PHYS 411 Quantum Mechanics I
S2006, MTΘF 12:00 – 12:50. Roberts 102

Common sense is the collection of prejudices acquired by age eighteen
— Albert Einstein

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- Office hours: Friday. 10:00–10:50
- Assignments etc.: http://solar.physics.montana.edu/dana/ph411/

Grading:
- Homework assignments — One set per week; hand in one problem at the beginning of each class.
- 3 in-class exams
- Final Exam


OUTLINE
I. Review of Classical Mechanics (Ch. 1)
   - Hamiltonian Mechanics
   - Constants of the Motion
   - Poisson Brackets
II. Historical overview (Ch. 2)
   - 2-slit interference
   - Hydrogen spectrum & Bohr atom
   - Probablility (a review)
III. Postulates of QM (Ch. 3)
IV. QM in action — particle in a box (4.1–4.2)
V. Abstract notation (4.3–4.6)
   - Dirac notation
   - Hilbert spaces & operators
VI. Superposition & Commutators (Ch. 5)
VII. Time development (Ch. 6)
VIII. Simple Harmonic Oscillator (7.1–7.3)
IX. One-dimensional scattering (7.6–7.9)