

CHEMISTRY 115—FUNDAMENTALS OF CHEMISTRY
SYLLABUS FOR SECTION 1118
FALL 2009

Instructor: Laurie LeBlanc
Office: Room H209
Office Hours: MW 12:30-2
T 10:30-12:30

COURSE DESCRIPTION

Chemistry 115 is an introductory course in chemistry. No previous knowledge of chemistry is required. Basic principles of inorganic and general chemistry are emphasized but as much as possible practical applications of the principles are noted and discussed, especially those applications relevant to students entering paramedical and allied health fields. The textbook and lab manual have been selected with these applications in mind. Chemistry 116, which is a sequel to Chemistry 115, covers organic chemistry and an introduction to biochemistry. The same textbook is used for both Chemistry 115 and 116.

Chemistry 115 is an admission or program requirement for a variety of paramedical and allied health fields; for example, nursing, cardiovascular technology, community health education, exercise science, and nutrition. It is a requirement for environmental technology. Chemistry 115 also satisfies the general education requirement for lecture and laboratory in the physical sciences.

The main theme in Chemistry 115 is the nature of matter—its composition, structure, and properties. The course content will be divided into six units:

Unit 1	Atoms and Elements Nuclear Chemistry
Unit 2	Compounds & Bonds Chemical Reactions
Unit 3	Measurements & Chemical Quantities
Unit 4	Polarity of Bonds & Properties of Solutions Energy & Changes of State
Unit 5	Gases
Unit 6	Equilibrium Acids and Bases

A qualitative (nonmathematical) understanding of the basic concepts will be stressed for all topics. Several topics will involve mathematical problem solving that require an ability to do basic algebra.

PREREQUISITES

The prerequisite for Chemistry 115 is one semester of college algebra (Math 90 at Cuyamaca College) or one year of high school algebra.

COURSE OBJECTIVES

The goal of this course is to help students understand the composition, structure, properties, and reactivity of matter, especially inorganic (non-carbon containing) substances. Basic principles and their application to new problems are emphasized.

Theories of science are formulated from experimental observations. Class meetings are designed with this in mind. Observations of chemical phenomena are presented in lecture before current theories are invoked to explain the observations. In laboratories you make your own observations. In subsequent lab reports you interpret your observations using theories already learned.

COURSE MATERIALS (You will need all of these supplies in the first week of class)

1. Timberlake, General, Organic, & Biological Chemistry, Structures of Life, 3rd Edition
2. Chemistry 115 Supplementary Materials, Fall 2009
3. Scientific calculator (No graphing or programmable calculators allowed on quizzes/exams) At no time will you be allowed to use a cell phone for calculating or any other purpose in class. Be sure your cell phone is put away at all times.
4. Safety glasses
5. Combination lock

ASSIGNMENTS

In order to be successful in this class, you should:

- attend class regularly; listen and take complete notes.
- do the reading and study check problems assigned from the textbook
- do the questions and problems as well as the additional problems assigned from the textbook.
- prepare for the lab experiments by reading the writeups thoroughly and carefully before each lab period; be prepared for the quiz.
- do the lab experiments and lab reports; stay after you finish up your lab and ask questions that you have about your lab report preparation.
- Come to office hours to ask questions and/or attend study sessions with fellow students. Working together in study groups can be of great help in understanding the material in this course.

You should do the study check problems as they come up in the reading. They are usually listed right after a worked out example. The idea is to try solving a problem right after having studied the solution to a similar problem. The answers to these problems are at the end of the text.

Questions and problems and additional problems are in the textbook at the end of the chapter. Although they will not always be collected or graded, it is essential that you do them. Similar questions to these will appear on exams. Having a written record of the answers to the study questions and problems will prove valuable to you when you are studying, seeking help with a question, or preparing for an exam. The answers to the odd-numbered questions and problems are in the back of the textbook. The additional problems have no answers.

There are approximately 14 lab experiments. I expect you to do all the labs. There will be no makeup opportunities for missed labs because of the logistical problems associated with such arrangements. A lab is a hands-on experience and there is no substitute. A lab report is required for each experiment. The lowest lab report grade will be dropped from your total to allow for emergencies. Please do not ask for other exceptions.

METHODS OF EVALUATION

When adding up your scores to give you your final grade I will drop your lowest lab report score and your lowest scored quiz on lecture material.

Your grade will be determined as follows:

Exams, one per unit, 100 points each	600	pts
Lab Reports (13) 10 pts each	130	
Lab Quizzes (14) 5 pts each	70	
Quizzes on lecture material (8) 15 pts each	120	
Miscellaneous Homework/Classwork	<u>50</u>	
Total Points	970	pts

Grades themselves will be based on a scale rather than a curve. Approximate total points for the class are 970. Letter grades will be assigned approximately as follows:

A	100% - 90.0%	970 - 873 pts
B	89.9% - 80.0%	872 - 776
C	79.9% - 70.0%	775 - 679
D	69.9% - 60.0%	678 - 582
F	59.9% - 0	581 and below

ATTENDANCE

If you miss six hours of class, you will be dropped for excessive absence. After the 12th week of classes, students cannot be dropped. If you accumulate your absences after the 12th week, you lose one grade level for each missed hour beyond six.

Lab Fees

It is your responsibility to check out of your lab locker at the end of the semester by the time of your final exam or, if you drop the class, at that time. You will be provided a set of glassware and equipment to use during the semester. It is expected that you will return the set in the condition you found it - clean and complete.

**Failure to check out by the deadline and/or loss or breakage of your locker materials will result in your being assessed a \$10 lab fee.

ACADEMIC ACCOMMODATIONS

Academic accommodations are available for students with disabilities. If you know or suspect that you have a learning disability or any other type of disability, contact the office of Disabled Students Programs and Services (DSP&S). DSP&S provides services and arranges for academic accommodations for students with disabilities. DSP&S will work with your instructor so that the appropriate accommodations are provided to you.

If you are pregnant or suspect that you may be, please notify me during the first week of class so that I can make accommodations for you during your experimental work in lab.

CLASS CONDUCT

Undesirable class behavior will have a negative effect on a student's grade. Excessive talking during lecture is both discourteous and annoying to students who sit nearby. Understanding lecture material may be more difficult for some students than it is for you and your distracting conversation may make it even more difficult and frustrating! Please show consideration and respect for others and refrain from talking during lecture. **Cell phones and other electronic devices are to be turned off during class periods.** Do not take or receive phone call or text during any time in the classroom. These activities MUST take place outside of my classroom!

A high degree of integrity is expected in this class. Cheating on exams and quizzes will not be tolerated. You will fail the course if you are caught cheating. Academic honesty is required for all assignments in this course. Plagiarism -- to take and pass off one's own work the work or ideas of another -- is a form of academic dishonesty. Penalties will be assigned for any form of dishonesty in this course. If ANY plagiarized work is discovered in an assignment, you will receive **no points** for the entire assignment. You may additionally be reported to the Assistant Dean of Student Affairs; this action can result in suspension or expulsion from the College. (See Academic Honesty in the Cuyamaca College Catalog.)

ACADEMIC POLICIES

This course adheres to the policies outlined in the Cuyamaca College catalog. For further information, see the Academic Policies section of the catalog.

SYLLABUS & SCHEDULE CHANGES

The syllabus and schedule are subject to change based upon the specific needs of the class and the discretion of the instructor. Changes will be announced in class.