**SOLID STATE PHYSICS II - PHYX 6540**  
**SYLLABUS**  
**Spring 2001**

**Class:** MW 3:00 - 4:30 SER 122A  
**Instructor:** J.R. Dennison SER 222D 797-2936 PHYSJR@cc.usu.edu  
**Office Hours:** MW 11:30-12:30 or by appointment  

**Prerequisites:** *Statistical Mechanics I (PHYX 6410), Solid State I (PHYX 6530).*

**Objectives:** This course has two primary goals: (1) to provide depth in a number of selected topics in solid state physics, building on the basic framework provided in Solid State Physics I and (2) develop research and written presentation skills in current topics of solid state physics.


Additional texts and journal article will also be require as supplemental reading; refer to the bibliography of the Assignment Sheet.

**Lecture:** Lectures will concentrate on the physics concepts and applications of these concepts. They will augment the text, rather than go over the text material in detail. *The reading assignment should be read before coming to lecture.*

**Assignments:** Reading assignments are listed on the attached Assignment Sheet. There are five assigned Problem Sets. These are not trivial problems, so do not procrastinate.

**Class Project:** You are to write a term report on a topic of your choice. The paper should be related to our class material and is to cover in depth a topic presented in a *Physical Review Letter* within the last five years related to noncrystalline solids, complex materials or surfaces and interfaces. Your bibliography must contain a minimum of ten journal articles, at least five of which are in physics research journals from within the last five years. You are to follow the *AIP Style Manual* and *Physical Review* for format. A length of approximately 4-8 journal pages or 12-24 double spaced manuscript pages is appropriate. You are required to submit an abstract plus a bibliography conforming to AIP standards and a detailed outline as interim steps in the writing process. The abstract plus bibliography, outline and paper are due on , respectively.

**Grading:** Each problem set counts 15% of the final grade, for a total of 75%. The written project will serve as a final exam and will count 25% of your grade. Assignments should be turned in as noted on the Assignment Sheet. Late work will be docked one letter grade for each class meeting past the due date.  

**Approximate Grading Scale:** A>90%, A->85%, B++>80%, B>75%, B->70%, C++>65%, C>60%, C->55%, D++>50%. D>45%.

"If a student has a disability that will likely require some accommodation by the instructor, the student must contact the instructor and document the disability through the Disability Resource Center [797-2444], preferably during the first week of the course. Any requests for special considerations relating to attendance, pedagogy, taking of examinations, etc. must be discussed with and approved by the instructor. In cooperation with the Disability Resource Center, course materials can be provided in alternative formats—large print, audio, diskette or Braille."