



**Course Name:**

Engineering Economy

<b>Course Number:</b> 20-197	<b>Credit:</b> 3
<b>Program:</b> Undergraduate	<b>Course Type:</b> Technical elective
<b>Prerequisite:</b> Numerical Analysis in Civil Engineering	<b>Corequisite:</b> -

**Course Description (Objectives):**

**Course Content (outline):**

- Introduction (time value of money, and interest rate)
- Methods of economic evaluation of engineering projects (equivalent annual payment, present worth, rate of return, benefit. Benefit-to –cost ratio)
- Side topics (depreciation, before/ after tax analysis, choice of minimum attractive rate of return, multiple alternatives, sensitivity analysis, retirement and replacement analysis, continuous interest rate)
- Complementary subjects (multi-attribute decision- making; probability in engineering decisions, and Bayesian decision-making).

**References:**

- Principles of Engineering Economy, E. L. Grant, W.G .Ire son, and R. S. Leavenworth