Chemistry 2310L 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 2310 and 2310L are co-requisite courses, i.e., students in Chem 2310 are required to take Chem 2310L at the same time or to have already received credit in 2310L and visa versa. Co-requisite course requirements are strictly enforced: Students who do not meet the co-requisite should drop the course or add the required co-requisite as soon as possible or **they will receive an F in the course.** Students who drop or audit Chem 2310 will be required to drop 2310L and vice versa.

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 (1)	5
Face to Face Lab Reports (9)	85
Check-out	2

Grading

Grading scale for final grades: A ≥ 93%, A– ≥ 90%, B+ ≥ 87%, B ≥ 83%, B– ≥ 80%, C+ ≥ 77%, C ≥ 73%, C– ≥ 70%, D+ ≥ 67%, D ≥ 63%, and D– ≥ 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

CHEM 231L			
Week #	**Week of**	**Experiment**	**Deadline**
1	1/20/25	Safety Contract and EHS Safety Training (online)	1/26/25
2	1/27/25	Intro	2/2/25
3	2/3/25	Extraction	2/9/25
4	2/10/25	Separations	2/16/25
5	2/17/25	TLC, FTIR, and MP	2/23/25
6	2/24/25	Alkene Addition	NA
7	3/3/25	Alkene Addition Cont.	3/9/25
8	3/10/25	Intro to Nucleophilic Substitution	3/16/25
9	3/17/25	**Spring Break**	NA
10	3/24/25	Cyclohexanol and Acid	3/30/25
11	3/31/25	Ketone Reduction	4/6/25
12	4/7/25	Fischer Esterification	4/13/25
13	4/14/25	Synthetic Organic Dyes	NA
14	4/21/25	Synthetic Organic Dyes Cont.	4/27/25
15	4/28/25	Checkout	NA