

Texas A&M University-Kingsville

CHEM 3125. Organic Chemistry Laboratory II

FACULTY SUPERVISOR:

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OFFICE HOURS: 2:30 – 4:30 PM, weekdays**

LABORATORY ASSISTANT:

To be named.

LABORATORY TEXT:

Because most organic laboratory texts have become quite expensive and because no one book has all the desired experiments you will need to purchase a plastic comb-bound book of experiments at the bookstore. Each experimental write-up in the lab book includes an introduction, a detailed procedure, and questions to be answered in your laboratory notebook.

ATTENDANCE:

There will be no makeup labs or makeup quizzes so you really need to attend all the lab meetings. It is absolutely crucial for you to be in the lab ON TIME, at 1:00 PM to hear the complete lab lecture. If you are later than 5 minutes you will be docked 5 points from your experiment grade of 15 points!

QUIZZES:

There will be three (3) 50 point unannounced quizzes during the term which will cover experiments you will have already performed.

GRADING:

A possible 300 points can be earned in CHEM 3123 as outlined below:

150 possible points for experiments.

150 possible points (sum of 3 50 point quiz grades)

300 possible points TOTAL

Clean up your own work area before leaving the laboratory.

The last three people left in the laboratory at the end of the work period are responsible for cleaning the common work areas.

USE COMMON SENSE; ASK, IF YOU DON'T KNOW!

SUPPLIES YOU WILL NEED TO BUY:

- 1) a **HARDBOUND** notebook for writing up the experiments.
- 2) **safety goggles**
- 3) a **small bottle of detergent**
- 4) a **roll of paper towels**
- 5) **matches or a cigarette lighter**
- 6) a **lab coat (optional)**

WRITING THE LABORATORY NOTEBOOK:

Your laboratory notebook must be BOUND and all entries made in INK. If you make mistakes cross them out with a single line. Leave the first 3 or 4 pages blank for a table of contents to be filled in during the semester. Each page of your notebook should be numbered consecutively and start the write up for each new lab experiment on a new page.

Each experiment should be written up to include

- I. **a. Title of Experiment**
 - b. Date performed**
 - c. Name of Lab Partner**
- II. **Purpose of Experiment (one sentence)**
- III. **Experimental Procedure (written procedures and sketches of apparatus)**
- IV. **Experimental Results (tables and/or written descriptions, yield in grams, percent yield, melting point, boiling point, and the like)**
- V. **Conclusions and Observations**
- VI. **Answers to Assigned Questions**

NOTE: The purpose of a laboratory notebook is to allow an individual of similar or greater chemical experience to reproduce the work you did and presumably obtain the same results.

NOTE: Please put your **NAME** – first name, middle initial, last name – and **YOUR LABORATORY SECTION NUMBER** and **MEETING DAY** on the outside front cover of your laboratory notebook!

CARE OF GROUND GLASSWARE:

Your ground glass “Chem Kit” is expensive, with current costs about \$400. per kit. The replacement cost to you for breaking a condenser, fractionating column, or separatory funnel is \$50. to \$75. depending on the particular piece of equipment broken.

Look over the ground glass items especially carefully when you check in your equipment at the beginning of the semester. Note on your inventory sheets any chips or “dings” in these items. Small chips in ground glass equipment still allows the piece to be used but do **NOT** accept pieces with cracks. Replace any cracked pieces with a replacement piece from the stockroom.

It is important to preserve the surfaces of the ground glass joints to keep them completely interchangeable and to keep them from freezing together. This is best done by lubricating the ground surfaces with stopcock grease by applying a light coat of grease around the upper surface of both joints to be joined together and them gently rotating the joints to evenly distribute the grease. Lubrication protects the surface of the joint, makes them easy to separate, and helps prevent leaks.

Always dismantle a ground glass apparatus assembly promptly to minimize the possibility of the joints freezing together. The residual lubricant can be wiped off the joint surfaces with a paper towel.

You should always clamp apparatus together at the locations shown in the illustrations in the experimental write ups. Realize that there is virtually no “play” in an apparatus joined by ground glass joints so it is important to clamp the apparatus together correctly and not too tightly. Sometimes large rubber bands can be used to keep various pieces of an apparatus “snugged” together.

Dates

Events

Week 5	Laboratory Experiment 3: Synthesis of 1,4 di-<i>t</i>-Butylbenzene
Week 6	Laboratory Experiment 4: Nitration of Methyl Benzoate
Week 7	Laboratory Experiment 5: Multistep Synthesis of Sulfanilamide (TWO – WEEKS)
Week 8	Laboratory Experiment 6: The Aldol Condensation: Synthesis of Dibenzalacetone
Week 9	Laboratory Experiment 7: Solubility Tests
Week 10	Laboratory Experiment 8: Classification Tests for Alcohols, Aldehydes, and Ketones
Week 11	Experiment 9: Solubility T27K

a scheduled test.

3) **Fabrication**

- 1) interfering with the instructor's ability to conduct the class,
- 2) causing inability of other students to profit from the instructional program, or
- 3) any interference with the rights of others.

An individual engaging in such disruptive behavior may be subject to disciplinary action. Such incidents will be adjudicated by the Dean of Students under non-academic procedures.

Ongoing behaviors or single behaviors considered distracting (e.g., coming late to class, performing a repetitive act that is annoying, sleeping or reading a newspaper in class, etc.) will be addressed by the faculty member initially either generally or individually. Cases in which such annoying behavior becomes excessive and the student refuses to respond to the faculty member's efforts can be referred to the Dean of Students. In the case of serious disruptive behavior in a classroom the instructor may first request compliance from the student and if it is not received, an instructor has the authority to ask the student to leave the classroom. If the student fails to leave after being directed to do so, assistance may be obtained from other university personnel, including University Police Department. An individual engaging in such disruptive behavior is subject to disciplinary action. Such incidents will be adjudicated by the Dean of Students under non-academic procedures to determine if the student should be allowed to return to the classroom.

Harassment /Discrimination (See page 23, section 200 of Student Handbook):

Texas A&M University-Kingsville will investigate all complaints that indicate sexual harassment, harassment, or discrimination may have occurred by the facts given by the complainant. Sexual harassment of anyone at Texas A&M University-Kingsville is unacceptable and will not be tolerated. Any member of the university community violating this policy will be subject to disciplinary action. A person who believes he/she has been the victim of sexual harassment, harassment, or discrimination may pursue either the informal or the formal complaint resolution procedure. A complaint may be initially made to the complainant's immediate supervisor, a department head, any supervisory employee, the Dean of Students (593-

accepted. Graduating seniors who need to schedule an early final should inform the instructor early in the semester. Students should turn off their cell phones during class.

The syllabus is intended to be informational and not contractual. The instructor reserves the right to amend, alter, change, delete, or modify the syllabus with notice (announced during the lecture season) in any manner that is deemed necessary and in the best interest of the Department of chemistry and Texas A & M University-Kingsville.

It is the responsibility of the student to keep the original graded copies of all materials (exams, problem set, in-class assignments, etc.) that have been returned for his/her records. Graded final exams are retained by the instructor for his/her permanent records.