Course Name:
Engineering Economy

<table>
<thead>
<tr>
<th>Course Number: 20-197</th>
<th>Credit: 3</th>
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<tbody>
<tr>
<td>Program: Undergraduate</td>
<td>Course Type: Technical elective</td>
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<tr>
<td>Prerequisite: Numerical Analysis in Civil Engineering</td>
<td>Corequisite: -</td>
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</tbody>
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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. Irson, and R. S. Leavenworth