

MARIAN UNIVERSITY

Indianapolis

Students are responsible for reading and understanding the contents of this syllabus before the first day of class.

CHE 100 Elements of General and Biological Chemistry 4 Credits

Semester and Year:

Online Instructor:

Email: Contact via Canvas email

Required Textbook(s):

Chemistry: An Introduction to General, Organic, and Biological Chemistry, 13th edition; Karen Timberlake, Pearson Education, Inc. 2017

ISBN: 9780134421353

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>

- **Marian University requires all work be completed on a laptop or PC; this includes all exams and quizzes.**

Course Description

This course is an introduction to the principles of general chemistry, organic chemistry, and biochemistry, and is designed for students in the health science areas.

This course will explore general chemistry, organic, and biochemistry. We cover 17 chapters. Therefore, we will be covering 2 to 3 chapters a week. Homework assignments and discussions will be given. Plan to spend a minimum of ten to twenty hours a week working on class material. You are encouraged to interact with your instructor with questions or other content issues as is needed.

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

- Perform basic calculations in chemistry using stoichiometric
- Understand the basic properties of matter and energy
- Understand the structure of atoms and their organization in the periodic table
- Understand the principles of chemical bonding
- Balance and utilize chemical equations
- Understand the basic properties of gases
- Understand the basic properties of water and solutions
- Understand acids, bases, pH, and buffers
- Understand the general principles of radioactivity
- Name, draw, and recognize 'simple' organic molecules
- Recognize and name common organic functional groups
- Recognize and understand common chemical reactions including organic and biochemical
- Understand the composition, structure, and function of carbohydrates
- Understand the composition, structure, and function of lipids
- Understand the composition, structure, and function of proteins
- Understand the composition, structure, and function of nucleic acids

Teaching Strategies

Add a narrative of the teaching strategies you will use in the classroom.

Assignments & Assessment Methods:

Methods of Evaluation

There are 4 Exams, exams are worth 70% of your total grade. Homework assignments are 7% of your total grade, discussions are 7% of your total grade, and quizzes are 16% of your total grade.

Exam 1 Modules 1 & 2 Chapters 2-4, 6

Exam 2 Modules 3 & 4 Chapters 7-10

Exam 3 Modules 5 & 6 Chapters 5, 11-12, 14

Exam 4 Modules 7 & 8 Chapters 13, 15-17

Grading Scale

The grading scale for this course is (this is course dependent and must be individualized)

Letter Grade	Percentage
A	92%
A-	88%
B+	84%
B	80%
B-	77%
C+	74%
C	70%
C-	67%

D+	64%
D	60%
F	<59%

Course Policies:

Late Policy & Due Date Extensions: Acceptance of work submitted past the due date or requests of due date extensions, including exams, may be considered in the event of unforeseen, documented hardships, such as medical emergencies, documentable technical issues, death of a loved one, etc. However, simply forgetting, time zone differences, going on vacation, or not performing as well as intended are not acceptable excuses.

Exam Retakes: Exams retakes are different than requesting and being granted an extension on an exam. There are no exam retakes allowed in this course. Once you open an exam, you're stating that you have prepared adequately for the exam and you're accepting the results of the exam.

Plagiarism Statement: Plagiarism is using the words or ideas of another as your own without giving credit to the source author. This also includes taking a paper found online and submitting it as one's own paper and/or cutting and pasting from a website and submitting it as your work product.

Plagiarism is defined in detail in the Code of Student Rights and Responsibilities under Section 8: Academic Conduct Procedures, as well as an extended description of academic dishonesty:

<https://www.marian.edu/docs/default-source/campus-life/codeofstudentrightsandresponsibilities.pdf?sfvrsn=18>

The following are some helpful websites for understanding plagiarism, documentation and citation:

- Marian University's library: <https://www.marian.edu/current-students/library>
- Plagiarism.org: <https://plagiarism.org/>
- Purdue OWL: <https://owl.purdue.edu/>

Student Handbook

Please refer to the MAP [Student Resources](#) and [Student Support Resources](#) modules for information regarding academics and school of policies including [Services for Students with Disabilities](#)

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

Course Outline

- Module 1: Chemistry and Matter
- Module 2: Elements, Compounds, and Their Bonds
- Module 3: Chemical Reactions and Gases
- Module 4: Solutions, Acids, and Bases
- Module 5: Radioactivity and Hydrocarbons
- Module 6: Organic Functional Groups
- Module 7: Carbohydrates and Lipids
- Module 8: Proteins and Nucleic Acids