Course Syllabus: General Chemistry
CHEM 1141
Fall 2023

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 quizzes 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, 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

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Dishonesty: Cheating, collusion, and plagiarism (the act of using source material of other persons, either published or unpublished, without following the accepted techniques of crediting, or the submission for credit of work not the individual's to whom credit is given).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
A	89
B	79
C	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.

Exams

There will be a midterm over the first 5 experiments and a final over the last 5 experiments. 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. One drop is placed in each section to cover any absences whether university excused or not.

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.

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 Disability Support Services.

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 Safety / Emergency Procedures. 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 29-31	**No lab**
Sept 5- 7	Check in, safety, introduction "paper lab" of equipment, protocol
Sept 12 - 14	Density
Sept 19 - 21	Paper Chromatography
Sept 26 - 28	Mass Relationships
Oct 3 - 5	Alum
Oct 12	**Midterm**

Dates	Activities/Assignments/Exams
Oct 17 - 19	Calorimetry
Oct 24 - 26	Titration with Vit C
Oct 31 – Nov 2	Alkaline Earths and Halogens
Nov 7 - 9	Nonmetals and Their Compounds
Nov 14 - 16	Service learning Instagram H_2O video (group work – no lab)
Nov 21 - 23	**No Lab**
Nov 28 - 30	VSEPR and Valence Bond theory Service learning project assignment; (video presentations)
Dec 7	**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 Halolgens – 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 uswed 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.

Service learning – Service learning is an opportunity to engage in practical and local/regional applications pertaining to the subject matter. The objective of the video is to apply water chemistry principles and communication skills to educate viewers on water disinfection and process.