

PHY240, Spring '13, Course Syllabus

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

Class Meeting: MWF 10:00-10:50 am

Office Hours: MWF 1:00-2:30 pm, Tu 10:30 am - 12:00 noon, or by appointment

Course Web Page: [D2L](#)

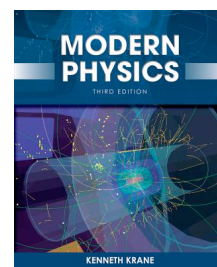
Course information can be found here throughout the semester. D2L should be your first access point, but there are occasionally some links and/or resources that it is more convenient to upload on the "courses.wcupa.edu" server and I will use the other website. The syllabus, homework problem solutions, and other interesting links and resources can be found here. Check it regularly!!

Text: Modern Physics, 3rd Ed., by Kenneth Krane, John Wiley & Sons (New York, 2012)

Note: This textbook is available as an e-book on CourseSmart at:

<http://www.coursesmart.com/IR/1276916/9781118061145?hdv=6.8>

Grading:	4 Exams (12.5% each)	50%
	Homework	15%
	Historical Papers/Presentations	10%
	Attendance/Participation	5%
	Cumulative Final	20%



Attendance: You are expected to attend every class period. It is up to you to make arrangements to get the lecture notes from a classmate and to learn of any important announcements that might have been made during class. Repeatedly missed classes will be noticed and attendance will be recognized in the "Class Participation" portion of the final grade.

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, or the death of family members (each of which is to be verified by a practicing, non-related, physician.)

Cell phones and texting are NOT ALLOWED during class. Cell phone use is disruptive to your classmates and to your instructors. Please turn your phones **off** or put them on **silence**, tuck them away in your bookbag, purse or European

carry-all, and forget about them until after class. If I see anyone texting or using their cell phones during class, I will take 5 points off of the nearest exam grade, and you will be considered "absent" for that day, since you are obviously not mentally present.

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.

Homework: For each chapter, I have posted an assignment of selected problems. These problems will be selected from the current version of the text and will usually be posted on my course website. The due date is clearly indicated. All homework is due by 4:00 pm on the indicated due date. No homework will be accepted after 4:00 pm on the due date. Solutions will be posted on the web after the due date. Be sure to check the solutions, in most cases I have made every attempt to present the most straightforward solution to a given problem.

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; it could be very damaging to your grade at the end of the semester. Homework is worth 15% of your final grade, more than any one exam!

I encourage you to discuss the homework problems together, and to work and learn together, but any assignment you turn in for a grade must be **YOUR OWN WORK!!** It is in your best interest to learn how to do the problems yourself.

Exams: There will be four 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 take to me and get clarification BEFORE it's too late!

Schedule: (This schedule is tentative, I will try to follow it as closely as possible!)

Month	Date	Reading	Topic	Hmwk
Jan.	28	Ch. 1	Introduction & Review of Classical Physics	
	30	Ch. 1	Review of Classical Physics	
Feb.	1	Ch. 2	Special Theory of Relativity	1
	4	Ch. 2	Special Theory of Relativity	
	6	Ch. 2	Special Theory of Relativity	
	8	Ch. 2	Special Theory of Relativity	
	11	Ch. 2	Special Theory of Relativity	
	13	Ch. 3	The Particle-Like Properties of EM Radiation	2
	15	EXAM I	Chapters 1 & 2	
	18	Ch. 3	The Particle-Like Properties of EM Radiation	
	20	Ch. 3	The Particle-Like Properties of EM Radiation	
	22	Ch. 3	The Particle-Like Properties of EM Radiation	
	25	Ch. 4	The Wave-Like Properties of Particles	3
	27	Ch. 4	The Wave-Like Properties of Particles	
Mar.	1	Ch. 4	The Wave-Like Properties of Particles	
	4	Ch. 4	The Wave-Like Properties of Particles	
	6	Ch. 5	The Schrödinger Equation	4
	8	Ch. 5	The Schrödinger Equation	
	11	Ch. 5	The Schrödinger Equation	
	13	Ch. 6	The Rutherford-Bohr Model of the Atom	5
	15	EXAM II	Chapters 3, 4, and 5	
	18	Spring Break	No Classes	
	20	Spring Break	No Classes	
	22	Spring Break	No Classes	
	25	Ch. 6	The Rutherford-Bohr Model of the Atom	
	27	Ch. 6	The Rutherford-Bohr Model of the Atom	
	29	Ch. 6	The Rutherford-Bohr Model of the Atom	
Apr.	1	Ch. 7	The Hydrogen Atom in Wave Mechanics	6
	3	Ch. 7	The Hydrogen Atom in Wave Mechanics	
	5	Ch. 7	The Hydrogen Atom in Wave Mechanics	
	8	Ch. 7	The Hydrogen Atom in Wave Mechanics	7
	10	Ch. 8	Many Electron Atoms	
	12	Ch. 8	Many Electron Atoms	
	15	Ch. 8	Many Electron Atoms	8
	17	EXAM III	Chapters 6, 7, and 8	

	19	Ch. 11	Solid-State Physics	
	22	Ch. 11	Solid-State Physics	
	24	Ch. 12	Nuclear Structure & Radioactivity	11
	26	Ch. 12	Nuclear Structure & Radioactivity	
	29	Ch. 12	Nuclear Structure & Radioactivity	
May	1	Ch. 13	Nuclear Reactions & Applications	
	3	Ch. 13	Nuclear Reactions & Applications	12
	6	Ch. 13	Nuclear Reactions & Applications	
	8	Ch. 13	Nuclear Reactions & Applications	13
	10	Exam IV	Chapters 11, 12, and 13	
	??	Final Exam	Chapters 1-8	