

NE 364- Engineering Economy

Hour: Lecture: 2 Hrs.

Tutorial: 2 Hrs.

Credit: 3.

Coordinator: Basem Roshdy

Text Book:

- William G Sullivan, Elin M Wicks, & James Luxhoj, “Engineering Economy”, latest edition.

Specific course information:

- a. A study of basic concepts emphasizing analysis of aggregate economy. Examination of the processes of price determination and calculation of optimum demand for maximum profit. Basic principles of money-time relationship. Methods of investment assessment and fundamental techniques of comparison of investment opportunities. Theories of depreciation of physical facilities and study of cost recovery systems.
- b. Prerequisite: 54 Credit hours
- c. Designation: Required

Specific goals for the course:

- An ability to apply knowledge of mathematics, science, and engineering.
- An ability to identify, formulate, and solve engineering problems.
- The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context

Course instruction outcomes:

- The students will be familiar with basic cost concepts and economic environment.
- The students will be familiar with the principles of money time relations and basics of investments opportunities assessment and evaluation.

Student outcomes:

A, E, H

Topics Covered:

- Introduction and overview.
- Cost concepts and the economic environment.
- Principles of money – time relations, the concept of economic equivalence.
- Cash flow diagrams: Interest formulas and uniform series.
- Cash flow diagrams: Uniform gradient series and geometric sequence
- Nominal and effective interest rates, continuous compounding and continuous cash flows.
- Applications of engineering economy: Methods of investment assessment.

- Comparing alternatives: Useful life is equal to the study period.
- Comparing alternatives: Useful life is shorter than the study period.
- Comparing alternatives: Useful life is longer than the study period.
- The imputed market value technique.
- Depreciation: Historical Methods.
- Depreciation: Cost recovery systems.

Course / credit hours	Math & Basic Sciences	Engineering Topics	General Education
Engineering Economy /3			3