Chemistry 513

Scarsdale High School

2014 – 2015

Welcome to Chemistry 513 at Scarsdale High School.

I am very excited to be your instructor and look forward to helping each of you explore and understand the basic concepts and principles of chemistry. I thoroughly enjoy this subject and hope that you will as well. But I also understand that studying chemistry is not everyone's life long ambition (hopefully I can change of few or your minds!!!). Therefore I will strive to make this subject as relevant to your lives as possible while still covering the course curriculum. Remember that chemistry is a critical part of the life sciences as they are understood today. So anybody hoping to enter the health professions must have a strong fundamental understanding of bio-chemistry which is firmly based upon the subjects that we will cover during this year.

Expectations

I come to school everyday ready to provide each of you with the best learning environment that I possibly can. I expect that each of you will do the same. So make sure that you have the appropriate writing instruments, notebooks and calculator. Please do not ask me to borrow one of these items – I am not Staples! Usually there are plenty of extra textbooks available in the classroom so it is unlikely that you will need to bring your book to class. Should the supply of textbooks get used up this term, then you may need to bring your textbook to class to use a reference.

I view each student as an individual and will work with each of you to maximize your understanding of chemistry. I will approach each of you as a young and responsible adult that will be diligent in keeping up with your course work and working to the best of your ability. My preference is to work with my students directly, but I will quickly include advisors, deans, parents and/or administrators if the appropriate corrections are not made expeditiously.

Based upon my experience with other science departments, chemistry is typically the first science class that will pose a real challenge to every student in the classroom. Anybody that has had experience with New York State Regents Living Environment and Earth Science courses knows that the curriculum is designed so that all students can pass the course. However, high school chemistry (and physics) is typically viewed as a college preparatory class. Subsequently, the courses are much more challenging and will require considerably more work each week. My general rule of thumb is that if a student expends the same amount of effort for chemistry as they did for biology, then that student's score will drop by about 20 points based upon a 100 point scale. So if you received an 80 in biology, your chemistry score will be somewhere around 60 if you put in the same level of effort.

Course Outline

The course will cover more than 1 chapter every two weeks. Each topic will include a laboratory assignment with a written report. Chemistry is a subject best learned by getting your hands "dirty" in the lab. So I expect that everyone will actively participate in these activities.

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The course begins with the smallest particles (electrons, protons and neutrons) and builds up to complex chemical interactions (redox reactions) between molecules. Some of the materials you will recognize from your previous science work while other material will be brand new.

Important: The material is cumulative (each chapter builds upon the previous chapter). If you get behind in your understanding, the new material becomes that much more confusing. It is a vicious cycle if you get caught in it. If you are having trouble with a concept or principle, please seek help from classmates, other instructors, or even me as soon as possible.

Assessment

In order to demonstrate your comprehension of the material, I will administer a number of different assessment vehicles. Each chapter will include vocabulary words, problem based homework and a quiz. **The content quizzes will not be announced**. Additionally, there is no make-up quiz offered. However, to compensate for times when you cannot attend class due to a doctor's appointment or some other reasonable event, I will add points at the end of the marking period, typically 10-15 points, which will "make-up" for the missed quiz points. In addition to the above listed assessments, I will also administer unit exams. These exams will contain the concepts and principles from 1-3 chapters' worth of material. These exams will be announced and make-up exams will be available for students per the school's policy. A comprehensive final exam, New York State Chemistry Regent Exam, will complete the course in June.

Quizzes are generally done in the first 5-10 minutes of a class period. Any student arriving late to class will not be allowed to take that quiz.

Laboratory reports will be submitted via Google Docs. No exceptions! Reports can be submitted up to 11:59:59 pm on the due date of that laboratory assignment.

Lecture notes will be done via the SmartBoard in the classroom. I will post each day's notes within 3-4 days of the lecture.

Reading: Each chapter will include reading sections. While most of this material will be covered in class during the lectures, **NOT** all of it will be. Students are responsible for **ALL** materials assigned from the readings.

Vocabulary: Each chapter will include words and phrases that are critical elements in understanding the material. Students are expected to know this vocabulary as part of the chapter.

Homework: Each chapter will include a number of homework problems that represent the types of material that are important. I encourage students to work together on these problems (this does not mean copy your friend's homework). Together you can help each other better understand the material. Due dates and assignments will be posted on my website.

Quiz: 1-3 days after a topic or concept is covered in class, students may be given a "pop" quiz with 1-4 questions relating directly to this material. The quizzes can be completed in less than 5 minutes if the student has kept up their notes and reading. Quizzes will not last longer than 10 minutes.

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In-Class Evaluation: When students walks into class, a "clicker" will be assigned to them. During the classroom discussions, questions will appear on the board that are to be answered by the student or groups of students. While we all learn to use these devices, the questions will be used to assessment the class' understanding of the material. In time, these questions will be counted towards the quiz scores.

Lab: Laboratory assignments will be done with at least one partner. Each student is expected to materially participate in the activity. In most instances, authentic lab reports are due from each student. The data collected in the lab is to be equally shared by all students within the group, but each student must write their own lab report based upon their data. If a lab report is determined to be a copy of another report, the report(s) will receive a score of zero (0) points. Students must pass the lab section of the course in order to pass the course for credit.

Laboratory reports are based upon a 10 point scoring rubric and will contain some or all of the following elements: Abstract, Introduction, Experimental, Results & Observations, Conclusion, References. Details regarding this format will be provided as we proceed through the year. Please see my website for the lab report outline and scoring rubric for more details.

Exams: Exams will cover 1-3 chapters' worth of material. Exams will be announced at least 1 week prior to the date. Exam questions will be similar in nature to the quizzes.

Final Exam: The final exam is the New State Regents exam. The final exam is a comprehensive exam based upon the material assigned from the textbook. Not all subject matter will be covered in class but each student is responsible for the material assigned through the homework.

If you come across and issue that you cannot resolve through this course outline, please do not hesitate to bring it to my attention. I'm always looking for ways to improve my courses. Have a great year!

JW

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Instructor
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Text Book

World of Chemistry; Zumdahl; S, Zumdahl, S; DeCoste, D; Houghton Mifflin Company; © 2002

Materials and Supplies

1. Pen and or Pencil (required in class everyday)
2. Scientific Calculator-**nonprogrammable only** (required in class everyday)
3. 3-Ring Binder (store and organize materials)
4. USB Flashdrive (for use with the Vernier probes)
5. LoggerPro3 software (online download instructions will be provided)

Suggested Materials

1. Molecular model kit
2. Molecules App
3. Safety googles

Grading

1. Homework	5 %	Check for completion
2. Quiz	10 %	No make-up quizzes. Add ~10 points per quarter to make-up
3. Laboratory	40 %	4-5 per marking period. Must pass labs to pass class
4. Unit Exams	45 %	3-5 per marking period
5. Marking Period	21.25 %	Marking periods 1-4
6. Final Exam	15 %	NY State Chemistry Regents Exam

Notes:

1. Scoring for homework and laboratory assignments are described in the rubric
2. If the student's quiz score is > 85%, the student will receive a score of 8 for the homework if the student did not submit homework for that chapter.

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Lab Report and Homework Scoring Policy

	Maximum Possible Points
Homework	
On Time	10 points
Quiz score > 85% but no homework submitted	8 points
Submitted within one week of the due date	7 points
Submitted within two weeks of the due date	5 points
Submitted after two weeks of the due date	1 point
Lab Report (Rubrics will be provided with each lab)	
On Time	Deduct 0 points from 10
Submitted within one week of the due date	Deduct 1 point from 10
Submitted within two weeks of the due date	Deduct 3 points from 10
Submitted after two weeks of the due date	Deduct 9 points from 10
Exams and Quizzes	
Questions will be assigned points based upon complexity and difficulty	