



Dallas High School Home of the Dragons



General Chemistry

2013-2014

Instructor: Lee Jones

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Office Hours: Tues-Friday 10:10-11:00 and 3:00-3:30. Additional times by arrangement.

Course Description: Welcome one and all! This course deals with the study of all the substances in our world, what they are made of, how they act, and how they interact with each other. In this course, you will practice essential skills in laboratory work, measurement using the metric system, and problem solving, while developing accuracy in measurement and graphing. Topics covered include lab safety, measurement and accuracy, water quality and purification, mixtures and compounds, structure of the periodic table and atomic theory, symbols, bonding, formulas and equations, chemical calculations (stoichiometry), gas laws, solubility, concentration of solutions, acid-base relationships and titrations, reaction rates, oxidation-reduction, and chemical equilibrium. Phew! But don't worry we will have fun doing it all.

Course Outline All 3 "Big Ideas" will be addressed in each unit, and on each Unit test

	Unit Topic	Summative Assessment
Unit 1	Chemical Foundations	Unit 1 Test
Unit 2	Atomic History	Unit 2 Test
Unit 3	Modern Atomic Theory	Unit 3 Test
Unit 4	Nuclear Chemistry	Unit 4 Test
Unit 5	Bonding and Structure	Unit 5 Test
Unit 6	Mole Concept	Unit 6 Test
Unit 7	Reactions	Unit 7 Test
Unit 8	Stoichiometry	Unit 8 Test
Unit 9	Solutions	Unit 9 Test
Unit 10	Acids and Bases	Unit 10 Test
Unit 11	Kinetic Theory	Unit 11 Test
Unit 12	Gases	Unit 12 Test
Unit 13	Organic Chemistry	Unit 13 Test

Standards to Be Assessed:

Big Idea 1: Matter and its Interactions- *How can one explain the structure, properties, and interactions of matter?*

- How do particles combine to form the variety of matter one observes?
- How do substances combine or change (react) to make new substances?
- How does one characterize and explain these reactions and make predictions about them?
- What forces hold nuclei together and mediate nuclear processes?

Big Idea 2: Scientific Inquiry- *How does the process of science actually work?*

- Can you create a sound scientific hypothesis using observations?
- Can you design and conduct a controlled experiment, field study, or other investigation to make systematic observations about the natural world, including the collection of sufficient and appropriate data?
- Can you analyze data and identify uncertainties in order to draw a valid conclusion that is supported by evidence?
- Do you understand that science is built upon the work of other scientists and is always changing based on new observations, questions, and technological advances?

Big Idea 3: Engineering and Design- *Can you design a valid scientific experiment?*

- Can you design an experiment that answers your questions while incorporating various trade-offs in time, money, ethics, public opinion, and other resources?
- Can you analyze data and determine the best conclusion or alternate scenarios?
- Can you refine your experiment to better answer your question and address future research needs?

Career Related Learning Standards: Career-related learning standards (CRLS) are fundamental skills essential for success in employment, college, family, and community life. We have integrated the Personal Management standard from the CRLS into all courses at DHS. **This standard will be assessed and communicated independent of the academic grade.** It is included below and mainly includes behaviors that will be assessed in this course.

- **Personal Management Standard:** Exhibit appropriate work ethic and behaviors in school, community and workplace.
 - Students will identify tasks that need to be done and initiate action to complete the tasks.
 - Students will plan, organize and complete projects and assigned tasks on time, meeting agreed upon standards of quality.
 - Students will take responsibility for decisions and actions and anticipate consequences of decisions and actions.
 - Students will maintain regular attendance and be on time daily.
 - Students will maintain appropriate interactions with colleagues.

Grading and Assessment:

Student's final grade for each course will be broken down into two categories:

- 1) **Academic:** based on assessments, tests, projects and performances that measure learning.
- 2) **Personal Management:** based on homework completion and other behaviors measuring the CRLS personal management standard.

The Final grade is calculated as follows: 75% of the course grade will be based on the **Academic** grade and **25%** on the **Personal Management** grade.

- Any items included in the Academic grade (PA) may be retaken and the higher grade recorded. Teachers may extend the retake time period, but as a rule all retakes need to be done within 2 weeks of the initial assessment.
- Students will complete extra preparation before retaking an assessment.
- Personal management work turned in late may be reduced by up to 50% credit.
- Retakes are not allowed on Personal Management assignments.

Academic Integrity: We expect students to express academic integrity by doing their own work and properly documenting information gathered from other sources. Students who violate the principles of academic integrity will be subject to disciplinary consequences (see Insubordination section of the on-line student agenda).

Tardies and Unexcused Absences: Points will be given towards the Personal Management grade at the end of each grading period (9 weeks/18 weeks) for daily attendance and punctuality. Points will be deducted for each tardy and each unexcused absence in that 9-week grading period. Overly disruptive behavior may also result in loss of attendance points.

Classroom Needs:

All students will need the following items:

- Scientific Calculator (log and EE button)
- 70 page, single subject, spiral bound, college ruled notebook
- Scissors

I would appreciate the following items to donate to a collective "bin" of student supplies:

- Scotch Tape
- Colored pencils
- Nitrile gloves (small, medium, large)

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Parents: Please keep the rest of the syllabus. By signing this form, you acknowledge that you have read and fully understood the expectations, rules, and standards associated with General Chemistry. If you have questions, please call 503-623-8336 ext 3910 or email using the email address provided in this document.

Parent Name: _____

Parent Signature: _____

Parent email Address: _____

Parent Phone: _____

Student Name: _____

Student Signature: _____