Course Syllabus: General Chemistry I-Lab
CHEM 1141
Fall of 2025

Contact Information

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Course Description

CHEM-1141 is a first-semester general chemistry lab course designed for BS majors and students preparing for advanced chemistry studies. As a survey course, it introduces fundamental chemistry concepts, basic calculations, and foundational knowledge relevant to fields such as organic, analytical, environmental, and biochemistry. The lab focuses on developing essential skills in measurement accuracy, proper use of common laboratory equipment, and core techniques. Through hands-on experiments, students gain practical experience that supports their understanding of chemical principles and prepares them for more advanced coursework.

Textbook & Instructional Materials

Chemistry: Laboratory Manual for Chemistry 1141, Fulton et al (MSU bookstore)
D2L: platform for all weekly quizzes and where all grades can be viewed.

Study Hours and Tutoring Assistance

Professors hold office hours to help you ask questions, work through problems, and clarify course material—make use of this time. If you need additional support, the **TASP Learning Center** offers free help with assignments. For more personalized assistance, private tutors are available for an hourly rate; please see the office assistant for the current list of available tutors.

Youtube, chemreview, Khan Academy, Study Monkey, and Quizlet are all very good options to look up videos, examples, demonstrations, extra problems, and practice problems.

Student Handbook

Refer to: Student Handbook

Academic Misconduct Policy & Procedures

Although there will be opportunities for group work, assignments unless otherwise noted are to be done individually. Similar answers on homework, data sheets/reports, or quizzes will have one written warning. Zeros will be given to every assignment afterwards where cheating is done. Blatant and obvious copying (exact odd/wrong answers, cut and paste) will receive an automatic zero the first and every time. Scores obtained by cheating will NOT be ones that are dropped in any category. Phones out/sounding during exam, cheating aids, or staring eyes during exams will result in a zero on the exam.

Academic Dishonesty: Cheating, collusion, and plagiarism (the act of using source material of other persons, either published or unpublished, without following the accepted techniques of crediting, or the submission for credit of work not the individual's to whom credit is given). Additional guidelines on procedures in these matters may be found in the Office of Student Conduct.
Office of Student Conduct

Grading Scale

Table 1: Points allocated to each assignment

Assignments	**Percent**
Data Sheets	50%
Prelab questions	10%
Quizzes	10%
Class Participation	10%
Midterm Exam	10%
Final Exam	10%

Table 2: Total Points for Final Grade

Grade	**Points**
A	≥ 89%
B	79 – 88%
C	69 – 78%
D	59 – 68%
F	< 59%

Homework

Before you may conduct lab, you must read and sign the safety sheet and academic integrity policy (digital, on D2L). You must also watch the safety film and take a quiz. You are not allowed to do experiments until this is done. There will be a prelab homework assignment due at the beginning of lab each week. Your data sheet is due at the beginning of lab the week after the experiment.

Quizzes

Quizzes will be given each week: see "Lab Format" page behind the lab schedule. They are offered through D2L only. The purpose is to prepare for lab and associated safety measures, so they will ONLY be open for 3-4 days ahead and will NOT be reopened.

Exams

There will be a midterm over the first 5 experiments and a final over the last 5 experiments. All sections take it at the same time. Please plan accordingly. More details will be given the week before the midterm. These exams are scheduled on a Thursday night. For those that cannot get off of work or have class (do NOT skip class), then you can take it earlier in the day or on your lab day. NO ONE is allowed to take it after the exam has been given. Friday is not an option.

Late Work/Make Up Work

Quizzes have a hard deadline in D2L, **no exceptions**. Prelabs and data sheets may be turned in **up to one week late** for less credit (up to 10 % per assignment). One drop is placed in each section except midterm and final to cover any absences whether university excused or not. For data sheets, a base score of 35 will be given IF the data sheet is turned in with all observations completed and TA signature. The lab must be turned in by the end of the second week.

Important Dates

Last day for term schedule changes: Aug, 26 – 28, 2025, Check date on Academic Calendar.
Deadline to file for graduation: 09/22/2025, Check date on Academic Calendar.
Last Day to drop with a grade of "W:" 11/24/2025, Check date on Academic Calendar.
Refer to: Drops, Withdrawals & Void

Desire-to-Learn (D2L)

Extensive use of the MSU D2L program is a part of this course. Each student is expected to be familiar with this program as it provides a primary source of communication regarding assignments, examination materials, and general course information. You can log into D2L through the MSU Homepage. If you experience difficulties, please contact the technicians listed for the program or contact your instructor.

Attendance

Attendance is required as stated in the Student Handbook. Excessive unexcused absences will result in an instructor drop with a grade of "F".

Online Computer Requirements – AI Policy

AI is a tool to help organize notes, for study help, and general questions. It is not to be used to create any working or written assignments that require your original work. Over 25% AI assignments will be a zero with no "redo".

Online Computer Requirements

This course requires you to have access to a computer (with Internet access) to complete and upload your assignments. It is your responsibility to have (or have access to) a working computer in this class. ***Assignments are due by the due date, and personal computer technical difficulties will not be considered reason for the instructor to allow students extra time to submit assignments, tests, or discussion postings.*** Computers are available on campus in various areas of the buildings as well as the Academic Success Center. ***Your computer being down is not an excuse for missing a deadline!!** Contact your instructor immediately upon having computer trouble If you have technical difficulties in the course, there is also a student helpdesk available to you. The college cannot work directly on student computers due to both liability and resource limitations however they are able to help you get connected to our online services. For help, log into D2L**.**

Change of Schedule

A student dropping a course (but not withdrawing from the University) within the first 12 class days of a regular semester or the first four class days of a summer semester is eligible for a 100% refund of applicable tuition and fees. Dates are published in the Schedule of Classes each semester.

Refund and Repayment Policy

A student who withdraws or is administratively withdrawn from Midwestern State University (MSU) may be eligible to receive a refund for all or a portion of the tuition, fees and room/board charges that were paid to MSU for the semester. HOWEVER, if the student received financial aid (federal/state/institutional grants, loans and/or scholarships), all or a portion of the refund may be returned to the financial aid programs. As described below, two formulas (federal and state) exists in determining the amount of the refund. (Examples of each refund calculation will be made available upon request).

Services for Students with Disabilities

In accordance with Section 504 of the Federal Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, Midwestern State University endeavors to make reasonable accommodations to ensure equal opportunity for qualified persons with disabilities to participate in all educational, social, and recreational

programs and activities. After notification of acceptance, students requiring accommodations should make application for such assistance through Disability Support Services, located in the Clark Student Center, Room 168, (940) 397-4140. Current documentation of a disability will be required in order to provide appropriate services, and each request will be individually reviewed. For more details, please go to Disability Support Services.

College Policies

Campus Carry Rules/Policies
Refer to: Campus Carry Rules and Policies

Smoking/Tobacco Policy
College policy strictly prohibits the use of tobacco products in any building owned or operated by WATC. Adult students may smoke only in the outside designated-smoking areas at each location.

Alcohol and Drug Policy
To comply with the Drug Free Schools and Communities Act of 1989 and subsequent amendments, students and employees of Midwestern State are informed that strictly enforced policies are in place which prohibits the unlawful possession, use or distribution of any illicit drugs, including alcohol, on university property or as part of any university-sponsored activity. Students and employees are also subject to all applicable legal sanctions under local, state and federal law for any offenses involving illicit drugs on University property or at University-sponsored activities.

Campus Carry
Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes has prohibited. The new Constitutional Carry law does not change this process. Concealed carry still requires a License to Carry permit, and openly carrying handguns is not allowed on college campuses. For more information, visit Campus Carry.

Active Shooter
The safety and security of our campus is the responsibility of everyone in our community. Each of us has an obligation to be prepared to appropriately respond to threats to our campus, such as an active aggressor. Please review the information provided by MSU Police Department regarding the options and strategies we can all use to stay safe during difficult situations. For more information, visit MSUReady – Active Shooter. Students are encouraged to watch the video entitled "*Run. Hide. Fight.*" which may be electronically accessed via the University police department's webpage: *"Run. Hide. Fight."*

Grade Appeal Process

Update as needed. Students who wish to appeal a grade should consult the Midwestern State University MSU Catalog

*__Notice:__ Changes in the course syllabus, procedure, assignments, and schedule may be made at the discretion of the instructor.

Course Schedule

Date(s)	**Activities/Assignments/Exams**
Aug 27 – 28	Complete Online Paperwork and Lab Safety Video (D2L) – no meeting
Sept 03 – 04	Check-in; Safety; Introduction "paper lab" of equipment, protocol Exp-1: Density of Liquid and Solid
Sept 10 – 11	Exp-2: Paper Chromatography
Sept 17 – 18	Exp-3: Use of Micropipettes
Sept 24 – 25	Exp-4: Mass Relationships
Oct 01 – 02	Exp-5: Preparation of Alum
Oct 09	**Midterm Exam (Bolin-306 and 313)**
Oct 15 - 16	Exp-6: Calorimetry
Oct 22 - 23	Exp-7: Titration with Vitamin C
Oct 29 - 30	Exp-8: Alkaline Earths and Halogens
Nov 05 – 06	Exp-9: Nonmetals and Their Compounds
Nov 12 – 13	Poster Presentations (*Oral and Written Communication*)
Nov 19 – 20	Exp-10: VSEPR and Valence Bond Theory (*Group work*)
Nov 24	**Drop Date by 5 PM with a grade of "W"**
Nov 26 – 27	Thanksgiving Holiday (*No Class*)
Dec 04	**Final Exam (Bolin-306 and 313)**

Labs and Concepts:

Exp-1: Density – The analysis and calculation of the density of an unknown liquid and unknown metal using a pycnometer. The concept of space in a container to calculate volume and mathematical concepts used to calculate unknown variables will be discussed.

Exp-2: Paper Chromatography – Learn how to separate a mixture of metal ions by chromatography based on their different polarities and the calculation of retention factor (R_f) of each ion.

Exp-3: Use of Micropipettes – Learn how to use micropipettes correctly and accurately and the calculation of percent error in volume measurement via micropipettes.

Exp-4: Mass relations – An introduction to mass relationships as it applies to mole relationships in chemical equations. An unknown substance will be identified (out of four possible) by its mass relationship of original material to known salt formed.

Exp-5: Preparation of Alum – Synthesis lab where alum salt is made from recycled aluminum cans. Synthesis using types of reactions, the understanding of Al as an amphoteric substance, and use of multiple chemicals and transfers will be utilized. Percent yield is calculated. Purity is tested by melting point.

Exp-6: Calorimetry – The study of heat transfer for a hot metal, dissolving of a salt, and a chemical reaction. Calorimetry, enthalpy, and mole calculations are utilized.

Exp-7: Analysis for Vitamin C – The study of the titration method, preparing stock solutions, equipment accuracy/use, and calculating the concentration of a titrant and unknown will be discussed. The amount of vitamin c in an unknown will be calculated.

Exp-8: Alkaline Earths and Halogens – A descriptive lab to learn about the color, solubility and some physical/chemical characteristics of group 2A and 7A. Characteristics will then be used to determine an unknown.

Exp-9: Nonmetals and Compounds – A descriptive lab used to learn about the physical and chemical nature of common gases. Specific characteristics will be determined and used to find the identity of an unknown gas. Gases are generated from chemical reactions where the gas in question is a product.

Exp-10: VSEPR and Molecular Shape – a lab of building molecules according to Lewis Dot rules. Prediction of shape, polarity, and bonding is practiced for numerous molecules.

Poster presentations – One aspect of research is reading literature. A brief literature search and review allows comprehension of journal article format, key points, and understanding results. Student must find peer-reviewed journal articles that discuss chemistry/chemical reactions, use equipment, and are current (no older than 7 years).