SYLLABUS
Organic Chemistry Laboratory A
Chemistry 225: Summer I 2010
Life Sciences Building 115

Instructor: Timothy Thomas
Teaching Assistants: _____
_____

Description: A one-semester-hour laboratory course designed to teach basic organic chemistry laboratory techniques and to illustrate some of the topics covered in organic chemistry lecture courses.

Prerequisites: Prior completion of and a grade of 'C-' or better in 1 year of General Chemistry Lecture and Lab.

Materials: Catalyst by Tim Thomas, Chem 225 edition.

In addition to the text, safety glasses and gloves are required; a lab coat or apron is recommended.

Course Homepage: This course relies heavily on communication via Blackboard and you are responsible for material posted there. Check Blackboard frequently!

Grading:		
	8 online quizzes, 5 pts each	40 pts
	3 assignments, 10 pts each	30 pts
	2 in-class exercises, 5 pts each	10 pts
	8 results sheets, 10 pts each	80 pts
	Practical Exam	70 pts
	Written Exam	50 pts
	Technique	20 pts
		300 pts total

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 background material and the experimental procedure, assignment or exercise. A reading list is attached to this syllabus. If you have questions, consult with your Teaching Assistant or the Lab Instructor well before your lab section. Do not wait until the few minutes before class.

Quizzes: A short quiz must be completed on Blackboard before class. Quizzes are based on the assigned reading, relevant lecture material, prerequisites, etc. STUDENTS WHO DO NOT COMPLETE THE QUIZ WILL NOT BE ALLOWED TO PERFORM THE EXPERIMENT. Provided time remains, each quiz may be repeated twice (3 total attempts).

Assignments/ In-class exercises: There are three assignments and two in-class exercises for the course. Due dates for assignments will be posted on Blackboard. No late work will be accepted. In-class exercises are done in class.

Results Sheets: At the end of each experiment, you must submit your Results sheet **before you leave the lab**. These are in your lab manual.

Practical Exam: The practical exam will be station-based and will require the student to identify glassware and equipment, perform laboratory techniques, interpret experimental results, etc. A study guide will be posted on Blackboard.

Written Exam: The written exam will be **CLOSED BOOK**. You may use your own calculator during the exams. However, you may not share someone else's calculator and you may not use your cell phone. A study guide will be posted on Blackboard.

Technique: Your success in lab goes beyond what appears on paper. Attention to safety, housekeeping, level of preparation, ability to work with others, ability to follow directions, correctly completing procedures and ability to work independently are also important. Safety violations will be addressed immediately and are described in a different section. Your technique will also be assessed during the two synthesis experiments at the end of the course.

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. If you miss an experiment for a justifiable reason—court summons, death in the immediate family, serious illness, etc.—you must notify the lab instructor in writing within 24 hours. Documentation will be required. If your absence is approved, your final grade will be based only on the experiments you actually performed. If you miss a second experiment, you have missed a significant portion of the course and should either drop or request an incomplete. A maximum of one and only one excused absence will be allowed for each student for each semester.

You should also come to lab on time. For safety reasons and fairness to your lab partner, you must arrive in time to hear the pre-lab lecture. Any student who is late by 10 minutes or more will not be allowed to perform the experiment and will be marked absent.

Safety Rules: These are contained the textbook and will be read aloud on the first day of class. 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. **Failure to adhere to the safety rules will also be reflected in the technique score.**

Registration: You must attend the section for which you are officially registered. Any change of section must be accomplished through the Registrar.

Check-In: Between semesters, all of the drawer locks in the lab are rotated. Thus, you and your lab partner should be the only ones who know the combination to the drawer to

which you have been assigned. However, to be prudent, you should not store any personal items or valuables in your lab drawer.

Check-Out: One of the requirements of the course is that you check out at the end. Even if you drop the course, you still have the obligation of checking out so that your account can be settled. No grade will be issued to any student who has not checked out and a hold may be placed on her/his registration.

Equipment: In addition to the glassware in your drawer, some experiments require the use of additional equipment (hot plates, heating mantles, voltage controllers, etc.). When you are using this equipment, you are responsible for it and you may be charged if items are missing or damaged.

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.

Anyone caught in an act of academic dishonesty will receive a zero on the assignment in question and will have her/his final grade in the course lowered by a letter. Any subsequent incidents will result in an 'F' in the course. The incident will also be reported to the Chair of the chemistry department and, at the Chair's discretion, to the Office of the Dean-- where additional sanctions, including expulsion from the university, may also be imposed. Consult the current Undergraduate Studies catalog for a complete description of University policies regarding academic dishonesty.

Grade Corrections: Throughout the semester, all graded materials will be returned during the next lab period. Scores will be posted on Blackboard. All grading corrections must be submitted in writing WITHIN ONE WEEK.

Email: You must use your Loyola email address when contacting the TAs or instructor for this course. Emails from outside sources are often blocked automatically.

Lab Coordinator:	Timothy Thomas	LSB 124
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Schedule: Organic Chemistry Laboratory A, Chemistry 225, Summer I 2010

May

Monday	Tuesday	Wednesday	Thursday	Friday
24	**25** Syllabus, Safety, Check-In, Information on Organic Compounds	**26**	**27** Modeling, Organic Chemical Behavior	**28**
31				

June

Monday	Tuesday	Wednesday	Thursday	Friday
	1 Organic Chemical Behavior continued	**2**	**3** Melting Point	**4**
7	**8** Distillation	**9**	**10** Crystallization	**11**
14	**15** Extraction	**16**	**17** Chromatography/ Searching the Organic Chemistry Literature	**18**
21	**22** Practical Exam	**23**	**24** 2-Chloro-2-Methylpropane	**25**
28	**29** Octenes	**30**		

July

Monday	Tuesday	Wednesday	Thursday	Friday
			1 Check-Out/ Written Exam	**2**

Chem 225 Reading Assignments[1]

Introduction		169
Safety/ Information on Organic Compounds		171-176, Handout on Blackboard
Modeling		Two handouts on Blackboard
Organic Chemical Behavior	Operations 1, 6	3-4, 16-19
	Procedure	177-184
Melting Point	Operation 30	137-143
	Procedure	185-192
Distillation	Operations 2, 5, 7, 9, 27	4-8, 13-16, 20-32, 34-35, 122-135
	Procedure	193-200
Crystallization	Operations 4, 8, 12, 13, 25	11-12, 33-, 40-43, 43-46, 104-118
	Procedure	201-206
Extraction	Operations 15, 22	48-57, 93-98
	Procedure	207-214
Chromatography, Searching the Organic Chemistry Literature	Operations 19, 20	87-90
	Procedure	215-224, Handout on Blackboard
2-Chloro-2-methylpropane	Procedure	225-230
Octenes	Procedure	231-236

[1] Pages numbers are from Catalyst. Techniques are cumulative. All experiments are Standard Scale.