Course Information Sheet for Physics 560A: Condensed Matter Physics

Quantum theory of solids; second-quantization; bosons and fermions; broken symmetry; band theory; transport theory and nonequilibrium Green’s functions; magnetism; superconductivity.

Each student must investigate an advanced topic in condensed-matter physics to be agreed upon with the instructor, and present their findings either in a 20-minute oral presentation or a 10-page term paper.

Professor: Charles Stafford
Office: PAS 347
Phone: 626-4260
email: stafford@physics.arizona.edu
Web: http://www.physics.arizona.edu/~stafford/teaching.html
Office hours: W 1:30–3:30pm

Lectures: MWF, 9–9:50am, PAS 416

Grading:
The course is graded on a curve, based on the cumulative score. The minimum cumulative percentages necessary to obtain the following letter grades will be roughly: $A \geq 80\%$, $B \geq 65\%$, $C \geq 50\%$, $D \geq 40\%$. The cumulative score will be determined as follows:

- Homework: 0% if no grader (solutions provided)
- Midterm (October 7): 30%
- Project (20-min. oral presentations Dec. 2, 5): 20%
- Final Exam (Take-home exam Dec. 7; due 4pm Dec. 12): 50%

Disabilities:
Students requiring accomodation in testing or note taking must notify the instructor and provide a letter from the Disability Resource Center by August 31, 2011.

Required Text:

Additional suggested references
G. D. Mahan, “Many-Particle Physics”
M. Marder, “Condensed Matter Physics” (Wiley, 2000)
C. Kittel, “Quantum Theory of Solids”


P. M. Chaikin and T. C. Lubensky, “Principles of condensed matter physics” (Cambridge, 1995)