Physics 212: General Physics (with Calculus): Electricity and Magnetism
Monday and Wednesday- 4:40 to 6:30 pm

Instructor: Dr. Justin Dunlap
Contact: j dunlap@pdx.edu (Please include Ph212 in subject line.)
Note: Please post all questions pertaining to homework and course material to D2L. I will answer questions there if not answered within two days.
Office: SRTC 370- Phone # 503-725-8929
Office hour: Wednesday 3:00 pm to 4:00 pm
Course material is on D2L: http://d2l.pdx.edu

Tentative Schedule:

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<td>Coulomb’s Law</td>
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<td>W 1/7</td>
<td>Ch.22</td>
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<td>W 3/4</td>
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<td>M 3/9</td>
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<td>Maxwell’s Equations</td>
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<td>W 3/11</td>
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<td>M 3/16</td>
<td>Final Exam (covers Ch 29-32)</td>
<td>17:30 to 19:20 (5:30 to 7:30 pm)</td>
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Homework:
Doing the homework should help you to review the material and prepare for the exams. Keeping up with the homework is essential for doing well in this class. Here are two options for the suggested homework problems:

1. Opt to not turn in any homework problems. In which case your grade will be calculated based on the three exam scores and any extra credit received.

2. Turn in the homework problems through WileyPlus,
   http://edugen.wileyplus.com/edugen/class/cls427751/
   Course ID: PH212DUNLAPWINTER2015
   Homework grades greater that 80% will receive a homework grade of 100% with lower scores scaled accordingly (e.g. 65%≈85%). Your grade will then be calculated based on 80% for exams, 20% for your homework score, plus extra credit.
Exams:
The exams will have both conceptual questions and problems: multiple-choice questions (Scantron Required) and 2 show-your-work problems (partial credit will be given). The exams are not comprehensive, but exam 2 and the final exam may include general concepts already covered in previous exams.
Your three exam grades will be weighted as follows:

- 20% (worst exam grade), 35% (middle exam grade), 45% (best exam grade)

You must bring and show your student ID when turning in the exam.
You will need a calculator and you can bring one piece of paper (8.5” x 11”) with handwritten notes (you can use both front and back).
Use of cell phones / computers (other than a calculator) / texting devices, during exams is strictly prohibited, and will not be tolerated.
For a low scoring exam a curve may be applied.

Missed Exam Policy:
You are required to take all three exams, missing an exam will result in a zero for that exam (preventing any possibility for an A or B+ in the class). To be excused from an exam you must e-mail me in the beginning of the term explaining the scheduling conflict (job-related or family-related). In case of an illness I expect a doctor’s note to excuse the absence. If you miss two of the exams, you will be given a grade of “F” for the course. I only give make-up exams under extreme circumstances.

Grading:
Grades will be determined using the following scale:
90% or better is an A/A-
80% to 89% is a B/B+
70% to 79% is a C/C+
60% to 69% is a D
I will calculate your grade with both options of turning in homework or not and choose the better of the two grades.
If you have any questions on how to determine your grade, you can use the Grading Template under “General Content” in the Course Content on D2L.

Extra credit:
1. Quizzes: (maximum of 2.5 percentage points extra credit)
   There will be six short in-class multiple choice quizzes throughout the term. You will receive half a point for each quiz turned in up to 2.5 points. Therefore you can miss one quiz and still receive full (extra) credit.

2. Workshop OR Term paper: (5 percentage points extra credit)
   a. Workshop
      Complete the class “Workshop for Ph212” successfully. The workshops meet weekly for 1h50min sessions. It is a one credit class and you need to sign-up for it. To pass the workshop students must attend all workshops and participate actively. You will work under the guidance of a workshop leader in small groups on problems sets corresponding to the material of the general physics lecture.

   b. Term paper
      Write a term paper on a topic which is relevant to this course. Some possible topics are listed below, but you are free to choose another subject that relates the physics discussed in class and that sparks your interest. You need to submit an outline of your paper, with a list of references by February 23rd. The paper should be 6-8 pages long (double spaced, font size 12) plus pages with figures and references. You must use at least one reference that is neither the textbook nor an online source, a journal article found online is fine but must be referenced to make it clear that it is a journal article. The paper is due at the time of the final exam. I only accept papers of people that have submitted the outline. No late work will be accepted for the outline and the paper submission. If you do not meet the page designation or your paper is judged not to adequately present the physics of your topic, you will only get partial credit, most likely less than three points.
Examples of topics for the term paper:
- Electric signals from the body- heart, head, muscles
- The electrocardiogram (EKG)
- Transmitting electric power to homes and businesses
- Nobel Prize winners in physics and their research
- Circuit design
- Solid state physics
- The transistor

If you have an idea for an alternative to the term paper, such as writing a physics based computer game, designing a physics demo, or creating an electronics project that exemplifies a physics concept, please feel free to bring this up with me.

3. **BuddyUp.org | Connect with your Classmates:** (0.5 percentage points extra credit)
Pioneered by college students like you, BuddyUp.org uses social networking to help you turn classmates into buddies, (search by language, major, location), start your own study group or find peer tutors on campus. Once you've created a profile, you'll be able to use BuddyUp immediately, as well as for future classes. This service is 100% free and I strongly encourage you to connect with your classmates, to ask for support or to offer it to others.
Sign up and email me a screen grab of your profile before the first midterm to receive the 0.5 points.

**PSU Tutoring Services:**
The skills enhancement and Tutoring Center offers physics tutoring sessions: Second floor of the University Library, (503) 725-4448, web: http://www.pdx.edu/tutoring/

**General Physics lab:** You are required to concurrently (or previously have taken) the general physics lab. Experimentation in physics (and science in general) is critical to understanding.
web: http://web.pdx.edu/~ralfw/physics/lab/index.htm

**Academic Misconduct:**
Academic dishonesty is the act of knowingly or intentionally seeking to claim credit for the work or effort of another person or participation in such acts. This includes, but is not limited to: (a) cheating, (b) fraud, (c) plagiarism, such as word for word copying, using borrowed words or phrases from original text into new patterns without attribution, or paraphrasing another writer's ideas; (d) The buying or selling of all or any portion of course assignments and research papers; (e) Performing academic assignments (including tests and examinations) for other persons; (f) Unauthorized disclosure or receipt of academic information; (g) Falsification of research data; and (h) Unauthorized collaboration.
Adapted from: PSU Student Code of Conduct (http://www.pdx.edu/dos/codeofconduct)
Cheating during an exam will result in a zero grade in the course and referral to the office of student affairs. A no tolerance policy will be enforced.