Revised Fall 2015

EGR 206
Engineering Economy
COURSE OUTLINE

Prerequisites:
Co-requisite: MTH 116 or equivalent

Course Description:

Presents economic analysis of engineering alternatives. Studies economic and cost concepts, calculating economic equivalence, comparing alternatives, replacement economy, economic optimization in design and operation, depreciation, and after tax analysis. Lecture 3 hours per week.

Semester Credits: 3 **Lecture Hours:** 3 **Lab/Recitation Hours:** 0

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Course Outcomes

At the completion of this course, the student should be able to:

1. Calculate the total revenue, total cost, and maximum profit for selling a product.

2. Apply 'time value of money' principles to personal and business situations.

3. Evaluate a single engineering project using 'time value of money' principles.

4. Compare multiple engineering projects and select the most economical solution.

5. Apply breakeven and sensitivity analysis to engineering projects

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Required Materials:

Engineering Computation Paper
Calculator

Textbook:
Engineering Economy, 15/E William G. Sullivan, Virginia Polytechnic Institute and State University Elin M. Wicks C. Patrick Koelling
ISBN-10: 0132554909 ISBN-13: 9780132554909
Publisher: Prentice Hall Copyright: 2012

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Topical Description: (Outline chapters and sections to be covered in the book – may include timeline)

Week	Topic	Chapter
1	Introduction	1
2	Cost Concepts & Design Economics	2
3	Cost-Estimation Techniques	3
4		
5	Time Value of Money	4
6		
7		
8	Evaluating a Single Project	5
9	Comparison and Selection of Multiple Projects	6
10		
11	Depreciation and Income Taxes	7
12	Benefit-Cost Ratio Method	10
13	Breakeven and Sensitivity Analysis	11
14		
15	Considering Multi-attributes	14
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Notes to Instructors
(List information about optional topics, departmental exams, etc)

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1. All instructors teaching this course will use the same textbook.

2. Spreadsheet analysis must be an integral part of problem-solving in the course.

3. Course content within this course may be covered at the instructor's discretion but with all topics being understood.

4. This course and its grades will be structured around a minimum of 2 tests, final exam, and homework.

5. At the end of the semester, all instructors will give the outcome assessment as it relates to the final exam to the program head at the same time they prepare there student final grades.

6. A comprehensive final exam will be given.

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