

Mayville State University
CHEM 342L
Organic Chemistry II Lab

Bob Miess

Spring 2025

1 S.H.

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Hours of Availability: Monday @ 11, Thursday 2, Friday @ 11; other times by arrangement. My schedule is posted in the course shell.

Instruction Mode: On-campus, face-to-face

Meeting Times and Location: T 12:00 to 1:50, SB 128

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.

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.

Course Objectives

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 (as aligned to Composite Science Education Program Approval Standards through North Dakota's [Education Standards and Practices Board](#)):

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.

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.
- 13047.3 Inquiry The program requires study of the processes of science common to all scientific fields.

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.

- **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

There are no specifically identified program SLO's related to this lab course at this time. Any activities specifically related to assessment will reinforce the SLO's.

Course Improvements Based on Most Recent Assessment Findings

In CHEM 342L no high-stakes program activities have been identified at this time.

Required/Recommended Materials

There is no required lab text for this course. Lab handouts with experimental procedures will be posted on Blackboard. Reference materials are available in the lab. It is recommended you have a personal set of goggles or safety glasses. There are pairs of goggles available in the lab if you do not have them. You will need to have a notebook that is used exclusively for this course to record your data, results, and conclusions. There may be usage of Labster videos for this course, but this would be occasional and posted in Blackboard for access.

Learning Experiences

As a student in this class you are expected to:

1. Complete assignments in a timely fashion. Late work is unacceptable and will be graded accordingly.
2. Actively participate in the learning process. In order to participate you need to be prepared so that you can ask and answer questions, draw your own conclusions, and think creatively as well as critically. If you do not understand something, speak out. Read the textbook as assigned!
3. Take responsibility for the learning experience of yourself and the other members of the class. You can learn a great deal by working with others. Participate in the discussions and group activities.
4. Attend all class meetings. Absences not only hurt your learning experience, but that of everyone else in the class. You are an integral part of this class. We need you! If you miss a class with a University approved excuse, you will be allowed to make up any missed work. Under such circumstances, please check the class web site for assignments and other important announcements. You are personally responsible for whatever material was covered in class during your time away!

Expectations/Protocols

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.

Method of Evaluation/Grading

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.

You should know what your grade is by simply looking at the Blackboard gradebook.

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

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

Enrollment Verification/Participation

The U.S. Department of Education requires instructors to validate student enrollment. As this is an on-campus course, attendance will be used as verification. Logging into the LMS is **NOT** considered attendance. If it is not validated, your enrollment in this course will be at risk. I anticipate the necessity of continual class attendance throughout the semester for CoVID-19 tracing reasons – I will not use this information for participation grading.

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)