

**Chemistry: Syllabus**  
**Instructor: Mr. Shannon**



**Contact Information**

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**General Course Description**

Chemistry is the study of the composition of matter and the changes that matter undergoes. Topics such as atomic structure, periodicity, bonding, formula, gas laws, solution processes, acids and bases, chemical reactions, kinetics, environmental issues, and nuclear chemistry are covered in this course. The history of the development of chemistry and the application and relevance of chemistry to other sciences are reoccurring themes. Lab experiments allow students to experience chemical and physical changes in matter and to evaluate results qualitatively and quantitatively through measurement and graphical representation. This course is designed for the college-bound student. Students should expect a demanding daily homework load as well as projects, quizzes, tests, and laboratory write-ups. A high level of understanding in Algebra and in scientific methods is necessary for success in this course.

**Daily Class Materials Needed**

*Student Planner	*Modern Chemistry textbook	*3 Ring Binder/Folder
*Notebook	*Pen/Pencil	*Calculator

**Daily Academic Expectations and Work Habits**

**1. BE ON TIME AND PREPARED FOR LEARNING**

**\*Respect for Others (Teachers, Students, and Community)**

*-Ways to Show Respect to Others:*

1. Make good eye contact when communicating with others

2. **BE ON TIME!**

Punctuality is vital in today's world. Virtually any job you may have will require you to be on time and ready to work. You must be in your seat when the bell rings. **If you are late, you must have a pass from the office or the teacher who detained you or you will be counted tardy.** You will receive one free tardy, every subsequent tardy will result in a problem solving session with Mr. Shannon.

3. Listen!

**2. COMPLETE ASSIGNED TASKS ON TIME**

**\*Make Hard Work Your Passion**

-The simplest way that an individual can achieve a higher degree of success in any endeavor is simple: "I'm going to outwork you!"

-The harder you work, the harder it is to surrender to any challenge in life....PERIOD!

We do a significant amount of cooperative/group learning. You are expected to contribute to your group and work with others. Failure to do so will result in your removal from groups and subsequent individual work.

**3. DEMONSTRATE ACADEMIC PROFICIENCY**

**Cheating is not tolerated in this class.** Any student caught cheating will receive an automatic office referral. In addition, the student will be required to make-up the assignment and may receive a maximum of 50% on the make-up assignment. Cheating is defined as passing off another's work as your own. This includes copying or stealing answers, whether it be daily work or assessments. (Reminder: Life is full of choices...)

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"Good habits result from resisting temptation."

### **Indian Proverb**

#### **Homework**

Expect to see homework on a nightly basis throughout the year. Homework will usually involve reading material from the text and answering problems associated with lab work, activities, and in-class discussions. It will also include some project work, laboratory reports, and study for examinations. Each homework assignment carries a due date or deadline. The deadlines in this course are very reasonable and **I expect that you will put forth effort daily in this class to complete these assignments.**

If you do not turn in an assignment on time, the following consequence & options will be given to make-up the assignment.

#### **Consequence**

1. The student will be required to complete the section review questions, in addition, to the original assignment to give an "extra" opportunity for learning.

#### **Options**

1. Complete the assignment by the end of the day and turn in the completed work, with additional problems, to Mr. Shannon's room and receive a 10% deduction.
2. Come in the following morning before school and complete the assignment. Student will receive a 25% deduction on their grade for this option.
3. If the assignment is not turned in the following morning, student will receive an academic lunch detention, for that day, where they will be expected to complete the assignment, in full. The student will receive a 50% deduction on their grade for this option, as well.

\*\*If a student has two late assignments, the next late assignment will result in a problem solving session with Mr. Shannon. Each subsequent late assignment will also result in a problem solving with communication with parents added at each level.

"We are what we repeatedly do. Excellence then, is not an act, but a habit."

### **Aristotle**

#### **Academic Assistance**

Due to extracurricular responsibilities, if students are in need of academic assistance in Mr. Shannon's classes, the following times will be set aside for academic assistance:

1. Before School (7:30 - 8:15 PM)
2. Home Room
3. Mr. Shannon's Plan Period

#### **Class Absences**

\*If a student misses class due to a school related event, the student is responsible for getting their assignments ahead of time and making sure that they are turned in, completed before they leave.

\*If a student misses class due to illness or a non-school related absence, that student will have one day to make up their work for each day they are gone. The materials can be found in the vertical paper holders.

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### **Class Participation**

When you are in class, I expect you to be ready to learn. I expect each of you to be an active participant in your learning. While I am speaking, you should be actively listening. If you have a question raise your hand, and I'll be happy to try and answer it. When I ask questions, I will either call on students to answer or ask for volunteers, so be ready. There will be days when you will be graded on how well you participate in the class.

"Not to know is bad, not to wish to know is worse."

### **Nigerian Proverb**

### **Bell Work**

Every day at the beginning of class, you will be expected to complete bell work. The bell work will consist of a "next-time" question that addresses information that will be covered in class that day. The bell work will be kept in your notebook and will be completed the within the first 5 minutes of class. At the end of each week, a bell work quiz will be given to assess the material learned for the week.

"It is our attitude at the beginning of a difficult task which, more than anything else, will affect it's successful outcome."

**-William James**

### **Grading Policy**

For each chapter or unit that is learned during the year, we will have four basic grades:

1. Homework (10-50 pts)
2. Lab Assignments (10 - 50 pts)
3. Section/Unit Quizzes (10 - 50pts)
4. Chapter Assessment (150 - 300 pts)

You will also have projects assigned during the semester, which will be graded using a rubric and will be worth between 100 - 300 pts.

Your semester final assessment will be worth **20%** of your semester grade.

### **Grading Scale**

A+ 98-100	B+ 92-90	C+ 82-84	D+ 75-76
A 95-97	B 88-89	C 79-81	D 73-74
A- 93-94	B- 85-87	C- 77-78	D- 70-72

### **Extra Credit**

You will have the opportunity to do some extra credit with every chapter. It can be a great asset to help you improve your grade. It is meant as a tool to help you better understand the material and help you prepare for tests. Therefore, I will only accept it, if turned in before the tests. Also, it should not be done in place of your regular homework, instead it is meant as a supplement. You may do a maximum of 20 points of extra credit per chapter.

Extra Credit is done on the following website associated with the text book:

<http://www.go.hrw.com>

Once at the home page type in the keyword: HM2 HOME

\*More information on the extra credit will be given at a later date.

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**Daily Behavioral Expectations**

**1. USE WORK TIME APPROPRIATELY**

***\*Discipline Yourself So No One Else Has To***

-Discipline is the internal mechanism that self-motivates you! It is essential to success, whether individually or in a group.

-To accomplish anything of real quality requires discipline and having the patience to do things right, the first time.

-Self discipline is a matter of how hard you are willing to work WHEN NO ONE IS WATCHING!

"Disciplining yourself to do what you know is right and important, although difficult, is the high road to pride, self-esteem, and personal satisfaction. "

**Brian Tracy**

**2. DEMONSTRATE RESPECT FOR PEOPLE AND PROPERTY**

***\*Respect Yourself & Others***

**-Respect for Yourself**

*-Ways to Develop Self Respect:*

1. Take responsibility for your actions! (See Below)
2. Be true to yourself!
3. Be willing to laugh at yourself!

**-Respect for Your School and School Property**

*-Ways to Show Respect for School Property*

1. ASK FIRST to borrow an item (PLEASE!)
2. Return all items to their proper locations when you are done! ( THANK YOU!)
3. Take responsibility for materials in your possession!

"I must respect the opinions of others even if I disagree with them."

**Herbert Henry Lehman**

"I never could have done what I have done without the habits of punctuality, order, and diligence, without the determination to concentrate myself on one subject at a time."

**Charles Dickens**

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**3. RESPOND APPROPRIATELY TO MR.SHANNON'S DIRECTIVES**

**\*Take Full Responsibility**

**-Life is full of CHOICES.....Each choice bears a consequence!**

-If you make a positive choice, enjoy the rewards!

-If you make a negative choice, accept the consequences!

(DO NOT MAKE EXCUSES!)

-Responsibility is a constant state of being that evolves!

**-We cannot pick and choose the days that we wish to be responsible!**

-RESPONSIBILITY = ACCOUNTABILITY = OWNERSHIP

-Ways to Become More Responsible:

1. Assume responsibility for a situation and force yourself to cope with it
2. Make yourself accountable for the "little things" each day.  
These are the things that develop character!
3. DO NOT MAKE EXCUSES!  
-Whining/Blaming Others....."LOSERS LIMP"

"Nobody can do it for you."

**Ralph Cordiner**

"The willingness to accept responsibility for one's own life is the source from which self-respect springs."

**Joan Didion**

**Mr. Shannon's Directives:**

1. Book bags are NOT allowed in class and are to be kept in your locker during the school day. Small purses (smaller than a text book) will be allowed until they become a distraction. If they become a distraction, they will not be allowed and must be kept in the student's locker. This will be dealt with on an individual basis.
2. Students may use iPods/mp3 players only with Mr. Shannon's permission, during individual study time the final 5 minutes of class to listen to music. They MAY NOT be used during any quizzes/tests. If they become a distraction (Ex/Sharing earpieces, too loud, etc...), they will be confiscated by Mr. Shannon and returned after school. If they are confiscated, that student will have a ONE WEEK suspension from using them in class.
3. To prevent distractions during science class, any cell phones, iPhones, and iTouches that are in a student's possession and not in their locker, must be TURNED OFF and placed on the corner of your desks during science class. Any phones that are not placed on the desk and are discovered, whether off or not, will be confiscated and turned into the office with a referral. If a phone "goes off" during class (Ex/Vibrates, flashes, or rings), the cell phone will be confiscated and turned into the office with a referral.
4. Due to safety and custodial issues, other than water, students will not be allowed to bring any food or drink into the classroom during science lab. Water must be left on your desks and not brought into the lab area. Any other items brought to science class will be immediately disposed of into the garbage.

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**COURSE OBJECTIVES AND SCHEDULE**

Unit 1 – Introduction of Chemistry & Organization of Matter (1<sup>st</sup> Quarter)

- True Colors Personality Survey
- Class Expectations and Guidelines
- Class Syllabus and Guidelines
- Lab Procedures
- Lab Safety
- Scientific Research
- Physical and Chemical Properties
- Physical and Chemical Changes
- Classification of Matter
- Scientific Method
- Scientific Measurements
- Structure of the Atom
- Atomic Theory and Models
- Electron Configurations

Unit 3 – Phases of Matter (3<sup>rd</sup> Quarter)

- Kinetic-Molecular Theory
- Pressure
- Gas Laws
- Volume-Mass Relationships
- Ideal Gas Law
- Stoichiometry of Gases
- Effusion and Diffusion
- Liquids
- Solids
- Changes of State
- Water
- Types of Mixtures
- Solution Process
- Concentration of Solutions
- Aqueous Solutions

Unit 2 – Language of Chemistry (2<sup>nd</sup> Quarter)

- Periodic Table and Properties
- Chemical Bonding
- Covalent Bonding
- Ionic Bonding
- Metallic Bonding
- Molecular Geometry
- Chemical Names
- Oxidation Numbers
- Chemical Formulas
- Chemical Reactions
- Types of Chemical Reactions
- Stoichiometry
- Limiting Reactants and Percent Yield

Unit 4 – Acid/Base and Equilibrium Reactions (4<sup>th</sup> Quarter)

- Properties of Acids and Bases
- Acid/Base Theories
- Acid/Base Reactions
- pH Concept
- Determining pH/Titrations
- Thermochemistry
- Driving Forces of Reactions
- Reaction Process
- Reaction Rate
- Nature of Chemical Equilibrium
- Equilibrium of Acids, Bases, and Salts
- Solubility Equilibrium
- Oxidation and Reduction
- Balancing Redox Reactions
- Oxidizing and Reducing Reagents
- Electrochemistry