

# Phy 100: “Elements of Physical Science”

Spring 2012

**Course description:** This course deals with fundamental physical principles such as force, motion, light, 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**

Office: Merion 129

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Office hours: MWF 3:30 – 4:30 PM; TuTh 11:00 AM - Noon; also by appointment

## Course Materials

- *Textbook: Conceptual Physics(11<sup>th</sup> ed.)* by Paul G. Hewitt (recommended but not required)
- a scientific calculator
- A-B-C-D cards

**Course Web page: Syllabus and related material will be on D2L.**

## **Grading:**

Tests (there will be 3 or 4): 55% total

Homework: 20%

Final Exam: 25%

Total: 100%

**Attendance:** Attendance is an important part of the class. After you miss more than three classes with no excuse, the instructor reserves the right to have each additional unexcused absence result in your course average being lowered by 2%. Excused absences are limited to those due to participation in University sanction 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 8-10 homework assignments throughout the semester. Points will be deducted from assignments handed in late. Once assignments solutions are posted, no late assignments will be accepted. The home works are due **IN CLASS**, and will not be accepted over email.

**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)**

Chapters 2-6: Motion, Newton's Laws, Momentum

#### **Test 1**

Chapters 7-10: Energy, Circular motion, Gravity, & Projectile Motion

#### **Test 2**

Chapters 19, 22-25: Waves, Electricity & Magnetism

#### **Test 3**

Select Chapters from Part 6 (Light) & Part 7 (Atomic & Nuclear Physics)

#### **Test 4 ?**

### **Mid-Semester 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. You are encouraged to bring a calculator to the exams, but the calculator cannot be a part of a cell phone, iPod, etc. (i.e., it must be ONLY a calculator)

### **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.

### **Intellectual Property Statement:**

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and all such permissions and waivers shall terminate on the last day of finals in the semester in which this course is held.

Links and references to on-line resources provided by the instructor may lead to other sites. The instructor does not sponsor, endorse or otherwise approve of any information appearing in those sites, nor is responsible for the availability of, or the content located on or through, external sites. Apart from materials used in accordance with the Fair Use Act, the instructor takes no responsibility for material that is otherwise offered at web sites and makes no warranty that such material does not infringe any third party rights. However, should any of this type of material be present and this fact is brought to the attention of the instructor, they will remove references to it from course materials.