

Syllabus
CHM 531, Advanced Physical Chemistry I, Fall 2013

Class Meeting: M. W. F. 11:00 AM in Room 234 Pastore Hall

Instructor: Sze C. Yang, e-mail: syang@chm.uri.edu

Office Hour: Tu, Th 10:00 AM, Room 334 Pastore Hall

Course Description

Fundamentals and applications of chemical thermodynamics, molecular structures, chemical transformations, principles and practice of computational chemistry.

Course Goals

The goal of this course is for students to be proficient in using basic chemical principles for solving research problems. Students will apply principles of physical chemistry and inorganic chemistry to understand the molecular structure and its influence on the property of materials. This course seeks to build student's chemical intuition by computational and visualization tools.

Textbooks and on-line resources:

"Thermodynamics and Chemistry", 2nd Ed, by Howard Devoe, (2012), a downloadable digital textbook.

"Elements of Statistical Thermodynamics", 2nd Ed., by Leonard K. Nash (2006, Dover Books), ISBN978-0-486-44978-4.

"A Brief Review of Elementary Quantum Chemistry", an on-line posting by C. David Sherrill, Georgia Institute of Technology.

"Computational Quantum Chemistry" by Lyudmila Slipchenko, Purdue University, an on-line course on computational chemistry.

Course Requirements:

3 Collaborative projects, each counts 100 points.	300 pts
2 Exams, each counts 200 pts.	400 pts
1 Final Exam	300 pts