# Mayville State University

**CHEM 341 Organic Chemistry I**

Fall 2025
4 Credit Hours

**Instructor Name:** Bob Miess

**Contact Information**:

Office: CB 108C

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Work phone: 34885 (off-campus: 701-788-4885)

**Hours of Availability:**

Monday, Friday: 2, Wednesday 1

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

**Course and Instructor Information**

**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:** M, T, W, F 11:00 – 11:50**,** CB 105

**Final Exam Time and Location:** December 15 – December 19

**Zoom Link**: https://mayvillestate.zoom.us/j/87211074290

## Course Materials and Technologies

**Organic Chemistry**, 2nd Edition (2006), Sorrell TN, University Science Books, Sausalito, CA.

Required

MSU Technology Requirements

**Achieve**:

You can choose to go through Macmillan to get entry or purchase your code through the Mayville State bookstore. Full-year access is recommended unless you are certain you are only taking the fall course. This link takes you to the McGraw site and is also posted on Bb.

Recommended

Let me know if you find something that might be useful for your colleagues.

## 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 is an upper -level course designed to be the first semester of a two-semester sequence covering organic chemistry. This course covers topics of organic structure and bonding, nomenclature, stereochemistry, functional groups, reactivity, and spectroscopy.

**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 341L, Organic Chemistry I Lab, is a recommended co-requisite for this course. The lab will build on class discussion and provide opportunities to apply and observe the topics under discussion.

## Course Objectives

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.

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):

Students who have completed this course should be able to:

1. Name organic compounds.
   - What are the IUPAC rules for naming organic compounds?
   - How does structure affect the naming of organic compounds?
   - How do stereochemical concerns influence the naming of organic compounds?
2. Discuss and apply the descriptions of bonding to organic compounds and their reactions.
   - Draw Lewis Dot structures emphasizing the reactivity of a molecule.
   - What does VSEPR tell us about bonding in carbon compounds?
   - How do structure and bonding affect physical properties of organic compounds?
   - Compare and contrast the reactions of propane, propene, and propyne.
3. Discuss and apply basic organic reactions and their mechanisms.
   - These mechanisms include nucleophilic substitution, elimination, radical substitution, electrophilic addition, radical addition, and pericyclic reactions.
   - Compare and contrast $S_N1$, $S_N2$, E1, and E2 reaction mechanisms and the conditions that favor them.

- Elimination typically wins out over substitution. What reaction conditions favor substitution over elimination?

**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 Expectations

### Instructor/Student Communication

Students are accountable for all academic communications sent to their Mayville State University email address and all information posted on the course Blackboard site.

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. If MSU classes are not meeting (i.e., for a holiday), I may not be in the office so, like on a weekend, I may not get back to you until the next working day.

### Assignments and Assessments

Student grades will be based upon your performance in the following areas:

- Readings, assignments, class announcements, and important dates will be posted in the corresponding course module block on the class Blackboard site with weekly updates.
- Achieve homework assignments (total of approximately 1050 pts) with each chapter in the textbook will be made which are a minimum I feel need to be done to ensure competence with the material. There will additionally be problems assigned from the textbook which will be reviewed in class but not graded.
- There will be four quizzes (total of 75 pts) to ensure that everyone is keeping up with the material. The quizzes will be based directly on the material under discussion.
- There will be three written exams (total of 150 pts; around Week 4/5, Week 9/10, Week 14/15). The tests will be similar to the problems from the book, class, and the Achieve homework. The exam will include a section of multiple-choice questions dealing with terminology, properties, as well as application of the material which you will be asked to explain your answer choice. I will post a sample exam on Bb which will be reviewed in class before each exam. The sample exam is for your review and will not be counted as a formal assignment. Because of the nature of the material, the first exam will include naming and Lewis structures. Starting with the second exam, the exam will include a "set of reactions" question and at least one mechanism question. Each exam will be valued around 50 points.
- A comprehensive Final Exam will be administered during the MSU final exam week (December 15 – December 19). Final course grades are due Dec. 23. The final exam will be worth about 100 points and follow the format of the other exams.

## Evaluation and Grading

### Grading Policies

Achieve will grade itself as soon as you submit your answer. You will have unlimited opportunities to correct anything you have wrong until the assignment deadline. Every time you re-submit, you lose a small percentage of points. I will transfer the final Achieve grade to the Bb gradebook after the deadline. I will return quizzes and exams after all have been submitted within 48 hours. All grades appear in the gradebook.

### Attendance/Participation Policies

Complete assignments in a timely fashion through the Achieve site.
Late work is discouraged and will be graded accordingly. If you need an extension (not at the end of the semester!), please let me know the reason and we will work something out. I will monitor your progress and let you know if you are falling behind.

### Grading Scale

Final grades will be based on the weighted total.

You should know what your grade is by simply looking at "weighted total column" Blackboard gradebook.

### Breakdown of Grades

| Item | Total Points | Weighted total | Occurrences |
|---|---|---|---|
| Achieve homework | 1050 x 10% = | 105 | Chapters 1 – 10 |
| Quizzes | 75 x 25% = | 18.75 | One quiz per block of material |
| Exams | 150 x 50% = | 75 | One exam per block of material |
| Final Exam | 100 x 15% = | 15 | Final Exam week: Dec 15 – Dec 19 |

Potential course weighted total points: 105 + 18.75 + 75 + 15 = 213.75

### Breakdown of Grades

The scale: 90%+ = A, 80 – 89% = B, 70 – 79% = C, 60 – 60% = D

## 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.

## 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

The Specific timeline is posted weekly in Blackboard. A general Course Timeline and Schedule is:

Block 1 (Week 1 – Week 5)
Chapter 1 – Structure of Organic Molecules
Chapter 2 – Bonding in Organic Molecules (Quiz 1)
Chapter 3 – The Conformations of Organic Molecules
Chapter 4 – The Stereochemistry of Organic Molecules (Quiz 2)
Exam 1 (C1 – C4)

Block 2 (Week 5 – Week 10)
Chapter 5 – Chemical Reactions and Mechanisms (Quiz 3)
Chapter 6 – Substitution Reactions of Alkyl Halides
Chapter 7 – Substitution Reactions of Alcohols and Related Compounds
Exam 2 (C5 – C7)

Block 3 (Week 10 – Week 15)
Chapter 8 – Elimination Reactions of Alkyl Halides, Alcohols, and Related Compounds
Chapter 9 – Addition Reactions of Alkenes and Alkynes (Quiz 4)
Chapter 10 – Addition Reactions of Conjugated Dienes
Exam 3 (C8 – C10)

Final Exam December 15 – December 19