College of Science and Mathematics
Chemistry Department

Course Information
Course Title: Chemistry of Our World: Living Things
Course Abbreviation and Number: CHM 1050/CHM 1050L
Course Credit Hours; 4
General Education Course__Element 6__ Writing Intensive Course_____ Service Learning Course_____ Laboratory Course__X__ Ohio TAG (Transfer Assurance Guide) Course _____Ohio Transfer Module Course__X__ Others (specify)_____

Course Registration
Prerequisites: None
Corequisites: None
Restrictions: None

Student Learning Outcomes
Attention is given to the fundamentals of general, organic and biological chemistry. Special attention is paid to covalent bonding, structures and reactions of molecules important to living things with consideration to the technological, regulatory, and social complexities of problems related to them. Understand the experimental basis of scientific inquiry. Understand the theoretical, practical, creative and cultural dimensions of scientific inquiry. Recognize appropriate ethical uses of knowledge in the natural sciences

CHM 1050 is a Natural Science course for the Core Element program. Learning outcomes are:
- Understand the nature of scientific inquiry
- Critically apply knowledge of scientific theory and methods of inquiry to evaluate information from a variety of sources
- Distinguish between science and technology and recognize their roles in society
- Demonstrate an awareness of theoretical, practical, creative and cultural dimensions of scientific inquiry
- Discuss fundamental theories underlying modern science

Suggested Course Materials (required and recommended)
Texts:
(1) Stoker, Stephen H., Essentials of General, Organic, and Biological Chemisty, Houghton-Mifflin, 2003
(2) Grossie and Underwood, *Laboratory Guide for Chemistry*, Hayden-McNeil, 2010

Suggested Method of Instruction
Lecture, Discussion, Laboratory

Suggested Evaluation and Policy
Lecture: Four to five exams and five to six homework assignments
Comprehensive final exam
Laboratory: 8 lab reports

Suggested Grading Policy
Grading scale: A-F

Suggested Assignments and Course Outline
Week 1 - 3: Classification of Matter, Atoms, Molecules and Compounds and Their Bonds; Homework 1
Week 4 - 6: Acids, Bases and Introduction to Organic Chemistry; Homework 2
Week 7 - 9: Hydrocarbons and Functional Groups; Homework 3
Week 10 - 12: Carbohydrates, Lipids, Amino Acids, Proteins and Enzymes; Homework 4
Week 13 – 14: Nucleic Acids, Protein Synthesis and a Current Topic; Homework 5

LABORATORY SCHEDULE
Weekly Experiments
Weeks 2-3 Introduction to Chemistry Lab / Lab Safety
Week 4 Periodic and Family Relationships
Weeks 5-6 Acid/Base Reactions
Week 7 Molecular Models: Organic Compounds
Week 8 Synthesis of Organic Compounds: Aspirin
Week 9-10 Carbohydrates
Week 11-12 Fats, Oils and Detergents
Weeks 13 Amino Acids and Proteins

Other Information
None.