

Engr 1201: Introduction to Engineering
(Sec. 01 3843: MTWTh 8:00 am – 9:10 am, Science Building, Room 109)
Syllabus – Summer I 2009

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Department Website: <http://www.mclennan.edu/departments/engr/>
Course Website: <http://www.cleverfred.com/mcc/>

In case the school has to close due to inclement weather, please visit the school website for up to date official information at <http://www.mclennan.edu/>.

*Please note: The “Final Exam” for this class is a comprehensive project and in-class presentation. The project is due on **Wednesday, July 1st**. Class presentations will be done on this date as well. If you will not be able to attend class on Wednesday, July 1, please let me know immediately to avoid failing the course.*

Catalog Description: Defines the role of the engineer in a technologically expanding society by examining the historical development and current practices of the profession. Covers technical areas including solution and presentation of engineering problems and computational methods with emphasis on use of the graphing calculator and introduction to the computer.

Course Aims: This course aims to help you answer the question, “Do I want to be an engineer?” and to help you prepare to be successful academically and professionally in the engineering field.

Prerequisites: High school math and physical science.

Required Textbook: *Introduction to Engineering Technology*, Robert J. Pond, 7th edition, 2009

Office Hours. Unless announced otherwise, my office hours will be Monday through Thursday from 7:30 am to 8:00 am in the same room where we have the class lecture. You are welcome to come to the classroom before class to work on homework assignments or projects.

Math Lab. Any student enrolled in this class has free access to the Math Lab, located in HPE 218. The Math Lab offers the following services:

- Computerized tutorials for each math course from Arithmetic and Prealgebra through College Algebra and Trigonometry, as well as Contemporary Liberal Arts Mathematics.
- Videos for all courses from Basic College Mathematics through Precalculus and Statistics, and for selected topics in Calculus and other subjects.
- Workshops on specific topics, which can be arranged for groups upon request.

Call (254) 299-8809 to confirm when the lab is open, as summer hours tend to vary.

Writing Center. Any student enrolled in this class also has free access to the Writing Center, located in SC 222. Project 2 requires that you visit the writing center for assistance writing your resume. The Writing Center offers the following:

- Help with class essays, research papers, academic writing, letter writing, and resumes
- Aided instruction through computer tutorials and ESL/ESOL software
- Word processing help

Call (254) 299-8356 to confirm when the center is open, as summer hours tend to vary.

Additional information is also available at <http://www.mclennan.edu/wc/>.

Attendance. Attendance is mandatory. The class roll will be checked every day. No absences are “excused,” with the exception of religious holy days as defined by the MCC attendance policy. Per MCC policy, you will be automatically dropped after missing 25% of class meetings, or 5 classes. If the student is dropped before the official drop date (June 23), the student will receive a grade of W. If the student is dropped after the official drop date, the student will only receive a grade of W if the student is passing. Otherwise, the student will receive a grade of F.

ADA Statement. “In accordance with the requirements of the Americans with Disabilities Act (ADA) and the regulations published by the United States Department of Justice 28 C.F.R. 35.107(a), MCC's designated ADA co-coordinators, Dr. Johnette McKown, Executive Vice President and Dr. Lynn Abernathy, Vice President, Student Services shall be responsible for coordinating the College's efforts to comply with and carry out its responsibilities under ADA. Students with disabilities requiring physical, classroom, or testing accommodations should contact Marc Sweatt, Disability Specialist, at 299-8122 or msweatt@mclennan.edu.”

Six Drop Rule. Students who enroll at MCC as entering freshman or first-time college students during the fall 2007 semester or any subsequent semester may not drop more than six courses. The six-course limit does not apply to students who were enrolled in college courses prior to the fall 2007 semester. Students who have completed a baccalaureate degree at any accredited public or private institution are not subject to the six-course limit. The sixcourse limit includes courses taken at MCC or any other Texas public institution of higher education. If a seventh drop is attempted, the student and instructor will be informed that the student must remain in the course and the student will receive a grade of A, B, C, D, F or I. He/she will not be able to receive a W or withdrawal grade and will not be due a refund of tuition and fees. All courses dropped after the semester census date are included in the six-course limit unless (1) the student withdraws from all courses or (2) the drop is an approved drop exemption.

Field Trip. There will be an *optional* field trip to *Space Exploration Technologies* (SpaceX) in McGregor on Saturday, June 13. You will get to tour the facility, look at the rocket engines, and learn from our local rocket scientists what real engineering work is like. Students are responsible for their own transportation to and from the facility. Details will be discussed in class as the date approaches.

Miscellaneous. Normally, please do not bring your children, friends, or guests to the class. (Please discuss this with me because I do not want you missing class if you cannot make child care arrangements.)

Grading Policy

Attendance	10%
Homework	25%
Project 1	15%
Project 2	15%
Project 3	15%
Final Project	20%

A: 90 – 100 B: 80 – 89 C: 70 – 79 D: 60 – 69 F: 0 – 59

Attendance. Your attendance grade will be the number of days attended divided by 19, the total number of class days. If you have any “excused” absences, please let me know in advance, so that I can make an appropriate adjustment to that grade.

Homework. There will be 16 homework assignments. All assignments are available on the Blackboard system and are organized loosely by the week in which they should be worked. The table below indicates the due dates for each assignment:

Homework	Turn In ...	Due Date
1	On Blackboard	Tuesday, June 2
2	Completed in class	Wednesday, June 3 (spelling test in class)
3	On Blackboard or in class	Thursday, June 4
4	On Blackboard	Monday, June 8
5	On Blackboard	Tuesday, June 9
6	In class	Wednesday, June 10 (bring notes & notebook to class)
7	On Blackboard	Thursday, June 11
8	On Blackboard	Monday, June 15
9	In class	Monday, June 15 (completed in class)
10	On Blackboard or in class	Thursday, June 18
11	Completed in class	Wednesday, June 17 (completed in class)
12	On Blackboard or in class	Monday, June 22
13	On Blackboard or in class	Tuesday, June 23
14	On Blackboard or in class	Wednesday, June 24
15	On Blackboard or in class	Thursday, June 25
16	On Blackboard or in class	Monday, June 29

In the spirit of preparing you for collegiate and professional success, we will try to incorporate technology as much as possible into this class. As such, most homework should be turned in online through Blackboard. There are some assignments, however, that require drawing or equations which may be either scanned and provided as an attachment in Blackboard, or may be brought to class. Finally, some assignments will be completed entirely in class.

In the case that Blackboard breaks down, all homework assignments and projects can be accessed on the course website listed at the top of the first page of the syllabus. Work that would normally be turned in via Blackboard should be typed out in a Word Processor, printed, and turned into class the day it is due. Click the Current Classes link, and then click the Daily Assignments and Projects links to access those materials. **Even if Blackboard isn't working, you are still responsible to turn in all assignments and projects on time!**

Formatting Requirements for Paper Work. Any assignment (homework or project) turned in on paper should be typed and printed. Any text should be written in complete sentences.

You should learn how to create a table in a document, since some assignments will require a table. If you need to draw any graphs, you can draw those on a 8.5 x 11 sheet of white paper (not notebook paper), and use a colored pencil or crayon to add color if necessary. Also, if you need to write any equations (there won't be many of these), you can either use a tool such as equation editor or leave space in your document and write the equation in ink after printing.

For example, in this document, I want to include a copy of the Pythagorean Theorem. Since I know how to use Equation Editor, I can write this as $a^2 + b^2 = c^2$. Alternatively, typing out the quadratic equation is a little more daunting,

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

so I left some space in my document and I've written it in, in ink, after the fact.

Projects. Three projects will be assigned, plus a final project. All formatting requirements described above for the homework also apply to the projects. It is recommended that you start on the projects as soon as you can.

Project #	Due Date	Details
Project 1	June 2	Inform prof of option chosen
	June 8	Final project due
Project 2	June 11	Schedule mock job interview
	June 18	Complete mock job interview
Project 3	June 22	Initial design of bridge/platform
	June 24	Turn in bridge and change orders
Final Project	July 1	All portions due in class

Makeup Policy and Late Assignments. Late assignments will not be accepted. Ever. If you have to miss class on the day that a project or homework assignment is due, you must turn in the assignment early. Note that failing to turn in a project on time (resulting in a grade of 0 on that assignment) will have a dramatically negative effect on your grade.

Academic Dishonesty. Any Student that is found guilty of academic dishonesty such as cheating, plagiarism, or collusion, will receive the zero grade on every test or assignment involved. For repeated violations, a guilty student can be assigned a failing grade in this course and can be recommended for suspension from the McLennan Community College District.

Privacy. Because of Privacy Laws, I can only discuss your grade with you, in person and in private. I can only discuss grades by e-mail if you e-mail me with your university address.

Course Progression

Not everything we'll be covering in class is in your book; therefore, it is very important that you come to class every day. The schedule is below, with the relevant chapter listed if available.

- Day 1: Introduction (Chapter 1)
- Day 2: Types of Engineering (Chapter 2)
- Day 3: Using Computer Applications for Engineering Work (Chapters 8 and 9)
- Day 4: Technical Writing (Section 7.5)
- Day 5: The Academic Environment (Chapter 3)
- Day 6: Success in Academia (Chapter 3)
- Day 7: Getting a Job in Engineering
- Day 8: Keeping a Job in Engineering
- Day 9: Problem Solving
- Day 10: Problem Solving, Continued
- Day 11: Engineering Design
- Day 12: Engineering Drawings
- Day 13: Right-Triangles and Trigonometry (Chapter 6)
- Day 14: More Trigonometry and Solid Geometry (Chapter 6)
- Day 15: Taking Measurements (Chapters 4 and 5)
- Day 16: Working in the Lab (Chapter 7)
- Day 17: Oral Communication Skills (Section 7.5)
- Day 18: Engineering Ethics
- Day 19: Final Presentations

I reserve the right to change any term on this syllabus at any time during the semester.