Bemidji State University

CHEM 1172: General Chemistry II Lab

A. COURSE DESCRIPTION

Credits: 0  
Lecture Hours/Week: 0  
Lab Hours/Week: 0  
OJT Hours/Week: *.*  
Prerequisites: None  
Corequisites: None  
MnTC Goals: Goal 03 - Natural Science  
A survey of chemistry covering basic concepts including inorganic, organic, and biochemistry. The laboratory component introduces techniques, methods, and instrumentation. [Core Curriculum Goal Area 3 (LC)]

If on-campus student must register for CHEM 1111 (Lecture) and CHEM 1171 (Lab).

B. COURSE EFFECTIVE DATES:  08/01/2022 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Organic Chemistry  
2. Alkanes and Cycloalkanes  
3. Alkenes and Alkynes  
4. Alcohols, Ethers, and Thiols  
5. Benzene and its Derivatives  
6. Chirality & Amines  
7. Aldehydes and Ketones  
8. Carboxylic Acids  
9. Carbohydrates  
10. Lipids  
11. Proteins  
12. Enzymes

D. LEARNING OUTCOMES (General)

1. be able to show on the American Chemical Society standardized exam their ability to meet the following learning outcomes:
2. name and recognize the chemical structure of carbohydrates, lipids, proteins and enzymes. Describe the functions and properties of these classes of compounds.
3. learn about Alkanes, Alkenes, Alkynes, Alcohols, Ethers and Thiols (structures, names and properties).
4. discuss the different kind of isomers and the meaning of chirality.
5. learn about Amines, Aldehydes, Ketones, Carboxylic acids, Esters and Amides (structure, names and properties).
E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

Goal 03 - Natural Science

1. Demonstrate understanding of scientific theories.
2. Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop, in greater depth, students' laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.
3. Communicate their experimental findings, analyses, and interpretations both orally and in writing.
4. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted