

Introduction to Quantum Chemistry and Molecular Spectroscopy

CHEM 6472 Fall 2004

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Office Hours: Tuesdays 1 - 2 pm, Thursdays 10 - 11 am or by appointment

Texts:

Required Text:

Molecular Quantum Mechanics (3rd Edition) by P.W. Atkins and R.S. Friedman.
Publisher: Oxford University Press, New York (1997).
ISBN: 019855947X
Call Number: QD462.A84 1997

Supplemental texts that may be helpful. These books have been put on reserve in the library.

Quantum Chemistry (5th Edition) by Ira N. Levine
Publisher: Prentice Hall, (1999)
ISBN: 0136855121
Call Number: QD462.L47

Quantum Chemistry (Physical Chemistry Series) by Donald A. McQuarrie
Publisher: University Science Books, (1983)
ISBN: 093570213X
Call Number: QD462.M4 1983

Topics:

We will cover topics as represented by Chapters 1-8, 10 and 11 of Molecular Quantum Mechanics by Atkins and Friedman.

This course will provide coverage of the fundamentals of quantum mechanics, treatment of basic quantum mechanical systems, angular momentum, group theory, approximation methods, atomic and molecular structure, and applications to molecular spectroscopy.

Grading:

Problem sets and mid-term and final exams will be given and each will account for 1/3 of the course grade.