PHYS 181

Engineering Physics II

Spring 2013

**Instructor:** Dr. Thomas Herring  
**Phone:** 445-4277

**Office:** CED 310  
**Email:** thomas.herring@wnc.edu

**Office Hours:**  
T 1:00 pm - 3:30 pm  
W 5:30 pm - 6:30 pm  
Th 1:00 pm - 3:30 pm

**Text:**  
**Required:** WebAssign Access (For online homework, includes etext)  
**Suggested:** Physics for Scientists and Engineers - 6e, Tipler and Mosca, W. H. Freeman (2007)  
**Class Key:** wnc 6027 7285

**Prerequisites:** MATH 182 and PHYS 180  
**Corequisites:** PHYS 181L

**Meeting Times:** M, W 11:00 am - 12:15 pm

**Grading:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Tests (4)</td>
<td>40%</td>
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<tr>
<td>Final Exam</td>
<td>20%</td>
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<tr>
<td>Homework</td>
<td>20%</td>
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<tr>
<td>Quizzes</td>
<td>20%</td>
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</tbody>
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95% – 100%      A      73% - 75%      C  
90% - 94%      A-      70% - 72%      C-  
86% - 89%      B+      66% - 69%      D+  
83% - 85%      B      63% - 65%      D  
80% - 82%      B-      60% - 62%      D-  
76% - 79%      C+      Below 60%      F

**Tests:** There will be 4 tests; all of them closed book. Students are allowed one 5” x 8” note card for (both sides) notes and formulas. Construction of this “cheat sheet” is an excellent way to study for the tests. This card should be handed in with every test.

**Final Exam:** The final exam will be comprehensive. The percentage score on the final can replace the lowest of the 4 regular test scores if it is greater than the lowest test score. Students will be allowed two 5” x 8” note cards (both sides) for notes and formulas. These cards should be handed in with the final exam.
Homework: Homework assignments will be assigned through WebAssign (www.webassign.net). You must purchase access to WebAssign either packaged with your text or separately (I suggest online). Assignments will be organized by chapter in the text and will be due at 11:59 pm on Sunday prior to the relevant test. For example, if test 1 covers chapters 1,2, and 3 then homeworks for those chapters will be due at 11:59 pm on the Sunday before test 1. The lowest homework score will be dropped.

Quizzes: Quizzes will be given in class approximately once per week (we won’t have quizzes on test weeks). They will consist of a mixture of multiple choice and short answer questions and should take 10 minutes or so to complete. The final quiz score for the semester will be recorded based on class participation. This score is a determined based upon a student’s level of participation in class discussions and interaction with other students.

Makeup Policy: If you make me aware of any conflicts in advance it should be easy to arrange makeup times for tests. There is no makeup available for homework or quizzes since solutions will be made available after the due date.

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 180, the student will perform with a minimum accuracy of 80 percent, the following objective:

○ List the basic standards of mass, length, and time in the SI, MKS, CGS, and U. S. Customary system.
○ Develop problem solving skills in dimensional analysis, approximations in the order of magnitude, vectors algebra and calculus related to physics problems.
○ Explain both the theoretical and experimental basis of classical mechanics and develop problem-solving skills for the application to a broad range of physical phenomenon.

III: Course Linkage
Linkage of course to educational program mission and at least one educational program outcome.
**General Education Mission**: PHYS 180 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 180 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 180 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 180 will know the subject matter appropriate to the emphasis of the degree.