Mayville State University

CHEM 341L
Organic Chemistry 1 Lab
Fall 2025
1 Credit Hour

Course and Instructor Information

Instructor Name: Bob Miess

Contact Information:

Office: CB 108C

Email: robert.miess@mayvillestate.edu

Work phone: 34885

Hours of Availability:

Monday, Friday: 2:00 – 3:00

Wednesday: 1:00 – 2:00

Also available for meetings on other days and times by appointment.

Office Hours Meeting Link:

Instructional Mode: On-campus face-to-face

Course Dates: August 25 – December 19. 2025

Time Zone: All times indicated throughout this syllabus reflect Central Time (CT).

Meeting Times and/or Location: T 12:00 – 1:50 SB 128

Zoom or Teams Link

Course Materials and Technologies

Required

MSU Technology Requirements

Lab procedures and materials will be posted on Bb.

You will need a notebook to write down your experimental findings and your lab reports.

Recommended

You may want access to a calculator.

Use of Artificial Intelligence in this Course

Do Your Own Work; Cite Gen AI Properly
Colorado State University
All work submitted in this course must be your own. Contributions from anyone or anything else- including AI sources, must be properly quoted and cited every time they are used. Failure to do so constitutes an academic integrity violation, and I will follow the institution's policy to the letter in those instances.

Course Description

This course consists of one two-hour lab period per week. The assignments will be applicable to the lecture. Completion of this course fulfills part of the requirements for the IT program for all related majors. Students will conduct experiments using appropriate technology, analyze data, and create lab reports using appropriate software applications.

Pre-/Co-requisites:

CHEM 122, General Chemistry II, is required as a pre-requisite for this course but may be waived with instructor approval with exigent circumstances.
CHEM 342, Organic Chemistry II, is a recommended co-requisite for this course. The lab will build on class discussion and provide opportunities to apply and observe topics under discussion.

Course Objectives

Purpose of the Course

"One must learn by doing the thing; for though you think you know it; you have no certainty until you try."

Sophocles

Good laboratory experiences can make a significant contribution to your professional work and expand the meaning and enjoyment of your professional life. Many of these experiences are particular to this course; they may not be encountered anywhere else in your college career.

The CHEM 341L/342L laboratory course sequence is intended to introduce or expand upon ideas and concepts relevant to the corresponding "lecture" class. The purposes of this lab course are to provide an opportunity for the student to apply the theoretical knowledge presented and discussed in lecture and get practical experience working in a laboratory setting.

The goals of the MSU Science program are to present current information on aspects of the physical world and to develop logical reasoning, sometimes mathematical, relating one process to another. Organic Chemistry I prepares the student to discuss and work with the basic principles of organic chemistry and its relationship to other disciplines as well as to describe different scientific models and how these models are used to stimulate scientific inquiry.
Students who have completed this course should be able to:

1. Apply theoretical ideas to practical situations - a critical aspect of most careers.
2. Gain skill in performing certain operations, often detailed and complex, to a successful conclusion, and thereby develop confidence in your own abilities and the reliability of scientific experimentation.
3. Learn to make sound conclusions based on your own observations of experimental data.
4. Keep and maintain a laboratory notebook.

Program Student Learning Outcomes (SLOs) Addressed in This Course
The Academic Program Student Learning Outcomes document can be found in the course shell. Following the link, leads to a document containing all learning outcomes pertaining to Essential Studies courses and all majors and minors. The document has an index, so you can quickly find the degree you are pursuing. Student learning outcomes are statements of what students should think, know, feel or do when they have completed a program. They are the basis for determining the extent to which program learning goals are being met. They are measurable or identifiable, action-oriented and realistic.

To successfully complete this course, the learner will be expected to meet the following objectives, as aligned to Composite Science Education Program Approval Standards through North Dakota's Education Standards and Practices Board (ND ESPB):

- **SLO #1:** Students will acquire a content knowledge base in the traditional chemistry core commensurate with career goals
- **SLO #2:** Students will communicate scientific information both orally and in writing
- **SLO #3:** Students will apply quantitative or qualitative theories of science to a broad variety of chemical problems (including experiential component)
- **SLO #4:** Students will construct and critically analyze scientific arguments

Standards Alignment (Composite Science Education Program Approval Standards-ND ESPB):

- 13047.1 Composite Science Major/General Science The composite/general science program requires that environmental science be incorporated within other courses or as a separate course. The composite/general science program requires:1. Coursework in biology, chemistry, physics, and earth science, including: a. Minimum of twenty four semester hours in one area, b. Minimum of twelve semester hours in two other areas, c. Minimum of four semester hours in the fourth area, d. Courses must be from those that the institution allows toward graduation in the science major. 2. Study of mathematics through the pre-calculus level (college algebra and above) and statistics

Course Improvements Based on Most Recent Assessment Findings
In CHEM 341L no high-stakes program activities have been identified at this time.

Course Expectations

Laboratory Safety:
Everyone enrolled in this laboratory course must be familiar with the safety guidelines as presented during the first formal lab class meeting and evidenced by signing the Safety Agreement which will be collected by the instructor.
My lab course expectations include:

1. Come to class prepared. This preparation includes reading through the laboratory handout which outlines the experiment. You should be able to answer pre-lab questions on a quiz.

   "In the field of observation, chance favors only the prepared mind."

   Louis Pasteur

2. Participate in the laboratory experience. Collection of experimental data will always be part of

the experience. You will show calculations and record observations and results in your notebook. In some instances, calculations will be required to fill in a data table, therefore it is recommended that you bring a calculator to lab or at least have access to one. I discourage you from bringing your computer into the lab just for protection reasons as some of the chemicals we use can cause damage to them as well as there can be water spills and leaks. For these reasons, you may wish to print a paper copy of the procedure or summarize it in your lab notebook.

3. A written laboratory report for each experiment is generally not needed as I will grade your notebook. Typically, this review will happen one week following the collection of the experimental data.
4. Attend all laboratory class periods. Only absences due to an University approved excuse will be approved. If you miss a period due to an excused absence you will be allowed to make up the work at a time that mutually works in your schedule and in the instructor's schedule. It is your responsibility to make the arrangements. If you miss a period due to an unexcused absence you will not be allowed to make up the work. You will receive a "0" grade for the missed lab.

Instructor/Student Communication

Students are accountable for all academic communications sent to their Mayville State University e-mail address and all information posted on the course Blackboard site.
Assignments can be submitted electronically via email or using the appropriate drop box posted in the course schedule.
I will respond to all emails sent Monday – Friday within 24 hours. Weekend emails will be addressed the first day of the next work week, typically by noon.

Assignments and Assessments

You will submit your lab notebook throughout the course of the semester for periodic review by the instructor. There will be regular weekly pre-lab quizzes covering the lab produces and calculations.

Evaluation and Grading

[Delete] Instructions: This section must contain the information included below. 1) Describe what *your students* can expect *of you* in terms of grading turnaround time. [See Timely Manner clause in M490 Section B]. Describe what *you* expect *from students* regarding late submissions, make-up exams, etc. 2) any attendance and/or participation policies, 3) grading scale (90-100=A; 80-89=B; etc.), and 4) the Grade Breakdown for the course. Examples of how to format a Grade Breakdown are provided in the Appendix.

Grading Policies

I will normally return graded notebooks within 24 hours of collection. I will post grades on Blackboard within this same timeframe. If someone is not participating or not taking care of business, I may ask you to join me for a personal conference outside of class time.

Attendance/Participation Policies

You are expected at every lab meeting to conduct the experiment. You may work with a lab partner but you will need your own lab notebook to record the information collected and your own personal conclusions regarding the experiment.

Grading Scale

The total of the percentages of reports and quizzes will be used to determine the final letter grade in the course using the typical 90, 80, 70 scale.

Breakdown of Grades

The Quizzes total will count 15% of your course grade. The lab notebook will make up the remaining 85% of the total grade

Enrollment Verification

The U.S. Department of Education requires instructors to conduct an activity which will validate student enrollment in this course. Class attendance will be used to verify enrollment in on-campus courses. If you do not attend, your enrollment in this course will be at risk.

Proctor Notification

No proctors are required for this course.

Important Student Information

In the Announcements section of the Blackboard Institution Page, you can view and download the Important Student Information document for the current academic year. It includes information about:

- ✓ Land Acknowledgement Statement
- ✓ Academic Grievance Concerns and Instructor English Proficiency
- ✓ NetTutor - Online Tutoring Program
- ✓ Starfish - Student Success System
- ✓ Students with Documented Disabilities
- ✓ Student Learning Outcomes / Essential Learning Outcomes
- ✓ Academic Honesty
- ✓ Emergency Notification
- ✓ Continuity of Academic Instruction for a Pandemic or Emergency
- ✓ Family Educational Rights and Privacy Act of 1974 (FERPA)
- ✓ Diversity Statement (Title IX)

Course Timeline/Schedule

Course Timeline and Schedule are subject to change as deemed necessary by the instructor. The experimental procedures are posted by the week on Bb. The instructor will let you know when you need to submit your notebooks for evaluation, at minimum midterm and last week of lab.