

# *Organic Chemistry Laboratory 2123 F*

FALL 2012

## **Contact Information**

Instructor: Nichole M. Jackson

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Office Hours: M 2:00 – 5:00 PM

TTH 8:30 – 9:30 AM

W 8:00 – 9:00 PM

W 2:00 – 4:00 PM

TH 1:30 – 3:30 PM

## **Course Information**

Lab: Tuesday 1:00 – 4:50 p.m.

Text:

## **Courses Prerequisites**

CHEM 1111 and CHEM 1112

Course Corequisite: CHEM 2323

## **ICOs**

1, 2, 3, 4

## **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.

## **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 laboratory setting.
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.

## **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 **1 day** 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.

## **\*\*Expectations for Engagement – Face to Face Learning**

Still apply for the lab as well as the lecture

## **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](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**

Date	Experiment	Experiment Description	Post-lab Quest.
8/28	Check-out, Safety Rules, Notebook Information	How to keep a notebook, and how to prepare for lab procedures	None
9/4	Melting point Determination	Read p. 17-22 Parts A & C Work individually	p. 22 Post: # 1-4 Pre: # 2, 5
9/11	Recrystallization	Read p. 23-32 Can work in pairs	p. 32 Post # 1-4 Pre # 2, 4
9/18	Extractions $K_d$ Determination	Read p. 33-45. Part A Can work in pairs	p. 45 post #1, 2, 4 Pre #1-3
9/25	Gas Chromatography	Read p. 59-65. Part A Work Individually Use GC Instrument	p. 65 Post # 1 Pre # 1,2,4,5
10/2	Distillation -- Simple	Read p. 47-58. Part B Can work in pairs GC confirmation	p. 58 Post# 1-3 Pre# 1,2
10/9	Distillation -- Fractional	Fractional apparatus. Part C Same pairs as previous week; GC confirmation	p. 58 Post# 4 Pre# 3
10/16	Mid-semester Exam	Covers 1 <sup>st</sup> half labs	
10/23	Thin Layer Chromatography	Read p. 73-79. Part B Can work in pairs	p. 79 Post#1-4 Pre# 1-3
10/30	Column Chromatography	Read p. 67-71. Part B Can work in pairs	p. 71 Post# 1-3 Pre# 1-3
11/6	Properties of Hydrocarbons	Read p. 183-185. All Can work in pairs	p. 184 Post# 1-6
11/13	Nucleophilic Substitution of Alkyl Halide	Read p. 187-192. Part A Can work in pairs	p.192 Post# 1,2 Pre# 1-4
11/20	Prep of Camphor	Handouts.	
11/27	Mass Spec, IR, C-13	Read p.92-101; 107-115 Demo of FTIR	p. 105 Post# 2-5 106 Pre# 5
12/4	Final Exam	Check-in equipment	

**Best of Luck!!!!**

