Advanced Chemistry Course Syllabus 2014-2015

**Instructor:** Mrs. Ellis, Mrs. Packard

**Email:** [Katharine.ellis@bvsd.org](mailto:Katharine.ellis@bvsd.org); [kathleen.packard@bvsd.org](mailto:kathleen.packard@bvsd.org);

**Website:** On the Monarch Website [www.schoology.com](http://www.schoology.com) code RC8GX-P32R8

**Office:** B-205 (upstairs science offices)

**Classroom:** Packard B-212

**Lab Consumables Fee:** $15.00 (due Friday **9/6/2014**, revtrak.net)

**Office Hours:** Mon: 2:30-3:30; Tues 3:00-3:30; Weds 8:20-9:16 and 3:00-3:30 or by appointment

**I GOALS:** The goal of Chemistry is to study concepts from the BVSD science curriculum guide on Chemistry. The objectives of the course are for students:

* TO CULTIVATE INDEPENDENT CRITICAL THINKING/PROBLEM SOLVING!
* To increase content knowledge, understanding, and appreciation of chemical concepts;
* To develop an understanding of experimental processes (scientific method) and master experimental skills (laboratory techniques);
* To become aware of the role of Chemistry in their everyday lives and, thus, become more responsible and enlightened consumers;
* Prepare for college academics;
* To prepare for study in advanced scientific courses.

**II TEXT:** Zumdahl, Introductory Chemistry: a Foundation, Sixth edition, Brooks/Cole, 2008.

You will be issued a book the second week of classes. It is your responsibility to maintain the quality of your text. Make sure you write down the condition of your book on the check-out form as fees will be applied at the end of the year for damage. Although we will use the book often for reading purposes**, you do not need to bring your book to class**.

**III CLASS MATERIALS/SUPPLIES:** Bring these to class every day – yes, every day.

* **Writing utensils.** Pens (black or blue) or pencils.
* **Binder**. You will have a number of worksheets associated with each chapter. A 3 ring binder is suggested with looseleaf paper. Keep this notebook for chemistry only. Dividers should be used to separate out 3 sections: Class Notes, Lab Reports, Worksheets
* **Scientific calculator.** Please get this ASAP**. Cell phones are not to be used in class**. Make sure it is a “Scientific Calculator” with an exponent, log, and square root function. Graphing calculators are suggested. Make SURE it is labeled with your name on the case as well as on the back or inside the battery case. Whiteout or silver paint pens work well.

**IV. COURSE TOPICS:**

|  |  |
| --- | --- |
| ***First Semester*** | ***Second Semester*** |
| 1. Measurements, conversions, scientific notation and significant figures. | 8. Thermochemistry and energy change. |
| 2. Properties of chemical compounds and basic atomic theory. | 9. Quantum theory, electron configuration, periodic properties |
| 3. The periodic table. | 10. Bonding and Molecular structure |
| 4. Formula and equation writing, balancing, and predicting. | 11. Gas properties and gas laws |
| 5. Chemical reactions and driving forces. | 12. Kinetics and equilibrium. |
| 6. Stoichiometry and the mole concept. | 13. Solution chemistry. |
| 7. Limiting Reactants | 14. Acids, bases, indicators, buffers. |

**V GOALS:** The goal of Advanced Chemistry is to study concepts from the BVSD science curriculum guide on Advanced Chemistry. The objectives of the course are for students:

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**VI CLASS RULES:**

**#1. Treat yourself, your classmates, and your classroom with compassion and respect!**

* Put-downs, name-calling, profanity, and vandalism will not be tolerated.
* Bring your stuff with you everyday. This includes everything in the materials/supplies list and your BRAIN! I will tell you a day ahead if you need to bring your textbook.
* Personal electronic devices (i.e., **iPods**, MP-3s, **cell phones**) are **NOT** to be used during class **unless permission is given**. Please have them turned off and stowed safely away. Any disruptions from these items will warrant their confiscation till the end of class, no prior warning is necessary. This includes texting under the desk.

**#2. Observe all safety rules!**  (see Safety Rules attached)

* You may leave the room only with permission from me.
* Absolutely no food or drink in the classroom.\* Because our rooms are also our labs, this is important not only for your safety and the safety of others, but also to make the laboratory a means for testing in a professional and scientific manner. (\*Bottles of water are permitted. They must be completely sealable and are to remain only at your desks never at the lab tables.)

**#3 Punctuality:**

* **Tardiness –** A student arriving more than 10 minutes late to class will constitute an unexcused absence. If you are more than 10 minutes late to class, any assignment for that day will receive a score of 0. I will give a bonus of 10 points to add to any assignment (other than the final exam) if you have zero tardies at the end of the semester. For each tardy without a valid note, you will lose 2 of those bonus points.
* **Bathroom -** I will let you go during class but **do not** ask if we are in the middle of lecture/class discussion. Only one student at a time is allowed to go. If you are gone more than 5 minutes it will be counted as a tardy. Phones should be left on front desk when you leave.

**#4 Academic Honor Code:**

* You are to submit only your own work from your own thoughts and processes. This means you CANNOT copy the answers for labs from your Lab partners. (You can all use the same data as collected by the group)
* You are not to participate in anything that would provide an unfair advantage to your own or another’s academic efforts.
* Students failing to comply with this code are subject to disciplinary action through me as well as the Monarch administration, no warning is necessary.

**#5 Homework Policy**

* This year, we will be implementing a Flipped Classroom method. Your nightly homework will consist of preparing yourself for the next day’s work by watching an online video about the topic. You should plan to take notes on the video as needed to be fully prepared to work the next day in class. I will be checking your notes or using other forms of accountability daily before allowing you to begin the classwork. Virtually all classwork in this class will consist of worksheets passed out after confirmation that you have come prepared to class.

**#6 Late Work and Make-ups:**

Monarch High School Policy states that assignments must be turned in on time.  Teachers are not expected nor required to accept late work.  Failure to submit work WILL result in a “zero” grade. My policy is as follows:

* This is an advanced-level course for which you are receiving a weighted GPA; as such you are expected to be responsible for your actions and for completing your work on time. Obviously, there may be times you miss class due to illness or other excused absence. For any missed tests, quizzes and experiments, you are expected to complete them **in accordance with school policy**. This means that if you are absent the day of the test, you will be expected to take the test on the day you return to school. If you are absent on the review day prior to the test, you will still be expected to take the test on the day you return to school. All worksheets and reviews can be found online. Missed experiments will **need** to be performed in B212 during tutor times on M or W or by making an appointment.
* Homework, lab reports or prelab questions will NOT be accepted late for full credit for any reason other than illness or family emergencies. If you attend a school-sponsored field trip, you know well in advance when you will be gone and are expected to turn in your work PRIOR to leaving. If, for some reason, you fail to turn in work when it is assigned, you will lose 50% the minute it is late. However, once I return the graded assignments, you will receive a 0 for that assignment permanently, regardless of how badly it affects your grade at the end of the semester.

**#6 Retakes:**

Monarch High School Policy states that reassessment should reflect efforts of relearning and reteaching that occur prior to any reassessment and opportunities for reassessment are limited by teacher discretion. My policy is as follows:

* Under exceptional circumstances, I may allow you to retake a test, however, there will be additional work on your part to justify my putting in the extra work to rewrite a test. In addition, you can expect that the retake will be more difficult than the original test and entirely multiple choice questions, so prepare accordingly.

**VII ASSESSMENT**:

**Grading – please do not waste your time and mine by asking me to round up your grade.**

A = 90.00 - 100%; B = 80.00-89.99% ; C = 70.00-79.99% ; D = 59.99-69.99% ; F = <59.99%

**Grading Procedure:**

Formative (Daily Homework) 10%

Summative (Lab reports) 25%

Summative (Quizzes and Projects) 15%

Summative (Tests and Lab Tests) 35%

Summative (Final Exam) 15%

**SAFETY IN THE LAB IS ESSENTIAL!!**

## SPECIFIC SAFETY RULES

* Always wear safety glasses (over your eyeballs) !
* Wear clothing that is appropriate for labs: shoes (closed toe) must be worn at all times; your body should be covered during lab (this is not the time or place to show your skin); don’t wear your favorite, most precious clothes to lab; long hair should be tied back.
* Always read any prelab instructions and observe all of the warnings or cautions.
* Before the lab, directions will be given. Listen to the directions carefully because some safety issues may be addressed.
* Many chemicals are poisonous and very dangerous. In fact you should not put anything in your mouth during lab, including gum, food, drinks, etc.
* Never taste, touch or smell any chemicals during lab.
* Make sure that all glassware is **clean** and dry before and after you use it.
* Read the label on containers twice before removing or returning chemicals.
* Hot glass and cool glass look the same. Never handle with your bare hands items that have been heated.
* Do not heat anything in a closed container. The expanding gases could cause the container to explode or crack and blow up in your face.
* Do not heat any chemical or item unless instructed to do so.
* Round things roll. (Thermometers and test tubes are prone to this phenomenon.)
* Always tend an open flame or hot plate!
* Never look down into a heating vessel.
* Never mix chemicals together unless you are instructed to.
* Never make chemical substitutions.
* Never put chemicals back into the storage container unless you’re instructed to do so. We do not want to contaminate any chemical stock.
* Never tilt a test tube or flask towards anyone.
* **Dispose of materials only as directed.** Never put solid waste in the sinks! After discarding liquids in your sink, always flush the sink with cool water.
* Know where the fire extinguisher is located. Know where the eyewash is located.
* Know how to call for help.
* If glassware gets broken or chemicals are spilled inform the teacher immediately.
* All spilt liquids, including water, must be wiped up immediately.
* Only clean up with the appropriate equipment – if unsure what is appropriate, ask.
* If there are any injuries, even apparently minor, notify the teacher immediately.
* All equipment and material must be left in the lab.

**NO HORSEPLAY WILL BE TOLERATED DURING LAB.**

**ANYONE ACTING IRRESPONSIBLE OR DANGEROUS WILL NOT BE ALLOWED**

**TO FINISH THE LAB AND WILL RECEIVE A ZERO ON THAT LAB.**

## Student Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_

## Contract Signatures and Information Sheet

## I consider the Chemistry Course Description and Safety Rules to be a student contract.

**Students**: Please re-read the syllabus (also available on website) so that you are fully knowledgeable and comfortable with the material in the Course Description and Safety Rules for Chemistry.

Students please complete the following:

**Do you have any severe allergies? Please List: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Do you wear Contact Lenses? YES NO**

**Anything else I should know? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Parent/guardian(s)**: Please review this packet (Syllabus plus Safety) so that you are aware of the procedures and responsibilities associated with this class.

Please feel free to communicate with me about any concerns that you may have during the year. I invite you to contact me for extra help if needed, or to simply chat. Email is the best way to communicate with me. I look forward to seeing both you and your son or daughter at back-to-school night, at parent conferences, and throughout the school year.

**By signing below, I understand and agree to these requirements, especially the Academic Honor Code, Classroom Policies and the Safety Rules:**

Student name (print):

Student e-mail\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Student signature: Date:

Parent/guardian (s) signature: Date:

Parent/guardian Email

*Please return this signed no later than Weds Sept 3*

*All students must have a contract signed before I will post their grades.*

*This will be placed in a binder for my records, so please do not fold or wrinkle it.*

*Thanks!*

CLASSROOM POLICIES

Please read the following policies for Advanced Chemistry and put your signature at the bottom as indication that you are aware of the policies for Advanced Chemistry.

**LATE WORK AND MISSED ASSIGNMENTS**

Monarch High School Policy states that assignments must be turned in on time.

* For any missed tests, quizzes and experiments, you are expected to complete them in accordance with school policy. Missed experiments will need to be performed in B212 during tutor times on M or W or by making an appointment.
* Homework, lab reports or prelab questions will NOT be accepted late for full credit for any reason other than illness or family emergencies. If you attend a school-sponsored field trip, you know well in advance when you will be gone and are expected to turn in your work PRIOR to leaving. If, for some reason, you fail to turn in work when it is assigned, you will lose 50% the minute it is late. However, once I return the graded assignments, you will receive a 0 for that assignment permanently, regardless of how badly it affects your grade at the end of the semester.

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**TARDY POLICY**

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* I will give a bonus of 10 points to add to any assignment (other than the final exam) if you have zero tardies at the end of the semester. For each tardy without a note from a teacher, you will lose 2 of those bonus points.

Grade Scale:

A = 90.00- 100%; B = 80.00-89.99% ; C = 70.00-79.99% ; D = 60.00-69.99% ; F = <59.99%

By signing below, I acknowledge the above classroom policies of Advanced Chemistry.

Student Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Parent Signature\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_