

PHY 361 (Modern Physics)

Course Information

Spring 2011

Instructors Mark Bowick: Physics 317- Tel. x5979 - email: bowick@physics.syr.edu.
Mitch Soderberg: Physics 315- Tel. x2565 - email:msoderbe@syr.edu

Time and Location: Tue & Thu 11:00AM–12:20PM in Physics 104N.

TEXT : “Quantum Physics: A Fundamental Approach to Modern Physics,”
John S. Townsend (University Science Books, 2010).

SYLLABUS

1. Space and Time - Special Relativity
2. Light
3. Wave Mechanics
4. The Time-Independent Schrödinger Equation (plus primer on Complex Numbers)
5. Principles of Quantum Mechanics
6. Quantum Money, Teleportation and Computation
7. Quantum Mechanics in Three Dimensions
8. Identical Particles
9. Condensed Matter Physics
10. Particle Physics
11. Cosmology

GRADING

The final course grade will be based on Homework (25%), Weekly Quizzes (10%), 2 Midterms (20% each) and the Final Exam (25%). Please check your scores on blackboard.

Office Hour

Tuesday 12:30-1:30 or anytime by appointment. Please bring your class notes and any other relevant material to the office hour discussion.

KEY DATES

Midterm 1: in class Thursday Feb 17

Midterm 2: in class Thursday March 31

FINAL: Friday May 6th 5:15-7:15PM