

## 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):** OPT 1198 AND MAT 1280

**Date Revised:** October 2012

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#### 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)