

GENERAL INFORMATION			
Name: Marta Goicochea-Pappas	Phone #: 305-237-0848		
Course Prefix/Number: <b>CHM 3120L</b>	Course Title: <b>Introduction to Analytical Chemistry Chemistry Laboratory</b>		
Number of Credits: 2 Credits			
Degree Type	<input type="checkbox"/> B.A. <input checked="" type="checkbox"/> B.S. <input type="checkbox"/> B.A.S <input 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: 03/10/08	Effective Year/Term: 2007-3		
<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 type="checkbox"/> Yes <input checked="" 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 checked="" 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 checked="" type="checkbox"/> Environmental Responsibility               </td> </tr> </table>		<input type="checkbox"/> Communication <input checked="" type="checkbox"/> Numbers / Data <input checked="" type="checkbox"/> Critical thinking <input checked="" 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 checked="" type="checkbox"/> Environmental Responsibility
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<b>Course Description:</b>  This is a laboratory course that expands and deepens the student's knowledge of the theories, calculations, and methodologies used in analytical chemistry. The students will learn to conduct experiments that will introduce them to various laboratory methods used to analyze and quantify representative samples.			
Prerequisite(s): CHM 1046 and 1046L with a grade of C or better.	Co-requisite(s): CHM3120		

**Course Competencies:**

Competency 1: The student will demonstrate knowledge of analytical chemistry experimental methods, procedures, and analyses by:

1. Performing chromatographic analyses (high-pressure liquid, gas-liquid, column, paper, and/or thin-layer chromatography).
2. Performing gravimetric analyses.
3. Performing titrimetric / volumetric analyses (acid-base, reduction-oxidation, complexometric, and/or precipitation) via conventional, electrochemical, optical, and/or computer-interfaced methods.
4. Performing spectrophotometric analyses.
5. Applying statistical analysis to determine the validity or usefulness of experimental data.
6. Using a spreadsheet as a means to manipulate quantitative information.
7. Using laboratory equipment (e.g., pipettes, burettes, volumetric flasks, analytical balances, pH meters, spectrophotometers, chromatographs) in a manner that achieves both accuracy and precision.
8. Preparing calibration / standard curves.
9. Preparing standard solutions.
10. Interpreting laboratory measurements and data, including SI units, significant figures, precision, and accuracy.
11. Identifying appropriate laboratory data collection procedures, techniques and equipment necessary to perform standard analytical laboratory activities.

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Reviewed By Director of Academic Programs Date: \_\_\_\_\_

12. Evaluating the design of chemical experiments.

Competency 2: The student will demonstrate knowledge of laboratory safety and good laboratory practices by:

1. Identifying and applying standard chemistry laboratory safety procedures.
2. Properly maintaining a scientific notebook.
3. Calibrating instruments.
4. Turning in required reports and successfully completing laboratory work in a timely fashion.

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