UPDATED: January 22, 2014

PHY480, Spring '14, Course Syllabus

Instructor: Dr. Matthew M. Waite, Merion 133, 610-436-2573, mwaite@wcupa.edu

Class Meeting: TTh 9:30 am - 10:45 am
Office Hours: MWF 9:00 -10:00, TTh 11:00-12:00, or by appointment.
Course Web Page: D2L

Course information can be found here throughout the semester. The syllabus, homework problem solutions, and other interesting stuff can be found here. Check it periodically!!

Text: Introduction to Solid State Physics, by Charles Kittel, J. Wiley & Sons, Inc. (New York, 2005) ISBN: 0-471-41526-X

Grading:

3 Exams (15%@)	45%
Cumulative Final	25%
Homework	25%
Class Participation	5%

Attendance:

Excused absences are limited to University-Sanctioned Events (which follow the Excused Absence Policy for University-Sanctioned Events as described in the West Chester University Undergraduate Catalog), and absences due to serious illness or injury (verified by a practicing MD, you must provide me with a phone number), or the death of family members (also to be verified.)

Homework:

Homework is due by 4:00 pm on the due date. At 4:00 pm, the solutions will be posted on the web page. No homework will be accepted late, no exceptions. At the end of the semester, one homework grade will be dropped, so, if you miss one assignment, it's no big deal. But you don't want to make a habit of it, or it could be very damaging to your grade at the end of the semester.

I encourage you to discuss the homework problems together, and to work and learn together, but when you are ready to sit down and write out your solutions, make sure that they are your own solutions.

University Policies:

For questions regarding Academic Dishonesty, the No-Grade Policy, Sexual Harassment, or the Student Code of Conduct, students are encouraged to refer to their major department's handbook, the Undergraduate Course Catalogue, the Rams Eye View, or the University Web Site. Please understand that improper conduct in any of these areas will not be tolerated and may result in immediate ejection from the class.

WCU's Department of Public Safety: 610-436-3311

Disability:

We at West Chester University wish to make accommodations for persons with disabilities. Please make your needs known by contacting the Office of Services for Students with Disabilities at ext. 3217 **and** me at the above listed contact information. Sufficient notice is needed in order to make the accommodations possible. The University and I desire to comply with the ADA of 1990.

Exams:

There will be three hourly exams throughout the semester. These hourly exams will focus on the most recently covered lecture and class material, but they should be considered cumulative in the sense that we will be building upon what we have already learned throughout the semester. I DO NOT give make up exams. If you miss an exam, you will receive a ZERO for that exam and it will be recorded as a zero. Only under very special circumstances will there be any change to this policy, and in those cases, exceptions will be made ONLY when I am notified prior to the scheduled exam time of a conflict. If you have ANY questions or concerns about this particular point, please come talk to me and get clarification BEFORE it's too late!

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Schedule: (This schedule is tentative, I will try to follow it as closely as possible! But it is likely to change some as the semester proceeds!!)

Month	Day	Date	Reading	Topic	Hmwk
~~Jan.~~	~~Tu~~	~~21~~	~~XX~~	~~Snow Day!~~	
	Th	23	XX	Drude Theory & Sommerfeld Theory	
	Tu	28	XX	Drude Theory & Sommerfeld Theory	
	Th	30	1	Crystal Structure	#1 Due
Feb.	Tu	4	1-2	Crystal Structure & Reciprocal Lattice	
	Th	6	2	Reciprocal Lattice	#2 Due
	Tu	11	3	Crystal Binding & Elastic Constant	
	Th	13	XX	X-Ray Scattering	#3 Due
	Tu	18	4	Phonons I: Crystal Vibrations	
	Th	20	5	Phonons II: Thermal Properties	#4 Due
	Tu	25		EXAM I (Up Thru XRD)	
	Th	27	6	Free Electron Gas	
Mar.	Tu	4	6	Free Electron Gas	
	Th	6	7	Energy Bands	#5 Due
	Tu	11	7	Energy Bands	
	Th	13	8	Semiconductors	#6 Due
	Tu	18	Spring	We ain't got no class!	
	Th	20	Break	We ain't got no class!	
	Tu	25	9	Fermi Surfaces and Metals	
	Th	27	9	Fermi Surfaces and Metals	#7 Due
Apr.	Tu	1	10	Superconductivity	
	Th	3		EXAM II (Ch 4-9)	
	Tu	8	10	Superconductivity	
	Th	10	11	Diamagnetism & Paramagnetism	#8 Due
	Tu	15	12	Ferromagnetism & Anti-Ferromagnetism	
	Th	17	13	Magnetic Ordering	
	Tu	22	15	Optical Processes	#9 Due
	Th	24	15	Excitons	
	Tu	29		EXAM III (Ch 10-13, 15)	
May	Th	1		Last Day of Class! Surprise!	