PHYS 180L
Engineering Physics I Lab
Spring 2011

Instructor: Dr. Thomas Herring
Phone: 445-4277
Office: CED 310
Email: herrin32@wnc.edu

Office Hours:
T 12:00 – 2:15 pm
W 1:00 pm -3:30 pm
Th 1:00 pm – 2:15 pm

Text: No required text. A laboratory manual will be provided by the instructor.

Prerequisites: Math 181
Co-requisite: Phys 180

Meeting Times:
M 1:00 – 3:45 pm

Grading:
Lab Assignments 60%
Class Participation 10%
Formal Lab Reports (3) 30%

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<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>95% – 100%</td>
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<tr>
<td>A-</td>
<td>90% - 94%</td>
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<tr>
<td>B+</td>
<td>86% - 89%</td>
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<td>B</td>
<td>83% - 85%</td>
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<td>B-</td>
<td>80% - 82%</td>
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<td>C+</td>
<td>76% - 79%</td>
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<td>C</td>
<td>73% - 75%</td>
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<td>C-</td>
<td>70% - 72%</td>
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<td>D+</td>
<td>66% - 69%</td>
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<td>D</td>
<td>63% - 65%</td>
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<td>D-</td>
<td>60% - 62%</td>
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<td>F</td>
<td>Below 60%</td>
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Note that there is no “W” grade on the scale. A “W” will only be given when requested by a student due to extreme circumstances and at the discretion of the instructor.

Lab Assignments: Lab assignments will be handed in at the end of each lab session and will be graded on a 10 point scale.

Class Participation: Class participation will be based on my observations of how you work with your group during the course. If you show up and participate in every lab you should get full credit. If you let your group members do all or most of your work and/or are disruptive to the class you will get a reduced score in this portion of the grade.

Formal Lab Reports: Three experiments throughout the semester will require a formal lab report. You will choose one of the lab assignments from each of three sections and write a formal report about that
topic. Details on how to write a formal lab report will be covered in class. An example lab report will also be provided.

**Makeup Policy:** Two lab sessions during the semester will be reserved for making up any missed lab. No additional lab makeup will be available. If you have notified the lab assistant or instructor in advance that you will miss a lab session you will be allowed to make up the lab you missed.

**Extra Credit:** There is no extra credit available.

**Dishonesty in Class:** I don’t anticipate any problems but here’s the policy anyway. Any dishonesty/cheating will result in an F in the course.

**Class Conduct:** Please be respectful of the learning environment, your fellow students, the instructor, and any visitors. This includes entering and leaving the room quietly (especially if arriving late or leaving early), silencing cell phones during class (just leave the room if you need to take the call), and engaging in side conversations not relevant to the course material.

**Disability Statement:** WNC supports providing equal access for students with disabilities. Susan Trist (DSS Coordinator) is available to discuss appropriate academic accommodations that students may require. Please meet with me and contact Susan (445-3278) if you might require any accommodation.

I: Catalog Course Description
Explores vectors, rectilinear motion, particle dynamics, work and energy, momentum, rotational mechanics, oscillations, gravitation, fluids, wave properties and sound. Students must co-enroll in both lecture and lab to receive credit.

II: Course Objectives
Upon successful completion of PHYS 180L, the student will perform with a minimum accuracy of 80 percent, the following objective:

- Apply the scientific method to experiments in the laboratory.
- Develop procedures and observational skills as data is taken and gain a fundamental understanding of simple and complex apparatus used in the experiment.
- Apply analytical techniques, statistical analysis, graphical analysis, spread sheet data/recording to the experiments.
- Verify the theoretical ideas and concepts covered in lecture by completing a host of experiments.
- Take the time to discuss the procedure, the data, and the results of the experiment with the lab partner.

III: Course Linkage
*Linkage of course to educational program mission and at least one educational program outcome.*

**General Education Mission:** PHYS 180L is a general education class that promotes the development of knowledge, skills, and attitudes that will benefit students in their personal and professional endeavors.

**General Education Student Learning Outcome:** Students who successfully complete PHYS 180L satisfy
the general education learning outcome of having problem solving, creative, and critical thinking skills. In addition, students will understand the methods of science and the role of science and technology in the modern world.

**Program Mission for AA/AS degree:** PHYS 180L satisfies the A.A./A.S. degree mission by providing academic knowledge and skills for successful transfer to meet higher educational goals.

**Program Student Learning Outcomes for AA/AS degree:** Students who successfully complete PHYS 180L will know the subject matter appropriate to the emphasis of the degree.