR, ^{13}C NMR	Read p. 93-101; 107-115	*p. 105 # 1-4, 6* *p. 115 1-20 (evens)*
1/29	Green Chemistry - Oxidation of Benzaldehyde	Handouts Read p. 14 - 16 Can work in pairs	*All*
2/5	^{1}H NMR	Read p. 125-132	*p. 132* *Post # 1-10*
2/12	Diels-Alder (Exp 32)	Read p. 269-271. Part B Can work in pairs	*p. 272* *Post #1- 2* *Pre #1, 4*
2/19	Properties of Alcohols (Exp 18)	Read p. 193-195 All parts Can work in pairs	*p. 195* *Post # 2-6* *Pre # 1,5*
2/26	Friedel-Crafts Alkylation (Exp 26)	Read p. 237-240. Part A and B Can work in pairs	*p. 242* *Post # 1,3* *Pre# 1-3*
3/5	Midsemester Exam	Covers 1st half labs	
3/12	NO LAB	SPRING BREAK!!!! ENJOY!!!!	
2/19	Acetanilide to *p*-Nitroaniline (Handout)	Read Handouts Can work in pairs	*Handout*
3/26	Dehydration of Alcohol (Exp 20)	Read p. 205-207. Part A Can work in pairs	*p. 208* *Post #1,2,8* *Pre #1,2*
4/2	Synthetic Dyes (Handout)	Read Handouts Can work in pairs	*Handout*
4/9	Grignard Reaction (Exp 19)	Read p. 197-202. Part A and C Can work in pairs	*p. 204* *Post # 1,2* *Pre # 1-5*
4/16	Prep of Adipic Acid (Exp 21)	Read p. 211-214. Part B Can work in pairs	*p. 217* *Post # 2,5* *Pre # 3,4*
4/23	Synthetic Organic Polymers (Exp 44)	Read p. 331-335. Part A and B Can work in pairs	*p. 337* *Post #3* *Pre #1-3*
4/30	Properties of Amines (Exp 29)	Read p. 255-258. All parts Can work in pairs	*p. 258* *Post # 2-4* *Pre # 1,4*
5/7	Final Exam	Check-in equipment	

GOOD LUCK THIS SEMESTER!!!!!