



Principles of Chemistry - Syllabus

Principles of Chemistry, CHEM 118, Spring 2024

Instructor	Michael McClure
E-mail	mm991@evansville.edu
Course Meeting Days and Time	Tuesday 9:30 AM – 10:50 AM Lecture Thursday 9:30 AM – 10:50 AM Lecture
Required Experiential Learning Dates	Tuesday 10:50 AM – 12:15 PM Lab Thursday 10:50 AM – 12:15PM Lab
Office Hours	Monday – Thursday 1:30 PM – 3:00 PM or by Appointment

Catalog Description:

Covers principles of stoichiometry, chemical bonding and structure, thermochemistry, chemical equilibrium, and kinetics. Three hours lecture, two hours lab. Prerequisite: Two semesters of high school chemistry. Fall, Spring

Credit Hour Policy Statement:

This class meets the federal credit hour policy through a combination of lecture + laboratory (or lecture + practicum) for a total of 45-75 hours of supervised learning activities for each credit.

General Education Requirements:

This course meets the General Education Requirements for Outcome 8 : Scientific Literacy with a laboratory component.

Course Learning Objectives:

The course is designed to show how the atomic- molecular theory of matter relates to the chemical and physical properties of materials. Students are expected to become proficient in problem solving and the arithmetic of chemistry.

Methods of Instructions:

During class meeting, major concepts will be reinforced via lecture, discussion, problem solving worksheets, and activities. Laboratory experiments are designed to enhance, reinforce or supplement classroom material.

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EXAMS

Exam dates are dependent on how we are progressing through the material, but generally I will announce the date of an exam a week or more in advance.

Exam questions and problems are from textbook chapters, assignments, and lecture material. Students are expected to read the chapters assigned. I will announce any chapter topics that may be skipped.

You may use the following materials during the exams: scientific calculator and periodic table. **Do not use your phone during the exam.**

ASSIGNMENTS

There will be graded homework assignments. Assignments will be posted on the CHEM 118 Blackboard page. *Assignments are due the same day as the exam for that unit, and must be submitted electronically to our Blackboard page.*

Scientific Calculator - you will need a scientific calculator to perform calculations for lecture and labs.

Lab Experiment + Lab Report

The lab component comprises 100 points of your overall course grade.

Each scheduled experiment includes performing the experiment in Lab, recording data and observations in a lab notebook, and submitting the required formal Lab Report.

Lab Notebook - a Lab Notebook is required. You may use a laptop or tablet, or an inexpensive composition notebook.

Failure to submit a Lab Report will result in a Zero (0) for that Lab Experiment.

A formal Lab Report is **required** for assigned experiments. During each experiment, record data/observations/sketches in your lab notebook. Afterwards, you will use the data/observations in your notebook to type a formal Lab Report. The Lab Report must follow the format and guidelines provided in our Blackboard class site. More information about writing the lab report will be provided.

Textbooks and Required Reading:

Textbook: Burdge, J.; Overby, J. Chemistry, Atoms First, 4th ed.; McGraw- Hill: New York, NY, 2021.

You are expected to read text assignments before lecture. A student Solutions Manual is available from the publisher but is not required for your purchase.



Course Schedule:

January
Syllabus Stoichiometry Bonding and Structure Exam 1 - TBA Liquids & Solids – chapter 12 Solutions – chapter 13 Review Problems Exam 2 - TBA
February
Kinetics – chapter 14 Equilibrium – chapter 16 Review Problems Exam 3 - TBA
March
Acids & Bases – chapter 17 Acid Base Equilibrium – chapter 18 Solubility Review Problems Exam 4 - TBA
April
Thermochemistry – chapter 10 Thermodynamics – chapter 15 Electrochemistry – chapter 19



Radioactivity
Review Problems
Exam 5 - TBA

Lab Experiments

Paper Chromatography of Food Colors

Determination of Sugar using Density and Mass Percent

Empirical Formula of a Salt

Video Lab - TBA

Mole Ratio and Reaction Stoichiometry

Solubility of Salt in Water

Evaluating the Cost Effectiveness of Antacids

Video Lab - TBA

Molecular Mass of an Unknown by Dumas Method

Kinetics of Alka-Seltzer Reaction

Energy of a Peanut – Calorimetry

Beer's Law

Video Lab – TBA

The instructor reserves the right to determine and/or change the number of experiments or assignments assigned during the semester.

The instructor reserves the right to determine and/or change lesson topics and/or exams and calendar dates.

Grading Criteria:

Exams	500 pts
Assignments	100 pts
Experiment and Lab Reports	100 pts



Total Points	700 pts
A: ≥ 540 pts B: 480-539 C: 420-479 D: 360-419 F: < 360	

Withdrawal and Attendance policies:

Harlaxton College expects regular class attendance by all students. Students are considered sufficiently mature to appreciate the necessity of regular and punctual attendance, to accept this personal responsibility and to accept the consequences of failure to attend. When absences occur due to emergency or medical reasons, students are expected to notify their instructors of the absence prior to class or to seek the assistance of the College nurse or a member of the Student Experience Team for help in notifying instructors.

Instructors have the authority to grant excused absences for medical, psychological, or personal reasons upon review of appropriate documentation and professional recommendation supporting such a request. In the event of long-term illness, reasonable accommodations will be made to allow a student to complete a course. In these cases, the Dean will need to approve the long term nature of the accommodation.

The Dean of Harlaxton College has the authority to grant excused absences for medical, psychological, or personal reasons.

Each instructor is expected to maintain an attendance policy in keeping with the nature of the Harlaxton program and may consider it in evaluating performance in their courses.

Policy Governing Unexcused Absences:

Harlaxton College operates an attendance policy that is binding on all faculty and students. The number of unexcused absences that are allowed before incurring a penalty is related to the number of times a class meets each week. For courses which meet three times a week, students are allowed a maximum of three unexcused absences during the semester without attracting penalty points. For courses meeting twice a week two such absences are permitted, and for courses meeting once a week a single absence is allowed. Additional unexcused absences will attract a grade penalty.

ASSIGNMENT LATE POLICY: Assignments must be submitted by the due date (date of exam). There will be an automatic 20% deduction for late assignment submissions. No assignment is accepted 2 weeks after the exam date for exams 2, 3, and 4. No assignment is accepted after the date of exam 5.

LAB REPORT LATE POLICY: Lab Report due dates are scheduled by the instructor. There is an automatic 20% deduction for late Lab Report submissions

For CHEM 118 meeting twice a week two absences are permitted. Additional unexcused absences (lab or lecture) will lower your overall grade average by one letter grade.

Policy Governing Excused Absences.

- Excused absences are not given to facilitate student travel independent of College-sponsored travel.
- Students may be permitted to miss class because of participation in academic field trips.
- Instructors must co-ordinate and confirm academic fieldtrips with the Dean, prior to the commencement of the Semester to ensure their inclusion in the Semester timetable.



- Where authorization for an academic fieldtrip is requested after the commencement of the semester, the request must be submitted to the Dean.

The following information is required:

- Purpose and brief description of the official Harlaxton event or academic fieldtrip.
- Dates, location, and times (as applicable).
- Alphabetical list of students involved [Last Name/First Name] along with their student identification number.

If approval is granted:

- Instructors affected will be notified at least one week prior to the class period during which absence is anticipated, or as soon as possible.
- Missed class time due to student participation is to be considered an excused absence.
- The grade of a student may not be lowered in any class due to excused absences.
- It is the student's responsibility - to take the initiative by consulting with their instructors before the absence occurs, and - to do what is required by the instructor to make up all missed assignments and/or examinations.
- Instructors are required to assist students in these occasional situations of excused absences.

Honor Code:

All students at the University of Evansville agree to the University honor code: *I will neither give nor receive unauthorized aid, nor will I tolerate an environment that condones the use of unauthorized aid.*

AI may be used only with prior permission or direction by the instructor.

- All work submitted in this course must be your own.
- The use of generative AI composition tools, such as those offered by ChatGPT, Google Bard etc. is prohibited in this course except for specific assignments and subject to the instructor's guidelines.
- Work generated by such tools without proper attribution is plagiarism and, thereby, a breach of the University's Plagiarism and Academic Honesty policy.

Disability Policy:

It is the policy and practice of the University of Evansville to make reasonable accommodations for students with properly documented disabilities. Students should contact Disability Services within the Office of Counseling Services by calling 812-488-2663 to seek services or accommodations for disabilities. Written notification to faculty from Disability Services is required for academic accommodations.

The University of Evansville Disability Services office will share the request for academic accommodations with the Academic Support team at Harlaxton College. Staff members at Harlaxton will meet individually with students to discuss needs and provide additional information related to examinations or other assessments.

Students from partner institutions should provide the appropriate letter of accommodation from their institution to the Academic Support team at Harlaxton College.



Non-Discrimination Statement

The University of Evansville expects all members of its community to treat each other with respect and civility. Harassing behaviors directed towards any member of our community will not be tolerated. As part of its commitment to non-discrimination, the University specifically prohibits harassment based on any other characteristics set forth in its nondiscrimination statement as follows: including race, color, gender, gender identity and expression, sexual orientation, creed or religion, national origin, age, disability, veteran status and all federally protected groups/classes. Any form of harassment undermines the mission of the University and negatively impacts the University community as a whole.

Prohibited Conduct and Confidentiality

The University of Evansville is committed to fostering an atmosphere free from harassment and discrimination. This commitment includes identifying problems that may lead to sexual harassment and misconduct, as well as other forms of harassment and discrimination, by creating an atmosphere in which the entire University community is sensitive to preventing prohibited conduct. Additionally, the University is committed to providing support and resources to individuals who have experienced prohibited conduct. This commitment includes effectively responding when a student, visitor, guest or program participant is the victim of prohibited conduct.

All campus employees, students, and guests are required to abide by the Title IX and Other Sexual Harassment and Misconduct Policy, the Harassment and Discrimination Policy, and the Consensual Sexual or Romantic Relationships Between Employees and Students Policy. Violation of these policies could result in disciplinary action, up to and including expulsion for students and termination for employees.

Faculty members at the University of Evansville are considered “Responsible Employees” under the applicable federal guidelines and the University’s policies. This means that I am unable to offer you confidentiality if you report any incidence of prohibited conduct to me as defined by Title IX statute. If I am made aware of a violation, I am required to report any known information to the Office of Institutional Equity.

You may choose to report the violation yourself the following ways:

Email: · Annie Sills, Assistant Director of Institutional Equity and Title IX Coordinator: cs175@evansville.edu ·

Keith Gehlhausen, Executive Director of HR and Institutional Equity: kg77@evansville.edu ·

Title IX: titleix@evansville.edu

Phone: 812-288-5261

Online: <https://www.evansville.edu/safety/report.cfm>

You may also choose to speak with a Confidential Resource. Confidential Resources are required to maintain confidentiality and cannot report violations to the Office of Institutional Equity:

University of Evansville

- Counseling Services: counselingservices@evansville.edu, 812-488-2633
- Health Center Professionals: healthcenter@evansville.edu, 812-488-2033
- University Chaplain: chaplain@evansville.edu, 812-488-5262

Harlaxton College

- College Nurse: Lesley Selby, RGN, +44 01476 403027, lseyby@harlaxton.ac.uk
- Counselling Services: counselling@harlaxton.ac.uk

