Physics 170, Fall 2014, Course Syllabus

Instructor: Dr. Matthew M. Waite, Merion Science Center 133, ext: 2573, mwaite@wcupa.edu

The best way to contact me is via e-mail. But, be aware that I will only read and respond to e-mails written in **proper English**, with **correct grammar**, **spelling**, **and etiquette**. Do not send me any e-mails addressed to "hey" written in text-speak like you're talking to your BFF about meeting up at Barnaby's tonight... Now, don't get me wrong, I might meet up for happy hour, but I won't answer any questions about class or homework!

Class Meeting: MWF 2-3 pm or 3-4 pm am, R 2-3 pm or 3-4 pm (Recitation)

Office Hours: MWF 9 – 10 am; TWTh 11am-12pm, and by appointment

Course Web Page: **D2L**

WileyPLUS: **http://edugen.wileyplus.com/edugen/class/cls402952/**

Course information can be found here throughout the semester. D2L should be your first access point. If required, links to other sites will be posted on D2L. The syllabus, homework problem solutions, and other interesting links and resources can be found here. Check it regularly!!

Course Goals & Student Outcomes: Our goals are to explore, analyze, and investigate the world around us and to gain a better understanding of how and why various physical phenomena occur. In our study of these physical phenomena, we aim to use our mathematical tools to aid us in gaining not only a qualitative conceptual perspective, but to provide a quantitative applied understanding as well.

Course PHY170 is an approved course in the WCU General Education program. It is designed to help students meet the following general education goals:

Gen Ed Goal 2: Ability to employ quantitative concepts and mathematical methods (Goal #2): Virtually every topic discussed in the class will have a quantitative aspect that will require advanced mathematics (calculus). These methods will be employed during class examples, recitation quizzes, midterm exams, and laboratory sessions.

Gen Ed Goal 3: Ability to think critically and analytically (Goal #3): New concepts will be presented each week which build upon previously discussed material. The relationships and connections between the concepts will require students to think critically and analytically about the reason the physical phenomena occur and how they occur. Critical and analytical thinking are essential for applying these interconnected yet seemingly diverse concepts to efficiently solve homework and exam problems.

It should be noted that the pace of this course moves fairly quickly. If you note the schedule at the end of this syllabus, you will see that we cover approximately one chapter per week. The curriculum of this course is determined in such a manner that you should leave this

course with a broad knowledge of a variety of physical phenomena, and a better understanding of how to view and approach physical problems. This is the reason most of you have been required by your majors to take this class. It is expected by the powers that be in your majors that we cover **all** of these topics and that you are exposed to **all** of these topics by the time you finish this course. Thus, **this quick pace is necessary** in order to cover the required course material and topics within the space of one semester. It is in your best interest to keep up to speed by **reading the sections in the text indicated in the schedule before you get to class**. In fact, there might even be a short quiz at the beginning of some classes to see if you have been keeping up with your reading.

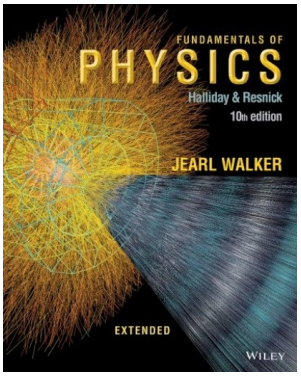
Text: Fundamentals of Physics, (10th Ed.) by Halliday, Resnick & Walker, (John Wiley & Sons, Hoboken, NJ, 2013) Vol. 1 (Ch 1-20). ISBN : 978-1-118-23376-4 (With WileyPLUS)

If you wish to only use an online version of the textbook, you can click on the WileyPLUS link above and register online. Your WileyPLUS account comes with an online eTextbook. But, you will always need internet access to get it... (there is no offline option.)

This textbook is also available as an eTextbook at Coursesmart.com. Cut/paste the ISBN into the search box: ISBN-13: 978-1-118-54787-8

Grading:

Item	% of Grade
3 Exams (4 and drop lowest)	45% (15% each)
Cumulative Final	20%
Homework	15%
Laboratory	20%



Attendance:

You are expected to attend every class period. I will take attendance for security as well as a means to assess who is serious about doing well in this class. If you regularly miss class I will take that to mean that you don't really care if you pass or fail. An unreasonable number of missed classes, without a valid (deemed by Dr. Waite and/or WCU Student Affairs) will result in removal from the roster and failure of the class (regardless of exam and/or homework grades). Thus, if you habitually skip class, you WILL fail, period.

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.)

Cell phones and texting are NOT ALLOWED during class. Cell phone use is disruptive to your classmates and to your instructors. Please turn off your phones 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, twitting, snap-chatting or otherwise using their cell phones during class, **I will take 5 points off of your grade of the exam of my choice** (that's 5 full points out of 100), and you will be considered "absent" for that day, since you are obviously not mentally present.

Exams:

There will be four exams over the course of the semester. The first will be given after completion of chapters 1-4. The second will be given after completion of chapters 5-8. The third will be given after completion of chapters 9-13. And the fourth will be given after completion of chapters 14-17. I will drop your lowest exam grade. These exams will cover primarily the material from the stated chapters, but they will be somewhat cumulative in the sense that the entire course builds upon itself as we proceed. The final exam will be cumulative. **I do NOT give make-up exams.** Should you miss an exam, it will be considered your dropped exam, should you miss more than one exam, one will be dropped and the other will be recorded as a zero. There are **NO exceptions to this policy**.

Homework:

Homework assignments will be complete using the online WileyPLUS course supplement. A link to this site is on D2L and the webpage listed at the beginning of this syllabus. Homework assignments are due by 8:00 pm on the due date. At 8:00 pm, the site will no longer accept homework submissions. I cannot change this. So PLEASE don't ask for an extension. As much as I want to grant it (and I really do most times, really, honestly, not kidding you) I cannot change the WileyPLUS program to allow it! I will, however, drop the lowest homework grade. So, if you miss one assignment, or even two, it's not going to affect your grade drastically. But, note that homework amounts to 15% of your total grade, as much as any single exam. Even if you get 100% on all exams, labs and the final… **you cannot get an A without doing your homework assignments!** They are considered part of the course, and exams are written and administered with the understanding that you have worked on the homework assignments.

ADA Policy:

"If you have a disability that requires accommodations under the Americans with Disabilities Act (ADA), please present your letter of accommodations and meet with me as soon as possible so that I can support your success in an informed manner. Accommodations cannot be granted retroactively. If you would like to know more about West Chester University's Services for Students with Disabilities(OSSD), please contact the OSSD which is located at 223 Lawrence Center. The OSSD hours of Operation are Monday – Friday 8:30 a.m. – 4:30 p.m. Their phone number is 610-436-2564, their fax number is 610-436-2600, their email address is ossd@wcupa.edu, and their website is at www.wcupa.edu/ussss/ossd."

Laboratory:

Most weeks you will have a lab session. These sessions will be held on either Tuesdays from 8-10 am, 10-12 pm, 1-3 pm, 3-5 pm, or Wednesdays from 9-11 am. You are to purchase a lab manual with all the lab assignments from Dynamic Bookstore. The allotted laboratory time is only 2 hours, therefore, it is your responsibility to prepare for the lab session by reading the

instructions BEFORE lab each week. At the end of the semester, your lab instructor will give your lab grades to me and I will record exactly what she provides. All lab issues are to be discussed with her.

Miscellaneous:

Please make any restroom visits before the class starts, or wait until it ends, the class is only 50 minutes. It is distracting to both the instructor as well as your fellow students when someone gets up and walks out of the classroom during lecture. Only in very rare circumstances will permanent physical damage be done by waiting a few more minutes for class to end... In fact, many doctors claim that waiting up to 2-3 hours is no problem (except for a bit of discomfort) at all. So, if I go off on a tangent and babble on and on for 2-3 hours, I'll let you get up and take a break... promise.

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.

E-Mail and Communication:

"It is expected that faculty, staff, and students activate and maintain regular access to University provided e-mail accounts. Official university communications, including those from your instructor, will be sent through your university e-mail account. You are responsible for accessing that mail to be sure to obtain official University communications. Failure to access will not exempt individuals from the responsibilities associated with this course."

Intellectual Property Statement:

The instructor utilizes copyrighted materials under the "Freedom and Innovation Revitalizing United States Entrepreneurship Act of 2007" (Fair Use Act). Apart from such copyright protected materials, all other intellectual property associated with this course is owned and copyrighted by the instructor, including, but not limited to, lectures, course discussions, course notes and supplementary materials posted or provided to students authored by the instructor, assessment instruments such as exams, and presentation slides. No recording, copying, storage in a retrieval system, or dissemination in any form by any means of the intellectual property of the instructor, in whole or in part, is permitted without prior written permission of the instructor. When such permission is granted, it must specify the utilization of the intellectual property and all such permissions and waivers shall terminate on the last day of the finals in the semester in which this course is held.

Links and references to on-line resources provided by the instructor may lead to other sites. The instructor does not sponsor, endorse or otherwise approve of any information appearing in those sites, nor is responsible in any way for the content of those sites. The instructor makes no warranty or responsibility for the copyright status of such material. However, should problems with copyright status be brought to the attention of the instructor, reference to offending materials will be removed.

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

Month	Day	Date	Reading	Topic	Lab Recitation	Hmwk
~~Aug.~~	~~M~~	~~25~~	~~Ch. 1~~	~~Introduction & Measurements~~		
	T	26			Introduction	
	W	27	Ch. 3	Vectors		
	Th	28			Vectors & 1-D Motion	
	F	29	Ch. 3 & 2	Vectors & Motion in 1-D		(1)
Sept.	M	1	Labor Day	No Classes		
	T	2			Motion & Acceleration	
	W	3	Ch. 2	Motion in 1-D		
	Th	4			2-D and 3-D Motion	
	F	5	Ch. 4	Motion in 2-D & 3-D		(3), (2)
	M	8	Ch. 4	Motion in 2-D & 3-D		
	T	9			Free-Fall	
	W	10	Ch. 5	Forces I		
	Th	11			Forces I	
	F	12	Ch. 5	Forces I		(4)
	M	15	Ch. 6	Forces II		
	T	16			No Lab	
	W	17	Exam I	Chapters 1-4		
	Th	18			Forces II	
	F	19	Ch. 7	Forces II		(5), (6)
	M	22	Ch. 7	KE & Work		
	T	23			Projectile Motion	
	W	24	Ch. 7	KE & Work		
	Th	25			Work & Kinetic Energy	
	F	26	Ch. 8	PE & Conservation		(7)
	M	29	Ch. 8	PE & Conservation		
	T	30			Inclined Plane	
Oct.	W	1	Ch. 9	Center of Mass & Momentum		
	Th	2			Potential Energy	
	F	3	Ch. 9	Center of Mass & Momentum		(8)
	M	6	Fall	Break		
	T	7			No Lab	
	W	8	Exam II	Chapters 5-8		
	Th	9			Momentum & Impulse	
	F	10	Ch. 9	Momentum & Collisions		
	M	13	Ch. 9	Momentum & Collisions		
	T	14			Cons. of Momentum	
	W	15	Ch. 10	Rotation		
	Th	16			Collisions	
	F	17	Ch. 10	Rotation		(9)
	M	20	Ch. 11	Torque & Angular Momentum		

Updated: Thursday, August 21, 2014

Month	Day	Date	Reading	Topic	Lab Recitation	Hmwk
	T	21			Equilibrium (Biomechanics)	
	W	22	Ch. 11-12	Torque, L, and Equilibrium		
	Th	23			Rotation & Torque	
	F	24	Ch. 12	Equilibrium		(10), (11)
	M	27	Ch. 13	Gravity		
	T	28			No Lab	
	W	29	Ch. 13	Gravity		
	Th	30			Equilibrium / Gravity	
	F	31	Ch. 14	Fluids I		(12), (13)
Nov.	M	3	Ch. 14	Fluids I & II		
	T	4			Kepler's Laws	
	W	5	Exam III	Chapters 9-13		
	Th	6			Fluids	
	F	7	Ch. 14	Fluids II		(14)
	M	10	Ch. 15	Oscillations		
	T	11			Archimede's	
	W	12	Ch. 15	Oscillations		
	Th	13			Oscillations	
	F	14	Ch. 16	Waves I		(15)
	M	17	Ch. 16-17	Waves I & II		
	T	18			Spring Mass Oscillator	
	W	19	Ch. 17	Waves II		
	Th	20			Waves	
	F	21	Ch. 16-17	Waves II		(16), (17)
	M	24	Ch. 19	Kinetic Theory		
	T	25			No Lab	
	W	26	Thanksgiving	Break		
	Th	27	Thanksgiving	Break	No Recitation	
	F	28	Thanksgiving	Break		
Dec.	M	1	Ch. 18	Temp., Heat & 1st Law		
	T	2			Lab Final	
	W	3	Exam IV	Chapters 14-17		
	Th	4			Thermodynamics	
	F	5	Ch. 18-19	1st Law & Kinetic Theory		(18)
	M	8	All of it!!	Semester Review (Ask your questions on this day!)		
	T	9	Finals Week			
	W	10				
	Th	11				
	F	12				