

**Central Ohio Technical College  
Course Description Listing – General Education Courses – Natural Sciences – Chemistry Courses  
2009-2010 Academic Year**

**ALL STUDENTS MUST TAKE PLACEMENT TESTS PRIOR TO SCHEDULING THE FIRST COMMUNICATIONS OR MATHEMATICS COURSE.**

**CHM-1700 Basic Chemistry**

6 credit hours, 7 contact hours (5 hours lecture and 2 hours lab). Prerequisite: Grade C (2.00) or better in either high school Algebra I or MTH-1205 or score of at least 43 on COMPASS Elementary Algebra test. This course will count neither for elective credit nor toward meeting minimum credit hours for graduation. Recommend completion of or concurrent enrollment in PCE-1400 or equivalent course or college level composition course. Course is graded A-E. Not open to students with credit for NAT-1223 or NAT-1700.

An introduction to the basic concepts of chemistry designed to serve as a foundation (or refresher) for the student about to enter the study of allied health sciences. The course includes the following topic areas: metrics; elements, compounds and mixtures; atomic structure; bonding; chemical reactions, energy of reactions; oxidation-reduction; gas laws, solids and liquids; liquid mixtures; acids, bases and salts; and a brief look at fluid-electrolyte balance. The laboratory portion of this course enhances the theories and concepts presented in lecture.

**CHM-1710 General Organic Chemistry**

6 credit hours, 7 contact hours (5 hours lecture and 2 hours lab). Prerequisite: (Grade C (2.00) or better in either high school Algebra I or MTH-1205 or a score of at least 43 on COMPASS Elementary Algebra test) and grade C (2.00) or better in either high school chemistry or CHM-1700. Completion of or concurrent enrollment in PCE-1400 or college level composition course is recommended. Course is graded A-E. Not open to students with credit for NAT-1228 or NAT-1710.

The course discusses the structures, reactions, properties, and naming of simple organic compound classes, including hydrocarbons, working up to the more complex biological compounds. The laboratory portion of this course enhances the theories and concepts presented in lecture.

**CHM-1713 General, Organic, and Biochemistry**

6 credit hours, 7 contact hours (5 hours lecture and 2 hours lab). Prerequisite: Grade C (2.00) or better in both high school Chemistry and high school Algebra I or MTH-1205. Course is graded A-E.

This General, Organic, and Biochemistry course is primarily designed to serve the student entering the Nursing and Allied Health programs. The course is the study of the general chemistry principles with a focus on identification of functional groups, understanding the properties of each functional group, the naming rules for simple molecules, and key reactions for each functional group; and biochemistry principles with a focus on the properties carbohydrates, lipids, proteins, enzymes, nucleic acids, and basic metabolic pathways. The laboratory portion of this course enhances the theories and concepts presented in lecture.