

Chemistry

Romeo High School & Romeo Engineering and Technology Center

2017/2018 School Year

Course Description

Grades: 10-12 Credit: 1

Chemistry is the study of matter and the changes that it undergoes. Basic chemical concepts such as physical and chemical changes, atomic structure, and chemical bonding are covered. Laboratory work is an essential component of this course. This course fulfills the year requirement of chemistry as required for graduation.

Instructor Contact and Communication

Please visit our website for information regarding your specific teacher's information including contact information, communication, website, learning management system, availability, etc.

- [RHS Staff Directory](#)
- [RETC Staff Directory](#)

Materials

Text

- Buthelezi, T. (2008). *Chemistry: matter and change. Student ed.* New York, New York: Glencoe/McGraw-Hill.

Other Materials

- Chromebook
- Scientific Calculator

Curriculum

Curriculum Essentials - The following are the main topics students will be learning in this course throughout the year as denoted in the Michigan Merit Curriculum:

- **C5.2B** Distinguish between chemical and physical properties.
- **C1.1C** Convert between metric units and use significant figures correctly.
- **C4.10A** List the number of protons, neutrons, and electrons for any given ion or isotope.
- **C4.8e** Write the complete electron configuration of elements in the first four periods of the periodic table.
- **C4.9C** Predict general trends in atomic radius, first ionization energy, and electronegativity of the elements using the periodic table.
- **C5.5A** Predict if the bonding between two atoms of different elements will be primarily ionic or covalent.
- **C5.5C** Draw Lewis Dot Structures for simple compounds.
- **C4.4B** Identify if a molecule is polar or nonpolar given a structural formula for the compound.
- **C4.2d** Name and write the formula for ionic and molecular compounds.
- **C4.6a** Calculate the number of moles of any compound or element given the mass of the substance.
- **C4.6b** Calculate the number of particles of any compound or element given the mass of the substance.
- **C5.2A** Balance simple chemical equations applying the conservation of matter.
- **C5.2d** Calculate the mass of a particular compound formed from the masses of starting materials.

- **C2.2f** Compare the average kinetic energy of the molecules in a metal object and a wood object at room temperature.
- **C4.3g** Given the structural formula of a compound, indicate all the intermolecular forces present (dispersion, dipolar, hydrogen bonding).
- **C2.2c** Explain changes in pressure, volume, and temperature for gases using the kinetic molecular model. ($PV=nRT$)
- **C3.4A** Use the terms endothermic and exothermic correctly to describe chemical reactions in the laboratory and in diagrams.
- **C5.7g** Calculate the Molarity of a solution given moles of solute and liters of solution. Calculate the pH from the hydronium ion concentration.

Routines and Procedures

School Routines and Procedures

All RHS/RETC students are expected to:

- Arrive to class on time with all appropriate materials
- Be an active participant and learner
- Be a respectful member of the class
- Be responsible with your time, materials, efforts, assignments, etc.
- Follow all classroom rules

Course Routines and Procedures

This course requires laboratory work. During laboratory sessions, students are expected to follow all safety rules and procedures presented in the course. Students and parents will be required to submit a laboratory safety contract before entering the lab.

Student Behavior

See pages 22-32 of the [RCS Student-Parent Handbook](#)

Grading & Retake Policy

Semester Grades

Semester grades will represent a continuous collection of grades, allowing for more time to have more summative grades to be used to calculate each grade. Midterms and finals are a part of the summative grade. RHS/RETC does not employ or record quarter grades.

80/20 Weighted Scale

Summative assessments will account for 80% of the final semester grade, and formative assessments will account for 20% of the final semester grade as prescribed by the RCS 6-12 grading policy.

Retake Policy

In an effort to allow a student's grade to accurately reflect his/her knowledge/mastery of a concept, students will be allowed an opportunity to retake *most summative assessments. The process for re-assessment requires a request from the student, a reflection as to why a retake is required, and a discussion with the teachers as to what additional practice is required on the part of the student to be better prepared for the retake. Please see the [RHS Retake Procedures and Request Form](#) for more information.

*Summative assessments not eligible for a retake:

- Semester/final exam
- Laboratory assessments
- Research-based projects
- Project-based learning assignments

Grading Scale

A 93 - 100%	B+ 87 - 89%	C+ 77 - 79%	D+ 67 - 69%	F 0 - 59%
A- 90 - 92%	B 83 - 86%	C 73 - 76%	D 63 - 66%	
	B- 80 - 82%	C- 70 - 72%	D- 60 - 62%	

GPA Calculation - Standard 4-point grading scale:

A 4.0	B+ 3.3	C+ 2.3	D+ 1.3	F 0.0
A- 3.7	B 3.0	C 2.0	D 1.0	
	B- 2.7	C- 1.7	D- 0.7	