Virginia Western Community College
EGR 206
Engineering Economy

Prerequisites
MTH 263

Corequisites
none

Course Description
Presents economic analysis of engineering alternatives. Studies economic and cost concepts, calculation of economic equivalence, comparison of alternatives, replacement economy, economic optimization in design and operation, depreciation, and after tax analysis.

Semester Credits: 3 Lecture Hours: 3 Lab/Clinical/Internship Hours: 0

Required Materials

Textbooks:
Engineering Economy w/MyEngineering lab Access with Pearson eText -- Access Card Package, 16/E, Author: Sullivan, Virginia Polytechnic Institute and State University Pearson Publishing, ISBN# 9780133750218

Other Required Materials:
Engineering Computation Paper
Calculator
Access to Microsoft Excel, 2010 or newer.

General Course Purpose

Educating students about project budgets

Course Outcomes

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

- Calculate the total revenue, total cost, and maximum profit for selling a product.
- Apply 'time value of money' principles to personal and business situations.
- Evaluate a single engineering project using 'time value of money' principles.
- Compare multiple engineering projects and select the most economical solution.
- Apply breakeven and sensitivity analysis to engineering projects.

Topical Description

- Cost concepts and design economics
- Cost-estimation techniques
- The time value of money
- Evaluating a single project
- Comparison and selection of multiple projects
- Depreciation and income taxes
- Replacement analysis
- Benefit-cost ratio method
- Breakeven and sensitivity analysis
- Probabilistic risk analysis
- Capital budgeting
- Decision making

Notes to Instructors

- All instructors teaching this course will use the same textbook.
- Spreadsheet analysis must be an integral part of problem-solving in the course.
- Course content within this course may be covered at the instructor's discretion but with all topics being understood.
- This course and its grades will be structured around a minimum of 2 tests, final exam, and homework.
- 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 their student final grades.
- A comprehensive final exam will be given, which must be at least 10% of the final grade.

ADA Statement (PDF)
Title IX Statement (PDF)