Catalog description for PHYS 201, 202, 203: An introductory college physics sequence for those whose majors are not in the physical sciences or engineering, which includes the principles of mechanics, waves, sound, thermodynamics, electricity magnetism, optics, relativity, and quantum theory.

Prerequisites PHYS 201 or equivalent.

Class format Three lectures and one three-hour lab per week.

Credit hours 4.

Instructor Dr. Tom Herrmann, BH 107D.
Office Hours: 9:00 - 9:50 MWF, 10:00 - 10:50 TU

Required texts: Conservation Laws, Vibrations and Waves, and Electricity and Magnetism by Benjamin Crowell. These are open-source books, and may be downloaded for free at http://www.lightandmatter.com/books.html. However, I recommend that you purchase printed copies, since they are inexpensive and much easier to use than a terminal-based book. You may buy them from the Bookstore or order from http://stores.lulu.com/benjamin.

Required equipment: A calculator with scientific functions, a ruler, a protractor, and a stapler. For the lab, bring a laboratory notebook, quadrille ruled (i.e. with “graph paper” on the pages.) Only two types are acceptable: (1) 8-1/2 × 11 format, paper-bound quadrille with 80 sheets, or (2) 9-3/4 × 7-1/2 format, quadrille with 100 sheets. Ruled paper (as opposed to quadrille) may NOT be used. Also, the binding must be on the side, not the top. No exceptions.

Course content We will continue from where we ended last term. Overall, the general progression will be:

- Conservation Laws, Chapter 5 (angular momentum).
- Vibrations and Waves, all chapters.
- Electricity and Magnetism, all chapters.

It is worth noting that you cannot just forget about all the concepts you learned last term. Skill at drawing free-body diagrams is still important. You still have to remember Newton’s Laws and the equations for accelerated motion. In our study of rotational motion, we will be using equations which are identical to Newton’s Laws
for linear motion, but they use angles instead of distance. So if you remember last term’s material well, you’ll find it easy to transfer many of the concepts to this term’s material.

The EOU physics home page is at http://physics.eou.edu. From there, you can click on “courses” and eventually access the web page of this class. (To go there directly, the URL is http://physics.eou.edu/courses/phys202/phys_202.html. The class schedule and other information (such as homework assignments) is accessible here. You will be responsible for periodically examining these pages to stay current with homework assignments, quiz dates, etc. Solutions to homework assignments will also be posted at this site.

Course requirements:

- **Reading.** It is to your advantage to have done the reading before coming to class, since lectures will generally not consist of repeating material from the text. Occasional reading quizzes will be given.

- **Homework.** There will be frequent homework assignments (two or three per week.) These are due at the *beginning* of class, usually two lectures from the day assigned. If you do not turn it in at the beginning of class, you may turn it in by 3:00 the same day for 75% credit. After that, no credit will be granted.

  The format of homework is to be college level. Assignments will therefore be done in black or dark blue pen, not in pencil. Solutions will be well-organized, showing (1) what information is given, (2) what is asked for, and (3) your solution. AN “ANSWER” IS NOT A SOLUTION. A solution contains a narrative with English sentences making it clear how you obtained the answer. (However, that does not mean that you work the problem, then put some sentences at the end describing what you did. The sentences should be used throughout the solution, not at the end.) Homework papers will be stapled together, and no ragged edges (of papers torn from spiral notebooks) will be accepted. Along with your name, write the homework set sequence number at the top of the first page. Solutions for homework assignments will be posted on the course web site, in Portable Document Format.

- **Unit examinations.** At the end of each chapter or so, a “unit examination” will be given. These are short (15-minute) exams, with problems involving very basic concepts from a given chapter. Each exam will be worth 12 points, and you must have 9 points (75%) to pass the exam. If you don’t pass a certain exam, you may take it over. Point credit is as follows:
  - If you pass the exam the first time, you get +10 points extra credit added to your homework score. If you pass with 12/12, you get +15 points.
  - If you pass the exam on the first retry, you get 5 points.
  - If you pass the exam on the second retry, you will have 0 points
  - If you pass on the third retry, you will lose 5 points from your homework total.
– If you don’t bother to pass the exam, you will lose 25 points from your homework total.

If you are absent (without a medical excuse) the day the exam is given, your score is a no-pass.

• **Laboratories.** There is one laboratory session per week, on Monday afternoon. Laboratory notebook format and grading practice will be described on a separate handout. **Labs are not optional.** Missing one lab write-up will lower your final weighted score by 8 percent; missing two labs will lower it a whole letter grade.

• **Examinations:** as noted below, there will be two midterms and a final exam. I will accommodate genuine emergencies and medical problems. I will not accommodate an absence in order that you visit your out-of-town significant other on his/her birthday.

Often, a student will do poorly on the first midterm exam, for a variety of reasons. For this reason I give an option of taking a third exam and using that to replace one of the midterms. The policy is: IF you have turned in at least 85% of the homework assignments and were NEVER absent during a lab, you may take a third midterm during the tenth week, and replace one of your midterm scores with that one.

**Grading practice:**
The weighting of activities will be as follows:

- Laboratories 20%
- Homework 22%
- Midterm exams 16% each
- Final exam 26%

*Approximate* grading scale: 85% A, 75% B, 62% C, 54% D.


**Statement on Academic Misconduct:**
Eastern Oregon University places a high value upon the integrity of its student scholars. Any student found guilty of an act of academic misconduct (including, but not limited to, cheating, plagiarism, or theft of an examination or supplies) may be subject to having his or her grade reduced in the course in question, being placed on probation or suspended from the University, or being expelled from the University — or a combination of these. (Please see the 2009-10 on-line Student Handbook: Campus Citizenship - Academic and Behavior, on the web at [http://www.eou.edu/saffairs/handbook/honest.html](http://www.eou.edu/saffairs/handbook/honest.html))

**Statement on Americans with Disabilities:**
If you have a documented disability or suspect that you have a learning problem and need accommodations, please contact the Disability Services Program in Loso Hall 234. Telephone: 962-3081.