
COURSE NAME/ NUMBER

LEARNING OBJECTIVES / GOALS / OUTCOMES/ LEARNING OUTCOMES:

Students will become familiar with the basic concepts of quantum mechanics and its applications to atomic and molecular systems. They will learn how to use principles of quantum mechanics and quantum mechanical programs to calculate properties of molecules and their spectra.

METHODS:

Lectures, computer labs, group problem-solving sessions.

PRIOR LEARNING ASSESSMENT RECOGNITION (PLAR):

Credit can be awarded for this course through PLAR YES _____ NO X

METHODS OF OBTAINING PLAR:**TEXTBOOKS, REFERENCES, MATERIALS:**

Atkins, *Physical Chemistry*, 6th ed., Freeman and Co., 1998

SUPPLIES / MATERIALS:**STUDENT EVALUATION:**

Labs	25%
Midterms	30%
Final	45%

COURSE CONTENT:

1. Introduction to Quantum Mechanics.
2. Simple Quantum Mechanical Problems and their Application to Spectroscopy.
3. Atomic Structure and Spectroscopy.
4. Molecular Structure.
5. Molecular Electron Spectroscopy.