Minnesota State University Moorhead

CHEM 275: General Chemistry Research Based Lab

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: 0

OJT Hours/Week: *.*

Prerequisites:
This course requires any of these 17 prerequisites
    MATH 095 - Elementary/Intermediate Algebra
    MATH 099 - Intermediate Algebra
    MATH 127 - College Algebra
    MATH 127L - College Algebra with Lab
    MATH 210 - Concepts from Discrete Mathematics
    MATH 227 - Survey of Differential Calculus with Algebra
    MATH 229 - Topics in Calculus
    MATH 261 - Calculus I
    MATH 142 - Pre-Calculus
    MATH 143 - Trigonometry
    A score of 22 on test ACT Math
    A score of 50 on test Accuplacer College Level Math
    A score of 520 on test OLD-SAT Math
    A score of 1 on test Transfer Equivalent to MATH 127
    A score of 1 on test Transfer Equivalent to MATH 095
    A score of 1 on test Transfer Equivalent to MATH 099
    A score of 520 on test SAT Math Composite

Corequisites: None

MnTC Goals: Goal 02 - Critical Thinking

An investigative-based General Chemistry laboratory course in which students will partner with Howard Hughes Medical Institute to discover bacteria-infecting viruses in an attempt to find new cures for diseases and antibiotic resistance. Students will work in the lab in a research group setting to discover, isolate and purify new bacteriophages from the environment, characterize the chemical environment in which they are found, obtain microscopic images of the phages, and isolate the phage DNA. Focus will be on experimental design, documentation, data interpretation, and laboratory safety. MnTC Goal 2.

B. COURSE EFFECTIVE DATES: 10/22/2019 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

None

D. LEARNING OUTCOMES (General)

None

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

Goal 02 - Critical Thinking

1. Gather factual information and apply it to a given problem in a manner that is relevant, clear, comprehensive, and conscious of possible bias in the information selected.

2. Analyze the logical connections among the facts, goals, and implicit assumptions relevant to a problem or claim; generate and evaluate implications that follow from them.

3. Recognize and articulate the value assumptions which underlie and affect decisions, interpretations, analyses, and evaluations made by ourselves and others.

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted