Engineering Economy Chapter 6

Peter O'Grady
Professor
Department of Industrial Engineering
University of Iowa

Annual Cash Flow Calculations

- Goal is to convert money to an equivalent annual cost or benefit.
- Example 6-1
  - Purchase furniture $1000, what is EUAC? (i=7%, time = 10 years)
- Example 6-2
  - As 6-1 but now can obtain salvage value of $200 in year 10. What is EUAC?

Computing P First

- Example 6-3
  - Variation in costs from year to year. What is the EUAC?
  - Note: calculate P first THEN A.
  - Note: Link between P and A

Analysis Period

- Can have analysis period the same for each alternative.
- Example 6-7
  - Note: Can purchase ANOTHER Pump B at end of 6 years.
  - Assume: that Pump B can be purchased for same price.

Continuing Requirement

- Can consider EUAC comparison for a complete cycle (including purchase, annual costs and salvage)
- Example 6-8

Annual cash flow analysis

- Determine time period for analysis: common multiple OR continuing operation then doesn't require least common multiple
- Calculate annual cost/benefit/profit for each alternative
  - Draw cashflow diagram
  - Identify/calculate A, S, i, P, F, n
  - Use uniform payment equations to determine A
- Compare annual costs