



# Advanced Placement Chemistry

2018-2019

**Teacher Name:** Ms. O'Brien

**West Michigan Aviation Academy:** 616.446.8886

**Contact Times:** Before (after 7:30am) & After School (before 5pm)

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## Purpose/Course Description:

The purpose of Advanced Placement Chemistry is to provide a college level course in Chemistry and to prepare the student to seek credit and/or appropriate placement in college chemistry courses. This course meets five times per week for a 55 minute period. Laboratory periods average about one day per every two weeks. There is an emphasis placed on depth of understanding of a topic, but the course also requires breadth of knowledge.

## Units of Study:

### **1<sup>st</sup> Semester**

- Big Idea #1: Chemistry Essentials (5 weeks)
- Big Idea #2: Intermolecular vs. Intramolecular Forces (4 weeks)
- Big Idea #3: Chemical Reactions (4 weeks)
- Exam Review (1 week)

### **2<sup>nd</sup> Semester**

- Big Idea #4: Chemical Kinetics (2.5 weeks)
- Big Idea #5: Thermochemistry & Thermodynamics (4 weeks)
- Big Idea #6: Equilibrium & Acids & Bases (7 weeks)
- Exam Review

### **After the Exam**

- Engineering Project(s) (after AP exam – end of the school year)

**Laboratory Work (general topics):**

- Mass % Lab
- Beer's Law Lab
- Determination of the Formula Lab
- Gravimetric Analysis Lab
- Separation Techniques Lab
- Conservation of Mass Lab
- Chemical Bonding Lab
- Redox Titration Lab
- Hess's Law
- Hand Warmer Lab
- General Kinetics Lab
- LeChatelier's Principle Lab
- % Acid Lab
- Acid-Base Titration Lab
- Buffer Lab
- Green Chemistry Lab

**Laboratory Notebook:**

A laboratory binder is required and **provided** for the course. All completed lab reports documenting all lab experiences must be included in the binder. The binder is checked after each lab.

**AP Exam Review:**

The final ten full class days before the AP Chemistry Exam are used for exam review and practice tests using old AP Chemistry exam materials. Students work in cooperative groups to solve free response problems from previous exams. One practice AP Exam will be administered outside of school time as part of the two-week review prior to the AP Chemistry Exam.

**Textbooks Used and Other Sources:**

Zumdahl, Steven S., et. al., Chemistry, 9th Edition. Boston, New York, Houghton Mifflin Company, 2014.

The College Board. AP Chemistry Guided Inquiry Experiments. Applying the Science Practices. 2013.

**Methods of Instruction:**

- Demonstration Investigation
- Hands-on Laboratory Investigation
- Class Discussions and Supplemental Lectures

**Evaluation/Grade Calculations:**

- Homework, in class work, etc. 20%
- Assessments 60%
- Cumulative Semester Exam 20%

**Grading Scale:**

Letter Grade	Percentage	Grade Point
A	95-100%	4.0
A-	90-94%	3.7
B+	87-89%	3.3
B	83-86%	3.0
B-	80-82%	2.7
C+	77-79%	2.3
C	73-76%	2.0
C-	70-72%	1.7
F	0-69%	0.0
INC	Incomplete Coursework	N/A

**\*Note:** A student who has a failing grade for the course but earns a 78% or higher on the cumulative semester exam, will receive credit towards graduation for this course.

**Course Work:**

- WMAA is committed to providing opportunities for students to show mastery of academic standards. Communication will occur frequently between the teacher and students concerning missing work. It is **the student's responsibility** to meet with the teacher to determine a plan of action to deal with missing work.



### Homework:

- Learning something new takes practice. In a typical week, AP Chemistry students can expect to complete 2-5 assignments, to practice new skills. The due dates for these assignments will be announced in class as well as posted on the week in preview. Students will sometimes be given class time to work on assignments with the support of their peers and teacher, however, the amount of class time given, as well as the amount of time needed to master a skill, will vary by assignment and by student. Any work that is not completed in class will need to be completed as homework by the due date. It is the student's responsibility to use allocated class time effectively to reduce the amount of homework and to seek additional support outside of class time if needed.
- At the start of the class on the day that an assignment is due, there will be a Homework Quiz in class. The Homework Quiz consists of 2-5 questions that students must complete individually. The questions on the Homework Quiz mirror the questions assigned to the students to practice. The grade for the Homework Quiz will serve as the student's homework grade. Some assignments will be graded on completion, as well.

### Late Assignments:

- Completion of late assignments is strongly encouraged, as the course work is critical for mastery of course concepts. Late course work will receive a 20% grade reduction. Students have **until the unit test** to complete missing work.
- If coursework is not turned in on time, a zero will be recorded in the grade book until the work is submitted. This zero will be accompanied in the grade book with a "missing" marker so that the reason for the zero is evident.

### Assessments:

- A student's mastery of academic standards is determined through performance on concept quizzes, unit tests, and cumulative semester exams, I will call these assessments. There will be 1-2 quizzes each week and a Test at the end of each unit (6 units=6 Tests).
- Assessments carry the greatest weight on the students overall grade in AP Chemistry and therefore students have the opportunity to **do corrections on each Assessment to earn back 50% of the points**. In order to do corrections, they must **notify the teacher** when they would like to take advantage of this opportunity and come in during one of the available office hours. They must also complete each correction before the next units test date. For example: if you want to do corrections for a Unit 1 quiz you will need to complete that before the Unit 2 Test.

**Consequences:**

- Unsafe or irresponsible lab practices will result in possible in-school suspension, as well as charges for damaged equipment.

**Classroom Policies and Expectations:**

- **Absence:** When absent, it is the **student's responsibility to get all missed work** and set up a time to meet with the instructor if necessary in order to clear up any confusion. For each day of class missed, students are allowed one day to make up the missed work. Any time a student misses class, it is encouraged that they check the google classroom/WIP to see what was done in class that day so that they are aware of what will need to be done to catch up.
- **Tardiness:** All students are expected to be in their assigned classroom before the final bell sounds. Any student that comes to class after the bell will be marked tardy for that class period. Three tardies will result in a call home, lunch detention, and Mr. Fisher will be notified. If the problem persists, further conversations will occur between Mr. Fisher, the student, and his or her family to determine a plan of action to correct the behavior. Tardies will affect students ability to participate in extracurricular activities.
- **Academic Dishonesty:** Academic dishonesty including, but not limited to, cheating and plagiarism will result in the student receiving no credit for the assessment. Restoration will be at teacher discretion.

**Character:**

Additionally, students will be evaluated on their character choices for each course. The character evaluation will reflect student mastery of WMAA's critical character expectations: be respectful, be responsible and do your personal best.

3 – Exceeding Expectations

2 – Meeting Expectations

1 – Currently Not Meeting Expectations

**Grade Book Available Online:**

- Parents and students are encouraged to check progress via PowerSchool at <http://ps.westmichiganaviation.org/public/>.