
CHEM 2455L PRINCIPLES OF ORGANIC CHEMISTRY LAB Fall 2018:
TLC 3107

Section 01: Thursdays, 9am-12pm

Section 02: Thursdays, 2pm-5pm

Instructor: Dr. Megumi Fujita

Office: TLC 2122

E-mail: mfujita@westga.edu

Office Hours: M12-2, T12-2, W8-10, F8-10&12-2 or by appointment

Course Material:

- **CHEM 2455L Laboratory Manual: Principles of Organic Chemistry Lab, Version 3.** Required, available as a course pack at the UWG Bookstore.
- **Organic Chemistry Model Kit:** This is required for this lab course, and is useful for CHEM2455 lecture course. Available at the UWG Bookstore.
- **Safety goggles** are required to be worn during the lab, and can be purchased (\$5) on the first day of lab with cash or check.

Please Note: This course should be taken with CHEM2455, which is a co- or pre-requisite concurrent. This means that if you drop the lecture class, you should also drop the lab.

Learning Outcomes

1. Demonstration of a working knowledge of organic laboratory techniques
2. Evaluate data collected to determine the identity, purity, and yield of products
3. Follow oral and written instructions to successfully complete laboratory assignments.
4. Discuss the outcomes of each experiment with clarity.
5. Engage in safe laboratory practices handling laboratory glassware, equipment, and chemical reagents.

Safety: The hazards encountered in CHEM2455L are significantly higher than those encountered in CHEM1211L and 1212L. You should be aware of safety hazards associated with each experiment before you begin work. Read the experiment before starting each experiment. The safety contract must be completed, signed, and turned in on the first day of lab. Students with known conditions (i.e. respiratory problems, allergies, pregnancy, etc.) should consult with the instructor for special precautions.

Online Environmental Health & Safety: Complete the following TWO programs under <http://www.usg.edu/facilities/resources/training> **by the second lab period.**

1. [Right-To-Know Basic Awareness with the Global Harmonized System](#)
2. [Hazardous Waste Awareness](#)

*At the end of each online training, a **Certificate will be displayed with your name.** Instead of printing them, please take a digital picture of the screen (or use Print Screen function), and **save the screen images as “Lastname basic” or “Lastname hazardous”** (use your own last name, of course), and deposit the images to the assignment folder in CourseDen. If you have completed these RTK training recently (**July 2018** or later) and can present the evidence (e.g. your on-campus employer’s e-mail confirmation), you may do so instead.

Tardiness / Missed Lab: Lab attendance is mandatory. Unexcused absences will result in a grade of zero. At the beginning of each laboratory we will discuss the laboratory. You must be present. Lateness will be penalized.

Preparation for Each Lab: The labs will require preparation and careful work to complete in the allotted time. Read all laboratory material before coming to lab, and take the on-line prelab quiz. The deadline for the prelab quizzes will be 2 hours before the beginning of lab class.

Postlab reports: Completed Post-lab reports must be turned in at the **beginning** of the next lab class. **Late submission will incur a 10% penalty per day.**

Lab final: A closed-book lab final exam will be given on the day of checkout. The study guide is included in the lab manual.

Grades

Prelab quizzes (10%), Postlab reports (60%), Lab final exam (20%), Online Environmental Health & Safety (5%) and Instructor points (5%)

Instructor points: your instructor will assign points based upon your readiness for each lab, punctuality, ability to work within the time assigned, respect for safety rules, respect for the instructor, TAs and other students, cooperation, attitude, performance, and tidiness.

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 in 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. Any type of cheating for the final exam will result in a grade F for the entire course.

More policies:

- You need to wear closed toed shoes for all labs (no sandals allowed).
- You need to wear your safety goggles at all time in the lab, even if you are not handling chemicals but others are.
- The use of cell phones and electronic devices is strictly forbidden at any time during the lab.
- You are to work at the station that has been assigned to you at the beginning of the semester and nowhere else.
- You are to perform your own experiment. Working with another student is allowed only upon approval of the instructor.
- 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 the instructor's permission to leave early.
- Refer to the student handbook for information on academic support, honor code, email policy, credit hour policy and HB 280 campus carry policy
<https://www.westga.edu/administration/vpaa/common-language-course-syllabi.php>

LABORATORY SCHEDULE CHEM2455L

Dates	Lab #	<i>Experiment</i>
8/16	0	Syllabus, Lab safety, Check-in
8/23	1	Melting point
8/30	2	Recrystallization
9/6	3	Molecular modeling
9/13	4	Thin layer chromatography (TLC)
9/20	5	Column chromatography: Separation of plant pigments
9/27	6	Acid-base, liquid-liquid extraction
10/4		No lab (Fall Break)
10/11	8*	Nucleophilic substitution reactions (SN1 and SN2)
10/18	7*	IR spectroscopy
10/25	9	Hydride reduction of ketone
11/1	10	Alcohols, aldehydes, ketones and acids
11/8	11	Ester synthesis
11/15		No Lab (Turn in Postlab 11 to Instructor)
11/22		Thanksgiving week
11/29	12	Checkout and Lab Final Exam

***Note the order swap between Labs 7 and 8.**