

Midland College Syllabus

2021 - 2022

CHEM 1411

General Inorganic Chemistry I Lecture

4 Semester Credit Hours

(3 Lecture/4 Lab)

Core Curriculum Course

Instructor Information:

Instructor: [Click here to enter text.](#)

Phone: [Click here to enter text.](#)

Office Hours: [Click here to enter text.](#)

Office: [Click here to enter text.](#)

Email: [Click here to enter text.](#)

Notice: Students MUST actively participate by completing an academic assignment required by the instructor by the official census date. Students who do not actively participate in an academically-related activity may be reported as never attended and dropped from the course.

Course Description:

Fundamental principles of chemistry for majors in the sciences, health sciences, and engineering; topics include measurements, fundamental properties of matter, states of matter, chemical reactions, chemical stoichiometry, periodicity of elemental properties, atomic structure, chemical bonding, molecular structure, solutions, properties of gases, and an introduction to thermodynamics and descriptive chemistry. Prerequisite: MATH 1314 College Algebra or equivalent academic preparation. High school chemistry is strongly recommended and TSI complete in Reading.

Core Objectives:

This course fulfills four hours of the Life and Physical Science requirement in the Midland College **Core Curriculum**. The Core Curriculum is a set of courses that provide students with a foundation of knowledge, skills and educational experiences that are essential for all learning. Please visit the [Midland College Catalog](#) for any questions about the core. As part of the core, this course addresses the following four objectives:

Critical thinking skills –. Students will demonstrate critical thinking skills by using appropriate calculations, analyzing experimental data, developing conclusions based upon trends in the data in course assignments, instructor created proctored exams, a departmental final exam, and in the execution of laboratory experiments / reports.

Communication skills – Students will submit an original written report (no Lab Manual template provided) that will include experiment title, an abstract, experimental protocols, results (data), and conclusions (interpretation(s) of

the data). The written reports will be required for the KHP/NaOH titration experiment. (see lab book) The report will be graded on legibility, order, and comprehension of the reader and the quality of the data and calculations.

Empirical and Quantitative skills – Students will demonstrate empirical and quantitative skills by analyzing real-world applications of mass measurement, volume measurement, concentration assessment, stoichiometry, titrations, paper chromatography, spectrophotometry, through course assignments, instructor created proctored exams, and a departmental final exam.

Teamwork – Students will work in groups of two or more to conduct laboratory experiments. Students will be graded on the quality of their data acquired together in addition to their individual conclusions.

Text, References and Supplies:

- Top Hat; General Chemistry ISBN:9780994802125
- Top Hat Access Card (OER) ISBN:9780986615108
- Scientific Calculator (Cell phones will not be permitted for use on tests.)

Student Learning Outcomes:

Upon successful completion of this course, students will:

1. Define the fundamental properties of matter.
2. Classify matter, compounds, and chemical reactions.
3. Determine the basic nuclear and electronic structure of atoms.
4. Identify trends in chemical and physical properties of the elements using the Periodic Table.
5. Describe the bonding in and the shape of simple molecules and ions.
6. Solve stoichiometric problems.
7. Write chemical formulas.
8. Write and balance equations.
9. Use the rules of nomenclature to name chemical compounds.
10. Define the types and characteristics of chemical reactions.
11. Use the gas laws and basics of the Kinetic Molecular Theory to solve gas problems.
12. Determine the role of energy in physical changes and chemical reactions
13. Convert units of measure and demonstrate dimensional analysis skills.

Student Contributions, Responsibilities and Class Policies:

Students will be expected to comply with the policies outlined in the Midland College student handbook. Instructor policies concerning attendance and academic behavior are consistent with the policies in the student handbook. Regular attendance is required to do well in this class.

Attendance Policy:

It is the responsibility of the students to know the policies and procedures associated with absences. These policies are set by instructors. Excused absences

may include, but are not limited to, illness, severe weather, and death in the family. Instructors will determine whether or not an absence is excused. Please visit the [Midland College Catalog](#)

Withdrawal Policy:

Students who have enrolled in a Texas public institution of higher education as a first-time freshman in fall 2007 or later are permitted to drop no more than six courses during the entire undergraduate career. This limit includes all transfer work taken at a Texas institution of higher education and to second baccalaureate degrees. This statute was enacted by the State of Texas in spring 2007 (Texas Education Code 51.907). Any course that a student drops after Census Day is counted toward the six-course limit if "(1) the student was able to drop the course without receiving a grade or incurring an academic penalty; (2) the student's transcript indicates or will indicate that the student was enrolled in the course; and (3) the student is not dropping the course in order to withdraw from the institution." Please visit the [Midland College Catalog](#)

Scholastic Dishonesty:

Midland College does not tolerate scholastic dishonesty or academic misconduct in any form. Please read the MC Student Handbook on this subject. Please visit the [Midland College Catalog](#)

Evaluation of Students:

Assessment Type	% of Grade	Grade Range
Lecture Exams	65%	A=90%
Lecture Assignments & Quizzes	10%	B=80%
Lab Average	25%	C=70%
		D=60%
		F=below 60%

Students will be evaluated based on the results of examinations and homework given throughout the semester. Students are expected to complete each exam. All normal lecture exams count equally. There will be no makeup exams this semester. The Final exam score counts as a normal exam and replaces your worst exam score if higher, or one missed exam score. (See Instructor Make-up Policy)

Course Schedule:

This class meets for 3 lecture hours per week and 3 laboratory hours per week. All sections have a common assessment. The common assessment for this class is shown in the schedule and is noted as such. For a tentative schedule of the class meetings and laboratory meetings, please refer to the schedule distributed to each student on the first class meeting (See Instructor Handout).

Non-Discrimination Statement

Midland College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following individual has been designated to handle inquiries regarding the non-discrimination policies:

Tana Baker

Title IX Coordinator/Compliance Officer
3600 N. Garfield, SSC 131
Midland, Texas 79705
(432) 685-4781
tbaker@midland.edu

For further information on notice of non-discrimination, visit the ED.gov Office of Civil Rights website, or call 1 (800) 421-3481.

Americans with Disabilities Act (ADA) Statement:

Midland College provides services for students with disabilities through Student Services. In order to receive accommodations, students must visit www.midland.edu/accommodation and complete the Application for Accommodation Services located under the Apply for Accommodations tab. Services or accommodations are not automatic, each student must apply and be approved to receive them. All documentation submitted will be reviewed and a "Notice of Accommodations" letter will be sent to instructors outlining any reasonable accommodations.

Math & Science Division Information:

Division Office: AHSF 124 (432) 685-4561
Division E-Mail: mns@midland.edu

Department Chair: Mr. John Anderson (432) 685-6737
Dean: Dr. Miranda Poage
Secretary: Sarah Anderson
Clerk: Liliana Orcutt

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