SYLLABUS
Organic Chemistry Laboratory A
Chemistry 225: Summer I 2009
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

In addition to the text, you will need several pieces of equipment—safety glasses, a sponge, and rubber gloves are required; a lab coat or apron is recommended.

Grading:	8 experiments, 10 pts each	80 pts
	2 assignments, 10 pts each	20 pts
		100 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. 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 will be administered during the first 5 minutes of class. These are based on the assigned reading. All quizzes will be collected after 5 minutes. STUDENTS WHO ARRIVE LATE WILL NOT BE GIVEN EXTRA TIME. During the quiz, sharing of calculators will not be allowed. Be sure to bring your own. The quizzes are **closed book**. However, you may use your answers to the pre-lab exercises—provided you remove them from the manual. Quizzes count for 2 of the 10 points for an 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.

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, and ability to work independently are also important. The Teaching Assistants or the Instructor can impose a penalty of up to 2 of the 10 points allotted to each experiment for poor laboratory technique. Safety violations will be addressed immediately and are described in a different section.

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.

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Schedule: Organic Chemistry Laboratory A, Chemistry 225, Summer I 2009

May

Monday	Tuesday	Wednesday	Thursday	Friday
18 Orientation	**19**	**20** Safety/ Modeling	**21**	**22**
25 Organic Chemical Behavior	**26**	**27** Finish Org. Chem. Behavior/ Hydrocarbon Demonstrations	**28**	**29**

June

Monday	Tuesday	Wednesday	Thursday	Friday
1 Melting Point	**2**	**3** Distillation	**4**	**5**
8 Crystallization	**9**	**10** Extraction	**11**	**12**
15 Chromatography/ Chemical Information	**16**	**17** 2-Chloro-2-Methylpropane	**18**	**19**
22 Octenes	**23**	**24** Check-Out	**25**	**26**

Chem 225 Reading Assignments[1]

Introduction		169
Safety/ Modeling		171-176 Modeling Handout
Hydrocarbons		Handout
Organic Chemical Behavior	Operation 1:	pp. 3-4
	Procedure:	pp. 177-184
Melting Point	Operation 30:	pp. 137-143
	Procedure:	pp. 185-192
Chemical Information		Handout
Distillation	Operations 5, 27:	pp. 13-16, 122-135
	Procedure:	pp. 193-200
Crystallization	Operations 7, 12, 13, 25:	pp. 20-32, 40-43, 43-46, 104-118
	Procedure:	pp. 201-206
Extraction	Operations 15, 22:	pp. 48-57, 93-98
	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
Octenes	All of above	
	Procedure:	pp. 231-236

[1] All experiments are Standard Scale.