

PHY 115: "Engineering Graphics 1" - Fall 2013

Tuesdays 6-8 PM in MER 109 (or AND 1)

Course description: This is an introductory course that focuses on engineering drawing, a necessary skill for communicating design ideas. We will start of learning the basics of hand-sketching in the first half of the semester, then move on to 3D computer aided design (CAD). For the latter, we'll use the software package Solidworks. To a lesser degree, we will talk about the practical side of engineering drawing and touch on engineering design in general, e.g., the design process, manufacturing methods, and material selection.

Instructor: Dr. Robert Thornton

Office: Merion 129

Office Phone: 610-436-2614

E-mail: rthornton@wcupa.edu

Office hrs: M 3:00-4:00 p.m.; Tu 1:00-2:00 p.m.; Wed 3:00-4:30 p.m.; Fri 3:00 – 4:30 p.m.; also by appt.

Textbooks (required):

Engineering Graphics Essentials by K. Plantenberg, (4th ed), SDC publications. Textbook should either (a) be NEW or (b) have no pages torn out and no writing in it.

Engineering & Computer Graphics Workbook Using Solidworks 2012 by Barr, Krueger, Juricic, and Aanstoos.

Other Required supplies (to be brought to every class):

- Gridded paper, pencil, eraser, and ruler.
- A removable media storage device, such as a USB flash drive

Web page/Syllabus: Many of the necessary course documents will be posted on D2L.

Grading:

Quizzes - approx 3: 50%

Homework: 25%

Final Exam: 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 approximately 10 homework assignments throughout the semester. Homework assignments are due at the beginning of class (6:00 pm) on the specified due date. Assignments may consist of

detailed hand sketches, computer exercises, or a design topic. Because of the unique structure of this class, no late assignments will be accepted unless you have already made a prior arrangement with me.

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

Week 1 (Aug 27)	Introduction, Syllabus, Orthographic projection & multi-views
Week 2 (Sep 3)	Fundamental orthographic projection (cont'd)
Week 3 (Sep 10)	Intermediate orthographic projection & auxiliary views
Week 4 (Sep 17)	Dimensioning I
Week 5 (Sep 24)	Quiz (material up to and including auxiliary views)
Week 6 (Oct 1)	Dimensioning II
Week 7 (Oct 8)	Fall break
Week 8 (Oct 15)	Section views
Week 9 (Oct 22)	Sketching in 3D
Week 10 (Oct 29)	Quiz (Dimensioning & section views)
Week 11 (Nov 5)	Intro to Solidworks
Week 12 (Nov 12)	Solidworks Lecture #2
Week 13 (Nov 19)	Solidworks Lecture #3
Week 14 (Nov 16)	Quiz (Solidworks)
Week 15 (Dec 3)	Review
Final Exam (Dec 10)	Final Exam (regular class time – see instructor for exam conflict)

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.

Other Policy: For questions regarding Academic Dishonesty, the No-Grade Policy, Sexual Harassment, or the Student Code of Conduct, students are encouraged to refer to their major department's handbook, the Undergraduate Course Catalogue, the Rams Eye View, or the University Web Site. Please understand that improper conduct in any of these areas will not be tolerated and may result in immediate ejection from class.