

METROPOLITAN STATE COLLEGE of DENVER
Office of Academic Affairs

REGULAR COURSE SYLLABUS

School of: Professional Studies

Department: Engineering Technology

CIP Code: 15.0201

Prefix & Course Number: CET 3120

Crosslisted With*: _____

Course Title: Engineering Economy

Check All That Apply: Required for Major: Required for Minor: _____ Specified Elective: _____

Required for Concentration: _____ Elective: _____ Service Course:

Credit Hours: 3 (3+0)

Total Contact Hours per semester (assuming 15-16 week semester):

Lecture 45 Lab 0 Internship 0 Practicum 0 Other (please specify type and hours): _____

Schedule Type(s): L Grading Mode(s): L

Variable Topics Courses (list restrictions, including the maximum number of hours that can be earned**):

** NOTE: This information must be included in the course description.

Restrictions (Variable Topics Course): _____

Prerequisite(s): at least junior standing or permission of instructor

Corequisite(s): None

Prerequisite(s) or Corequisite(s): _____

Banner Enforced:

Prerequisite(s): _____




Corequisite(s): _____

Prerequisite(s) or Corequisite(s): _____

Catalog Course Description:

This course examines the "time value of money" as a basis for evaluating economic alternatives required in engineering decision-making.

APPROVED:

	<u>3 Apr 08</u>
Department Chair OR Program Director	Date
	<u>4/8/08</u>
Dean OR Associate Dean	Date
	<u>5/19/08</u>
Associate VP, Academic Affairs	Date

*If crosslisted, attach completed Course Crosslisting Agreement Form

Prefix and Course Number: CET 3120

Required Reading and Other Materials will be equivalent to:

Newnan, Donald G., Eschenbach, Ted G., Lavelle, Jerome P. (January, 2008). *Engineering Economics Analysis 10th (or current) edition*. Oxford University Press.

Specific, Measurable Student Behavioral Learning Objectives:

Upon completion of this course the student should be able to:

1. Summarize project cost and benefits in cash flow diagrams
2. Compare competing alternative choices using engineering analysis techniques
3. Calculate depreciation schedules based on various depreciation systems

Detailed Outline of Course Content (Major Topics and Subtopics) or Outline of Field Experience/Internship (experience, responsibilities and supervision):

- I. Introduction
 - A. Basic concepts of engineering economy
 - B. Cash flow diagrams
- II. Judging the Attractiveness of Proposed Investments
 - A. Interest formulas
 - B. Equivalencies
 - C. Solving interest problems
 - D. Analysis Techniques
 1. Present Worth Analysis
 2. Annual Cash Flow Analysis
 3. Rate of Return Analysis
- III. Techniques for Economy Studies
 - A. Relationships between depreciation accounting and engineering economy
 - B. Amortization of engineering facilities

Evaluation of Student Performance:

1. Written exams
2. Homework
3. Oral presentation on faculty assigned problem