

Southwest Texas Junior College  
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## ENGR 1201

### Introduction to Engineering (2-0-0-2)

#### Course Description

ENGR 1201 - Introduction to Engineering - 2 sem. hrs. (2-0-0) 1401015110  
Introduction to engineering as a discipline and a profession. Includes instruction in the application of mathematical and scientific principles to the solution of practical problems for the benefit of society. Two lecture hours per week. TSI Requirement: M2; R2; W1. Prerequisite: None

#### Course Focus

The course will focus on the use of computer tools to aid in the solution of engineering/scientific problems.

#### Textbook and Readings

Raymond B. Landis. Studying Engineering - Third Edition. Los Angeles, CA: Discovery Press, 2007.  
ISBN 978-0-9646969-1

#### Technology Requirements

Students will be expected to have access to and use (1) a scientific calculator, (2) MS Excel 200x, (3) email, and (4) the Internet.

#### Learning Outcomes

The following learning outcomes will be addressed in this course:

1. Describe the nature of engineering and the related professions.
2. Identify the components of an engineering/scientific education.
3. Demonstrate basic problem solving technique.
4. Utilize a systematic approach to engineering analysis and design.
5. Solve engineering/scientific problems using a computer.

#### Student Objectives

In order to complete this course, the student must be able to:

1. attend class regularly
2. demonstrate responsibility
3. describe the technology team concept
4. list technology team members

5. identify characteristics of technology team members
6. list characteristics of a professional
7. list and describe academic success strategies
8. list and describe personal growth and development strategies
9. list and describe ways to broaden your education
10. list and describe the components of an engineering education
11. describe a successful problem solving strategy
12. list and describe mathematical models
13. use a scientific calculator to solve basic engineering problems
14. use MS Excel to solve basic engineering problems
15. graph basic engineering problems using MS Excel
16. describe the fundamental concepts of programming
17. use Visual Basic for Applications (VBA) to solve basic engineering problems

### Student Contributions

Each student is expected to study at least six hours per week outside of class, which includes review of online materials, research and readings on class related topics, completion of assignments, and preparation for exams.

### Course Evaluation

Your performance will be evaluated by satisfactory mastery of the outcomes listed above. In addition to the completion of ten homework assignments, three regular exams and a comprehensive final exam will be given during the course. The point system below will be used to determine your grade:

Homework assignments (10)	100 points
Exams (3)	300 points
Final Exam (Comprehensive)	200 points
Attendance	32 points

The following point ranges will determine your final grade:

A	540 or more
B	480-539
C	420-479
D	360-419
F	359 or less

### Course Policies

Plagiarism, the representation of someone else's work as your own, or cheating on an examination will not be tolerated. Either case will result in a grade of zero on the work or examination in question. Two or more infractions will be reported to the Dean of Instructional Services for disciplinary action.

### Americans with Disabilities Act (ADA) Statement

Any student with a documented disability needing academic adjustments is requested to speak directly to the Counseling Department (see below) as early in the semester (preferable within the first week) as possible. All discussions will remain confidential.

Crystal City Idalia De La Cruz (830/374-2828)  
Del Rio Marilyn Casson (830 775-1560)

Eagle Pass Brenda Hoffman (830/758-4102)  
Uvalde Melissa Deleon (830/591-7352)

**Class Schedule**

The class meets on Tuesday and Thursday mornings, 8:00 AM to 8:50 AM from August 25, 2009 to December 8, 2009.

**Office Hours**

Monday through Friday from 8:00 AM to 5:00 PM except class times.

Created: 2009-2010 Revised: 08/22/2009