SYLLABUS CHM 203 Fall 2014

**Instructor:** Dr. Leslie Meadows Frost 464 Science (office) 401 Science (lab)

email [Frost@marshall.edu](mailto:Frost@marshall.edu) (best way to contact me)

Course material will be posted on muonline.

**Office Hours:** Official office hours will be MW 9-11; T 9-10

During office hours I may be in either my office or laboratory (401). Please check both places for me. If you cannot come by during scheduled office hours or if you have questions at other times, please feel free to drop by my office or lab at any time.

**Statement of Course:** CHM 203 General Chemistry I

An introduction to chemical science, its development, basic concepts and interrelationships with other sciences. Intended primarily for non-science majors and B.A. degree candidates.

**Prerequisites:**

There are no formal prerequisites for this course but if your math ACT score was below 17, I would strongly advise you to complete MTH 098 before attempting this course. If your math ACT score was 17 or 18, I would suggest that you take MTH 099 along with this course.

**Required Course Material:**

Text:   The text for this course is Hein, Pattison, Arena, Best**: Introduction to General, Organic, and Biochemistry, 11th Edition.** Wiley and Sons has made a special, low price version available to Marshall students. This version contains only the chapters for the first semester course and is printed in black and white. The price for this version is about $65. All the color photos and such are in grey tones but this shouldn't make any difference in your ability to understand the text because most of things in color are just supplemental material. This version is bound as a paperback. The ISBN number is 9781118940808. This version is available at the Marshall Bookstore. You will not find this version at Amazon or any of the other online dealers. If you have a copy of the 9th edition or the 10t edition of the book you can use that. There is no significant difference in the content between the editions.

Calculator: You will need a basic scientific calculator.  The logarithm function is the only thing that you will need beyond addition, subtraction, multiplication, and division.  You should be able to find a suitable calculator for around $15 or less.

**Course Policies:**

1. Graphing calculators, calculators with alphanumeric programming, and calculators on cell phones, PDAs, etc. cannot be used during quizzes/exams. Likewise, sharing of calculators during quizzes/exams is prohibited.

2. During quizzes/exams, all materials necessary will be provided to you except a pencil and calculator. You may NOT use your own paper, etc.

3. Students with disabilities who require special accommodations will be made. www.marshall.edu/disabled.

4. Academic dishonesty will be dealt with as outlined in the undergraduate catalog.

**Schedule:**

We will be covering the first 18 chapters in the textbook over the course of the semester. This works out to roughly a chapter for each day of class. Chemistry is a subject that builds on a foundation.   You cannot understand the later topics unless you have mastered the earlier topics. Therefore, you will need to be sure to keep pace with the material presented and ask plenty of questions when you are having trouble with a given topic. All course content including lecture notes and problem sets will be posted on muonline. I will send out reminders on Monday of each week about which lecture notes that we will discuss that week.You will probably want to bring copies of the lecture notes to class to keep you focused during the lectures.

**Attendance for this course is optional (except on exam dates), but strongly encouraged.**

# No class on Sept. 1

# Midterm Grades Due Oct. 20

Oct. 31-Last Day to Drop Class

Nov. 24 Fall Break

Dec. 1 Dead Week (class still meets during this week)

**Exams and Quizzes:**

You will be taking either a quiz or an exam every Wednesday. Each quiz will typically focus on a few selected topics that will be announced in class only on the preceding Monday. The lowest scoring quiz for the semester will not be calculated in your final quiz average. You will be given 4 exams throughout the course of the semester and a final exam at the end of the semester. The approximate exam dates are as follows:

**1st Hour Exam Sept. 17**

**2nd Hour Exam Oct. 8**

**3rd Hour Exam Oct. 29**

# **4th Hour Exam Nov. 21**

**\*\*\*\*\* Final Exam- Dec. 6, 2014 Saturday, 10:00 a.m.\*\*\*\*\*\*\*\*\*\***

Exam dates are approximate (except for the final exam). You will be given 1 week prior notice before all exams. You must have a university excuse for missing an exam to be able to take a make-up exam. You will need to make arrangements with me to take the make-up exam. Talking to each other and/or sharing calculators is not permitted during an exam. All calculators will be checked prior to every exam. Programmable calculators will **not** be permitted for use on tests. If you are caught cheating on any exam, you will automatically receive a grade of 0% for that exam.

## Your grade will be determined as follows:

# Quizzes 100 points

Hour Exams 400 points

Final Exam 100 points

**Grading Scale:**

* 1. A
  2. B
  3. C
  4. D

59 or lower F

**Additional Homework:**

Each student is to prepare for each class by reading the material covered in the previous class, answering the relevant problems at the end of the chapter, and previewing the material in order to anticipate the next class lecture.

Problem sets for each chapter are available at muonline. These are very important, because the problems on these handouts will be the same type of problems that will appear on the exam. The answers to the problem sets are located at the end of the questions, and I will also be posting a copy of worked out answer keys on the bulletin board by my office. You are to practice the problems found at the end of each chapter in the book. Choose odd numbered questions, as the answers for these are in the back of the book.

**Suggested Activities for Success:**

1. Read the suggested material from the textbook before and after each lecture.

2. Try to work through every homework problem assigned no matter how difficult.

3. Always attend class and take good notes.

4. Seek help from others, some possibilities:

a. Take advantage of office hours.

b. Work in small groups on studying for quizzes and the final.

## Course Objectives:

    This course is an introductory course in chemistry and is aimed specifically at the needs of those in the health related professions.  At the end of this course, it is expected that the student will have

* achieved an understanding of the basic structure of the atom and how that structure relates to the chemical and physical properties of the elements and their compounds
* attained an understanding of the major types of chemical bonding and how that relates to the structure of compounds
* an understanding of how the structure of a compound relates to its chemical and physical properties
* become familiar with the properties common to all gases
* learned the basic calculations involved in predicting the amount of reagent needed for a reaction and the amount of product that can be obtained from a reaction
* obtained a knowledge of the commonly encountered units for describing solutions and know the basics of how to prepare and work with such solutions
* become familiar with how the concentration of a solution relates to physical properties such as osmotic pressure
* been introduced to nuclear reactions and the uses of radionuclides in both treatment and diagnosis of disease
* achieved an understanding of the basics of acid-base chemistry including the ability to predict the relative strengths of acids and bases and to predict their chemical reactions.
* become familiar with the concepts of equilibrium and how that responds to a stress in the system
* attained an understanding of how the pH of the blood is maintained by a complex system of buffers

**Miscellaneous Topics**

**● Academic Dishonesty:** Marshall University’s academic honest policy (http://www.marshall.edu/academicaffairs/Academic%20Dishonesty%20Policy.pdf) will be enforced. Any student caught cheating in this course will receive 0 points on that assignment or exam.

**● “Policy for Students with Disabilities:** Marshall University is committed to equal opportunity in education for all students, including those with physical, learning and psychological disabilities.  University policy states that it is the responsibility of students with disabilities to contact the Office of Disabled Student Services (DSS) in Prichard Hall 117, phone 304 696-2271 to provide documentation of their disability.  Following this, the DSS Coordinator will send a letter to each of the student’s instructors outlining the academic accommodation he/she will need to ensure equality in classroom experiences, outside assignment, testing and grading.  The instructor and student will meet to discuss how the accommodation(s) requested will be provided.  For more information, please visit [http://www.marshall.edu/disabled](https://outlookweb.marshall.edu/owa/redir.aspx?C=214f712951214368819838517632d478&URL=http%3a%2f%2fwww.marshall.edu%2fdisabled) or contact Disabled Student Services Office at Prichard Hall 11, phone 304-696-2271.”

● If a test falls on a day that is cancelled by the university (e.g. a snow day), the test will occur on

the next period the class meets.

●Please turn off cell phone ringers before class. Failure to do so may result in you being removed

from the room, even during a test.

● You may not record my lectures without my permission and under no circumstances may they be

posted, transferred, or reproduced to any form of media (Internet, print, television, and the like)

without my permission.