**Northwest High Magnet School**

**AP Chemistry 1-2**

**Course Syllabus 2016-17**

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| **Instructor:** | Rachel Benzoni |
| **E-mail:** | rachel.benzoni@ops.org |
| **Plan Periods:** | 5th and 8th periods |
| **Office/Classroom** | Math-Science Plan Center/Room 202 |

**Course Description**

This course expands and discusses in greater depth the physical concepts and skills begun in Chemistry 1-2 plus additional material such as molecular orbital theory, crystal structure, and ligand field theory. The students become familiar with college lab equipment, experimental procedures, and exacting lab reports. They should gain proficiency and confidence in numerical problem solving and essay explanation of the processes of physical, inorganic chemistry. This course meets the district requirement for chemistry. AP Chemistry is designed to be equivalent to a first-year college introductory chemistry course and follows the College Board curriculum.

**Instructional Philosophy**

Today’s students will grow up to be adult members of our society and I believe that not only is it my responsibility to prepare them for their future academic endeavors but to also provide them a knowledge base so they have a basic scientific knowledge to draw on throughout their lives. I provide all the tools which my students need, but I expect them to use these tools in order for them to succeed.

In AP Chemistry, there is so much content to learn that I could spend every day lecturing and still not get through all the content. In addition, students would not spend any time actively engaging in the content. Therefore, this year the course will be run as a “Flipped Classroom” where I require you to watch videos of lectures about the topics we need to learn, take notes, read the book, and write down questions that arise for homework. You will then bring your questions to class for us to explore through scientific reading and writing, demonstrations, lectures and interactive assignments, and then you will apply the concepts through labs using scientific equipment and procedures, practice problem activities, and independent homework.  Short quizzes and tests will also be used to determine your grasps of the concepts and prepare you for the format of the AP Exam. I will be teaching you about how you best retain information after you have taken notes. These skills will help develop your scientific thinking to be used for the rest of your life, help prepare you to find success on the AP Chemistry test to receive college Chemistry credit, and will also be used for success in future college courses of Chemistry. You will have deadlines to meet and requirements before you can move on to subsequent topics, but your completion of each topic will essentially be at your pace.

**Major Units of Study (timeline subject to change)**

Semester 1

* Chemical foundations
* Atoms, molecules and Ions
* Stoichiometry
* Chemical reactions and solution stoichiometry
* Gases
* Thermochemistry
* Atomic structure and periodicity
* Bonding
* Organic introduction

Semester 2

* Liquids and solids
* Solutions
* Kinetics
* Chemical equilibrium
* Acids and bases
* Acid-base equilibrium
* Solubility and complex ion equilibria
* Spontaneity, entropy and free energy
* electrochemistry

**Course Expectations**

* Complete coursework, both in and out of class, in a timely fashion.
* Participate during in-class discussion and cooperative learning opportunities.
* Complete formal lab write-ups.
* Create technology based projects and presentations.

**Class Rules and Expectations: *Be Safe, Be Respectful, Be Responsible***

* Rules and guidelines set forth in the student handbook will be followed in this class. Any student who distracts other students or the instructor interferes with the learning environment and should expect consequences.
* Attendance: Being in class, on time, is important for student success. Anyone entering the classroom after the bell has stopped ringing is tardy.
* Electronic Devices: No electronic devices (cell phones, mp3 players, games, etc.) are permitted to be seen, heard, or used in the classroom at any time.

**Safety Expectations**

Chemistry is a lab-based course with safety as an essential component. The safety guidelines support and encourage an investigative approach and laboratory instruction, while at the same time assisting in the development of a safe learning environment. Students will follow the Omaha Public Schools district guidelines on safety that is published in the science safety contract. Students will be provided a copy of the guidelines. The students, parents and/or guardians are expected to read the guidelines and sign and return the signature portion of the contract. The student will not be allowed to participate in the lab activities until the signed contract is returned.

**OPS Secondary Grading Practices**

All coursework and assessments are judged based on the level of student learning from “below basic” to “advanced.” This course will provide multiple opportunities to achieve at the “proficient” to “advanced” levels. Students are evaluated based on a proficiency scale or project rubric. Proficiency scales for this course are available upon request.

**Grading weight**

Formative 35% of final grade

Summative 65% of final grade

At the end of the grading period, scores are converted to a letter grade using this grading scale.

A = 3.51 – 4.00 A-= 3.01 – 3.50 B = 2.51 – 3.00 B-=2.01 – 2.50 C = 1.51 – 2.00 D = 0.76 - 1.50 F = 0.00 – 0.75

**Redoing/Revising Student Coursework**

1. Students are responsible for completing all coursework and assessments as assigned.
2. Students will be allowed redos and revisions of coursework for full credit as long as they are turned in during that unit of study while a student still has an opportunity to benefit from the learning. When time permits, teachers should allow the redoing or revising of summative assessments.
3. Students are expected to complete assessments when given to the class, or if a student was justifiably absent, at a time designated by the teacher.
4. Redoing, retaking or revising will be done at teacher discretion in consultation with the student and parent(s). Teachers may schedule students before, during, or after school to address needed areas of improvement if not convenient during class. The time and location for redoing, retaking or revising will be done at the teacher’s discretion in consultation with the student and parent(s).
5. Scores for student work after retaking, revising or redoing will not be averaged with the first attempt at coursework but will replace the original score.