

CHEM 1501 - An Introduction to Chemistry

Summer 2026 Syllabus, Section 01, CRN 30030,

Credit hours: 3

Instructor

Janelle Mitchell

Professional Qualifications:

M.S., Chemistry, Youngstown State University

B.S., Chemistry, Youngstown State University

Senior Lecturer

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Additional Contact Methods:

Blackboard messaging.

Preferred Contact Method: email

Communication Expectations:

Emails will be answered within 2 business days. Please be sure to include your class (day and time) in your email.

How to Refer to me:

Professor Mitchell

Course Description

1501. Introduction to Chemistry. Metric units, dimensional analysis, chemical nomenclature, the mole concept, chemical stoichiometry. Emphasis on problem solving and the mathematics required for success in the study of chemistry. For students without high school chemistry and others needing preparation for CHEM 1510 or CHEM 1515. Three hours lecture, no laboratory. Prereq.: "C" or better in MATH 1510 or Level 20 on the MPT or one unit each of high school algebra and geometry. 3 s.h.

Course Readings

Group	Title	Author	ISBN
Required	Basic Chemistry 6th edition (Pearson+), digital rental	Timberlake and Timberlake	8220145125501

Hardcopy ISBN: 9780134878119

Looseleaf ISBN: 9780134986999

*The above ISBN are 3 different options for the same book. Do not purchase all 3.

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Schedule of Topics and Assignments

Day	Date	Reading(s)	Proposed Topic	Due/To Prepare for Class
Mon	6/29	CH 1/2	Introduction, Scientific Method, Math Review, Scientific Notation/ Significant Figures	

Wed	7/1	CH2/3	Conversion Factors, Dimensional Analysis/ Matter; Classifications	CH 1 and CH 2 Homework due Sunday, July 5th by 11:59 PM
Fri	7/3	No Class		
Mon	7/6	CH 3/4	Matter; Properties, Temperature, Energy/ Elements and Symbols	
Wed	7/8	CH 4	The Periodic table, Atoms and Isotopes	CH 3 and CH 4 Homework due Thursday, July 9th by 11:59 PM.
Fri	7/10		Exam 1 – Chapters 1, 2, 3, and 4	
Mon	7/13	CH 6	Ions, Nomenclature; Ions, Ionic Compounds, Polyatomic Ions, Molecular Compounds	
Wed	7/15	CH 5	Electromagnetic Radiation, Energy Levels, Sublevels and Orbitals, Electron Configuration	
Fri	7/17	CH 5/7	Periodic Table Trends/ The Mole, Molar Mass, Percent Composition	CH 6 and CH 5 Homework due Sunday, July 19th by 11:59 PM.
Mon	7/20	CH 7/8	Empirical and Molecular Formulas/ Chemical Equations	
Wed	7/22	CH 8	Balancing Chemical Equations, Chemical Reactions, Redox Reactions	CH 7 and CH 8 Homework due Thursday, July 23rd by 11:59 PM
Fri	7/24		Exam 2 – Chapters 6, 5, 7, and 8	
Mon	7/27	CH 9	Stoichiometry, Limiting Reactant, Percent Yield	
Wed	7/29	CH 9	Energy in Chemical Reactions, Enthalpy	
Fri	7/31	CH 10	Lewis Structures, VSEPR Theory, Molecular Geometry, Electronegativity	CH 9 Homework due Sunday, August 2nd by 11:59 PM
Mon	8/3	CH 10	Polarity, Molecular Polarity, IMF, Phase Changes	
Wed	8/5	CH 11	Gas Laws, Ideal Gas Law, Partial Pressure	CH 10 and CH 11 Homework due by 11:59 PM
Fri	8/7		Exam 3 – Chapters 9, 10, and 11	
Mon	8/10	12	Solutions, Solubility, Concentration, Dilutions, Colligative Properties	
Wed	8/12	CH 13/14	Reaction Rates, Equilibrium, Le Châtelier's Principle/ Acids and Bases, Buffers	CH 12 and CH 13/14 Homework due Thursday, August 13th by 11:59 PM
Fri	8/14		Final Exam - Comprehensive	

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.