Introductory to Physics I, PHYS0174-Section 1340
Fall Term 2025, M&W 6-7:45 pm
Official website for the course http://canvas.pitt.edu

This version of syllabus is still in progress because not all information is currently available. As a result, I will leave things in red because of lacking of the knowledge. I will fix this document as time goes.

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1. Instructor and Teaching Assistants

* Instructor: Prof. X.L. Wu
Office: 219 OEH
E-mail: xlwu@pitt.edu
Zoom ID: 777 892 2593 with Passcode 951413
Office Hour: M&W, 8:00-9:00 pm, outside Alumni 343, or by appointment.

* Graduate TAs
(1) xxx, email: , Allen 524
Zoom ID: https://pitt.zoom.us/, passcode: xxx
Office Hour: to be announced

(2) xxx, email:, NPL 392
Zoom ID: https://pitt.zoom.us/, passcode: xxx
Office Hour: to be announced

* Undergraduate TAs

(1) xxx, email:

Zoom ID: https://pitt.zoom.us/, passcode: xxx

Office Hour: to be announced

(2) xxx, email:

Zoom ID: https://pitt.zoom.us/, passcode:

Office Hour: to be announced

2. Textbook, Course Description, and Objectives

This is the first term of the introductory physics sequence PHYS 0174-0175, or in short PHYS I-II. The lectures are based on Fundamentals of Physics by Halliday/Resnick/Walker, 12th edition. The textbook is available online and at the University Bookstore. Although copies of the textbooks are reserved in the Benedum Engineering Library, students may find it useful to purchase the book. As the book provides answers to all odd-numbered problems, owning a physical book is convenient for study, such as testing your understanding of certain concepts and polishing problem-solving skills. For this purpose, an old edition, which could be purchased inexpensively, will be sufficient.

The course covers many chapters in the textbook (Ch1-17), covering import topics ranging from kinematics (Ch1-4), Newton's laws of motion (Ch5-6, 12), laws for conservation of energy and momentum (Ch7-9), rotation kinematics and dynamics (Ch10-11), gravitation (Ch13), oscillations and waves (Ch15-17), and fluids (Ch14, optional). Chapters 1-9 are foundational, and their mastery will have a significant impact on how well you can perform for the rest of the term and beyond, such as PHYS0175.

Since many subjects are covered in a short-time span, we will proceed on average of at least one chapter a week. It is considerable amounts of work in terms of reading, comprehension, and exercising. In order not to fall behind, you must work diligently and seek help whenever necessary. In short, do not fall behind; otherwise, it will be difficult to catch up later.

The course consists of two components, lectures and recitation classes. The latter meets one hour per week, taught by a graduate TA. In a typical recitation class, there will be

discussion about how to use physical concepts to solve problems that you may encounter in homework. For most of the weeks in the term, you are expected to take a short quiz at the end of a recitation class (see Table II).

3. Prerequisites

Mathematics is the language for all sciences. In fact, calculus was invented specifically for studying physics. Since this is a calculus-based course, we will use calculus whenever it is appropriate. To do well in this course, it also requires knowledge of high-school algebra, trigonometry, and simple geometry. If you learned these subjects sometimes ago, please read relevant materials to refresh on definitions, concepts, and problem-solving techniques.

4. Study Resources

A *Resource Room* (Thaw Hall 312) will be available throughout the semester to help students understand physical concepts and overcome difficulties in homework assignments. The room is available from 9am to 5pm, Monday through Friday, during the term. In addition, tutoring is available through the Academic Support Center (WPU 311).

5. Homework

Homework is an integral part of the course. We will use WileyPlus online homework system to manage the assignments and grading. To register please follow the following steps (additional information will be posted on Canvas (Announcement):

(a) Login to Canvas.
(b) Click on any WileyPlus content link, such as Assignment for HW1.
(c) Creating your user profile according to the instruction.
(d) Enter your activation code. The code will be sent by e-mail.
(e) Once you claim your account, click into this course.

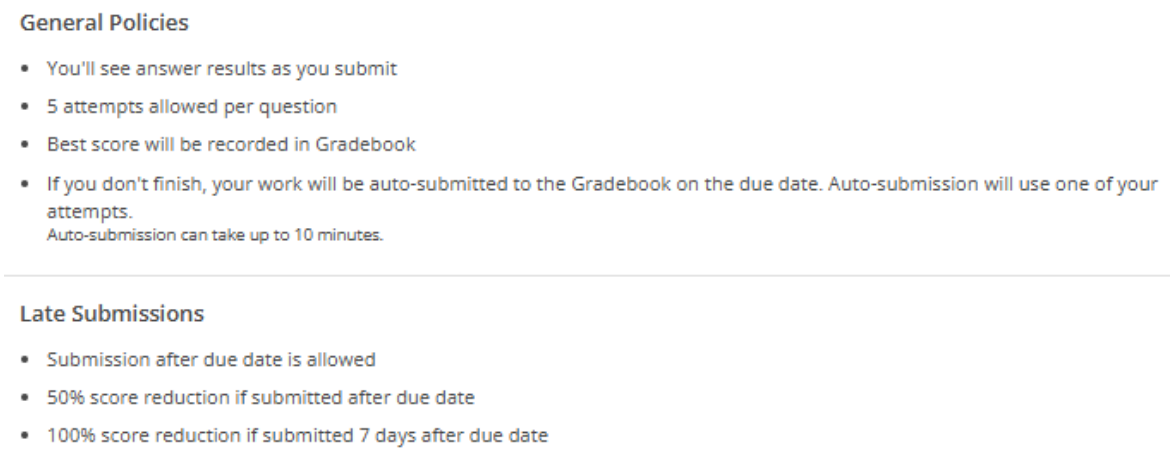
Payment: $71.76 per semester and nearly doubled for two semesters. Since the difference is not significant by paying twice, I would not recommend the two-semester option.

For detailed help on registration and other aspects of using WileyPlus, go to their Tech Support (https://wpsupport.wiley.com/s/).

There will be one homework assignment each week. The starting date of each assignment is set 11 days before the due day, which is always on Friday at midnight (11:59pm). Late homework will be accepted but be penalized for each day of delay. The assignment will be closed permanently two weeks after it is due. Note the first HW assignment (HW1) is due on Sept. 5, 2025.

All homework assignments should be completed on WileyPlus, and no paper copies are accepted. Each problem may be generated uniquely for each student in an assignment. Therefore, the problems assigned to you will be similar, but not necessarily identical, to problems assigned to other students.

If you have questions and requests concerning homework assignments, please direct them to the Instructor/TA office hours or send them by email (see "Instructor and TAs" for information). Questions or requests posted on the website (in any form) will not be answered! We do not use WileyPlus or Canvas websites for communication. Solutions to the homework problems will be available online at WileyPlus after the due dates.



When extra credits or points are given for certain assignments, such as Departmental Pre- and Post-Assessment, they will be treated as parts of homework.

6. Recitation and Quiz

To help you develop problem-solving skills, there is a recitation class each week, and it is mandatory. It is important for you to attend the recitation class that is originally assigned to you.

The recitation classes provide opportunities for you to ask questions, and your TA will help address those questions. Your TA will also discuss problem-solving strategies and run an *in-class quiz* for most of the week during the term.

The information about times/sections/rooms is given on the University's course schedule, copied below for your quick reference.

Table I: Information about Recitation Classes

Time	**Section**	**Location**	**TA**
W 12:00-12:50 PM	24474	105 Allen Hall	xx
W 1:00-1:50 PM	32664	105 Allen Hall	
W 2:00-2:50 AM	16542	105 Allen Hall	
W 3:00-3:50 PM	15788	105 Allen Hall	
TH 1:00-1:50 PM	21519	105 Allen Hall	
TH 2:00-2:50 PM	15789	105 Allen Hall	
TH 3:00-3:50 PM	15790	105 Allen Hall	
TH 4:00-4:50 PM	19740	105 Allen Hall	

7. Exam

There will be two mid-term (105-min in-class) exams and a 1-hour-50-min cumulative final exam. These exams are tentatively scheduled as follows:

* Midterm1: Sept 24 at 6:00-7:45 pm, 343 Alumni Hall
* Midterm2: Oct 29 at 6:00-7:45 am, 343 Alumni Hall
* Final: Dec xx at xxx, 343 Alumni Hall???

All midterms will be held during the regular class times in Alumni 343 unless otherwise announced. There will be no make-up exam unless there is a legitimate reason, such as sickness or death in the family. For these special cases, you need to submit the supporting material(s) 24 hours prior to an exam and be approved by the professor. The location and timing of the final exam are set by the University and will be announced once it becomes available.

For each midterm exam, you are allowed to bring one (double-sided) summary sheet of handwritten or typed formulas. The very act of creating such a summary sheet should help

you organize concepts in your mind. You don't have to remember physical constants, such as g=9.81 m/s^2, as these constants will be provided in exams. For the final, you are allowed to bring three such formula sheets.

8. Grading Police

Your final grade for the course is determined by the two midterms (20%x2), the final (30%), the HW including pre- and post-assessment (10%), the quizzes (10%), and attendance/in-class responses (10%).

Late and Absent Assignments: We do not accept late homework or quizzes unless there is a legitimate reason such as athletes going out for games on behalf of the University, being in an emergency room during a recitation, or a case as strong. Your TA or the professor should be notified 24 hours prior to the absence, and supporting materials are required.

9. Course Schedule (tentative)

The schedule below, which is subject to change, lists the materials to be covered in each week, the dates of exams, and the homework assignments. You are recommended to read the relevant chapters or materials BEFORE coming to class.

Table II, Course Schedule

Week of	**Due**	**Reading Assignment**
Aug 25	HW1 (due Sept 5), no quiz	Ch1,2. measurement, 1D motion
Sept 1	HW2 (due Sept 12), Q1	Ch3,4. vectors
Sept 8	HW3 (due Sept 19), Q2	Ch4. 2D-3D motion
Sept 15	HW4 (due Sept 26), Q3	Ch5,6. force and motion
Sept 22	HW5 (due Oct 3), midterm1 (9/24)	Ch7. work-kinetic energy relation
Sept 29	HW6 (due Oct 10), Q4	Ch8. work-potential energy relation
Oct 6	HW7 (due Oct 17), Q5	Ch9. center of mass & momentum **p**
Oct 13	HW8 (due Oct 24), Q6	Ch10. rotation kinematics
Oct 20	HW9 (due Oct 31), Q7	Ch11,12. rotation dynamics, equilibrium, & elasticity (optional)
Oct 27	HW10 (due Nov 7), midterm2 (10/29)	Ch13. gravitation
Nov 3	HW11 (due Nov 14), Q8	Ch15. oscillation
Nov 10	HW12 (due Nov 21), Q9	Ch16. waves-1
Nov 17	HW13 (due Dec 5), Q10	Ch17. waves-II

Nov 24		thanksgiving break
Dec 1	no HW, no quiz	Ch14. fluids
Dec 8	final (12/17???)	

10. Academic Integrity

Students in this course will be expected to comply with the University of Pittsburgh's Policy on Academic Integrity. Any student suspected of violating this obligation for any reason during the semester will be required to participate in the procedural process, initiated at the instructor level, as outlined in the University Guidelines on Academic Integrity. This may include, but is not limited to, the confiscation of the examination of any individual suspected of violating University Policy.

11. Disabilities

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact your instructor and Disability Resources and Services (DRS), 140 William Pitt Union, (412) 648-7890 / (412) 383-7355 (TTY), as early as possible. DRS will verify your disability and determine reasonable accommodation for this course.