

PHY 116: "Engineering Graphics 2" Spring 2013

Tuesdays 6-8 PM in Anderson 1 (Merion 109)

Course description: This is the second part of a two-semester course that focuses on engineering drawing & design. A requirement for enrolling in this course is satisfactory completion of PHY 115 "Engineering Graphics I." This class will be similar in many ways to the first semester, but we will deal with slightly more advanced topics, such as finite element analysis and assembly drawings. Most of the time we will be working with Solidworks, but some advanced hand sketching will be covered as well.

Instructor: Dr. Robert Thornton

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Office hours: MW 1:00-2:30 PM; Tu/Th 1:00 - 2:00 PM; also by appointment

Textbooks:

Engineering Graphics Essentials by Kirstie Plantenberg, SDC Publications (required).

Commands Guide Tutorial for Solidworks 2010 by Planchard & Planchard, SDC publishers (suggested).

Required course materials (to be brought to every class):

- Blank engineering (gridded) paper, pencil, eraser, ruler.
- A removable media storage device, such as a USB flash drive
- All of the solidworks parts you made last semester!!

Web page/Syllabus: Many of the necessary course documents (syllabus, homework assignments, solutions, etc.) will be posted on D2L.

Grading:

Quiz 1: 25%; Quiz 2: 25%

Homework: 25%

Design Project: 25%

Attendance: Since the course only meets once a week, attendance is crucial. Attendance will be taken at each lecture. If you are not there for the *entire* lecture, you will be marked absent. One unexcused absence is allowed. After you miss more than one with no excuse, each additional unexcused absence will result in your course grade going down 1/3 of a letter grade (e.g., B to B-). If you have good reason to miss class, your absence will be considered an excused absence and will not lower your grade. 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. An unexcused absence on the day of a quiz or exam will result of a grade of zero for that quiz or exam. 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 be weekly/biweekly assignments over the majority of the semester. Most of these assignments will be done individually by all students. After the design projects have started, assignments will be done as groups and will be more subjective. Assignments are due at the beginning of class on the specified due date. Because of the unique structure of this class, no late assignments will be accepted unless you have already made a prior arrangement with me.

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.

Tentative list of topics covered:

- SW part modeling (review)
- Assemblies in Solidworks
- Drafting standards (review) & drawings on Solidworks
- Assembly drawings
- Advanced topics (e.g., sweep & loft)
- Solidworks motion
- FEA
- Fasteners
- Fits & clearances
- Design projects

Intellectual Property Statement:

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