**AP Chemistry Syllabus Fall 2015**

**Instructor:** Mr. Walsh **Room:** 180

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**School Website:** <http://www.mcfarland.k12.wi.us> **Class Website:** <http://mrwalshapchemistry.weebly.com>

Reference the High School website for the school calendar and grade book access. Academic calendar, assignments, syllabus, and other news can be found on the class website.

**Textbook:** Chemistry: Zumdahl and Zumdahl, Eight Edition, 2010. Textbooks will assigned in class and are generally for homework and personal reference as necessary. It will not need to be brought to class daily.

**Course Description:**

This course is designed to be the equivalent of the general chemistry course usually taken during the first college year. The course requires a working knowledge of chemistry and second-year algebra. The breadth, pace, and depth of material covered exceeds the standard high school chemistry course, as does the college-level textbook, laboratory work, and time and effort required of students. For some students, this course enables them to undertake, as freshmen, second-year work in the chemistry sequence at their institution or to register for courses in other fields where general chemistry is a prerequisite.

Advanced Placement Chemistry provides an orderly development of the fundamental concepts and principles of chemistry with an emphasis on inquiry and critical thinking skills including: problem solving, mathematical reasoning, and experimental investigations. The curriculum will cover the big ideas and enduring understandings outlined in the College Board Curriculum Framework for 2015-2016 with an in-depth study of such topics as thermodynamics, equilibrium, acid-base chemistry, kinetics, oxidation-reduction reactions and electrochemistry.

**Course Goals:**

1. For each student to master the big ideas of the College Board Curriculum Framework for 2015-2016.
2. To prepare students for success on the AP Chemistry Exam by mastering content and familiarity with the test design.
3. To hone student skills associated with proper scientific laboratory practices, data analysis, and scientific literacy.
4. To encourage the spirit of scientific investigation and with it the attitudes of accuracy in thought and work.

**Class Materials - Required materials for optimal class performance:**

Textbook

Lab Notebook\*

3-Ring Binder

Pens and Pencils

Scientific Calculator (Texas Instrument Preferred)

*\*Laboratory notebooks were purchased as part of your class fee.*

**Organization:**

* Unit 1 – Matter and Measurement
* Unit 2 – Atoms, Molecules, and Ions
* Unit 3 – Chemical Equations and Stoichiometry
* Unit 4 – Aqueous Reactions and Solution Chemistry
* Unit 5 – Gases
* Unit 6 – Organic and Biological Molecules\*
* Unit 7 – Electronic Structure of Atoms
* Unit 8 – Periodic Properties of the Elements
* Unit 9 – Thermochemistry
* Unit 10 – Basic Concepts of Chemical Bonding
* Unit 11 – Molecular Geometry and Bonding Theories
* Unit 12 – Intermolecular Forces and Kinetic Molecular Theory
* Unit 13 – Properties of Solutions
* Unit 14 – Kinetics
* Unit 15 – Equilibrium
* Unit 16 – Acid/Base and Aqueous Equilibria
* Unit 17 – Thermodynamics
* Unit 18 – Electrochemistry
* Unit 19 – Nuclear Chemistry (after AP test)

\*denotes a take-home unit (self-taught)

**Policies and Procedures:**

1. ***Grading*** – Grading is done on a percentage basis according to the following scale:

# Grading Scale

## A+ 100-99.5% B+ 89.4-86.5% C+ 79.4-76.5% D+ 69.4-67.5%

A 99.4-92.5% B 86.4-82.5% C 76.4-72.5% D 67.4-65.5%

A- 92.4-89.5% B- 82.4-79.5% C- 72.4-69.5% D- 65.4-59.5%

1. ***Grade Components***

i. *Participation* -- Our classes are not meant to be lectures, but rather active discussions. Each student is expected to participate in class and each student is expected to allow their neighbor and the rest of the class to participate. No “points” will be awarded for participation as active academic discourse and respectful classroom behavior is an expectation of all Spartans.

ii. *Homework* (15%) -- Students will typically have two to three graded homework assignments each week. No late homework will be taken with the exception being those associated with an “excused absence”. Students will receive a zero in all other cases, unless extenuating circumstances are explained to Mr. Walsh and an alternative plan is agreed upon.

iii. *Class Binder* (5%) – Students will be expected to maintain a well-organized binder to store all class handouts and note packets in. The binder will be checked regularly for completeness and organization.

iv. *Labs* (35%) -- Students will complete four to five labs each quarter. Students will be graded on laboratory technique (obeying lab safety rules & performing the proper technique according to instructions given prior to the lab), proper data documentation, and lab analysis.

iv. *Tests* (45%) -- Students can expect a test about every two weeks. There will be four chapter tests each semester, unless class schedules make section quizzes a desirable means to assess student understanding without having completed a chapter.

v. *Final* (20%) – The AP Chemistry final will be cumulative, covering topics mastered in both the first and second semester.

c. ***Tardies*** – Punctuality is critical for this course due to the amount and nature of the material we will be studying. Per MHS regulations, a student is tardy if they are not in the classroom when the bell rings. Each individual tardy will require 10 minutes after school with Mr. Walsh to discuss why you may be having trouble getting to class on time. No one will get there, but each tardy beyond 3 will result in detention and potential truancy tickets.

1. ***Absences*** – If it within your Earthly powers to make it to class, do so! If you are absent from class, check the bin for your absentee slip when you get back and schedule time with Mr. Walsh or a group of classmates to review what you missed. The absentee slip will include any hand-outs, labs, and assignments covered while you were gone. If you missed a lab, it is ***your*** responsibility to schedule a time (within **2-3 days**) after school to make it up. Assignments that were handed in during an ***excused*** absence are due the day you return. No late work resulting from an unexcused absence will be accepted. We will adhere to the school policies that you have the number of days you were absent (excused) plus one to make up other work.

**The AP Chemistry Exam:**

The AP Chemistry exam is scheduled for Monday, May 2nd, at 8:00 am…that’s right the very first one! We will discuss the test layout, topics covered, and other test strategies throughout the course.

**How To Succeed and Words of Wisdom:**

The next five months will go a lot more smoothly for you if you just accept the following now…

1. Plan on studying ***at least*** 2 hours a night. This is a college level course, meaning material will be presented to you in class and it will be your responsibility to supplement your learning at home by studying notes, reading the textbook, and researching topics online.
2. If you have problems with time-management and procrastination, make them points of focus for you this year. You ***will not*** be able to finish lab reports or cram for tests the night before they are due.
3. Get a study group of 4-5 people together now and meet regularly.
4. Plan on taking AP test, that’s pretty much the point of the class. Do not be discouraged by test scores. Keep in mind that 50% on the AP exam…is a 3.
5. Do not worry (too much) about your grade. Be prepared to fail, learn, persevere, and succeed. You will put yourself under a lot of stress if you demand an “A” out of this course.
6. The test was revamped in 2014, so we will be experiencing and learning a lot of new things together. We will not have as much practice materials as previous years, but I will do my best to get you prepped!
7. Be prepared to endure when people stare at you, mouth wide-open, because you told them you are taking AP Chem and to nod understandably when they stare blankly at you as you discuss what you are learning.

**Welcome to AP Chemistry!**