SYLLABUS **Teaching Assistant:_____**
Organic Chemistry Laboratory A
Chemistry 225: Fall 2012

Description: A one-semester-hour laboratory course designed to accompany organic chemistry lecture courses.

Pre- and Co-requisites: Prior completion of and a grade of 'C-' or better in 1 year of General Chemistry Lecture and Lab and CHEM 223, respectively.

Materials: Catalyst by Tim Thomas, Chem 225 (ISBN: 0-536-94370-2)

Safety glasses are provided on the first day of class and must be brought to every lab. A full-length lab coat is also required.

Course Homepage: Course announcements, the current grade book, handouts, etc. are posted on the course homepage (http://blackboard.luc.edu/). You are responsible for this material, so you should check Blackboard frequently.

Grading: Course grades consist of the following components:

Best 8 of 9 results sheets, 5 pts each	40 pts
Best 9 of 10 discussion questions, 5 pts each	45 pts
8 Online quizzes, 5 pts each	40 pts
2 assignments, 5 pts each	10 pts
Practical exam	65 pts
Written Exam	100 pts
	300 pts total

Course grades will be assigned on the following scale: A>95%, A->92%, B+>90%, B>82%, B->80%, C+>78%, C>72%, C->70, D+>68%, D>60%, F<60%

Pre-Lab Preparation: Success in organic lab depends on advance preparation. Therefore, there are several things you must do before coming to lab. One major component of your pre-lab assignment is to thoroughly read and understand the experimental procedure. If you have questions, consult your Teaching Assistant or the Lab Coordinator well before your lab section. Do not wait until the few minutes before class.

Online quizzes: A pre-lab quiz must be taken via Blackboard before each experiment. Students who do not complete the online quiz before lab will not be allowed to perform the experiment.

Results: At the end of each experiment, you must submit a Results sheet **before you leave the lab**. This sheet summarizes your laboratory results and is contained in your lab manual or distributed in class.

Discussion Questions: Discussion questions are posted on Blackboard. These should be completed after class and are due at the beginning of the next class period. No late work will be accepted.

Assignments: There are two out-of-class assignments for the course. One deals with resources for finding information about organic compounds. The other covers tools for exploring the organic chemistry literature. Detailed instructions for the assignments and due dates will be posted on Blackboard. All of the due dates are firm. No late work will be accepted.

Practical Exams: The practical exam consists of a hands-on assessment of your laboratory technique, your ability to name and utilize glassware and equipment, etc.

Written Exam: The written exam will cover all portions of the course—the assigned readings, laboratory procedures, topics discussed in class, pre- and co-requisite material, etc.

Re-grades: All requests to have items re-graded must be submitted in writing within one week from when the graded materials were returned to the student.

Attendance: You are expected to attend every lab session. Due to safety constraints and size limitations, you will not be allowed to make up an experiment in another section. Missing a lab period will result in a zero for all work related to that experiment.

Students must be present for the pre-lab lecture because important safety-related information is covered. **Any student who misses any portion of the pre-lab lecture will not be allowed to perform the experiment and will be marked absent.**

Safety Rules: Read the safety rules carefully and follow them throughout the course. Anyone who does not adhere to the safety rules will not be allowed to remain in the laboratory.

Academic Integrity: Each student is expected to do her/his own work. Although the lab is constructed so students may work in pairs during an experiment, all work submitted for a grade must be an individual effort. The penalty for academic dishonesty is a grade of 'F' for the course.

Email: You must use your Loyola email address when contacting the TAs or the instructor for this course. Emails from outside sources are often blocked automatically. In the subject line of your email, put Chem 225- section number and TAs name.

Eye Protection: You will be provided a pair of safety goggles at the beginning of the course. You must bring your eye protection with you to every class. You may not leave your eye protection in your drawer because it may become contaminated. For several reasons—especially hygiene—you also may not borrow eye protection from your TA or the chemistry stockroom.

Electronic Devices: For safety's sake and in order to prevent contamination, the use of cell phones, laptop computers, MP3 players, etc. is not permitted in the lab. Use of these devices in lab will result in the student not being allowed to perform the experiment.

Zero-Tolerance Policy on Safety: Safely working with organic chemicals requires your complete attention. One important part of lab safety is the pre-lab lecture at the beginning of class-- when the TAs and the instructor discuss the chemicals that are going to be used that day. You must pay careful attention during the pre-lab. Activities that indicate that you are not paying full attention will result in you not being allowed to perform the experiment. Such activities include talking to classmates, using one's phone or other electronic devices (which are not allowed in lab in the first place), sleeping, doing homework, etc.

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Tentative Schedule—Subject to change

August

Monday	Tuesday	Wednesday	Thursday	Friday
27 Glassware, Library Resources	**28** Glassware, Library Resources	**29** Glassware, Library Resources	**30** Glassware, Library Resources	**31** Glassware, Library Resources

September

Monday	Tuesday	Wednesday	Thursday	Friday
3 LABOR DAY	**4** No class	**5** Safety and Modeling	**6** Safety and Modeling	**7** Safety and Modeling
10 Safety and Modeling	**11** Safety and Modeling	**12** Organic Chemical Behavior	**13** Organic Chemical Behavior	**14** Organic Chemical Behavior
17 Organic Chem. Behavior	**18** Organic Chem. Behavior	**19** Melting Point	**20** Melting Point	**21** Melting Point

24 Melting Point	**25** Melting Point	**26** Distillation	**27** Distillation	**28** Distillation

October

Monday	Tuesday	Wednesday	Thursday	Friday
1 Distillation	**2** Distillation	**3** Crystallization	**4** Crystallization	**5** Crystallization
8 FALL BREAK	**9 FALL BREAK**	**10 FALL BREAK**	**11 FALL BREAK**	**12 FALL BREAK**
15 Crystallization	**16** Crystallization	**17** Extraction	**18** Extraction	**19** Extraction
22 Extraction	**23** Extraction	**24** TLC	**25** TLC	**26** TLC
29 TLC	**30** TLC	**31** Practical Exam		

November

Monday	Tuesday	Wednesday	Thursday	Friday
			1 Practical Exam	**2** Practical Exam
5 Practical Exam	**6** Practical Exam	**7** Review	**8** Review	**9** Review
12 2-Chloro-2-Methylpropane	**13** 2-Chloro-2-Methylpropane	**14** 2-Chloro-2-Methylpropane	**15** 2-Chloro-2-Methylpropane	**16** 2-Chloro-2-Methylpropane
19 Cyclohexene	**20** Cyclohexene	**21 Thanksgiving**	**22 Thanksgiving**	**2 Thanksgiving**
26 Written Exam	**27** Written Exam	**28** Cyclohexene	**29** Cyclohexene	**30** Cyclohexene

December

Monday	Tuesday	Wednesday	Thursday	Friday
3 check out	**4** check out	**5** Written Exam	**6** Written Exam	**7** Written Exam

Chem 225 Reading Assignments[1]

Safety		Handout
Modeling		Modeling Handout
Organic Chemical Behavior	Operations 1, 5, 6	pp. 3-4, 13-19
	Procedure:	pp. 177-184
Melting Point	Operation 30:	pp. 137-143
	Procedure:	pp. 185-192
Distillation	Operations 7-9, 27:	pp. 20-35, 122-135
	Procedure:	pp. 193-200
Crystallization	Operations 12, 13, 25:	pp. 40-46, 104-119
	Procedure:	pp. 201-206

[1] All experiments are Standard Scale.

Extraction	Op. 15, 21-22:	pp. 48-57, 91-98
	Procedure:	pp. 207-214
Chromatography	Operations 19, 20	pp. 80-87
	Procedure	pp. 215-224
2-Chloro-2-methylpropane	Operations 6, 11:	pp. 16-19, 37-39
	Procedure:	pp. 225-230
Cyclohexene	All of above	
	Procedure:	Handout