



Danville Area School District  
Course Overview  
2014-2015



**Course:** Organic Chemistry

**Teacher:** Tom Williams

**Course Introduction:**

This course is designed for students who are considering the pursuit of a science major or students who plan to pursue health-care professions. The course will emphasize the identification, naming and drawing of organic molecules with the following functional groups: alkanes, alkenes, alcohol, carboxylic acids, aldehydes, ketones, amines, amides, ethers, and esters. Characteristic chemical reactions of these functional groups will be introduced. Common organic laboratory skills, techniques and equipment will also be used. Prerequisites: Successful completion of Chemistry.

**Course Text or Student Materials:**

Hart, Crane, Hart and Hadad; *Organic Chemistry, A Short Course*, Twelfth Edition, 2007.

**Units of Study:**

- Review of Chemistry
- Intro to Organic
- Alkanes
- Alkenes and Alkynes
- Functional Groups

**Student Objectives:**

- Obtain a general working knowledge of the naming system used in organic chemistry.
- Obtain a general working knowledge of the ways to draw and represent organic molecules.
- Identify the various functional groups in organic molecules.

**Standards/Anchors (Eligible Content):**

- CHEM.A.1.1.2** Classify observations as qualitative and/or quantitative.
- CHEM.A.1.1.4** Relate the physical properties of matter to its atomic or molecular structure.
- CHEM.A.1.1.5** Apply a systematic set of rules (IUPAC) for naming compounds and writing chemical formulas (e.g., binary covalent, binary ionic, ionic compounds containing polyatomic ions).
- CHEM.B.1.2.1** Determine the empirical and molecular formulas of compounds.
- CHEM.B.1.3.1** Explain how atoms combine to form compounds through ionic and covalent bonding.

**CHEM.B.1.3.2** Classify a bond as being polar covalent, non-polar covalent, or ionic.

**CHEM.B.1.3.3** Use illustrations to predict the polarity of a molecule.

**CHEM.B.1.4.1** Recognize and describe different types of models that can be used to illustrate the bonds that hold atoms together in a compound (e.g., computer models, ball-and-stick models, graphical models, solid sphere models, structural formulas, skeletal formulas, Lewis dot structures).

**CHEM.B.1.4.2** Utilize Lewis dot structures to predict the structure and bonding in simple compounds.

**Instructional Plan:**

Media resources, class discussion and laboratory experiments will be used to reinforce and aide in the learning of concepts and topics covered in class.

**Student Assistance:**

Students are able to meet with the teacher during any free periods of the day and are also encouraged to schedule appointments before or after school, if necessary. Students are able to get assignments and expectations from oral communication in class, or by checking in with the teacher before class.

**Assessments and Evaluation:**

Assessments in the course include regular assignments from the textbook, practice worksheets and lab assignments.

Progress is evaluated with graded assignments, lab papers, weekly quizzes and unit tests.

**Grading:**

Grades are based on a total points system. Generally, grades will come from tests, labs, quizzes, and textbook assignments.

Other graded activities, projects or assignments may also be given.

Labs that are handed in late will have 10% of the grade deducted.

Assignments with no name will receive a reduced grade. If a paper cannot be identified, it will be recorded as a zero.

**Homework/Procedures:**

- Assignments are given on a regular basis.
- Late assignments and labs are not accepted without an excused re-admit slip.

**Student and Parent Communication:**

Parents can feel free to contact the instructor with any questions or concerns, E-mail communication is preferred.

Tom Williams: [towilliams@danville.k12.pa.us](mailto:towilliams@danville.k12.pa.us)

Students can meet with the teacher at a variety of times to communicate questions or concerns. (See Student Assistance Section)

**Student Expectations and Classroom Rules of Conduct**

Follow the rules and regulations outlined in the student handbook.