CHM 1020 Elementary Organic Chemistry with Applications Course Syllabus

I. Wright State University, College of Science and Mathematics  Department of Chemistry

II. Course Information

Course Title: Elementary Organic Chemistry with Applications
Course Abbreviation and Number: CHM 1020
Course Credit Hours: 4
Course Cross Listing(s) Abbreviation and Number: N/A
Check (“x”) all applicable:
   General Education Course_  Element 6___
   Writing Intensive Course___
   Service Learning Course_____ 
   Laboratory Course_ X___
   Ohio TAG (Transfer Assurance Guide) Course ______
   Ohio Transfer Module Course_____ Others (specify)_____

III. Course Registration

Prerequisites: CHM 1010 or High School Chemistry
Corequisites: CHM 1020L
Restrictions:

Other:

IV. Student Learning Outcomes

This course is intended to provide students, especially those planning careers in the health sciences, with an introduction to the basic principles of organic chemistry and biochemistry. After taking the course the students should be familiar with the terms and concepts used in organic chemistry and biochemistry.

CHM 1020 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

V. Course Materials


VI. Method of Instruction  Lecture and Laboratory Experimentation

VII. Evaluation and Policy  The course grade, based upon a possible total of 450 points, is to be calculated as follows:
   Best two out of three hour exams 200 points
   Laboratory grade 100 points
   Final exam 150 points

The final exam will be given as scheduled by the university.
VIII. Grading Policy
It is expected that grades will be assigned according to the following performance levels. > 400 = A, 350-399 = B, 300-349 = C, 250-299 = D, <250 =

IX. Suggested Assignments and Course Outline

Recitation:
Week 1: Introduction Week
2: Saturated Hydrocarbons
Week 3: Unsaturated Hydrocarbons
Week 4: Alcohols, Phenols, and Ethers
Week 5: Aldehydes and ketones
Week 6: Carboxylic Acids, Esters, and Other Acid Derivatives
Week 7: Amines and Amides
Week 8: Carbohydrates
Week 9: Lipids
Week 10: Proteins
Week 11: Enzymes and Vitamins
Week 12: Nucleic Acids
Week 13: Biochemical Energy Production
Week 14: Carbohydrate metabolism

Laboratory:
Week 1: Introduction
Week 2: Molecular Models, Organic Compounds
Week 3: Chromatography of Kool-Aid
Week 4: Synthesis of Organic Compounds
Week 5: Fats, Oils, Soaps, and Detergents
Week 6: Amino Acids and Proteins
Week 7: Rate of a Chemical Reaction
Week 8: Dyes and Dyeing
Week 9: Synthetic polymers
Week 10: Stain Removal, Bleach, and Optical Brighteners
Week 11: Vitamin C Determination
Week 12: Titrimetric determination of the Power of an Antacid Tablet
Week 13: Qualitative Analysis
Week 14: Laboratory Clean-Up

X. Other Information

Approved: Undergraduate Curriculum and Academic Policy Committee
_______________________________________ Faculty Senate