IE 405
ENGINEERING ECONOMIC ANALYSIS
2016 Summer Semester

GENERAL INFORMATION

INSTRUCTOR

Dr. Alberto Garcia
Office: JDT 518
Phone Number: 974-7647

OFFICE HOURS

Monday: 2:00 – 3:00 p.m.
Wednesday: 2:00 – 3:00 p.m.
Others by appointment only.

TEXTBOOK

Engineering Economy, L. T. Blank and A. J. Tarquin, **7th Edition**, McGraw-Hill Publishing Company, 2011.

POWER POINT PRESENTATIONS

Available at Blackboard Class Folder

READING GUIDE

Available at Blackboard Class Folder
Summary of Definitions, Concepts, Procedures and Formulas

CLASSROOM AND SCHEDULE

Class 9:45 am - 11:15 am	MTWRF John D. Tickle Engineering 434	02-Jun-2016 - 06-Jul-2016	Lecture

GRADE DISTRIBUTION

Quizzes	35%
Homework Exercises	35%
Exam	30%

NOTE: Homework exercises can be done individually or in groups of two students.

A = [100-94], A- = (94-90], B+ = (90-87], B = (87-83], B- = (83-80], C+ = (80-77], C = (77-73], C- = (73-70], D+ = (70-67], D = (67-63], D- = (63-60], F = 0therwise.

COURSE DESCRIPTION

Role of engineering economy in engineering projects. Principles of economic equivalence; time value of money; analysis of single and multiple investments; comparison of alternatives; capital recovery and tax implications; decision-making under the assumption of certainty; risk analysis; inflation; public sector analysis and break-even point concepts; basic accounting principles and financial statements.

TOPICAL OUTLINE

1. Algebraic Background: Geometric Progressions
2. Terminology and Cash-Flow Diagrams
3. Engineering Economy Factors
4. Use of Multiple Engineering Economy Factors
5. Nominal and Effective Interest Rates
6. Present-Worth and Capitalized-Cost
7. Equivalent Uniform Annual Worth Evaluation
8. Rate of Return Computations (Single and Multiple Projects)
9. Benefit/Cost Ratio
10. Economic Life and Replacement Analysis
11. Break-Even Point Analysis
12. Introduction to Investments and Bond Analysis
13. Inflation
14. Depreciation Methods
15. After-Tax Economic Analysis

REQUIRED BACKGROUND

Engineering Mathematics, spread sheets (Excel)

CLASS ATTENDANCE

Academic success is built upon regular class attendance. At the University of Tennessee, students are expected to attend all of their scheduled classes. It is the prerogative of the individual instructor to set the attendance requirements for a particular class.

LATE WORK

Homework exercises and lab reports must be submitted by the stipulated due dates. A penalty of 5% of the total worth of each will be subtracted each day after the due date. No late work will be accepted after three days.

HONOR STATEMENT

An essential feature of the University of Tennessee, Knoxville, is a commitment to maintaining an atmosphere of intellectual integrity and academic honesty. As a student of the university, I pledge that I will neither knowingly give nor receive any inappropriate assistance in academic work, thus affirming my own personal commitment to honor and integrity.