COURSE SYLLABUS

Course Title:	Introduction to Engineering
Department:	Business and Technology
Curriculum:	Technology Studies

Date submitted:	March 2104 (AAC: 14-27)

Course Descriptors:
Make certain that the course descriptors are consistent with college and Board of Trustees policies, and the current course numbering system.

Course Code: (eg. ACC 101)	EGR*111
Course Type:	L

A: Clinical   B: Lab   D: Distance Learning
I: Individual/Independent   L: Lecture   N: M: Seminar   Internship
P: Practicum   U: Studio
X: Combined Lecture/Lab   Y: Combined Lecture/Clinical/Lab   Z: Combined Lecture/Studio

Elective Type:	G/LAS

E: English   FA: Fine Arts   FL: Foreign Language   G: General   HI: History   HU: Humanities   LAS: Liberal Arts & Sciences   M: Math   S: Science   SS: Social Science

Credit Hours:	3
Developmental: (yes/no)	No

Contact Hours:		
	Lecture:	3
	Clinical:	0
	Lab:	0
	Studio:	0
	Other:	0
	TOTAL:	3

Class Maximum:	19
Semesters Offered:	F/Sp

Prerequisites:

C- or better in Intermediate Algebra (MAT*137) **OR** C- or better in Elementary Algebra/Intermediate Algebra Combined (MAT*139)

Corequisites:

None

Other Requirements:

None

Catalog Course Description:	Introduces students to engineering and the engineering profession through the application of physical conservation principles in analysis and design. Topics include dimensions and units, conservation of mass, momentum, energy and electric charge, static force balances, material properties and selection, measurement errors, mean and standard deviation, elementary engineering economics, and design projects.

Topical Outline:
List course content in outline format.

1. Introduction to Engineering
2. Engineering Problem Solving
3. The Scientific Method
4. Engineering Analysis
5. Engineering Design
6. Problem Solving Tools
7. Technology Communication
8. Engineering Ethics

Outcomes:	**Upon successful completion of this course, the student will be able to do the following:**

Describe measurable skills or knowledge that students should be able to demonstrate as evidence that they have mastered the course content.	**COURSE:** **1.** demonstrate an understanding of the engineering profession and its various disciplines **2.** compare the three main approaches to engineering problem solving **3.** solve engineering problems using the scientific method **4.** identify various problem solving tools used in engineering **5.** communicate technology information effectively **6.** explain the importance of ethics in engineering
	PROGRAM: *(Numbering reflects Program Outcomes as they appear in the college catalog)* **Technology Degree Associate Degree:** 1. Identify and apply the design principles of engineering and technology when solving basic engineering problems. 2. Utilize the tools, materials, techniques, and technical processes of engineering and technology when solving technical problems.
	GENERAL EDUCATION: *(Numbering reflects General Education Outcomes as they appear in the college catalog)* **7. Quantitative Reasoning -**Students will learn to recognize, understand, and use the quantitative elements they encounter in various aspects of their lives. Students will develop a habit of mind that uses quantitative skills to solve problems and make informed decisions. **Demonstrates**: Interprets numerical information and applies sufficient laws of logic and mathematics to solve problems using numbers, symbols, graphs and/or descriptions. **Does Not Demonstrate:** Misinterprets numerical information or insufficiently applies laws of logic and mathematics to solve problems using numbers, symbols, graphs and/or descriptions.
Evaluation: List how the above outcomes will be assessed.	**Assessment will be based on the following criteria:** 1. Homework 2. Design projects 3. Quizzes and exams
Instructional Resources: List library (e.g. books, journals, on-line resources), technological (e.g. Smartboard, software), and other resources (e.g. equipment, supplies, facilities) required and desired to teach this course.	**Required:** **Desired:**
Textbook(s)	Refer to current academic year printout.