Graduate Quantum Mechanics
PHY 631,632; Fall 05/Winter 06

Instructor: Prof. Graham Kribs

Text: Sakurai: Modern Quantum Mechanics (required)
Messiah: Quantum Mechanics Vol 1 (recommended)

Office: 470 Willamette Hall

Office Hours: 10am–12pm Mondays

E-mail: kribs@uoregon.edu
(This is the best way to reach me, however please refrain from emailing me highly technical questions that are best answered during office hours, thanks.)

Class Website: http://wingate.uoregon.edu/phy631
(Syllabus, homework, announcements, etc.)

Grade: 40% Homework
30% In-class Mid-term: November 1 (1.5 hours)
30% In-class Final: December 2 (2 hours)

Homework: Homework will be assigned weekly on Thursdays, due Tuesdays at the beginning of class.

Advice: Helping each other with the material and homework is great. Copying is not. Know the difference: the course is for your benefit!

Syllabus (631/632)

(1) Introduction; Foundational experiments; early theoretical ideas.
(2) Schrödinger equation; Wave packets; 1D problems.
(3) Formalism; Operators, matrices, observables; Hilbert space.
   Harmonic oscillator.
(4) Angular momentum and spin.
(5) Symmetries.
(6) 3D problems; Hydrogen atom.
(7) WKB; Perturbation theory; Time-dependent P.T.; Fermi’s Golden Rule.
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Syllabus

Announcements

Class Cancellations

Class is CANCELED on Tuesday, October 11. Office hours CANCELED on Monday, Oct 10. Homework assigned on Oct 6 due TWO WEEKS LATER on Tuesday, Oct 18.

We will make it up by extending class to 12:00 noon on Thursday, Oct 13 and Thursday, Oct 20. Bring an energy bar. (Let me know if you absolutely cannot do this on one or the other date.)

Homework

Homework #1 (due Tuesday, Oct 4)
Homework #2 (due Tuesday, Oct 18)
Homework #3 (due Tuesday, Oct 25)
Homework #4 (due Tuesday, Nov 1)
Homework #5 (due Tuesday, Nov 8)
Homework #6 (due Tuesday, Nov 15)
Homework #7 (due Tuesday, Nov 22)
Homework #8 (due Tuesday, Nov 29)

Contact

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