

# Chemistry 561 Quantum Chemistry

Fall 2024

**Texts:** Quantum Chemistry, Ira N. Levine, 7th Edition, Prentice-Hall

**Instructor:** Professor Mark S. Gordon, 201 Spedding Hall

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Office Hours: By arrangement via Zoom

➔ No cell phone calls or texting, etc. are allowed in class

## Course Outline

Topic	Chapter: Levine
Historical background of Quantum Mechanics	1
Operators and the Schrodinger Equation	1, 3
Free particle, particle in box, tunneling	2, 3
Degeneracy, expectation values, postulates of QM	3, 7
Fundamental theorems of quantum mechanics	7
Harmonic Oscillator	4
Angular momentum	5
Hydrogen atom	6
Variational Theorem and application	8
Perturbation theory	9
Electron spin	10

**Course Grade:** Two Hour Exams = 50%

Final Exam = 50%

**Disabilities:** If you have a documented disability that requires assistance, you will need to go to the Disability Resource (DR) Office for coordination of your academic accommodations. The DR Office is located in the Student Services Building, Room 1076. The DR office phone number is 515-294-7220, TDD 515-294-6335.

**CDC COVID-19 Recommendations: CDC recommends universal indoor masking for all teachers, staff, students, and visitors, regardless of vaccination status.**

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