Date         Experiment         Experiment Description         Post-lab Quest.           1/18         Check-out, Safety Rules, Mass Spec review, IR, "3C NMR         Read p. 93-101; 107-115         p. 105 # 1-4, 6 p. 115 1-20 (evens)           1/25         pK <sub>a</sub> Determination (Exp 23)         Read p. 225-227 Can work in pairs         p. 227 Post: # 2-4 Pre: # 1-5           2/1         1H NMR         Read p. 269-271. Part B (Exp 32)         p. 272 Post #1-2 Post # 1-10           2/8         Diels-Alder (Exp 32)         Read p. 269-271. Part B (Exp 32)         p. 272 Post # 1-2 Pre: # 1,4           2/15         Properties of Alcohols (Exp 18)         Read p. 193-195 All parts Can work in pairs         p. 195 Post # 2-6 Pre # 1,5           2/22         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           3/1         Acetanilide to p-Nitroaniline (Handout)         Read Handouts Can work in pairs         Handout           3/8         Midsemester Exam         Covers 1st half labs         Handout           3/15         NO LAB         SPRING BREAK!!!! ENJOY!!!!         p. 208 Post All Part All P	LADONATON AUGIONILITO				
Rules, Mass Spec review, IR, <sup>13</sup> C NMR	Date	Experiment	Experiment Description	Post-lab Quest.	
1/25         pK <sub>a</sub> Determination (Exp 23)         Read p. 225-227 Can work in pairs         p. 227 Post: # 2-4 Pre: # 1-5           2/1         TH NMR         Read p. 125-132         p. 132 Post # 1-10           2/8         Diels-Alder (Exp 32)         Read p. 269-271. Part B Post # 1-10         p. 272 Post #1-2 Pre # 1, 4           2/15         Properties of Alcohols (Exp 32)         Read p. 193-195 All parts Can work in pairs         p. 195 Post # 2-6 Pre # 1, 5           2/22         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           3/1         Acetanilide to p-Nitroaniline (Handout)         Read Handouts Can work in pairs         Handout           3/8         Midsemester Exam         Covers 1 <sup>st</sup> half labs         Handout           3/15         NO LAB         SPRING BREAK!!!! ENJOY!!!!         SPICE # 1,2 Pre # 1,2           3/22         Dehydration of Alcohol (Exp 20)         Read Handouts Can work in pairs         # 1,2 8 Pre # 1,2           3/29         Synthetic Dyes (Handout)         Read P. 197-202. Part A and C (Exp 19)         P. 204 Post # 1,2 Pre # 1,5           4/5         Grignard Reaction (Exp 21)         Read p. 211-214. Part B Can work in pairs         P. 217 Post # 2,5 Pre # 3,4           4/12         Prep of Adipic Acid (Exp 21)         Read p. 331-335. Part A and B Can work in pairs	1/18	Rules, Mass Spec	Read p. 93-101; 107-115	p. 115 1-20	
Can work in pairs   Pre: # 1-5	4/05		Dood in 225 227	, ,	
Post # 1-10	1/25	1 -	•	1 -	
Can work in pairs	2/1	<sup>1</sup> H NMR	Read p. 125-132		
Can work in pairs	2/8	Diels-Alder	Read p. 269-271. Part B	p. 272 Post #1- 2	
(Exp 18)         Can work in pairs         Pre # 1,5           2/22         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           3/1         Acetanilide to p-Nitroaniline (Handout)         Read Handouts Can work in pairs         Handout           3/8         Midsemester Exam         Covers 1 <sup>st</sup> half labs           3/15         NO LAB         SPRING BREAK!!!! ENJOY!!!!           3/22         Dehydration of Alcohol (Exp 20)         Read p. 205-207. Part A Can work in pairs         p. 208 Post #1,2,8 Pre #1,2           3/29         Synthetic Dyes (Handout)         Read Handouts Can work in pairs         Handout           4/5         Grignard Reaction (Exp 19)         Read p. 197-202. Part A and C Can work in pairs         p. 204 Post # 1,2 Pre # 1-5           4/12         Prep of Adipic Acid (Exp 21)         Read p. 211-214. Part B Can work in pairs         p. 217 Post # 2,5 Pre # 3,4           4/19         Synthetic Organic Polymers (Exp 44)         Read p. 331-335. Part A and B Can work in pairs         p. 337 Post #3 Pre #1-3           4/26         Properties of Amines (Exp 29)         Read p. 255-258. All parts Can work in pairs         p. 258 Post # 2-4 Pre # 1,4		(Exp 32)	•	Pre #1, 4	
Alkylation (Exp 26)  3/1 Acetanilide to p-Nitroaniline (Handout)  3/8 Midsemester Exam  Covers 1 <sup>st</sup> half labs  3/15 NO LAB  SPRING BREAK!!!! ENJOY!!!!  3/22 Dehydration of Alcohol (Exp 20)  3/29 Synthetic Dyes (Handout)  4/5 Grignard Reaction (Exp 19)  4/12 Prep of Adipic Acid (Exp 21)  4/12 Prep of Adipic Acid (Exp 21)  4/14 Synthetic Organic Polymers (Exp 44)  Alcohol Read p. 205-207. Part A p. 208 Post #1,2,8 Pre #1,2  Alcohol Can work in pairs  Alcohol Can work in pairs	2/15	•		1 ·	
Nitroaniline (Handout) Can work in pairs  3/8 Midsemester Exam Covers 1 <sup>st</sup> half labs  3/15 NO LAB SPRING BREAK!!!! ENJOY!!!!  3/22 Dehydration of Alcohol Can work in pairs #1,2,8 Pre #1,2  3/29 Synthetic Dyes (Handout) Can work in pairs Handout (Handout) Can work in pairs Pre #1,2  4/5 Grignard Reaction (Exp 19) Can work in pairs Pre #1-5  4/12 Prep of Adipic Acid (Exp 21) Can work in pairs Pre #3,4  4/19 Synthetic Organic Polymers (Exp 44) Can work in pairs Pre #1-3  4/26 Properties of Amines (Exp 29) Read p. 255-258. All parts Pre #1,4  4/26 Properties of Amines (Exp 29) Can work in pairs Pre #1,4	2/22	Alkylation	•	1 -	
3/15 NO LAB SPRING BREAK!!!! ENJOY!!!!  3/22 Dehydration of Alcohol (Exp 20)  3/29 Synthetic Dyes (Handout)  4/5 Grignard Reaction (Exp 19)  4/12 Prep of Adipic Acid (Exp 21)  4/12 Prep of Adipic Acid (Exp 21)  4/14 Synthetic Organic Polymers (Exp 44)  4/15 Can work in pairs  4/16 Properties of Amines (Exp 29)  SPRING BREAK!!!! ENJOY!!!!  P. 208 Post #1,2,8  #1,2,	3/1			Handout	
3/22       Dehydration of Alcohol (Exp 20)       Read p. 205-207. Part A (Exp 20)       p. 208 Post #1,2,8 #1,2,8 Pre #1,2         3/29       Synthetic Dyes (Handout)       Read Handouts (Can work in pairs)       Handout         4/5       Grignard Reaction (Exp 19)       Read p. 197-202. Part A and C (Exp 19)       p. 204 Post # 1,2 Pre # 1-5         4/12       Prep of Adipic Acid (Exp 21)       Read p. 211-214. Part B (Exp 21)       p. 217 Post # 2,5 Pre # 3,4         4/19       Synthetic Organic Polymers (Exp 44)       Read p. 331-335. Part A and B Pre # 1-3       p. 337 Post #3 Pre # 1-3         4/26       Properties of Amines (Exp 29)       Read p. 255-258. All parts (Exp 29)       p. 258 Post # 2-4 Pre # 1,4	3/8	Midsemester Exam	Covers 1 <sup>st</sup> half labs		
Alcohol (Exp 20)       Can work in pairs       #1,2,8         3/29 Synthetic Dyes (Handout)       Read Handouts       Handout         4/5 Grignard Reaction (Exp 19)       Read p. 197-202. Part A and C (Exp 19)       p. 204 Post # 1,2 Pre # 1-5         4/12 Prep of Adipic Acid (Exp 21)       Read p. 211-214. Part B (Exp 21)       p. 217 Post # 2,5 Pre # 3,4         4/19 Synthetic Organic Polymers (Exp 44)       Read p. 331-335. Part A and B Pre # 1-3       p. 337 Post #3 Pre # 1-3         4/26 Properties of Amines (Exp 29)       Read p. 255-258. All parts Can work in pairs       p. 258 Post # 2-4 Pre # 1,4	3/15	NO LAB	SPRING BREAK!!!! ENJOY!!!!		
3/29         Synthetic Dyes (Handout)         Read Handouts Can work in pairs         Handout           4/5         Grignard Reaction (Exp 19)         Read p. 197-202. Part A and C Can work in pairs         p. 204 Post # 1,2 Pre # 1-5           4/12         Prep of Adipic Acid (Exp 21)         Read p. 211-214. Part B Can work in pairs         p. 217 Post # 2,5 Pre # 3,4           4/19         Synthetic Organic Polymers (Exp 44)         Read p. 331-335. Part A and B Pre # 1-3         p. 337 Post #3 Pre # 1-3           4/26         Properties of Amines (Exp 29)         Read p. 255-258. All parts Can work in pairs         p. 258 Post # 2-4 Pre # 1,4	3/22	Alcohol	•	#1,2,8	
(Exp 19)       Can work in pairs       Pre # 1-5         4/12       Prep of Adipic Acid (Exp 21)       Read p. 211-214. Part B (Exp 21)       p. 217 Post # 2,5 Pre # 3,4         4/19       Synthetic Organic Polymers (Exp 44)       Read p. 331-335. Part A and B Pre # 1-3       p. 337 Post #3 Pre # 1-3         4/26       Properties of Amines (Exp 29)       Read p. 255-258. All parts Can work in pairs       p. 258 Post # 2-4 Pre # 1,4	3/29			Handout	
(Exp 21)       Can work in pairs       Pre # 3,4         4/19       Synthetic Organic Polymers (Exp 44)       Read p. 331-335. Part A and B Can work in pairs       p. 337 Post #3 Pre #1-3         4/26       Properties of Amines (Exp 29)       Read p. 255-258. All parts Can work in pairs       p. 258 Post # 2-4 Pre # 1,4	4/5	_		•	
4/19         Synthetic Organic Polymers (Exp 44)         Read p. 331-335. Part A and B Can work in pairs         p. 337 Post #3 Pre #1-3           4/26         Properties of Amines (Exp 29)         Read p. 255-258. All parts Can work in pairs         p. 258 Post # 2-4 Pre # 1,4	4/12	Prep of Adipic Acid	Read p. 211-214. Part B		
(Exp 29) Can work in pairs Pre # 1,4	4/19	Synthetic Organic	Read p. 331-335. Part A and B	p. 337 Post #3	
5/3 Final Exam Check-in equipment	4/26	•		<i>*</i>	
	5/3	Final Exam	Check-in equipment		

# **GOOD LUCK THIS SEMESTER!!!!!**

# Organic Chemistry Laboratory 2125 G

Spring 2011

#### **Contact Information**

Instructor: Nichole Jackson

Office: WH 126

Phone: (423) 335-6526 Email: njackson@odessa.edu

Office Hours: MW 9:30 – 10:00 AM; M 2:00 – 5:00 PM

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

#### **Course Information**

Department: Physical Sciences

Start Date: 01/18/2011 End Date: 05/13/2011 Modality: Face-to-Face

Credits: 1 hour

Lab: T 1:00 – 4:50 PM

#### **Required Reading/Materials**

Bell, Clark, Taylor, *Organic Chemistry Laboratory with Qualitative Analysis*; 3<sup>rd</sup> Ed., 2001,

Harcourt, Inc.

# **Courses Prerequisites**

Course Corequisite: CHEM 2325

#### **SCANS**

1, 3, 6, 8, 9

#### **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 problem solving, critical thinking and analytical reasoning.

#### **Course Grade**

Reports 70%, Mid-semester Exam 15%, and 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 Tuesday 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 days** late will **NOT** be accepted unless special permission has been obtained. Points will also be deducted for unsafe conduct in the laboratory.

#### Sections of Notebook:

- (a) Prelab
- (b) Procedure
- (c) Reactions (if applicable)
- (d) Data
- (e) Results
- (f) Summary/Conclusions

#### **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.

#### **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.

# **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.

# Learning Resource Center (Library)

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

## Student E-mail

Please access your <u>Odessa College Student E-mail</u>, 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 <a href="Odessa College Student Handbook">Odessa College Student Handbook</a>.