

Quantum Mechanics

PHYSICS 851/852, FALL 2000 / SPRING 2001

<http://www.nscl.msu.edu/~pratt/phy851>

Instructor: Scott Pratt

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Text

Modern Quantum Mechanics, J.J. Sakurai, Addison-Wesley 1994

Lecture

Monday-Wednesday-Friday, 10:20 AM - 11:10 AM, 317 Physics/Astronomy

Physics 851: First Lecture: August 28, Last Lecture: December 8

Physics 852: First Lecture: January 8, Last Lecture: April 27

Final Exam

Physics 851: Thursday, December 14, 10:00 AM - 12:30 PM

Physics 852: Monday, April 30, 7:45 AM - 10:15 PM

Topics

Physics 851: Matrix Representations, Schrödinger Equation, Potential Problems, Hydrogen Atom, Spherical Potentials, Approximation Methods, Perturbation Theory, Fermi's Golden Rule, Angular Momentum Scattering Theory.

Physics 852: Second Quantization, Advanced Topics in Angular Momentum, Isospin, Cooper Pairs, Quantum Hall Effect, Dirac and Klein-Gordon Equations.

Grading and Homework

Homework will be handed in every Friday. Homework will be due at 5:00 PM on Friday, and should be put into the TAs mail box. Quizzes will be administered every Friday that homework is due, at the end of class, and typically will consist of one problem which is quite similar to the homework. Homework will account for 20% of the overall grade, quizzes for 40%, and the final exam will account for the remaining 40%. The lowest two quiz grades will not be counted when calculating grades. No makeup quizzes will be administered and late homework will suffer a 25% penalty.