
ORGANIC CHEMISTRY II LAB - Spring 2019

Instructors: Dr. Geisler

Office: TLC 2120

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Office Hours: T & R 10-12, M 1-4, W 1-2, other times by appointment

Lab: Wednesday 9-12 or 2-5 in TLC 3107

Course Material: Organic Chemistry II Laboratory Manual available at the bookstore.

Safety Glasses are required to be worn at all times and can be purchased in the lab.

Co-requisite: Due to the interdependence of CHEM 3422 and 3422L students withdrawing from one of these courses must also withdraw from the other.

Objectives: To apply the knowledge obtained in Chem 3422 lecture to problem solving in the laboratory. To develop good laboratory techniques; work safely; take data carefully; record relevant observation; use time effectively; assess the efficiency of your experimental method; plan for the isolation and purification of substances you prepare; and characterize substances you prepare by physical and spectroscopic means and synthesize organic substances.

Safety: The hazards encountered in CHEM 3422L are significantly higher than those encountered in CHEM 2411L. You should be aware of safety hazards associated with each experiment before you begin work. Read the experiment and review safety information on hazardous chemicals before starting each experiment. Safety glasses must be worn at all times: if you are found without safety glasses you will be expelled from the lab and will suffer a reduced grade. Students with known conditions (i.e. respiratory problems, allergies, pregnancy, etc.) should consult with the instructor for special precautions.

Tardiness / Missed Lab: Lab attendance is mandatory. Unexcused absences will result in a grade of zero. Make-up labs will be permitted only with a valid excuse and subject to availability. At the beginning of each laboratory we will discuss the laboratory. You must be present. Lateness will be penalized by deduction from the grade for that lab.

Preparation for Each Lab: Read all laboratory material before coming to lab and complete the Courseden prelab quiz. The labs will require preparation and careful work to complete in the allotted time. The prelab quiz is due before the lab begins.

During the lab: Most labs are to be performed individually at your designated work place. Record all data on your datasheets in a tidy, legible manner for submission after the lab. Use non-erasable ink, and never use white out.

After the lab: Clean up the lab space, clean the apparatus and put back to the drawer. Fill the datasheet, analyze the results and write a conclusion. Answer the assigned post-lab questions.

Reports: Laboratory reports are to be turned in at the **beginning** of the next lab. **Late submission will incur a 10% penalty for each day** after the due date. **If any assignment is not turned in before the prelab briefing, your report will be considered late.**

Grades

- **Online Prelab Quizzes (15%)**
- **Post-lab Reports including one formal report (55%)**
- **Lab final exam (25%)** will be given at the end of the semester as a written closed-book test.
- **Instructor points (5%)** will be based upon your ability to work within the time assigned, respect for safety rules (e.g. goggles, shoes), respect for policies (e.g. cell phone), respect for the instructor, TAs and other students, cooperation, attitude, performance, and cleanliness. Repeated tardiness may result in lower Instructor points.

Grading Scale: 90-100 A, 80-89 B, 70-79 C, 60-69 D, <59 F

Academic Misconduct: Honesty in reporting results is one of the essential characteristics of your laboratory work. Any form of academic dishonesty or misconduct will be penalized to the fullest extent possible, including a grade of zero for the assignment or grade of F for the entire course, or in a serious case, expulsion from the university. **Falsifying data** includes (but is not limited to) fabrication of data for lab work you did not do, and changing poor data to better-looking data. Little of your grade depends on getting "good" quantitative results; you will be more severely penalized for misrepresenting results than for honestly reporting "poor" results. For lab reports (including formal reports), **you must write your own report as an individual, and copying ANY part of other people's work is considered a serious academic misconduct.** This includes (but not limited to) experimental procedure, data, tables, reaction equation and mechanisms, discussion and conclusions, and answers to prelab/postlab questions. The penalty of academic misconduct will be to the fullest extent possible. The grade obtained for such

reports will be zero for both the one who copied and the one who let the other copy. Any type of cheating for the final exam will result in a grade F for the entire course.

Other policies:

- **Do NOT use a cell phone and electronic devices** during lab. If you are found using a cell phone it will affect your "Instructor's Point" grade.
- **E-mail and CourseDen:** Only UWG e-mails will be read and responded. The CourseDen will be used to post grades, the syllabus, and other supplemental materials. Please do NOT use the CourseDen email.
- **Follow all the safety rules** described in the Safety Contract. Especially be mindful of the following:
 - You must wear safety glasses all the time. If you were found not wearing safety glasses, you will be expelled from the lab.
 - Make sure to wear closed-toe shoes all the time during the lab. If you wear any open-toed shoes, you are not allowed to do a lab and you will receive a grade of zero.
- The time required to perform the experiment is usually 3 hours, if you leave before the end of the lab, you must have all the data proving that you have actually performed the experiment and you must ask me if it is OK for you to leave.

LABORATORY SCHEDULE:

Date	Experiment	Report
Jan 9	Check in, syllabus, safety	
Jan 16	Experiment 1: Diels Alder Reaction	Data sheet
Jan 23	Experiment 2: Friedel-Crafts Alkylation	Data sheet
Jan 30	Experiment 3: Nucleophilic Aromatic Substitution	Data sheet
Feb 6	Experiment 4: Hydride Reduction of Ketone	Data sheet
Feb 13 and 20	Experiment 5&6: Grignard reagent: Alcohol from carbonyl compounds	Formal report
Feb 27	Experiment 7: Wittig reaction	Data sheet
March 6	Experiment 8: Aldehydes and Ketones	Data sheet
March 13	Experiment 9: Ester Synthesis	Data sheet
March 27	No lab	
April 3	Experiment 10: Aldol Condensation	Data sheet
April 10	Check out and final exam and PS	