

CHEM 1500L - Chemistry in Modern Living Laboratory

Fall 2026 Syllabus, Section 01, CRN 40999,

Credit hours: 1

Instructor

Ganesaratnam Balendiran

Professional Qualifications:

PhD University of Wisconsin-Madison

Professor

Email: gkbalendiran@ysu.edu

Office: Ward Beecher 6017

Office Phone: 1-330-941-7103

Additional Contact Methods:

email: gkbalendiran@ysu.edu

Communication Expectations:

Avoid repeating information in email that is already discussed in the class.

Public Instructor Information

Instructor Title:

Instructor Professional Qualifications:

Instructor Office Location:

Instructor Office Phone:

Course Description

1500L. Chemistry in Modern Living Laboratory. Introduction to basic laboratory techniques designed to supplement CHEM 1500. Three hours per week. Concurrent with CHEM 1500. 1 s.h.

This course is an introduction for students who might have no previous experience with chemistry. The course's main goal is to develop an appreciation for the role of chemistry in the modern world. The approach for the course is to investigate the connections between chemistry and the concerns of society and present information for evaluations of the risks and benefits of possible solutions to some societal-technological issues.

This is a General Education Laboratory course in the Natural Sciences Domain. The learning outcomes for the course are:

1. Students will successfully perform an experiment to test a hypothesis, including the collection and analysis of data.
2. Students will demonstrate the knowledge and application of scientific principles.
3. Students will use and interpret formulas, graphs, and tables.
4. Students will demonstrate understanding of the interactions of science, technology and society.

Course Readings

Group	Title	Author	ISBN
Optional	None		

Course Readings (Both required and recommended reading).

Course Materials

Textbook: None; all handouts will be made available and *must be printed and read before* coming to class/lab. Bring the instructions, handouts, reports and quizzes to the lab.

Required materials: lab coat, safety goggles, calculator. Attendance is required.

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

TENTATIVE SCHEDULE

Day	Date	Reading(s)	Proposed Topic	Due/To Prepare for Class
Thu	8/27		Introduction to the Course Syllabus and Laboratory Safety.	
Thu	9/3	Expt. 1	Measurements. Graphs.	Same day
Thu	9/10	Expt. 2	What Materials Protect Us from UV Light?	Same day
Thu	9/17	Quiz 1	Quiz 1 (safety, exp. 1, 2)	Same day
		Expt. 3	Pure Compounds and Mixtures: Chromatography of Pen Inks	Same day
Thu	9/24	Expt. 4	Ionic and Covalent Compounds	Same day
Thu	10/1	Expt. 5	Bonds, Molecular Models, and Molecular Shapes	Same day
Thu	10/8	Expt. 6	Quiz 2 (exp. 3, 4, 5) Chemical Moles: Baking Soda to Table Salt.	Same day
Thu	10/15	Expt. 7	Chemical Reactions and Catalysts	Same day
Thu	10/22	Expt. 8	Gas Laws	Same day
Thu	10/29	Expt. 9	Quiz 3 (exp. 6, 7, 8) Properties of Water	Same day
Thu	11/5	Expt. 10	Solutions; Electrolytes	Same day
Thu	11/12	Ext. 11	Which Common Materials are Acids or Bases?	Same day
Thu	11/19	Expt. 12	How Much Acid is in Food? Analysis of Vinegar	Same day
Thu	12/3	Expt. 13	Organic Molecules Quiz 4 (exp. 9, 10, 11, 12)	Same day

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.