

MARIAN UNIVERSITY

Indianapolis®

Marian's Adult Programs

CHE 108
Elements of General and Biological Chemistry Laboratory

Course Description

This course is an introduction to the laboratory principles of general chemistry, organic chemistry, and biochemistry, and is designed for students in the health science areas obtained through in home Chemistry experiments.

Semester and Credit Hours

Credit Hour: 1

Required Textbook(s) and Additional Resources

This course requires students to purchase a lab kit through Hands-On Labs. Specific ordering instructions will be provided by the instructor via the Canvas LMS.

Course Objectives

Upon completion of the course, the student should be able to demonstrate understanding of the following topic areas:

- 1) To learn about the SI system and how it relates to measurements in mass, length, volume and time.
- 2) To define a solid, liquid, and gas and explore melting points.
- 3) Compare and contrast carbohydrates, lipids, and proteins for energy utilization in the human body.

- 4) Define acids and bases and then explore how a buffer works..
- 5) Carbohydrates and their function in living systems.
- 6) Proteins are made up of amino acids which are linked by peptide bonds.
- 7) To investigate the catalytic activity of enzymes and how the structure of the active site of an enzyme relates to its ability to turn a reactant into a product.
- 8) Differentiate a molecular formula from a structural formula and identify and understand isomers.

Course Overview

This course will explore general chemistry, organic, and biochemistry in an experimental course. There are 8 laboratories to be completed in the course. You are encouraged to interact with your instructor with questions or other content issues as is needed.

Please be advised that all dates and times in Canvas are Eastern Time (ET) by default. Unless you as the student have changed your personal settings due dates and times will appear as ET. Please plan accordingly.

Tutors

Tutors are available through the "Learning and Counseling Center" (317-955-6150). In the event you're having a problem with this course, please don't ignore it, because the course material typically does not get easier as we go along. It is up to you to contact the center to request a tutor. The tutors are competent and have a good background in the course material.

Policy Statements

Attendance: Students are expected to complete experiments during the week. The experiments are all included in the kit.

Academic Integrity: The University's guidelines for penalties and procedures will be strictly adhered to. If you are not familiar with the guidelines, please refer to the University's Code of Students Rights and Responsibilities.

Franciscan Values:

1. Dignity of the Individual
 2. Peace and Justice
 3. Reconciliation
 4. Responsible Stewardship
- All these are grounded in prayer

Students with disabilities who have proper documentation must contact the Director of Academic Support Services in the Counseling and Consultation Services office to set up a documentation review. If after the review, accommodations are deemed appropriate, an accommodation plan will be developed. As per the ADA (Americans with Disabilities Act) no accommodations can be provided until this process is complete. Contact Marj Batic, Director of Academic Support Services (mbatic@marian.edu ; 317.955.6150; or stop by the office in Clare Hall). Note: Students who may require assistance in emergency evacuations should consult with the instructor as to the most appropriate procedure to follow. If there are questions regarding such a procedure, contact Ruth Rodgers, Vice President, Student Success and Engagement/Dean of Students @ rrodgers@marian.edu or the Director of Academic Support Services for additional information.

The lab experiments are each worth 50 points therefore the total points available in the course will be 400 points from which your grade will be determined.

Grading Scale

GRADE	PERCENTAGE
A	92%
A-	88%
B+	84%
B	80%
B-	77%
*C+	74%

C	70%
C-	67%
D+	64%
D	60%
F	<59%