

# **CHEMISTRY I - HONORS**

## **Semester 2, Spring 2021**

**TEACHER:** Mr. Thomas H. Mills, III, M.A.  
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**PHONE NUMBER:** 410-943-4511 ext. 1564  
**ROOM NUMBER:** Room A203  
**PLANNING:** Period 3

**COURSE DESCRIPTION:** This course provides the basic principles of chemistry through a program of theory, experimentation, and problem solving. Lab exercises, teacher demonstrations, and video demonstrations illustrate the various physical phenomena. This course is offered for students who wish to continue advanced programs of study. In Chemistry I – Honors, science content is more rigorous, and technology is incorporated into the course. Next Generation Science Standards (NGSS) are embedded throughout the course to prepare students for the Maryland Integrated Science Assessment (MISA). Prerequisites: Biology I, Algebra I, and Algebra II *or* Geometry.

**MISSION STATEMENT:** Chemistry I – Honors provides a well-rounded background in the physical sciences. Central to the students' experiences will be hands-on investigations and real-world applications of the concepts. Students will have access to multimedia materials, including classroom labs, models, simulations, video, printed text, and Internet resources.

### **UNITS OF STUDY:**

1. Introduction to Chemistry, Measurement, Lab Safety, and Techniques (1.5 weeks)
2. Atomic Theory, Moles, Molar Mass (1.5 weeks)
3. Atomic Spectra, Quantum Model of the Atom, and Arrangement of Electrons (1.5 weeks)
4. Periodicity and Chemical Bonding (2 weeks)
5. Chemical Nomenclature, Composition and Reactions (2 weeks)
6. Stoichiometry (2 weeks)
7. Kinetic – Molecular Theory, Phases of Matter, and Gas Laws (1.5 weeks)
8. Solutions and Ionizations (1.5 weeks)
9. Acids, Bases, Salts and Chemical Equilibrium (2 weeks)
10. Thermochemistry (1 week)

**COURSE TEXTBOOK:** Modern Chemistry by Houghton, Mifflin and Harcourt (2017)

**ONLINE CHEMISTRY RESOURCES:**

- The Cavalcade o' Chemistry: <http://www.chemfiesta.org>
- Bozeman Science: <http://www.bozemanscience.com/ap-chemistry/>
- Cosmo Learning: <https://cosmolearning.org/courses/ap-chemistry-with-chemguy/>
- Khan Academy: <https://www.khanacademy.org/science/chemistry>
- Widener University: <http://science.widener.edu/svb/tutorial/>
- Frostburg University: <http://antoine.frostburg.edu/chem/senese/101/index.shtml>
- Grandinetti – Ohio State: <http://www.grandinetti.org/Teaching/Chem121/Lectures>
- Chemtutor: <http://www.chemtutor.com/>
- Interactive Periodic Table: [www.ptable.com](http://www.ptable.com)
- Web Elements: <https://www.webelements.com/>
- The Periodic Table of Videos: [www.periodicvideos.com](http://www.periodicvideos.com)
- Visual Periodic Table: <http://www.periodictable.com/>

**GRADING PROCEDURES****TERM GRADING:**

Announced Quizzes, Tests & Projects (Summative Assessments)	60%
Exit Tickets, Classwork & Laboratory Assignments (Formative Assessments)	40%

**LETTER GRADES:**

90% to 100%	A
80% to 89%	B
70% to 79%	C
60% to 69%	D
below 60%	E

**COURSE GRADING:**

Term I	47.5% of course grade
Term II	47.5% of course grade
Final Examination	5% of course grade

**ATTENDANCE, MAKE – UP WORK & LATE WORK**

**Topics in chemistry build upon each other and regular class attendance is extremely important for success in this course.** All assignments that are missed due to absences should be completed for credit. Missed assignments that may not be made up at home must be completed, by appointment, before or after school.

Make-up work can be completed as outlined in the Code of Conduct Handbook. Your work will be due within the time allowed in the Code of Conduct Handbook.

**GUIDELINES FOR SUCCESS****ASK FOR EXTRA HELP:**

Extra help is available after school hours. It is best to acquire extra help several days before a test or quiz. Do not wait until the night before a test or quiz to prepare for it.

**CLASSROOM RULES & PROCEDURES:**

1. Cell phones may only be used for instructional purposes at designated times. Cell phones must put away at all other times. Electronic devices used at inappropriate times must be surrendered to the teacher.
2. No food or drinks are allowed in the classroom.
3. Be in the classroom when the late bell rings per the NDHS tardy procedures.
4. Treat your peers and Mr. Mills respectfully at all times.
5. Participate as much as possible in large and small group discussions.

**GENERAL GUIDELINES FOR SUCCESS:**

1. **Do not cram for summative assessments.** Summative assessments are announced in advance so that you have time to prepare for them.
2. Ask questions if you do not understand. Your peers likely have the same question.
3. Do assigned reading before class. Some exposure to the material will make class less overwhelming.
4. Record assignments and assessment dates in your agenda. Avoid surprises.
5. Review your notes after class. Write down and ask questions that you still have regarding the information.
6. Do all assigned homework and remember to bring it with you to class.
7. Do not give up if you are unsuccessful in solving a problem or understanding a concept the first time. Review your notes, refer to example problems, re-read your text, and try again. If you are still unsuccessful, ask a classmate for help.