

Bemidji State University

TADT 3267: Engineering Economic and Cost Analysis

A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: *.*

Lab Hours/Week: *.*

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

MnTC Goals: None

Introduction to the methods for determining costs related to developing and producing a product, for analyzing the present and future value of liquid and physical assets, and for analyzing the present and future value of a time series of payments. Other topics include basic accounting practices, cost estimating, and forecasting. Prerequisite: Junior status or consent of instructor.

B. COURSE EFFECTIVE DATES: 08/25/2014 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Accounting reports
2. After Tax Economic Analysis
3. Annual Worth Analysis
4. Breakeven, Sensitivity and Payback
5. Cost/Benefit Analysis w/ Public sector project considerations
6. Depreciation Methods
7. Effects of Inflation
8. Estimating Costs
9. Foundations of Engineering Economy
10. Present Worth Analysis
11. Rate of Return Analysis; single and multiple alternatives
12. Replacement ;Retention Decisions
13. Time and Interest Affects on Money Nominal and Effective Interest Rates

D. LEARNING OUTCOMES (General)

1. demonstrate an ability to use a systematic method of problem solving and decision-making.
2. compute labor and material cost components for existing products
3. understand how profit is generated and how profit shapes business decisions at all levels
4. demonstrate an ability to use and apply the basic micro economic analysis methods such as Annual Worth, Rate of Return, Breakeven, Sensitivity, etc.
5. demonstrate a fundamental understanding of economics in decision-making.
6. demonstrate a fundamental understanding of the time value of money.
7. apply the principles of engineering economy to make appropriate financial decisions with respect to using company resources, including the acquisition of capital equipment, selecting methods of financing, depreciating equipment, etc.
8. interpret financial statements, including Profit-Loss and Balance Sheet
9. estimate product and operation costs

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted