

Instructor

Prof. Matt Liptak
Cook A116 / STEM W112
(802) 656 . 0161
matthew.liptak@uvm.edu

Lecture

MWF 9:40 . 10:30 AM, Williams 301

Office Hours

TR 10 AM . 11 AM, F 2 PM . 3 PM, or by appointment, Cook A116 / STEM W112

Exams

R Feb. 9, Mar. 9, Apr. 6, Apr. 27, 6:00 PM . 9:00 PM, Williams 301
R May 11, 10:30 AM . 1:15 PM, Williams 301

Course Description

First semester of a two-semester sequence. Topics include matter, stoichiometry, gas laws, thermochemistry, quantum theory, atomic structure, electronic configurations, bonding and intermolecular forces.

Textbook

Gilbert, T.R.; Kirss, R.V.; Foster, N. *Chemistry: An Atoms-Focused Approach*, 1st Ed., Norton, 2014.

Web Content

Lecture notes will be available through Blackboard (bb.uvm.edu). These materials are available for all current, UVM-affiliated, students.

Quizzes will be administered using the SmartWork (<http://smartwork.wwnorton.com>) system. A free subscription comes with your textbook when purchased at the UVM bookstore.

SmartWork Enrollment Key: CHEMAT11173

Course Goals

Upon completion of Chemistry 031, it is anticipated that you will:

1. Understand how to use the scientific method to solve a problem.
2. Employ the periodic table to predict chemical properties.
3. Balance a comprehensive range of chemical reactions.
4. Use thermodynamics and quantum mechanics to formulate reasonable hypotheses.
5. Describe chemical bonding using molecular orbitals.

Academic Honesty

As UVM students, you are expected to conduct yourself in accordance with the Code of Academic Integrity.

Laboratory/Recitation

Laboratory Safety

OSHA-approved safety glasses or goggles, which can be obtained at the UVM bookstore, must be worn at all times when in the laboratory. Contact lenses are *not* permitted in the laboratory, but prescription glasses will fit underneath safety *goggles*. Open-toed shoes are not permitted in the laboratory at any time. *Any violation of these policies will result in a grade of zero for the experiment.*

Laboratory Preparation

Prior to each laboratory, you should: print out and read a copy the experiment, watch the laboratory demonstration video, prepare your laboratory notebook, and complete the Pre-lab

Grading

Problem Sets (100 Points)

A total of 11 open-book, open-notes problem sets will be administered via the online SmartWork system throughout the semester. Problem sets will be due at 11:59 PM on the date noted below, and the answers will be available at midnight. Thus, ***no extensions will be granted*** for the problem sets, but your lowest grade out of the 11 problem sets will be dropped.

January 30