

ENGR 1201 – INTRODUCTION TO ENGINEERING

South Plains College

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Office Hours: **M:** 2:30 – 5:00, **TR:** 9:50 – 10:40, **T:** 12:00 – 1:00, **F:** 8:00 – 11:00

Textbook: Thinking Like An Engineer, Stephan, Bowman et al., 3rd edition, Pearson Publishing.

ATTENDANCE: Attendance and effort are highly important for success in this course. Any student having more than 3 absences or misses submitting any combination of 3 assignments in the class, stands a chance of automatically being dropped from this course with a grade of F. The only exception will be a medical emergency for which proper documentation, as deemed appropriate by the professor, will be needed.

GRADING: Grades in the course will be based on the following components:

• Exams	(50%)	$A \geq 90$
• Projects	(20%)	$80 \leq B < 90$
• Homework	(20%)	$70 \leq C < 80$
• Lab Work	(10%)	$60 \leq D < 70$
		$F < 60$
TOTAL	100%	

PS: NO MAKE-UP exams will be given. If you miss **one**, the final exam will count twice.

If you miss more than 3 components (any combination of HW, Lab, exams, Projects) you will be dropped from the course.

EQUAL OPPORTUNITY: South Plains College strives to accommodate the individual needs of all students in order to enhance their opportunities for success in the context of a comprehensive community college setting. It is the policy of South Plains College to offer all educational and employment opportunities without regard to race, color, national origin, religion, gender, disability or age.

DISABILITY: Students with disabilities, including but not limited to physical, psychiatric or learning disabilities, who wish to request accommodations in this class should notify the Special Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his/her disability to the Special Services Coordinator. For more information, call or visit the Special Services Office in the Student Services Building, 894-9611 ext. 2529, 2530.

DROPPING A COURSE: If you decide to drop the course, return a completed official drop form to the registrar's office by the dates given in the schedule of classes.

COURSE DESCRIPTION

Introduction to the various engineering disciplines including familiarization with the relevant engineering sciences, computer analysis tools and techniques, discussion of professionalism and ethics, and experiences in team design projects.

HOMEWORK

All homework will be done on Pearson's MyLab. Please create an account using the code bought with the book at www.coursecompass.com. Once you have your login details to this website then you will use the course id "**krishnan03218**" to enroll in my course. Enrollment ends February 15th, 2016. All homework should be turned in online by the date assigned.

Lab assignments are posted on the blackboard on the college website at www.southplainscollege.edu. All lab work should be emailed to my email at rkrishnan@southplainscollege.edu before the beginning of the next class.

Online enrollment will close on **February 28th of 2019**. After that date the student will lose his 20% grade in Homework. The enrollment will not be open for any reason after that date.

COURSE PURPOSE

This course is designed to develop the motivation, study habits, and problem solving skills necessary for success as a freshman engineering student. Students are introduced to the opportunities and challenges offered by a career in engineering. They also gain experience in the application of basic computer tools (e.g., Excel and MATLAB) to analyses typical of engineering. Finally, students develop an understanding and appreciation of the design process and the open-ended problems found in the practice of engineering.

COURSE OUTCOMES:

Upon completion of this course, students should have:

1. An elementary knowledge of the disciplines in engineering, especially the undergraduate programs and extracurricular opportunities available
2. A basic understanding of and experience in the steps and techniques of engineering design
3. Emerging skills in written and/or oral communication related to engineering design
4. Introductory skills in teamwork with peers
5. Preliminary development of the habits of mind that engineering study and practice require
6. Summarize and give examples of the ethical and professional issues characteristic of an engineering career
7. Apply Microsoft Excel and Mathworks MATLAB to engineering analyses*

* Time permitting

Course Outline		
This schedule is tentative and subjective to change. Changes will be announced in class.		
Week	Date	Topics and Sections Covered
1	1/14, Mon 1/15, Tues	Introduction, Form Groups, Assign Project 1
	1/16, Wed 1/17, Thurs	Details of Project 1, Chapter 1
2	1/21, Mon	<i>MLK, Jr.</i>
	1/22, Tues	Chapter 2 – Ethics
	1/23, Wed 1/24, Thurs	Chapter 2 – Ethics
3	1/28, Mon 1/29, Tues	Project 1 Presentation
	1/30, Wed 1/31, Thurs	Lab 1 – Word Resume
4	2/4, Mon 2/5, Tues	Chapter 3
	2/6, Wed 2/7, Thurs	Chapter 4
5	2/11, Mon 2/12, Tues	Intro to Excel
	2/13, Wed 2/14, Thurs	Lab 2 – Excel
6	2/18, Mon 2/19, Tues	Importance of Coloring your resume, Dress sense etc..
	2/20, Wed 2/21, Thurs	Engineering Job Fair
7	2/25, Mon 2/26, Tues	Chapter 5
	2/27, Wed 2/28, Thurs	Chapter 5
8	3/4, Mon 3/5, Tues	Lab 3 – Excel
	3/6, Wed 3/7, Thurs	Exam #1

	3/11 - 3/15	Spring Break	
9	3/18, Mon 3/19, Tues	Chapter 7	
	3/20, Wed 3/21, Thurs	Chapter 7	
10	3/25, Mon 3/26, Tues	Chapter 7	
	3/27, Wed 3/28, Thurs	Lab 4 – Excel	
11	4/1, Mon 4/2, Tues	Chapter 8	
	4/3, Wed 4/4, Thurs	Chapter 8	
12	4/8, Mon 4/9, Tues	Chapter 8	
	4/10, Wed 4/11, Thurs	Lab 5	
	4/12, Fri	UIL – No office hours	
13	4/15, Mon 4/16, Tues	Chapter 8	
	4/17, Wed 4/18, Thurs	Lab 6	
14	4/22, Mon	EASTER	
	4/23, Tues	Miscellaneous	
	4/24, Wed 4/25, Thurs	Project 2	
15	4/30, Mon 5/1, Tues	Chapter 8	
	5/2, Wed 5/3, Thurs	Exam 2 Review	
Finals	5/, Mon		
	5/, Tues		