Miami Dade College

Course Competencies Template - Form 112

GENERAL INFORMATION	
Name: Eileen Johann and Maria E. Tarafa	Phone #: 305-237-2630 and 305-237-2760
Course Prefix/Number: CHM1033L	Course Title: Chemistry for Health Sciences Lab
Number of Credits: 1	
Degree Type	☐ B.A. ☐ B.S. ☐ B.A.S ☒ A.A. ☒ A.S. ☐ A.A.S. ☐ C.C.C. ☐ A.T.C. ☐ V.C.C
Date Submitted/Revised: 11/10/07	Effective Year/Term: 2008-1
☐ New Course Competency ☒ Revised Course Competency	
Course to be designated as a General Education course (part of the 36 hours of A.A. Gen. Ed. coursework): ☒ Yes ☐ No	
The above course links to the following General Education Outcomes: ☐ Communication ☒ Numbers / Data ☒ Critical thinking ☐ Information Literacy ☐ Cultural / Global Perspective ☐ Social Responsibility ☐ Ethical Issues ☐ Computer / Technology Usage ☐ Aesthetic / Creative Activities ☐ Environmental Responsibility	
Course Description (limit to 50 words or less, **must correspond with course description on Form 102**): This course emphasizes chemistry topics related to the allied health sciences. Students will learn the essentials of inorganic chemistry, organic chemistry, biochemistry, and their application to physiological functions in a laboratory setting.	
Prerequisite(s):	Corequisite(s): CHM1033, MAT1033 (pre or corequisite)

Course Competencies: (for further instruction/guidelines go to: http://www.mdc.edu/asa/curriculum.asp)

Competency 1: The student will demonstrate cognitive objectives from the laboratory experience by:

1. Collecting measurement data including length, mass and volume of various objects using the Metric system.
2. Converting figures using the Metric and English systems.
3. Determining the presence of common cations and anions by using precipitation, complexation, and gas evolution reactions.
4. Preparing various aqueous solutions and analyzing the phenomena of dialysis and osmosis.
5. Identifying different types of electrolytes by analyzing their electrical conductivity.
6. Determining the pH values of various solutions of acids, bases and buffers.
7. Examining the structure, properties and reactions of several organic compounds such as alkanes, alkenes, alkyl halides, alcohols, esters, aldehydes, ketones, carboxylic acids, carbohydrates, lipids and proteins.
8. Illustrating carbohydrate chemistry by outlining the properties and chemical reactions of representative carbohydrates.
9. Examining lipid chemistry by outlining its properties and chemical reactions.
10. Examining protein chemistry by outlining the properties and chemical reactions of representative proteins.
11. Examining enzyme chemistry by outlining its properties and chemical reactions.
12. Illustrating the process of digestion by simulating simple digestive processes using enzymes and food substances in the laboratory.

Revision Date: _____

Approved By Academic Dean Date: _____ Reviewed By Director of Academic Programs Date: _____

Competency 2: The student will demonstrate the following affective objectives concerning safety in the laboratory by:

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.

Competency 3: The student will demonstrate proficiency in the following psychomotor objectives by:

1. Using laboratory glassware for measuring and transferring liquids such as graduated cylinders, pipets and beakers.
2. Operating electronic balancing in order to obtain mass measurements.
3. Operating and manipulating volumetric equipment in a manner that achieves both accuracy and precision.
4. Handling laboratory equipment smoothly and without hesitation.

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