

Master Syllabus

OPT 2208 - Engineering Technology Economics & Cost Analysis

Division: Science, Mathematics and Engineering

Department: Operations Technology

Credit Hour Total: 3.0

Lecture Hrs: 3.0

Prerequisite(s): MET 1131AND MAT 0100

Date Revised: January 2017

Course Description:

Basic economic cost concepts, decisions, analysis and evaluations as applied to engineering design, production, maintenance and quality control.

General Education Outcomes:

- Critical Thinking/Problem Solving Competency
- Written Communication Competency

Course Outcomes:

Various Types of Costs

Describe the various types of costs and how they react to different types of business situations, including standard costs and overhead costs.

Assessment Method: Locally developed exams

Performance Criteria:

70% of students correctly answer at least 70% of applicable exam questions.

Cost Analysis and Control Tools

Demonstrate an understanding of several cost analysis and control tools, including budgets, breakeven points and cost-volume-profit relationships.

Assessment Method: Locally developed exams

Performance Criteria:

70% of students correctly answer at least 70% of applicable exam questions.

Time Value of Money

Describe and demonstrate an understanding of the concept of the time value of money.

Assessment Method: Locally developed exams

Performance Criteria:

70% of students score 70% or better on exams.

Economic Analysis Methods

Apply economic analysis methods related to the time value of money and investment capital spending cash flows to a real world or simulated situation.

Assessment Method: Portfolios

Performance Criteria:

70% of students score a "3" or better on 5-point rubric regarding the application on economic analysis methods on class projects.

Outline:

Cost terminology

Types of costs

Standard costs

Overhead costs

Contribution

Cost-Volume-Profit Analysis

Budgeting

Budget analysis

Process planning and cost estimation

Operations and/or costing and estimating project

Introduction to cash flows information on estimating and using of cash flows and cash flow diagrams

Time Value of money

Present worth and future work

Calculating Return On Investment (ROI)