

**PHYS 1404: General Physics II**  
**Fall 2003**

**Professor:** Dr. Beth Ann Thacker  
Assistant Professor of Physics  
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**Schedule:** T 12:30pm – 1:50pm  
W 2:00pm – 3:50 pm  
R 12:30pm – 1:50pm

**Office Hours:** T 2:00pm – 3:30pm, W 11:30am – 12:00pm and 4:00pm-4:30pm, or by appointment.

**Prerequisites:** MATH 1320 and 1321.

**Course Materials:** All materials (modules, homework, readings and extra handouts) will be available in class.

**Course Coverage:** Electrostatics, Coulomb's Law, the Electric Field, Electric Flux and Gauss' Law, Electrical Potential Difference, Direct Current Circuits, Capacitors, Magnets, Magnetic Fields and Magnetic Forces, Radioactivity and Optics.

**The Nature of the Course:** The course will be completely laboratory-based. (It will NOT be divided into Lecture and Laboratory. It is important that you understand this.) You will work through modules, learning content by doing experiments. Throughout the experiments there will be questions to guide you. The focus is on understanding the experiments and on learning to develop models of physical phenomena based on experimental evidence. It is the *process* that you go through in class that is important. You will answer the questions on the computer. You will have a record of your answers. There will also be times for discussion with other students and points at which the instructor will question you to determine your understanding up to that point. There will also be readings, exercises and homework.

**Participation:** Participation will count as 15% of your grade. If you come to class and participate each day, not coming late, being on task (working on the appropriate experiment), etc., you will receive the full participation grade. In addition, pretests, journals, questionnaires and other activities will count as part of your participation grade.

**Homework:** Homework will be assigned each week on Thursday and be returned the following Thursday. Homework will be turned in at the beginning of the class on Thursday. After the beginning of class it is late. Late homework will not be accepted, with the exception that you will be allowed to turn in one homework late. Other late homework will not be accepted. Homework will be graded and will count as 25% of your grade. It is an important part of the class.

**Pre-tests, post-tests and surveys:** A survey will be given at the beginning of the semester and a survey and a class assessment questionnaire will be given at the end of the semester. Every unit will start with a pre-test. There may be other pre-tests, post-tests or surveys. You may be required to do some of these outside of class. Pre-tests are to determine your understanding of a topic before instruction. Pre-tests will not be graded, but they will be counted as part of your

participation grade. You will receive full credit, if you take the pre-tests and complete the surveys and questionnaires. Your participation grade will decrease by 3 percentage points for each survey or questionnaire you don't complete and ½ percentage point for each section pre-test you don't complete.

**Journals:** Occasionally you will be asked to write a journal entry. Your instructor will give you a topic to write on. You may also use the journal to comment to the instructor about the class. Journal entries will be read, but not graded for content. Journal entries will count as part of your participation grade. You will get full credit, if you write the journal entry, and lose ½ a percentage point from your participation grade, if you don't.

**Project:** We will work some of the units on a particular topic as a project outside of class. There will be times outside of class that you can, and should, talk with one of the instructors about material in the project. You will be given the materials to work on outside of class. There will be questions to answer and turn in that will be graded. More information on the project will be given out in class. The project will count as 10% of your grade. It will be due on December 4, 2003.

**Quizzes:** There will be two scheduled quizzes and pop quizzes about the project material. Quizzes will count 10% of your grade (3% for pop quizzes and 7% scheduled quizzes). The quizzes will be given on:

|        |                    |
|--------|--------------------|
| Quiz 1 | September 18, 2003 |
| Quiz 2 | October 9, 2003    |

**Exams:** There will be two midterm exams and a final exam. Each midterm exam will count 10% of your grade and the final will count 20% of your grade.

|                |   |
|----------------|---|
| Midterm exam 1 | September 24, 2003                          |
| Midterm exam 2 | October 29, 2003                            |
| Final Exam     | Tuesday, December 16, 2003, 1:30am – 4:00pm |

**Grades:** The grades will be distributed as follows:

|               |     |
|---------------|-----|
| Participation | 15% |
| Homework      | 25% |
| Project       | 10% |
| Quizzes       | 10% |
| Midterm 1     | 10% |
| Midterm 2     | 10% |
| Final Exam    | 20% |

Any student who because of a disability may require special arrangements in order to meet course requirements should contact the instructor as soon as possible to make any necessary accommodations. Student should present appropriate verification from AccessTECH. No requirement exists that accommodations be made prior to completion of this approved university procedure.