

Course Syllabus: General Chemistry CHEM 1141 Fall 2025

Contact Information

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Course Description

CHEM 1141 is a first semester chemistry lab course to satisfy lab science requirements for BS majors and provide entry level information for students wishing to pursue other chemistry courses. The content covers basic chemistry concepts, calculations, and background for future courses such as organic, analytical, environmental, and biochemistry. This is a survey course. Highlights and introductions to various specific and applied concepts will be covered in several areas relating to different aspects chemistry. This is the supplementary lab that practices lab techniques and teaches the students about accuracy, measurements, common lab equipment and techniques.

REQUIRED Textbook & Instructional Materials

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

Study Hours and Tutoring Assistance

Professors have office hours for the purpose of asking questions, working problems, and clarifying information – use this! Please also consider going to **TASP learning center** if you need further help with assignments. Personal tutors can be obtained but for an hourly rate (please see office assistant for the current list).

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-2018-19

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Dishonesty: Cheating, collusion, and plagiarism (the act of using source material of other persons, either published or unpublished, without following the accepted techniques of crediting, or the submission for credit of work not the individual's to whom credit is given).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

Grade distribution:

Table 1:

Assignments	Percent
Data sheets	50
Prelabs	10
quizzes	10
Class participation	10
midterm	10
final	10

Table 2: Total points for final grade.

Grade	Percent
Α	89
В	79
С	69
D	59
F	Less than 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.

Extra Credit

There are occasions when extra credit may be offered.

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 50 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

Refer to: Drops, Withdrawals & Void

Desire-to-Learn (D2L)

Moderate 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

Students are expected to attend all lab days in which they are enrolled. Although in general students are graded on intellectual effort and performance rather than attendance, absences will lower the student's grade because vital information is not gained. Excessive, non-university excused absences or missing 3 labs will result in an instructor drop. Missing this amount of material results in the inability to pass the course. The instructor must give the student a verbal or written warning prior to being dropped from the class.

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

Taking an online class 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 and tests 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!! There are many places to access your class! Our online classes can be accessed from any computer in the world which is connected to the internet. 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.

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 <u>Disability Support Services</u>.

College Policies

Refer to: Campus Carry Rules and Policies

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 as 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 <u>Safety / Emergency Procedures</u>. 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."

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.

Grade Appeal Process

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

Notice

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

Course Schedule

Dates	Activities/Assignments/Exams
Aug 26-28	Online paperwork and safety
Sept 2-4	Check in, safety, introduction "paper lab" of equipment, protocol

Dates	Activities/Assignments/Exams
Sept 9-11	Density
Sept 16-18	Paper Chromatography
Sept 23-25	Mass Relationships
Sept 30-Oct 2	Alum
Oct 9	Midterm
Oct 14-16	Calorimetry
Oct 21-23	Titration with Vit C
Oct 28-30	Alkaline Earths and Halogens
Nov 4-6	Nonmetals and Their Compounds
Nov 11-13	Poster presentations (oral and written communication)
Nov 18-20	VSEPR and Valence Bond theory (Group work)
Nov 24	Drop date by 5 PM
Nov 25-27	Thanksgiving Break
Dec 4	Final

Labs and Concepts:

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.

Copper Chemistry – A descriptive lab used to introduce students to two different oxidation states of copper and some of the different colors and solubilities of the Cu compounds. To practice methods of transfer and recovery, the percent recovery of original Cu will be calculated.

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.

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.

Fractional Crystallization – Study of a separation method using changes in pH and solubility. Percent recovery of each heterogeneous component is calculated.

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.

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.

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.

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.

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 f 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 (last 7 years).