

PHY112

Introduction to Engineering Physics II

Dillard University - Spring 2004

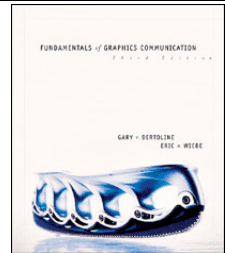
Meeting Times:

001 STERN 123 **M 1:00p - 2:50p**
901L STERN 123 **W 1:00p - 2:50p**

Instructor: Rob Salgado	E-mail: rsalgado@dillard.edu	Office hours: t.b.a.
Office: Stern 307A	instant-messengers: AOL, MSN, Yahoo: dillardphysics (do not email here)	
Voice: (504)-816-4510		

Catalog Description: **PHY112 Introduction to Engineering Physics II**

An introduction to engineering graphics and computer aided graphics using AutoCAD covering engineering fundamentals/problem of basic engineering graphics (terminologies, virtual symbolisms, lettering, engineering specifications and ethics); basic geometric constructions, descriptive geometry, multiview projection, auxiliary view, isometric projection dimensioning and manufacturing processes. Class meets two hours per week for lecture and two hours per week for laboratory.



Required Textbooks:

Fundamentals of Graphics Communication by **Gary R. Bertoline and Eric N. Wiebe**
(McGraw-Hill: ISBN: 0-07-232209-8 (3rd edition))

Electronic Materials: The main textbook has a VERY useful website: <http://higherred.mcgraw-hill.com/sites/0072322098/>
I will maintain a web page that lists the assigned problems and solutions: (temporarily at) <http://physics.syr.edu/~salgado/112/>

Classroom Rules:

Comet to class ON TIME. (Tardiness will earn a penalty. Leaving early will earn a penalty.)
Attendance is REQUIRED, in accordance with University regulations (page 17):
*"Unexcused absences in any course shall be limited to the number of semester hours of credit given to the course."
... "A student incurring an excessive number of absences may be dropped from the roster." ... "The course instructor will record as two unexcused absences those absences that occur on the day immediately preceding or following an official holiday recess."*
Note that your attendance is recorded on the official midterm and final grades sheets.
Academic dishonesty will not be tolerated, in accordance with University regulations (page 18).
Comet to class PREPARED, having read or written any assignments.
Limit all discussion to the PHYSICS topic under discussion.
Turn OFF all phones, pagers, radios, and other disruptive devices. (Disruptiveness will earn a penalty.)
Treat each other with RESPECT.

Grades:

30% HOMEWORK
40% LABWORK
30% FINAL PROJECT (FORMAT: technical drawing)
A ≥ 90, B ≥ 80, C ≥ 70, D ≥ 60, F < 60. This class is not graded on a curve.
Borderline cases (between two letter grades): If you see an exam showing an upward trend, your grade may be nudged upwards.

Homework and Lab-work:

Homework and lab-work will be assigned and graded. If you need help with your homework, please visit me (with your textbook and your notebook and with proof that you have tried the problems) during Office Hours... the sooner the better.
LATE homework or lab-work will be penalized.
You will submit some of your homework and lab-work electronically... by email or by floppy-disk.

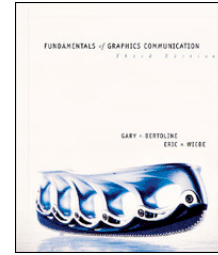
Dates you should be aware of:

Martin Luther King, Jr. Holiday (Mon, Jan 19 **no class**)
AAPT Winter 2004 Meeting (Mon, Jan 26 - Wed, Jan 28 **special arrangements will be made**)
Mardi Gras Holidays Labor Day (Mon, Feb 23 - Wed, Feb 25 **no class**)
Midterm Period (Tue, Mar 2 - Fri, Mar 5) [Grades due Mar 8]
Spring Break (Mon, Mar 8 - Fri, Mar 12 **no class**)
Academic Advising Day (Wed, Mar 17 **no class**)

Easter Holiday (Fri, Apr 9 **no class**)
Seniors Exam Period: (Wed, Apr 14 - Fri, Apr 16)
Last Day to Withdraw (Wed, Apr 14)
Last Day of Classes: (Wed, Apr 28)
Exam Period: (Fri, Apr 30 - Thu, May 6) [Grades due May 10]

Sequence of PHY 112 topics:

Chapter 1: Introduction to Graphics Communication and Sketching
Chapter 2: The Engineering Design Process (reading assignment)
Chapter 3: Engineering Geometry
Chapter 4: Design Visualization
Chapter 5: 3-D Solid Modeling
Chapter 6: Multiviews and Auxiliary Views
Chapter 7: Pictorial Projections
Chapter 8: Section Views
Chapter 9: Dimensioning and Tolerancing Practices
Chapter 10: Working Drawings and Assemblies



These topics will involve technical drawing with standard drafting tools and with computer-based tools like AutoCAD.

You will need to obtain your own set of drawing instruments.

Required materials (subject to minor revision)

- ___ 45-degree right triangle
- ___ 30-60-degree right triangle
- ___ 1 Triangular Scale (detail to be discussed in class)
- ___ 1 drafting brush
- ___ 1 T-square
- ___ 1 Ames Lettering Guide
- ___ 1 roll of drafting tape/drafting-dots
- ___ 1 protractor
- ___ 1 drawing compass
- ___ 2 mechanical pencils (0.5mm) with 2B and 2H lead refills (*see example below)
- ___ 1 eraser (vinyl-type, not the pink-type)
- ___ 1 erasing shield
- ___ 1 computer disk



Ames Lettering Guide



Erasing Shield

Here are two kits that supply some of the items listed above.

<http://www.officedepot.com/ddSKU.do?level=SK&id=448601>
Staedtler® Drafting Kit, 12 Piece

Includes: lead, leadholder, leadpointer, master bow compass, 6" protractor, 8" and 10" triangles, plastic eraser, erasing shield, dusting brush and 12" architectural scale. Comes in a sturdy plastic carrying case with a easy-open ziplock.

<http://www.officemax.com/max/solutions/product/prodBlock.jsp?prodBlockOID=536947808>
Drafting Starter Kit.
Item #11155849, Style #37108
Helix Drafting Starter Kit

Provides a selection of quality technical level drafting and design tools to meet the various requirements of students and professionals. Includes professional compass, 12" architect scale, mechanical pencil, replacement leads, professional eraser, erasing shield, 6", 180 degree protractor, 30/60/90 degree triangle, 45/45/90 triangle, mini-dusting brush, and plastic carrying case.

Here are examples of the 2B and 2H lead refills.

<http://www.officemax.com/max/solutions/product/prodBlock.jsp?prodBlockOID=53256>
http://www.officedepot.com/ddSKU.do?level=SK&id=710186&location_info=_SK_710186
http://www.officedepot.com/ddSKU.do?level=SK&id=929380&location_info=_SK_929380
Pentel Lead Refills

2B "soft" for drawing lines
2H "hard" for drawing construction lines