

**Phy 100: “Elements of Physical Science”**  
**Fall 2009**  
**Sec 2: Mon Wed Fri 1:00 - 1:50 Boucher 109**

**Course description:** This course deals with fundamental physical principles such as force, motion, waves, and energy. These concepts describe how the Universe behaves on scales ranging from the nucleus of an atom to the way galaxies flow through the cosmos. We will touch on a broad range of topics and discuss how they affect our lives, often in ways we take for granted.

**Instructor: Prof. Robert Thornton**

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Office hours: MWF 3:00-4:00 PM; Tu 9:00-11:00 AM; also by appointment

**Textbook:** *Physics: A World View* (7<sup>th</sup> ed.) by L. Kirkpatrick and G. Francis

**Course Web page:** Syllabus and related material will be on Blackboard.

**Grading:**

Exam 1: 15%; Exam 2: 15%; Exam 3: 15% (45% total)

Homework: 20%

Final Exam: 35%

Total: 100%

**Attendance:** Attendance is an important part of the class, and will be taken on random days. Three unexcused absences are allowed. After you miss more than 3 classes, your final grade in the course will drop from 1/3 of a letter grade (for example from A to A-) with each additional class missed. Excused absences are limited to those due to participation in University sanctioned events (see policy in the WCU undergraduate catalog) or those accompanied by written confirmation from a doctor, the Dean of Students, etc. If you are sick, you **MUST** obtain a doctor's note. Finally, whether your absence is excused or unexcused (or if you are late to class), you will be responsible for any material covered and any announcements that were made in class that day.

**Homework:** There will approximately 6-8 homework assignments throughout the semester. Points will be deducted from homeworks handed in late. Once homeworks have been graded and returned, no late homeworks will be accepted.

**Reading:** Students are expected to keep up with the reading in the book as the associated material is covered in class. Pop-quizzes may be given to enforce this.

**Disability:** West Chester University is committed to making accommodations for persons with disabilities. Please make your needs known by contacting your instructor and the Office of Students with Disabilities. Sufficient notice is needed in order to make the accommodations possible. The University desires to comply with the ADA of 1990.

## **West Chester University General Education Goals:**

This course strives to have students meet the following general education goals:

1. Ability to communicate effectively
2. Ability to employ quantitative concepts and mathematical methods
3. Ability to think critically and analytically

### **Course Coverage (might be revised as the semester progresses)**

There are 28 chapters in the text, more than we'll have time to cover during the semester. We will cover approximately fourteen chapters:

Chapter 1 - Introduction

Chapters 2-4 Motion (Speed, Acceleration, Newton's Laws, Weight)

Chapter 5 Gravity

#### **Exam 1: Chapters 1-5**

Chapters 6 – 8 Momentum, Energy, and Rotation

Chapter 15 Vibrations and Waves

#### **Exam 2: Chapters 6-8, 15**

Chapters 17-18 Optics

Chapters 20-22 Electricity & Magnetism

#### **Exam 3: Chapters 17-18, 20-22**

### **Exam dates and policy:**

Exam dates are not set at the beginning of the semester because the pace of the course can vary. The dates of each test will be announced in class. An unexcused absence on the day of a test will result of a grade of zero for that test. If you have an excused absence on the day of one of the three tests, the average of your other two tests will be used as a substitute for the exam you missed. No make-ups will be given. You may only miss one exam due to an excused absence.

Final Exam (Cumulative):

The final exam is mandatory. Missing the final exam will result in a zero for the exam unless EXTREME circumstances apply. Even in that case, extra questions will be added to the make-up final.