Physics 162 Syllabus: Spring 2004

Instructor: Stanley J. Micklavzina

- Office: Room 142 Willamette Hall
- Demonstration Room: Room 109 Willamette Hall
- Phone: 346-4801 or 346-4757
- Office Hours: 2:00 - 3:00 Monday and Friday, 3:00 - 4:00 Thursday or by Appointment
- Email: stanm@hendrix.uoregon.edu
- T.A. Jeffrey Kolb Office: Room 218, 346-4760
  Office Hours: 1:00 - 2:00 Monday 3:00 - 4:00 Wednesday
- Email: jkolb@darkwing.uoregon.edu

Textbook:

Energy Its Use and the Environment Third Edition

This course is an introduction to physics principles as they apply to solar and renewable energy and an introduction to direct applications of solar and other alternative energy sources. We will begin by studying energy use, mechanical and thermal energy physics topics, sources of energy, and then focus on applications of direct solar and wind energy conversion systems. We will also look at energy storage and other sources of renewable energy. PHYS 161 and 162 both start by studying basic physics principles before branching into different areas of focus. (PHYS 161 focusses on current popular energy sources and the environmental impact from energy use.)

We will meet a number of times in a lab setting to give you hands-on experience of the physics principles. I will have a sign-up sheet in the class and there is a sheet listing the times in the Lab Preference Sheet. Special outside class activities exist for students who miss any of these times. The lab or these activities are a requirement for this course.

PHYS 199: Special Studies Advanced Topics PHYS 162: This is a one credit hour small group special seminar that will discuss and apply the topics of energy. Possible topics of discussion are the role of energy in the upcoming election, President Bush's Energy Plan, Oregon Energy Plan, Renewable Energy as it applies to transportation. There will be Power House Energy kits that we will assemble and make laboratory measurements studying physics and energy design and alternative energy sources for buildings. If you would like to study the topics of energy to a deeper level in a small group setting, than I encourage you to sign up for this seminar. It meets on Wednesdays 16:00 - 16:50 (4:00 - 4:50 p.m.) in Room 112 Willamette Hall.

Course Grading:

1. Homework 15%
2. Lab Exercises and Reports 25%
3. Midterm Exam: 25%
4. Final Exam: 35%
Homework, lab assignments, and reports will be graded.

No late homework or reports will be accepted. Lab meetings are scheduled in advance. Lab meetings cannot be made up. If you miss the lab you will have to do the outside class activity. Late homework will not be accepted due to grading hassles.

The exams will be both multiple choice and essay.

There is some room for adjustment in the schedule and I will update this site regularly. It is your responsibility to find out what announcements were made and what was discussed in class if you miss a lecture. Please let me know what your interests are and I can try and adjust the course to meet your interest.

Have a nice Spring.
Lab Sign Up Sheet.

NAME

There will be lab activities associated with this course. Performing the lab activities is a requirement for the course. The Hand-On Labs will take place three times over the term. They will be done on Thursdays 4/8, 4/15, and 5/13. Please consider signing up for the two slots that are outside the regular class times if you have those times free so those that have class at that time can use our class time slots.

If you do not have the form that was given in class, you can print and fill out this form and hand it in. Please indicate your order of preference and also indicate which times conflict due to a class or work. Remember, these meeting times will only happen three times throughout the term. Perhaps you can negotiate with your work schedule if you have conflicts. If you are unable to attend the labs, you will have to do assigned activities outside of the class. The material covered in the labs will be on the exams.

Times: Mark 1-4, your preferred times. Indicate with an X class or X work which sessions you cannot attend.

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