

SYLLABUS

Organic Chemistry Laboratory B
Chemistry 226: Spring 2009
LSB 115

Teaching Assistant: _____
TA's Room & Phone: _____
TA's Office Hours: _____

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 via experiment.

Prerequisites: Prior completion of and a grade of 'C-' or better in Chem 223/225.

Materials: Catalyst: Custom Laboratory Program; Tim Thomas
Spring Edition; Pearson/ Prentice Hall.

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.

Course Homepage: Important announcements, extra copies of the syllabus, the grade book, etc. are available on Blackboard (blackboard.luc.edu). You are responsible for this information, so you should check Blackboard frequently.

Grading: Your grade will be based on the following components:

80 points	Best 8 out of 9 notebook scores
80 points	Best 8 out of 9 online quizzes
40 points	Two written assignments
<u>100 points</u>	<u>Written Exam</u>
300 Points	Total

Course grades will be assigned on the following scale and there will be no rounding:
A > 92%, A- > 90%, B+ > 88%, 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 Instructor well before your lab section. Do not wait until the few minutes before class.

Before coming to class, you must also complete the pre-lab portion of your lab notebook. As described in the attached handout, "Keeping a Laboratory Notebook," this includes the Title, Objective, Outline, Table of Reagents and Initial Calculations. At the beginning of the lab period, you must submit the duplicate pages for the pre-lab portion

of the notebook. **NO ONE WILL BE ALLOWED TO PERFORM AN EXPERIMENT WITHOUT FIRST COMPLETING THE PRE-LAB PORTION OF THE NOTEBOOK.** Think of your completed pre-lab as your admission ticket to lab! Just as a reminder and as described in the handout, the longest, most detailed part of the notebook is the PROCEDURE section, which is written as you do the experiment. Do not copy the procedure into your notebook before class!

In-Class Quizzes: A short quiz (<10 minutes) will be given at the beginning of each lab period. This quiz will cover the assigned reading and pre-lab portion of the laboratory notebook. Students who arrive late will not be given additional time to complete the quiz. Quizzes are CLOSED BOOK but you may use the duplicate pages of your pre-lab. You may use your own calculator during the quiz. However, you may not share someone else's calculator and you may not use your cell phone. The in-class quiz is incorporated into the notebook score for each experiment.

Notebook: During the experiment, you will complete the remaining sections of the notebook. At the end of each experiment and before you leave lab, you must hand in the duplicate sheets from the rest of your notebook. (For more detailed instructions on the content of the notebook, see the description in "Keeping a Laboratory Notebook"). No late work will be accepted. Your Teaching Assistant will combine the portions of your notebook and your quiz and grade them according to the grading scheme posted on Blackboard.

On-line quizzes: A short quiz over each experiment must be completed on Blackboard after the experiment and before the next lab period. The quiz will cover the assigned reading, the experimental procedure and relevant lecture material. A properly kept laboratory notebook will assist you in completing the quizzes.

Written Assignments: There are two written assignments for the course that count 20 points each. Both will be posted on Blackboard. The first is a spectroscopy unknown. The second is a writing exercise. The spectroscopy assignment is due at the beginning of your lab period during the week of 2 FEB 09. The writing assignment is due at the beginning of your lab period during the week of 20 APR 09. No late work will be accepted.

Written Exam: There will be a written exam given at the end of the semester. The written exam will be **CLOSED NOTEBOOK AND CLOSED BOOK**. You may use your own calculator during the exam. However, you may not share someone else's calculator and you may not use your cell phone.

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 3 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. However, remember that you are able to drop one experiment score. Any additional missed work will also receive a zero. If you miss a second experiment, you have missed a significant portion of the course and should either drop or request an incomplete.

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 15 minutes or more will not be allowed to perform the experiment and will be marked absent.

Safety Rules: A copy of the safety rules is attached to this syllabus and is available on Blackboard. The safety rules will be read aloud and covered in detail 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.

Lab Drawers: The lab drawer is a shared space. At least one other section will be using it. Therefore, you should not leave any personal items in your drawer. You must also leave the drawer in a good condition at the end of the lab period. The Teaching Assistant will not accept your notebook pages until she/he has inspected your lab drawer. The Teaching Assistant may also deduct Technique points if the drawer or other areas of the lab—such as balances, sinks, etc.—are not left in a satisfactory condition at the end of the lab period.

Equipment: In addition to the glassware in the 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 to your teaching assistant WITHIN ONE WEEK.

Lab Coordinator: Timothy Thomas
(773) 508-8115

LSB 124
email: TTHOMA1@LUC.EDU
Office Hours by appointment

Schedule: Organic Chemistry Laboratory A, Chemistry 226, Spring 2009

January

Monday	Tuesday	Wednesday	Thursday	Friday
12 Syllabus, Safety	13 Syllabus, Safety	14 Syllabus, Safety	15 Syllabus, Safety	16 Syllabus, Safety
19 MLK DAY*	20 Spectroscopy*	21 Spectroscopy*	22 Spectroscopy*	23 Spectroscopy*
26 Reduction	27 Reduction	28 Reduction	29 Reduction	30 Reduction

February

Monday	Tuesday	Wednesday	Thursday	Friday
2 Diels-Alder [†]	3 Diels-Alder [†]	4 Diels-Alder [†]	5 Diels-Alder [†]	6 Diels-Alder [†]
9 Nitration	10 Nitration	11 Nitration	12 Nitration	13 Nitration
16 Ketone Deriv.	17 Ketone Deriv.	18 Ketone Deriv.	19 Ketone Deriv.	20 Ketone Deriv.
23 Acylation	24 Acylation	25 Acylation	26 Acylation	27 Acylation

March

Monday	Tuesday	Wednesday	Thursday	Friday
2 BREAK	3 BREAK	4 BREAK	5 BREAK	6 BREAK
9 Grignard I	10 Grignard I	11 Grignard I	12 Grignard I	13 Grignard I
16 Grignard II	17 Grignard II	18 Grignard II	19 Grignard II	20 Grignard II
23 Esters	24 Esters	25 Esters	26 Esters	27 Esters
30 Soap/ Nylon	31 Soap/ Nylon			

April

Monday	Tuesday	Wednesday	Thursday	Friday
		1 Soap/ Nylon	2 Soap/ Nylon	3 Soap/ Nylon
6 Aldol	7 NO LAB	8 NO LAB	9 EASTER	10 EASTER
13 EASTER	14 Aldol	15 Aldol	16 Aldol	17 Aldol
20 Exam [‡]	21 Exam [‡]	22 Exam [‡]	23 Exam [‡]	24 Exam [‡]

*The Spectroscopy assignment is posted on Blackboard and can be done outside of class. Attendance is optional this week and there is no quiz. The lab period for spectroscopy will be a review and question/answer period with the Teaching Assistants. Students from the Monday sections may attend any lab period this week.

[†]The spectroscopy assignment is due at the beginning of your lab section this week.

[‡]The writing assignment is due at the beginning of your lab section this week.