

SYLLABUS

Course:	CHEM 552 (Quantum Chemistry; 3 units)
Prerequisites:	CHEM 351/352 sequence preferred.
Lecturer:	Dr. Jussi Eloranta
E-mail:	Jussi.Eloranta@csun.edu
Office:	Eucalyptus Hall 2025
Office hours:	Fri 12:00 – 1:00 pm.
Lectures:	Fri 6:15 – 7:30 pm. 2+1 hours / week of lectures in Eucalyptus Hall 2227
Exams:	No examinations (only final project).
Content:	Quantum chemistry and Electronic structure theory.
Course material:	Provided during class.

1. Student learning outcomes

The following topics will be covered:

1. The foundations of quantum mechanics
2. Linear motion and the harmonic oscillator
3. Rotational motion and the hydrogen atom
4. Angular momentum
5. Group theory
6. Techniques of approximation
7. Atomic structure
8. Molecular structure
9. Electronic structure theory
10. Final project

2. Tentative schedule (Spring 2018)

The assigned final project has to be completed before the end of the semester.