

JAMESTOWN COMMUNITY COLLEGE
State University of New York

MASTER COURSE SYLLABUS

Course Title: Allied Health Chemistry

Course Abbreviation and Number: CHE 1530

Credit Hours: 3

Course Type: Lecture

Course Description: Students will consider selected basic concepts from inorganic, organic, and biological chemistry which will be applied to allied health and biological fields. Topics include matter and measurements, chemical bonds and reactions, redox, states of matter, acids and bases, organic functional groups, and common macromolecules in biological systems. The course is for students with little or no chemistry background who are pursuing a degree in an allied health field or who wish to continue in CHE 1550.

Prerequisite/Corequisite: ENG 1510; **Eligibility:** college level math.

Student Learning Outcomes:

Students who demonstrate understanding can:

1. Apply knowledge of molecular structures to make predictions about functionality in organic/biological systems.
 2. Identify and understand the four main types of biomolecules (carbohydrates, proteins, lipids, and nucleic acids).
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Topics Covered:

- Metric system
 - Atomic structure
 - Bonding
 - Chemical formulas and reactions
 - Oxidation-reduction reaction
 - States of matter
 - Water
 - Solutions
 - Acids, bases, and salts
 - Radioactive isotopes
 - Organic Chemistry
 - Introduction to carbon and its bonding and functional groups
 - Alkanes and derivatives
 - Unsaturated hydrocarbons and aromatic hydrocarbons
 - Alcohols, thiols, phenols and ethers
 - Aldehydes, ketones, and carboxylic acids
 - Esters, amines, and amides
 - Biochemistry
 - Carbohydrates
 - Lipids
 - Proteins
 - Nucleic acids
 - ATP and energy transfer in reactions
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Information for Students

- Expectations of Students
 - Civility Statement (<http://www.sunyjcc.edu/current-students/classroom-civility>)
 - Student Responsibility Statement (<http://www.sunyjcc.edu/academics/student-responsibility>)
 - Academic Integrity (<http://www.sunyjcc.edu/faculty-staff/academic-integrity>)
- Disability/Special Services
 - Any student who requires accommodations to complete the requirements and expectations of this course because of a disability should make their needs known to the Coordinator of Accessibility Services, 716.338.1251.
- Emergency Closing Procedures (<http://www.sunyjcc.edu/student-life/campus-safety/jcc-alert>)
- Course grade is determined by the instructor based on a combination of factors, including but not limited to, homework, quizzes, exams, projects, and participation. Final course grade can be translated into a grade point value according to the following:

A=4.0	B+=3.5	B=3	C+=2.5	C=2	D+=1.5	D=1	F=0
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- Veterans and active duty military personnel with special circumstances (e.g., upcoming deployments, drill requirements, VA appointments) are welcome and encouraged to communicate these to the instructor.
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Effective Date: Fall 2019