

Course Syllabus

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MARIAN UNIVERSITY
Indianapolis

CHE 108 Elements of General and Biological Chemistry Lab 1 Credit

Semester and Year:

Online Instructor:

Email: Contact via Canvas email

Required Textbook(s):

We will use from Hands On Lab kit: LP-2454-CK-02

Note: Students enrolled in CHE 100 only are not required to purchase a lab kit. This is only for students enrolled in CHE 108.

Please be aware that the lab kits come from an outside vendor. Most orders require up to 5 business days for order production and processing in addition to shipping time. Students should plan ahead and order the kit accordingly. If you have any questions or concerns regarding your order, please call the Hands-On Labs' Customer Service Department at 866-206-0773 ext. 3 or email them at info@holscience.com.

Note: If eligible, degree seeking students at Marian University may utilize financial aid to purchase this lab kit through the MU Book Store.

1. Visit the Hands-On Labs website at www.holscience.com.
2. Click Student Orders.
3. Do you have a log-in and password? Click Yes.
4. Your login is: C000228 and your password is: labpaq
5. Order LabPaq number: Chemistry: LP-2454-CK-02
6. Click Add to Cart.
7. Click Checkout and follow the process to purchase the lab kit.

Students are required to purchase the items listed above prior to the start of the course. Look into all of your options - new, used, rental or e-books. If you choose a rental option, be sure to understand the policies and the due dates for the returns. While you have the option to obtain your course materials from any source, ordering from the MU Book Store can be a convenient option. Please note that you can also charge bookstore purchases to your student account or use your MU financial aid if applicable. Visit www.bkstr.com/marianustore/home.

Additional Resources:

The Mother Teresa Hacklemeier Memorial Library at Marian University provides various databases <http://www.marian.edu/library/Pages/default.aspx> (<http://www.marian.edu/library/Pages/default.aspx>)

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.

This course will explore general chemistry, organic, and biochemistry in an experimental course. There are 8 laboratories to be completed in the course. Plan to complete minimally 1 lab a week. You are encouraged to interact with your instructor with question or other content issues as is needed.

Upon successful completion of this course, students will be able to:

Student Learning Objectives

Student Learning Outcomes

- 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.

Teaching Strategies

Lab activities

Assignments & Assessment Methods:

Methods of Evaluation

Write a narrative of the methods on how you will plan to evaluate the student.

Grading Scale

The grading scale is based upon the Marian University Department of Nursing recommended scale and is included in the *Nursing Student Handbook*.

GRADE	PERCENTAGE
A	92%
A-	88%
B+	84%
B	80%
B-	77%
*C+	74%
C	70%
C-	67%
D+	64%
D	60%
F	<59%

* A grade of 77% is required to pass the course. The School of Nursing policy states that receiving a grade lower than a C+ (77%) in any two nursing courses, results in automatic dismissal from the nursing program; and the student is ineligible for readmission for a period of five (5) years. See *Nursing Student Handbook* for more information.

Course Policies:

Student Handbook

Please refer to the Student Handbook for academic and school of nursing policies. The Student Handbook provides information regarding:

All Nursing students are responsible for reviewing and signing the School of Nursing Student Handbook each semester which holds you accountable for all information and addendums made throughout the semester.

NOTE: Students with disabilities who have proper documentation must contact the Director of Academic Support Services in the Learning and Counseling Center 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 contact the instructor as to most appropriate procedure to follow. If there are questions regarding such a procedure, contact the Dean of Student Affairs (Ruth Rodgers – rrodgers@marian.edu) or the Director of Academic Support Service for additional information.

****Any changes to this syllabi will be communicated to the student.**

Course Outline

Schedule

Course Summary:

Date**Details**

**[Lab 1 Laboratory Techniques and Measurements](https://marian.instructure.com/courses/1971494/assignments/10352280)** [\(https://marian.instructure.com/courses/1971494/assignments/10352280\)](https://marian.instructure.com/courses/1971494/assignments/10352280)

**[Lab 2 Melting Points](https://marian.instructure.com/courses/1971494/assignments/10352281)** [\(https://marian.instructure.com/courses/1971494/assignments/10352281\)](https://marian.instructure.com/courses/1971494/assignments/10352281)

**[Lab 3 Caloric Content of Food](https://marian.instructure.com/courses/1971494/assignments/10352282)** [\(https://marian.instructure.com/courses/1971494/assignments/10352282\)](https://marian.instructure.com/courses/1971494/assignments/10352282)

**[Lab 4 Using Buffers](https://marian.instructure.com/courses/1971494/assignments/10352283)** [\(https://marian.instructure.com/courses/1971494/assignments/10352283\)](https://marian.instructure.com/courses/1971494/assignments/10352283)

**[Lab 5 Molecules of Life: Testing for Sugars and](https://marian.instructure.com/courses/1971494/assignments/10352284)** [\(https://marian.instructure.com/courses/1971494/assignments/10352284\)](https://marian.instructure.com/courses/1971494/assignments/10352284)

**[Lab 6 Macromolecules of Life: Testing for Amino Acids](https://marian.instructure.com/courses/1971494/assignments/10352285)** [\(https://marian.instructure.com/courses/1971494/assignments/10352285\)](https://marian.instructure.com/courses/1971494/assignments/10352285)

**[Lab 7 Enzymes: Temperature, pH, and Specificity](https://marian.instructure.com/courses/1971494/assignments/10352286)** [\(https://marian.instructure.com/courses/1971494/assignments/10352286\)](https://marian.instructure.com/courses/1971494/assignments/10352286)

**[Lab 8 Stereochemistry I](https://marian.instructure.com/courses/1971494/assignments/10352287)** [\(https://marian.instructure.com/courses/1971494/assignments/10352287\)](https://marian.instructure.com/courses/1971494/assignments/10352287)
