

Quantum Mechanics III

Instructor: Oksana Ostroverkhova, oksana@science.oregonstate.edu

Textbook: *Modern Quantum Mechanics*, 3rd Ed., J.J. Sakurai and J. Napolitano

References: 1. *Quantum Mechanics*, Cohen-Tannoudji, Diu and Laloe
2. *Quantum Mechanics*, B. H. Bransden and C. J. Joachain
3. *Quantum Mechanics*, D. McIntyre

Office hours: Weniger 413, as needed

Course outline:

Variational methods	(Chapter 5.4)	week 1
Time-dependent potentials	(Chapter 5.5)	week 1-2
Time-dependent perturbation theory	(Chapter 5.7)	week 2-4
Interaction of a particle with EM fields	(Chapter 5.8-5.9)	week 5-6
Identical particles	(Chapter 6)	week 7-8
Scattering theory	(Chapter 7)	week 9-10

Homework:

There will be one homework assignment per week: check the course web for current assignments due. Homework is to be turned in at the beginning of the class; late homework is not accepted. The homework solutions will be available immediately after the due time.

Worksheets:

In order to help you check your understanding of the material and provide feedback for me, worksheets will be given during many lectures. Filled out worksheets will be graded and returned by the next lecture.

Exams:

We will have one in-class midterm (tentative date May 10) and a final exam (registrar-set time is Thursday, June 15, 9:30 AM)

Grading Policy:

Homework (total)	30%
Worksheets (total)	10%
Midterm	20%
Final	40%