

IE 347 ENGINEERING ECONOMY AND COST ANALYSIS II

Instructor: Serhan DURAN (sduran@ie.metu.edu.tr)

Objectives/Goals:

This course is mainly concerned with economic analysis for engineering and managerial decision making. It consists of techniques for evaluating the worth of prospective projects, investment opportunities and design choices.

Course Topics:

The course structure will resemble the structure of the textbook with some exceptions. Specifically the following topics will be covered:

- Interest and Time Value of Money, Economic Equivalence
 - Terminology and cash flow diagrams
 - Factors and their use
 - Nominal and effective rates
 - Continuous compounding
- Methods for Evaluation of Alternatives
 - Present worth and capitalized cost method
 - Annual equivalent cost method
 - Determination of rate of return and classification of investments
 - Benefit/cost ratio method and payback period method
- Replacement Analysis
- Capital Rationing
- Inflation
- Index Numbers and Cost Estimation
- After Tax Economic Analysis and Methods of Financing
- Sensitivity and Risk Analysis

Textbook:

BLANK & TARQUIN, Engineering Economy, McGraw Hill, New York (6th edition or later)

Reference books:

NEWMAN, LAVELLE and ESCHENBACH, Engineering Economy Analysis, Engineering Press (8th edition)

PARK, Fundamentals of Engineering Economics, Pearson Prentice Hall, (2nd edition)

Grading:

Case Study	10 %
Quizzes (Best 5 out of 6)	20 %
Homeworks (5)	5 %
Midterm (November 24, 2009)	30 %
Final (January 20, 2010)	35 %