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Physics 122 General Physics II Fall 2015 Online

Eric R. Potter

Parkland College, epotter@parkland.edu

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On-line Physics 122

Course Information

WEB PAGE:

<http://tycho.parkland.edu/cc/parkland/phy122o/fall/>

INSTRUCTORS:

Eric R. Potter

E-MAIL:

epotter@parkland.edu

Course Description:

This is the second semester of a college-level, algebra-based physics sequence. The main topics covered include electricity & magnetism (fields, forces, circuits, and E&M waves), optics (reflection, refraction, mirrors, lenses, interference, and diffraction), and modern physics (special relativity, atomic theory, quantum mechanics, and nuclear physics). This class is designed to be identical (in content, difficulty, and total time spent on the course) to any other Physics 122 offered - the only difference is there will be no in-class time and more individual learning time! The only requirement for this course is to have access to a computer with internet and email access. You will also be required to take two exams ON CAMPUS.

YOU MUST ALSO USE COBRA FOR THIS COURSE.

All the instructions to get started as well as announcements are on the COBRA site...

Note on Buying the Textbook for this Course:

For this course, you should buy the text [PHYSICS FUNDAMENTALS](#) by Coleta.

Course Components:

- THE "CLASSROOM": since this is an online class, there is no formal classroom, but instead we will use [COBRA](#) for all interaction; during the first week of class you must logon to COBRA and you should check it two or three times a week (like you are "going to class"); on COBRA important class announcements will be posted and you will also be able to ask and answer questions about the course material.
- THE TEXT: it is required in this course that you read the assigned chapters/sections in the text each week; in addition, using the many resources on the web to find relevant examples, simulations, additional instruction, etc. will be VERY useful; since there will be little to no face-to-face interaction with the instructor, it is necessary to slowly and carefully read the text and look through examples; this aspect of the course is not graded but essential to learning physics (and exam questions on topics covered only in the text are fair game!).
- LECTURES: after reading the text and any accompanying material, you will need to look over and answer some "lecture" questions; this aspect of the course is worth 5% of the grade and essential to learning physics (remember, exam questions on topics covered only in the text are fair game!); the only thing you need to complete to get full credit are the slides in the lectures (and you will receive full credit no matter how many submissions you make); however, doing all the supplementary activities that come with the text and companion web site will benefit you greatly in doing well on the labs, homework, quizzes and exams.
- LABS: you must complete and submit these on-line lab exercises each week; these simulations will help you explore the concepts learned about in the text and lectures; these lab exercises will be graded for completeness and correctness; at the end of the semester, each lab will be weighted equally and together, the labs will count for 10% of your grade.
- HOMEWORK: you must work out and submit these on-line problems each week; some of these problems will be "interactive examples" with extensive help sequences (although only the initial question is for credit) and others will be more traditional problems; these homework questions will be graded for completeness and correctness; you may submit answers as much as you like

without penalty; at the end of the semester, each week's problems will be weighted equally and will be worth 10% of your grade.

- **QUIZZES:** every week you must submit your answers to these online quizzes to evaluate your progress for the week; these quizzes will be graded for completeness and correctness; you can work on the quizzes throughout the week and change your answers as many times as you like but only your final submission will be graded; in addition you will not know if you are right or wrong until after the grading deadline; at the end of the semester, each week's quizzes will be weighted equally and the lowest two quizzes over the semester will be dropped; the quizzes will count for 15% of your grade.
- **BONUS:** every week you can earn up to 2 "bonus" points by ANSWERING physics questions on the web board; the first correct and complete answer to a new question gets a point and you can get up to 2 points per week up to a total of 20 points for the semester; check the web board often to improve your chances of getting these bonus points; and post questions often to help your classmates get bonus points; the full 20 bonus points will add an additional 2% to your grade.
- **EXAMS:** two times during the semester you will need to come in to take a multiple choice exam; the exam will have conceptual and calculational problems to evaluate your progress in learning physics; the exams will be 90 min long and have between 30 and 45 questions; the exams will not be cumulative (the first exam will cover weeks 1-6 and the second exam weeks 9-13); your average on the two of these exams must be greater than 50% to pass the course (exams will not be curved!); each exam will count for 25% of your grade; see weeks 7 & 14 for more info on the exams including sample practice tests with the same formula sheet you will get to use on the exam. **You will need to sign up for an exam time [here](#). Also, you will need to show an ID when you take the exam.**
- **FINAL EXAM:** for your final exam in this class, you must make corrections on any problems you missed from each of the two exams; your score on the "exam corrections" will equal your exam scores plus points for any of the missed questions you now answer correctly, **WITH AN EXPLANATION**; the "exam corrections" will be 10% of your grade; (this will be handed in through email).
- **GENERAL:** no late work is accepted; after the scoring deadlines you cannot make-up any work; after the exam dates you cannot make-up any exams!

Deadlines:

Every deadline, your assignment is due at 3:00 PM. NO EXCEPTIONS! If you will be gone or miss some days, you must make up the work ahead of time! Assignments will always be available at least two weeks before they are due. PLAN AHEAD! Do not wait until that afternoon (or even the night before) to start the assignment - you will not get it done and NO LATE WORK IS ACCEPTED! As a general rule of thumb, two days before the material is due you should do the lectures and labs and a day before the deadline you should do the homework and the quizzes - then you have an extra day just in case!

Grades:

- 5% - Lectures
- 10% - Labs
- 10% - Homework
- 15% - Quizzes
- 25% - Exam #1
- 25% - Exam #2
- 10% - Final Exam (Exam Corrections)

You should be getting full (or close to full) credit on lectures, labs, quizzes, and the final exam. For these exercises you have as much time as you need (until the deadline) to work on your own and seek out resources. Getting full (or close to full) credit on these activities will give you a buffer should you not perform as well on the (difficult) exams as you would like to! However, keep in mind that you must get AT LEAST AN AVERAGE OF 50% ON THE TWO EXAMS TO PASS THE CLASS. If you want, you can email me before the weekly deadlines if you want me to look over your work/reasoning on the labs and quizzes; although I will not say for certain if your answers are right or wrong, I will look for problems or incorrect reasoning (this will help your scores on the weekly assignments but also help you learn physics!).

Grades will be distributed as follows after all your points are added and weighted as described above:

- A - 100% to 90%
- B - 89% to 80%
- C - 79% to 70%
- D - 69% to 60%
- F - 59% or lower

Interaction with the Instructor & Extra Help:

You should go to cobra.parkland.edu with questions. This is the easiest and fastest way to get a little extra help in this course. The instructor will check questions here at least once a day to respond to your posts. However, other students (or the instructor) may respond to your posts at any time. In addition, seek out the resources available to you - learning physics online is a challenge and you may find yourself needing extra help. Use other web sites (do a google search on a difficult topic), communicate with other students from this class, find peer tutoring, [online tutoring](#), etc.

Office Hours:

There will be "online office hours" on COBRA from 9pm-10pm on Tuesday and Thursday night, but remember I will check COBRA numerous times throughout the week! With this being an online class - we strongly encourage everyone to use the web board for any questions as much as possible.

However, Professor Shoaf will also hold "in-person" office hours from 9-11am on Monday and Wednesday.

Syllabus Addendum:

Download a [Syllabus Addendum](#) provided by Parkland.