

## Physics 313A – Solid State Physics, Winter Quarter 2013

<b>Instructor:</b>	Dr. Alexander Dzyubenko
<b>Office:</b>	Science III, room 302
<b>Class Meetings:</b>	Mon Wed 15:10–16:00–17:15
<b>Office hours:</b>	Mon 11:00 AM – Noon, Wed 2:00–3:00 PM
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### **Textbook: Solid State Physics**

By N. W. Ashcroft and N. D. Mermin  
ISBN-10: 9780030839931

Supplementary: *Introduction to Solid State Physics*, Wiley 2005, 8<sup>th</sup> Edition  
by Charles Kittel ISBN 978-0-471-41526-8

Material covered:

CRYSTAL STRUCTURE AND X-RAY DIFFRACTION  
THE RECIPROCAL LATTICE  
CLASSIFICATION OF SOLIDS  
CRYSTAL BINDING AND COHESIVE ENERGY  
LATTICE VIBRATIONS  
PHONONS AND THERMAL CONDUCTIVITY

**Homework:** I will assign a number of problems biweekly.  
We will have problem discussion sessions every Monday.

### **Grading:**

Final Exam	50%
Homework	30%
Project Presentation	20%

**Final Exam:** Comprehensive, Time and date TBA.