

Syllabus
ENGR-107-101 Introduction to Engineering
Fall 2005 (CRN: 2256)
9:30 – 10:45 TR GH5 and GH206A

General Information

Text: *MU ENGR 107 Introduction to Engineering*
References: Various engineering-related web sites and class notes.
Supplies: engineering/scientific calculator

Instructors	William E. Pierson (696-2695)	Jamie Wolfe (696-6042)
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Office Hours:	11:00 -noon MTWRF F 2:00 – 4:00 MW	8:00 – 4:30 M-F
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Office:	3F Gullickson Hall	115 Gullickson Hall
Office Hours:	TBD – See GH3F Bulletin Board	11:00 – Noon TR Or By Appointment

Web Site: (see WebCT)

Course Objectives

The primary objectives of this course are to:

- Introduce students to the engineering profession,
- Describe the similarities and differences between various engineering disciplines,
- Help students understand the academic requirements for completing an undergraduate engineering degree,
- Help students develop the skills required to be an effective engineer, and
- Help students understand the importance of team work in arriving at solutions to engineering problems.

Student Learning Outcomes

Upon completion of the course, the student will be able to:

1. Understand the various engineering disciplines and career choices.
2. Identify the skills and attributes required to be a successful engineering student and a successful engineering professional.
3. Define the requirements to complete the engineering transfer program.
4. Demonstrate an ability to generate a methodical solution to an engineering analysis problem.
5. Successfully work in a team environment.
6. Describe and apply the engineering design process.
7. Demonstrate an ability to create neat and legible freehand lettering and freehand sketches.
8. Demonstrate an ability to create orthographic projected.

Computer Usage, Homework, and Quizzes

Homework assignments, in-class exams, and formal presentations will be used to assess student performance. Some homework will be completed using an online format (WebCT) and some homework will be completed using a traditional format. Team-oriented assignments and projects will be required, and teams will be required to write and give formal presentations on at least one team project. Each person will be evaluated on overall team performance as well as on individual performance.

Grading	Percentage	Letter Grades	
Exams (2 @ 20% each)	40%	90 - 100%	A
Drawings & Homework	20%	80 - 89%	B
In-class and On-line Quizzes	20%	70 - 79%	C
Team Projects and Presentation	20%	60 - 69%	D
Total	100%	0 - 59%	F

Course Policies

1. Students are expected to be prompt and to attend and participate in all class meetings.
2. Ample time will be given to complete homework assignments. Online HW (quizzes) must be completed on or before the posted deadline. Conventional homework assignments will be collected at the beginning of the class period on the announced due date.
3. Unless otherwise stated, conventional HW assignments should be done on 8.5 x 11" paper in a neat manner that is easy to read, showing all steps and calculations to each problem. Answers should be clearly marked and easy to find. Student name(s), the assignment number, and the number of the problem should be shown at the top of each sheet.
4. Cheating will not be tolerated on quizzes. Any student caught cheating on a quiz or exam will receive a zero for that exercise.
5. It is University policy that absences such as those resulting from illness, death in the family, or institutional activities are to be excused when a student reports and verifies them to the instructor. For such excused absences, the student will not be penalized. In the case of unexcused absences, the student is responsible for turning in homework (that may be due) on time and picking up any new homework assignments. Missing a quiz, midterm exam, or final exam because of an unexcused absence will result in a 0% (failure).

Tentative Schedule of Topics, Section 101 (CRN 2256)

Lesson# - Date	Topics	WebCT
1 - 8/23	Introductions; course syllabus and objectives; "meet the team"; MU transfer program and the articulation agreement; WVU-Tech BSCE cooperative degree; future plans	-
2 - 8/25	Ch. 1: The Engineering Disciplines; Intro to WebCT	Survey
3 - 8/30	Ch 6: Engineering Design: A Creative Process	
4 - 9/1	Ch 2: Preparing for an Engineering Career	Exponents & Logarithms
5 - 9/6	Ch 7: Engineering Graphics	
6 - 9/8	Ch 3: The Successful Engineering Career; ethics case studies	Ethics
7 - 9/13	Ch 9: Freehand Sketching	
8 - 9/15	Ch 4: Solving Engineering Analysis Problems	Engineering Prefixes
9 - 9/20	Ch 8: Projections Used in Engineering Graphics	
10 - 9/22	Ch 4: Solving Engineering Analysis Problems	Estimation
11 - 9/27	Ch 11: Standard Practice For Engineering Drawings	
12 - 9/29	Review for Exam #1	
13 - 10/4	Exam #1	
14 - 10/6	Panel Discussion: <i>What's It Like To Be an Engineer?</i> (Location Student Memorial Center – Alumni Lounge)	3:00 – 4:30
15 - 10/11	Ch 10: Computer Aided Design and Drafting, AutoCAD Inventor	
16 - 10/13	Chap. 5, Working in Teams; team assignments; short team exercises	Linear Equations
17 - 10/18	CO ₂ Car Design Using AutoCAD Inventor	
18 - 10/20	Team Exercise: estimating and measuring distance (GPS)	
19 - 10/25	Work on CO ₂ Car Design	
20 - 10/27	Introduction to Embedded Systems, Lego Robotics	
21 - 11/1	Work on CO ₂ Car Design	
22 - 11/3	Work on Lego Robotics	
23 - 11/8	Work on CO ₂ Car Design	
24 - 11/10	Work on Lego Robotics and/or CO ₂ Car Design	
25 - 11/15	Lego Robotics Competition – Location TBA	
26 - 11/17	Work on CO ₂ Car Design and Presentation	
27 - 11/29	CO ₂ Car Design Presentations – section 101	
28 - 12/1	CO ₂ Car Design Presentations – section 102	
29 - 12/6	CO ₂ Car Competition; Wrap up and review for Exam #2	
30 - 12/13	Exam #2 – 12/13/2005	

Note: Shaded entries meet in room GH206A. Unless noted otherwise, all other entries meet in GH5.