

Chemistry 3310L Course Syllabus

Instructor:	Dr. Terry Fernando
Office:	0757 Gilman
Office Hours:	M, W 2:15-3:15 pm or by appointment
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Chem 3310 and 3310L are co-requisite courses, i.e., students in Chem 3310L are required to take Chem 3310 at the same time or to have already received credit in 3310. Co-requisite course requirements are strictly enforced: Students who do not meet the co-requisite should drop the course or add the co-requisite as soon as possible or **they will receive an F in the course**. Students who drop or audit Chem 3310 will be required to drop 3310L.

Learning Objectives

At the end of this course, you will be able to

- Understand and follow current lawful and safe chemical handling practices (e.g., personal protective devices) and the hazards associated with the use of common organic reagents.
- Carry out and understand many common organic chemistry tasks, including percent yield calculations, thin layer chromatography, recrystallization, distillation, extractions, solvent removal, and temperature control of reactions (reflux, ice-baths, etc.).
- Carry out key organic syntheses along with purifying and characterizing obtained product.
- Understand the mechanism for each synthesis as well as underlying fundamental patterns.

Required Personal Protective Equipment (PPE)

- Safety Eyewear: UVEX — Model S040C Safety Glasses or Jones & Co. Visorgogs or Magid Glove and Safety Manufacturing “Sapphire” safety glasses. Other types of protective eyewear require approval from course instructor.
- Lab coat: A mid-thigh or longer lab coat must be purchased. These are available at the bookstore, chemstores in 1400 Gilman Hall (credit card), and various online stores such as Amazon.

Course Materials

- You will use Microsoft Word and provided Lab Report templates for your lab reports.
- All required lab readings, lab report templates and tutorials are posted on Canvas. Submission links for your lab reports are also on Canvas.

Assessment

Assignment	Percent of Final Grade
Safety Assignments (2)	8
Dry Lab Reports (2)	10
Face to Face Lab Reports (10)	80
Check-out	2

Grading

Grading scale for final grades: A \geq 93%, A- \geq 90%, B+ \geq 87%, B \geq 83%, B- \geq 80%, C+ \geq 77%, C \geq 73%, C- \geq 70%, D+ \geq 67%, D \geq 63%, and D- \geq 60%, and F < 60%.

Grades are rounded up at the end of the semester. (e.g. 92.5% => 93%)

See important Course Policies on Course Canvas Home Page

Required and Suggested ISU Syllabus Statements: [Click Here](#)

Experiment Schedule		
Week #	Week of	Experiment
1	1/20/25	Safety Training
2	1/27/25	Intro
3	2/3/25	Extraction
4	2/10/25	Separations (Dry Lab)
5	2/17/25	TLC, FTIR, and MP
6	2/24/25	NMR (Dry Lab)
7	3/3/25	Intro to Nucleophilic Substitution
8	3/10/25	Elimination
9	3/17/25	Spring Break
10	3/24/25	Alkene Addition
11	3/31/25	Multistep 1: Cyclohexanol and Acid
12	4/7/25	Multistep 2: Epoxide
13	4/14/25	Multistep 3: Ring Opening
14	4/21/25	Bibenzyl and NBS
15	4/28/25	Check out