

# Physics 180, Spring 2021, Course Syllabus

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

**Class Meeting:** MWF 10-10:50 AM, Tues 2-2:55 PM (Recitation)

**Zoom Meeting:** This course will meet via Zoom at the times listed above for lecture. Office hours and other meetings can be conducted through Zoom as well. The Zoom link for this course is as follows:

<https://wcupa.zoom.us/j/93808672071?pwd=N21vMC82RXBuRUZ0THpORitJaUErdz09>

Meeting ID: 938 0867 2071

Password: 546558

**Office Hours:** MWF 9-9:45 AM, Tu 11-11:50 AM, or by appointment.

<https://wcupa.zoom.us/j/845113288?pwd=cmx2enJoSEFtVIZlUmxtM0hIYU5YOT09>

**Course Web Page:** D2L

WileyPLUS: You can register for this section following the instructions on the Wiley Flyer on D2L. The Course number is A37849.

Course information can be found on D2L 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 PHY180 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 and to read 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.

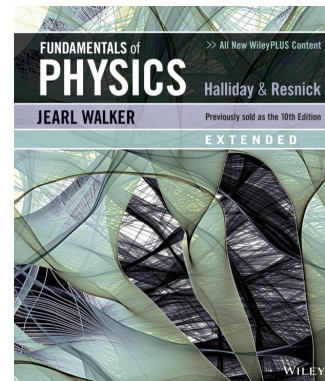
**Text:** Fundamentals of Physics, Halliday & Resnick, (11<sup>th</sup> Ed.) by Jearl Walker, (John Wiley & Sons, 2018) ISBN:

Extended Edition: 978-1-119-46013-8

Regular Version: 978-1-119-28624-0

Volume 1: 978-1-119-46015-2

**Volume 2: 978-1-119-46014-5**



This textbook in its entirety is included with WileyPLUS Next Generation, which we will be using as our online component to the course. So you do not need to purchase the hardcopy if you would prefer not to buy it. It is provided as part of the WCU Inclusive Access Program.

**Grading:**

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.)

**Exams:** There will be four exams over the course of the semester. The first will be given after completion of chapters 21-23. The second will be given after completion of chapters 24-27. The third will be given after completion of chapters 28-31. And the fourth will be given after completion of chapters 32-36. 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.** I will, however, drop your lowest exam grade. Thus, **every one gets one dropped exam for whatever reason (University Sanctioned Events included,** as well as court dates, car trouble, hangovers, bellyaches, weddings, etc.) 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 unless approved BEFORE the exams by Dr. Waite.** Please be aware of the course and university policies regarding "make-ups" before requesting preferential treatment.

**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.

**Laboratory:** Most weeks you will have a lab session. These sessions will be held on Mondays. Please refer to your PHY180 Lab D@L page for policy and details on lab. ~~You are to purchase a lab manual with all the lab assignments, as well as a lab notebook from Dynamic Bookstore. If you have room in your notebook from PHY170, you may use it. 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.

**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.

**ACADEMIC & PERSONAL INTEGRITY:** It is the responsibility of each student to adhere to the university's standards for academic integrity. Violations of academic integrity include any act that violates the rights of another student in academic work, that involves misrepresentation of your own work, or that disrupts the instruction of the course. Other violations include (but are not limited to): cheating on assignments or examinations; plagiarizing, which means copying any part of another's work and/or using ideas of another and presenting them as one's own without giving proper credit to the source; selling, purchasing, or exchanging of term papers; falsifying of information; and using your own work from one class to fulfill the assignment for another class without significant modification. Proof of academic misconduct can result in the automatic failure and removal from this course. For questions regarding Academic Integrity, the No-Grade Policy, Sexual Harassment, or the Student Code of Conduct, students are encouraged to refer to the Department Undergraduate Handbook, the Undergraduate Catalog, the Ram's Eye View, and the University website at [www.wcupa.edu](http://www.wcupa.edu).

**STUDENTS WITH DISABILITIES:** "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 visit them at 223 Lawrence Center. Their phone number is 610-436-2564, their fax number is 610-436-2600, their email address is [ossd@wcupa.edu](mailto:ossd@wcupa.edu), and their website is at <https://www.wcupa.edu/universityCollege/ossd/>. In an effort to assist students who either receive or may believe they are entitled to receive accommodations under the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973, the University has appointed a student advocate to be a contact for students who have questions regarding the provision of their accommodations or their right to accommodations. The advocate will assist any student who may have questions regarding these rights. The Director for Equity and Compliance/ Title IX Coordinator has been designated in this role. Students who need assistance with their rights to accommodations should contact them at 610-436-2433."

**ELECTRONIC MAIL POLICY:** 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 friend about meeting up at Barnaby’s tonight... Now, don’t get me wrong, I enjoy happy hour as much as the next person, but this is an academic class and should be treated as such.

“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.”

**EXCUSED ABSENCES POLICY:** Students are advised to carefully read and comply with the excused absences policy, including absences for university-sanctioned events, contained in the WCU Undergraduate Catalog. In particular, please note that the “responsibility for meeting academic requirements rests with the student,” that this policy does not excuse students from completing required academic work, and that professors can require a “fair alternative” to attendance on those days that students must be absent from class in order to participate in a University-Sanctioned Event.

**REPORTING INCIDENTS OF SEXUAL VIOLENCE:** West Chester University and its faculty are committed to assuring a safe and productive educational environment for all students. In order to comply with the requirements of Title IX of the Education Amendments of 1972 and the University’s commitment to offering supportive measures in accordance with the new regulations issued under Title IX, the University requires faculty members to report incidents of sexual violence shared by students to the University’s Title IX Coordinator. The only exceptions to the faculty member’s reporting obligation are when incidents of sexual violence are communicated by a student during a classroom discussion, in a writing assignment for a class, or as part of a University-approved research project. Faculty members are obligated to report sexual violence or any other abuse of a student who was, or is, a child (a person under 18 years of age) when the abuse allegedly occurred to the person designated in the University Protection of Minors Policy. Information regarding the reporting of sexual violence and the resources that are available to victims of sexual violence is set forth at: [https://www.wcupa.edu/\\_admin/diversityEquityInclusion/sexualMisconduct/default.aspx](https://www.wcupa.edu/_admin/diversityEquityInclusion/sexualMisconduct/default.aspx)

**EMERGENCY PREPAREDNESS:** All students are encouraged to sign up for the University’s free WCU ALERT service, which delivers official WCU emergency text messages directly to your cell phone. For more information, visit [www.wcupa.edu/wcualert](http://www.wcupa.edu/wcualert). To report an emergency, call the Department of Public Safety at 610-436-3311.

**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.

### **WCU COVID-19 Syllabus Statement**

Part of West Chester University's response to the COVID-19 pandemic was to switch all instruction to remote. This decision was made out of an abundance of caution to protect the health of all members of the WCU community. Faculty have been asked to make every effort to adapt their courses to this novel situation while still meeting the critical learning outcomes of the course. These changes may include changes to the dates for exams and other assessments (see the revised course schedule below), and in some cases changes to how the final course grade is calculated. Under remote instruction, some required learning activities may take place outside of the originally scheduled time slot for the course. No student will be penalized for missed attendance during such an asynchronous activity. **Students are asked to discuss any problems with the course format and schedule directly with me via email.** Patience and flexibility on everyone's behalf are critical to our community's navigation of this public health crisis.

For this particular course, the following alternative modalities are being utilized:

**Lecture/Recitation:** Zoom meets at the regular class meeting time. Please make sure you are signed on before 10:00 am so we can begin promptly. **Meeting ID: 938 0867 2071**

**It is a violation of state and federal law to record, photograph or screenshot these Zoom meetings and lectures. I, and the University, will prosecute violations.**

I will provide any lecture slides I deem appropriate for posting.

**Labs:** Please refer to your PHY180 Lab D2L page for detail and policy regarding labs. Contact your lab instructor for clarification of any policy or issues you do not fully understand.

**Exams:** PDF files will be provided on exam day. Since I would like to offer you up to two hours to complete the exam *(again, I am OFFERING this... it is NOT a requirement. If you do not want the extra time to allow for printing, scanning, contacting me for questions, etc, you do not have to take it. You can complete the exam between 10:00 AM and 10:50 AM and submit it to D2L.)* I will email the exam to you depending on your availability before, after, or during another 2-hour time block on that day. You will let me know before exam day the time (9 am, 10 am or "other") that you want the exam e-mailed to you.

The exam will be open book, open notes. But no access to online D2L materials, or other resources such as Google or other internet content. I will not provide an equation sheet. Since it will be open notes, you should have all your notes from lecture and will not need my equation sheet.

There are a number of options for completing the exams and submitting the answers. I will list these in order of preference, depending on your available technology.

**Note that the cover page is a PDF Form. You can just click in the spaces next to name and date and type in your information. Check the box to indicate your agreement to the terms to the exam.**

- 1) Download the PDF file to a tablet or iPad and do the exam on your device. Use your stylus to write on the PDF file. Save it and upload it to the Submission folder on D2L. (Make sure the file saves correctly before sending it... close it down, and re-open it and make sure it's all there and saved correctly.)



- 2) Print out the PDF on printer paper and write your answers directly on the page using a pen or pencil. Scan the document using your printer/scanner or an app such as TurboScan, iPhone Notes, or Adobe Scan. Save it and upload it to the Submission folder on D2L.
- 3) If you do not have a tablet and do not have a printer (or one that works very efficiently) then simply write your answers on a separate piece of paper. Write neatly, and make sure you indicate which problem you are working on very clearly. When you are done, scan the document using your printer/scanner or an app such as TurboScan, iPhone Notes, or Adobe Scan. Save it and upload it to the Submission folder on D2L.
- 4) Save the file as ***“LastName 180 Exam0X.pdf”*** (“X” being the exam number, 1, 2, 3 or 4). If you can’t combine the two files, then you can use ***“LastName 170 Exam0XA.pdf”***, and ***“LastName 170 Exam0XB.pdf”***, for the cover sheet and exam solutions respectively.

Office hours will be by request via Zoom or email.

**Meeting ID:** <https://wcupa.zoom.us/j/845113288?pwd=cmx2enJoSEFtVlZlUmxtM0hIYU5YQT09>

**Schedule:** See PDF file on D2L, it will be updated as needed to reflect snow days and such.