El Paso Community College
Syllabus
Part II
Official Course Description

SUBJECT AREA	**Engineering**
COURSE RUBRIC AND NUMBER	**ENGR 2308**
COURSE TITLE	**Economy for Engineers and Scientists**
COURSE CREDIT HOURS	**3 3 0** **Credits Lec Lab**

I. Catalog Description

Provides methods used for determining the comparative financial desirability of engineering alternatives. Provides the student with the basic tools required to analyze engineering alternatives in terms of their worth and cost, an essential element of engineering practice. The student is introduced to the concept of the time value of money and the methodology of basic engineering economy techniques. The course will address some aspects of sustainability and will provide the student with the background to enable them to pass the Engineering Economy portion of the Fundamentals of Engineering exam. **Prerequisite: MATH 2413 with a grade of "C" or better. (3:0).**

II. Course Objectives

Upon satisfactory completion of this course the student will be able to:

A. Define interest rate and rate of return.
B. Calculate simple and compound interest.
C. Demonstrate how time and interest affect the value of money.
D. Use and interpolate interest tables.
E. Calculate unknown interest rates and unknown number of years in problems.
F. Perform basic sensitivity analysis.
G. Perform present worth and annual worth analysis.
H. Perform rate of return analysis for single and multiple alternatives.

III. THECB Learning Outcomes (ACGM)

Upon successful completion of this course, students will:

1. Apply different methods to calculate the time value of money.
2. Construct cash flow diagrams for a given problem.
3. Estimate total revenue, total cost, and break even points.
4. Calculate the uniform series payment, given principal, interest rate, and pay period.
5. Perform project evaluation, including cost/benefit analysis.
6. Articulate principles of taxation and depreciation.
7. Perform capital budgeting, cost comparisons, and replacement analyses.
8. Solve problems at a level consistent with expectations of the engineering economics portion of the Fundamentals of Engineering exam.

IV. Evaluation

A. Grading

It is recommended that four examinations be given, including the final examination. Quizzes and/or homework may also be assigned, and those grades may be included in the final average. The weight given to exams, quizzes, and homework is at the discretion of the instructor.

Grades will be assigned based on a student's average using the scale below:
A = 90 - 100%
B = 80 - 89%
C = 70 - 79%
D = 60 - 69%
F = Below 60%

B. I and W Grades

Incomplete (I) grades will be given at the instructor's discretion and only under special circumstances. The instructor is not obligated to issue a "W" (Withdrawal) grade. Students who wish to withdraw must submit the proper paperwork to the registrar prior to the "drop" deadline. A grade of "W" cannot be issued at the end of the semester.

V. Disability Statement (American with/Disabilities Act [ADA])

EPCC offers a variety of services to persons with documented sensory, mental, physical, or temporary disabling conditions to promote success in classes. If you have a disability and believe you may need services, you are encouraged to contact the Center for Students with Disabilities to discuss your needs with a counselor. All discussions and documentation are kept confidential. Offices located: VV Rm C-112 (831-2426); TM Rm 1400 (831-5808); RG Rm B-201 (831-4198); NWC Rm M-54 (831-8815); and MDP Rm A-125 (831-7024)

VI. 6 Drop Rule

Students who began attending Texas public institutions of higher education for the first time during the Fall 2007 semester or later are subject to a 6-Drop limit for all undergraduate classes. Developmental, ESL, Dual Credit and Early College High School classes are exempt from this rule. All students should consult with their instructor before dropping a class. Academic assistance is available. Students are encouraged to see Counseling Services if dropping because exemptions may apply. Refer to the EPCC catalog and website for additional information.