



ChE 451 - Engineering Economy Fall 2007

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<u>Office</u>	Jett Hall 256
<u>Office Hours</u>	Available by appointment or whenever in office. If you want an appointment, please email me and I will set one up for you.
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Course Description

Discounted cash flows, economics of projects, sensitivity analysis

Course Prerequisites

Senior standing, same as IE 451

Required Text

Newnan and Lavelle, *Engineering Economic Analysis*, 9th ed., Oxford Univ. Press, 2004.

Course Objectives

1. To understand the time value of money
2. To develop a facility for evaluation of investments
3. To develop a facility for financial decision-making
4. PC assisted economic calculations

Topics Covered

1. Introduction to engineering economy studies, balance sheet, income statement, cash flow statement
2. Costs, breakeven analysis, present macroeconomic issues
3. Compound interest factors and cash flows
4. Present worth methods
5. Annual worth methods
6. Future worth methods
7. Rate of return methods
8. Benefit/cost analysis
9. Payback analysis
10. Replacement analysis
11. Incremental analysis
12. Depreciation and taxes
13. Inflation

Class Schedule

Tuesday and Thursday 8:55-10:10 am, in JH 283.

Grading

The following grading scale is used:

Homework	20%
Test I	20% (September 20)
Test II	20% (October 18)
Test III	20% (November 29)
Final	20% (December 13)

Contribution to Meeting Professional Component

1. Provide students with an ability to design a system, component, or process to meet desired needs.
2. Provide the broad education necessary to understand the impact of engineering solutions.
3. Provide an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
4. Provide an understanding of professional responsibility.

Relationship of the Course to Program Objectives

This course addresses the following program objectives:

- Provide students with a solid foundation in the fundamentals of Chemical Engineering science, design, and practice; This is accomplished in this course by teaching the fundamentals of engineering economy and requiring homework in this subject.
- Assume graduates can apply engineering skills and identify necessary resources in the identification, formulation, and solution of engineering problems. This is accomplished by evaluating student performance in the solution of homework and tests.

Note

All students are required to abide by the NMSU Code of Conduct. Inappropriate behavior will not be acceptable.

ADA Statement

If you have or believe you have a disability, you may wish to self-identify. You can do so by providing documentation to the Office of Services for Students with Disabilities located at Garcia Annex (Phone: 646-6840, TTY: 646-1918). Appropriate accommodations may then be provided for you. If you have a condition that may affect your ability to exit safely from the premises in an emergency or which may cause an emergency during class, you are encouraged to discuss this in confidence with the instructor and/or the director of the Americans With Disabilities Act Coordinator at 646-7795.

Prepared by

Richard L. Long, Jr., August 21, 2007