ENG. COST/ECON ANALYSIS

CAST STUDY/TERM PROJECT GUIDELINES

1. Project Objectives:
   a. To apply engineering economic decision making to realistic problems.
   b. To improve communication skills both in presentation and report writing.

2. Problem Statement: In this course design project, student will voluntarily form into project teams of 3-4 students each. Each project team is required to identify a project pertinent to one of the following engineering economic decision problems.
   a. Service Improvement
   b. Equipment and Process Selection
   c. Equipment Replacement
   d. New Product and Product Expansion
   e. Cost Reduction
   Refer to example problems of the short case studies in the textbook.

3. Project Procedure: Project teams must follow this decision-making process:
   a. Recognize a decision problem
   b. Define the goals or objectives
   c. Collect all the relevant information
   d. Identify a set of feasible decision alternatives
   e. Select the decision criterion to use
   f. Select the best alternative
   g. Document and present the project problem, analysis and results.

4. Project Report Requirements
   a. Written proposal: Recognize a decision problem, define the project objectives and tasks, plan the project schedule, team members and their responsibilities, etc.
   b. Oral presentation: Each design team will have 15 minutes to present its problem, analysis, alternative designs and final results. Every team member is required to participate. MS Power Point is required for this presentation. All students should be prepared to evaluate the performance of his/her teammates and other design teams.
   c. Written final report: Should include the following:
      - Cover page
      - Executive Summary (100 ~ 150 words)
      - Table of Contents : (Report body should include following sections)
        1. Problem statement (recognize a decision problem),
        2. Project objectives (define the goals or objectives),
3. Data and sources (describe the data used and list any outside sources)
4. Problem analysis (collect all the relevant information, identify a set of feasible
decision alternatives),
5. Evaluate alternatives and perform calculations (select the decision criterion to
use and conduct economic analysis)
6. Report the best alternative and other results (select the best alternative),
7. Conclusions and recommendations (Discuss possible risk factors in your
analysis and make a recommendation for future action.)
- Reference list