

PHYSICS 136
Fall 2017
Introduction of Physics II

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General Information

Lecture Hours 1:25 – 2:15 pm Mon/Wed/Fri
Location PHY306
Office Hours 2:15-3:15 pm Monday or by appointment PHY217A
Laboratory Hours as scheduled for your section
Textbook “College Physics”, a free, online textbook by OpenStax College (<http://openstaxcollege.org/>). The link to the HTML version is http://cnx.org/contents/Ax2o07U1@9.4:HR_VN3f7@3/Introduction-to-Science-and-th
A PDF copy of the book can be downloaded from the OpenStax website or from Canvas in the folder “files” of this course website

General Course Description

This course covers fundamental concepts and applications of thermal dynamics, electricity and magnetism, and optics, including chapters 13, 14, 15, 18, 19, 20, 21, 22, 24, 25, 26, and 27 in the textbook.

Prerequisites

Physics 136 is a web-based, first-year physics course for majors in mathematics, physics, computer science, and the physical sciences. It is a four-hour course. Only students which have already completed a first-year **calculus** course are allowed to register for Physics 136 without co-registering for Mathematics 142.

Course Repetition Policy

If you are repeating the course, please refer to the [Laboratory Policy Regarding Repeating a Course](http://www.phys.utk.edu/labs/Lab%20Repeat.pdf) (<http://www.phys.utk.edu/labs/Lab%20Repeat.pdf>)

Announcements, Lecture Notes, Course Updates <https://bblearn.utk.edu>

Aside from in-class discussion, the primary method of communication between you and me will be via Canvas and/or email. This syllabus and other important information and announcements will be posted there, as well as copies of the slides used in lecture.

The homework will be posted on Webassign, you can register the class through this website, <https://www.webassign.net/wa-auth/login>, by using class key: **utk 8752 8607**

It will be your responsibility to be aware of the content of any communication taking place in class, be it an announcement or anything related to the course material, in case you missed a class.

Grading Policy

The semester Grade will be based on a Weighted Averages of the homework assignments, the attendance, the lab grades, two one-hour tests, and the final examination as follows:

Homework: 20%

Attendance: 10%

Lab: 20%

Two 1-hour in class testes: 30%

Final examination (2 hour test): 20%

Homework sets will be assigned On-Line using **WebAssign**. One homework will be given for each chapter, when the homework will be assigned and when it will be due will be announced on Canvas and WebAssign.

Class attendance is expected. You are responsible for the material that will be covered in class and for all the homework problems assigned. The home work needs to be done independently. In this semester, I will institute a new method of teaching, where I will present a problem in each lecture, and ask you to help solving the problem. You can discuss with your peers and you should hand over your solutions to me after the class. The purpose of this excise is to make sure that you understand the concept of each lecture, and you are present in the class room. In class work will take a total of 10% of the final grade. **If you did the in-class problem entirely wrong, you will still get 50% of the credit for being there. Not submitting your in- class problem will be zero for that class.**

Due dates for problem sets are firm. Please note: No extensions or make-up problem sets will be given. In lieu of extensions, the two lowest scores on homework sets will be dropped from the average. I generally encourage students to work together as far as homework is concerned. The goal is to use homework as one of the most effective ways of assimilating the material. Do not take advantage of the work of other people, and do not let anybody take advantage of your own work: efforts should be shared.

Laboratory attendance is strictly mandatory. Work will be graded by each Lab Instructor independently. An effort will be made to ensure a uniform grading policy between different laboratory sections. Laboratory make-ups are entirely at the Lab instructor's discretion and arrangements for such must be made with the Lab instructor directly. The laboratory exercises are an important and integral part of this course and have to be completed before a final grade will be assigned. You must complete all of the Laboratory assignments. Please note: If you fail the Laboratory part of the course, you automatically fail the entire course. You find the laboratory schedule here: <http://www.phys.utk.edu/physlabs/schedules.html>

The **In-Class Tests** will be open book exams. Questions and Problems on the Short Tests and Final Exam will generally NOT require only a purely numerical answer (like the homework). Short Test and Final questions will generally be similar in character to example problems in the book and example problems given in lectures. For the Short

Tests and Final Exam you are required to bring a pencil and a non-programmable pocket calculator. In particular, no laptops, cell phones, or other means of communication are allowed. The **Final Exam** is mandatory. Missing the final exam is very serious and may well result in failure of the course.

NO MAKE-UP 1-HOUR TESTS WILL BE GIVEN.

No Short Tests score will be dropped and ordinarily make-up Short Texts will NOT be given. Missing the final exam is very serious and may well result in failure of the course. However, if there are extremely serious circumstances supported by proper documentation, a make-up for Short Tests and/or Final may be considered at my discretion.

Conversion to Letter Grades

A	90 - 100
A-	85 - 89
B+	80 - 84
B	75 - 79
B-	70 - 74
C+	65 - 69
C	60 - 64
C-	55 - 59
D+	50 - 54
D	45 - 49
D-	40 - 44
F	0 - 39

Textbook

“College Physics”, a free, online textbook by OpenStax College (<http://openstaxcollege.org>). The link to the HTML version is http://cnx.org/contents/Ax2o07U1@9.4:HR_VN3f7@3/Introduction-to-Science-and-th
A PDF copy of the book can be downloaded from the OpenStax website or from Canvas under “files” of this course website

Another useful resource is the course website built by Prof. Breinig (<http://labman.phys.utk.edu/phys136/>).

Course Material

The class covers most of the materials described in Chapters 14, 15-16, 32-44 of the textbook. Anyhow, this course consists of several components: lectures, laboratories, homework problems, and reading assignments in the textbook. The material you will be

expected to learn and will be tested on during the exams will be taught to you as part of all of these course components. In particular, I stress the importance of problem solving and carefully working (not just reading) your way through all the parts of the textbook. Reading the relevant chapter or sections for each week's lectures (i.e. Reading assignments) is a compulsory and vital part of the course. **The lectures will NOT just repeat the material in the textbook**, but will be rather used to discuss the course material in a variety of ways. Some lectures will follow the textbook, some other will discuss topics not covered in the textbook, and/or discuss them in a different manner.

Questions and Appeals

I encourage you to ask questions during the lecture or/and talk to me during my office hours (Monday or by appointment – just ask after class) about the subject. You can discuss with me and/or complain to me about the grading of a given assignment, be it homework, Lab grade, Short Tests or Final Exam. Any appeal will be entertained if it is raised no later than one week after the date on which the graded Exam/ Lab/ Tests /HW are made available for return to the class. After this “appeal period” of one week, exam grades will be considered final and will not be altered. Any appeal concerning a grade in the Laboratory should directly be discussed with your Lab. instructor.

For students with disabilities

If you need course adaptations or accommodations because of a documented disability, please contact the Office of Disability Services at 2227 Dunford Hall (telephone/TTY 865-974-6087; e-mail ods@utk.edu) by January 16. This will ensure that you are properly registered for services.

Academic Honesty

All work submitted by a student is expected to represent his/her own work. Students are expected to enter their own homework without assistance from others. Students are expected to perform all work in conformance with the University policies regarding Academic Honesty.

Schedule: The class meets 42 times. There will be 40 class sessions, 2 midterm exams (administered at the normal class time) and a cumulative final exam. There is no class on Mon, Sept. 4 (Labor Day), Fri, Oct. 6 (Fall break), and Fri, Nov. 24 (Thanksgiving day). The final will be given according to the university schedule (Tuesday, Dec. 12, 12:30-2:30 pm.)

The class schedule is tentative: **I reserve the right to change the class sessions when content is taught or when midterms are administered; updates will be made in class and online. One homework will be assigned for one chapter. The assign day and due day will be announced on class and blackboard.**

Class sessions:

1. W Aug. 23 Introduction

2-13. Temperature, Heat, Thermal dynamics (Chapters 13-15)

14. Review

15. Wed. Sep. 27 First midterm exam (Chapters 13-15)

16-27. Electricity, Magnetism (Chapters 18-22)

28. Review

29. Wed. Nov. 1 Second midterm exam (Chapters 18-22)

30-41. Optics (Chapters 24-27)

42. Review

**Thursday Dec. 12, 12:30-2:30 PM PHY306
TWO-HOUR CUMULATIVE FINAL**