

GENERAL INFORMATION			
Name: Tchao Podona	Phone #: 305-237-8483		
Course Prefix/Number: CHM 1020L	Course Title: General Education Chemistry Laboratory		
Number of Credits: 1 Credit.			
Degree Type	<input type="checkbox"/> B.A. <input type="checkbox"/> B.S. <input type="checkbox"/> B.A.S <input checked="" type="checkbox"/> A.A. <input type="checkbox"/> A.S. <input type="checkbox"/> A.A.S. <input type="checkbox"/> C.C.C. <input type="checkbox"/> A.T.C. <input type="checkbox"/> V.C.C		
Date Submitted/Revised: 11/10/07	Effective Year/Term: 2008-1		
<input type="checkbox"/> New Course Competency <input checked="" type="checkbox"/> Revised Course Competency			
Course to be designated as a General Education course (part of the 36 hours of A.A. Gen. Ed. coursework): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
The above course links to the following Learning Outcomes: <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Communication <input checked="" type="checkbox"/> Numbers / Data <input checked="" type="checkbox"/> Critical thinking <input type="checkbox"/> Information Literacy <input type="checkbox"/> Cultural / Global Perspective </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Social Responsibility <input type="checkbox"/> Ethical Issues <input type="checkbox"/> Computer / Technology Usage <input type="checkbox"/> Aesthetic / Creative Activities <input type="checkbox"/> Environmental Responsibility </td> </tr> </table>		<input type="checkbox"/> Communication <input checked="" type="checkbox"/> Numbers / Data <input checked="" type="checkbox"/> Critical thinking <input type="checkbox"/> Information Literacy <input type="checkbox"/> Cultural / Global Perspective	<input type="checkbox"/> Social Responsibility <input type="checkbox"/> Ethical Issues <input type="checkbox"/> Computer / Technology Usage <input type="checkbox"/> Aesthetic / Creative Activities <input type="checkbox"/> Environmental Responsibility
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Course Description: This course provides the non-science major with an introductory study of the substances central to our daily lives. The students will learn the basic chemistry of nutrition, medicines, cosmetics, household cleaners and the environment in a laboratory setting.			
Prerequisite(s): None	Co-requisite(s): CHM 1020		

Course Competencies:

Competency 1:	The student will demonstrate the following affective objectives concerning safety in laboratory by:
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1. Demonstrating a commitment to safety by following all safety rules and procedures.
2. Demonstrating a professional attitude and respect for laboratory responsibilities by maintaining the laboratory areas in a clean and neat manner.
3. Demonstrating a willingness to respond to the material of the course by attending class regularly.
4. Demonstrating responsibility for the successful completion of laboratory work by coming to the laboratory prepared to perform all procedures scheduled for the laboratory session.

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Competency 2: The student will learn the following cognitive objectives from the laboratory experience by:

1. Describing the importance of accurate and precise measurements in science.
2. Applying dimensional analysis to solve unit conversion problems.
3. Demonstrating the ability to use the metric system of measurements by solving metric conversion problems.
4. Defining density and measuring mass and volume in order to calculate the density of liquids and solids.
5. Solving density problems.

Competency 3: The student will demonstrate knowledge of matter's classification, properties, and changes by:

1. Distinguishing between the physical and chemical properties of matter.
2. Distinguishing between the physical and chemical changes that matter undergoes.
3. Characterizing the three common states of matter.
4. Identifying the significance of the coefficients in a balanced chemical equation.
5. Applying stoichiometric relationships.

Competency 4: The student will demonstrate knowledge of the wave nature of light by:

1. Describing how light can be separated into its different color components.
2. Defining wavelength and frequency.
3. Describing the relationship that exists between wavelength, frequency, and energy of electromagnetic radiation.

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Competency 5: The student will demonstrate an ability to understand several of the intricacies of the periodic table by:

1. Distinguishing between periods and groups on the periodic table.
2. Relating the position on the periodic table to atomic number.
3. Using the structure of the periodic table to classify elements (e.g., metal, non-metal, metalloid, noble gas, representative element, transition element, inner transition element, alkali metal, alkaline earth metal, and/or halogen).
4. Relating the group number of elements to similarities in chemical properties.
5. Describing the properties of metals and non-metals and distinguishing them according to their properties.

Competency 6: The student will demonstrate knowledge of basic separation techniques by:

1. Demonstrating the technique of distillation as a means to purify a liquid sample.
2. Demonstrating the technique of Thin Layer Chromatographic separation and analysis.

Competency 7: The student will demonstrate knowledge of the properties of solutions by:

1. Distinguishing between a solute and solvent in a solution.
2. Distinguishing between the different types of solutions: saturated, unsaturated, and supersaturated.
3. Demonstrating the effect of a solute on the freezing point of the solvent.
4. Demonstrating the effect that a solute has on the osmotic process by examining the flow of substances through a membrane.

Competency 8: The student will demonstrate knowledge of the properties of acids, bases, and salts by:

1. Defining pH.
2. Defining the terms "acid" and "base" in the context of the pH scale.
3. Applying the pH scale to find acidity and basicity of common household substances.
4. Distinguishing between acids, bases and salts among common household products.

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