In engineering practice, projects are typically suggested and obtained through a proposal or bidding process. As part of the proposal process, the engineering team is required to submit a detailed description of the project, project objectives, scope of work, and to the extent possible, descriptions of methods that will be used. The engineering team must also provide a list of project tasks, proposed schedule, and a list of project participants and their qualifications.

1. **WRITTEN PRELIMINARY PROPOSAL**

   **DUE: 5:00 P.M. FRIDAY JANUARY 23, 2004**

   A formal written preliminary project proposal must be submitted to allow the instructor and mentor(s) to evaluate the project scope and determine feasibility and ability of the project to satisfy objectives of the Engineering Synthesis course. The proposal must contain sufficient information, including appropriate background, allowing the instructor to evaluate the project. The proposal must contain at least the following:

   - A cover letter from the project leader, addressed to the instructor. This letter should identify the leader as the principal in a consulting firm (the team should select a name) and describe the firm’s capabilities. Consider the instructor to be a prospective client.
   - A cover page identifying the project name, team name, organization and address, submittal date, and identification of the person (or organization) to whom the proposal is being submitted.
   - A brief, but clear and concise, description (1-2 pages) of the proposed project and scope of work.
   - A preliminary (but detailed) list of tasks to be accomplished, the team member(s) responsible for completing each task, and a tentative schedule providing start and end dates.
   - The name(s), e-mail and mailing addresses, and telephone number(s) of your proposed mentor(s).
   - A description of the team members' qualifications. This description can be provided in one of two ways, but the same method must be used for all team members. Either provide a one-page Curriculum Vitae (CV) for each person, or prepare a brief, one-paragraph summary of each person's background and accomplishments that are pertinent to the proposed project.

   Each team must meet with the instructor before Jan 23 to discuss the project, then revise the project and scope of work, as necessary.

2. **ORAL PROPOSAL PRESENTATION**

   **IN CLASS ON MONDAY FEBRUARY 2, 2004**

   Each firm (team) has been invited, along with an unknown number of other firms, to describe their approach to the proposed engineering design project, and to answer any questions that the client may have about the written proposal submitted earlier. This session provides the team with the opportunity to convince the client that their firm is best qualified to undertake the work. Each team must make a formal oral proposal presentation, about 15 minutes in length, to the entire class on Monday, February 2. A revised written project proposal must also be submitted at this time.
Presentation Objectives:

- To convince the client that your version of the proposed project is the best of the alternatives.
- To convince the client that your firm has the necessary qualifications.
- To answer any questions the client may have regarding the proposal.

Presentation Audience:

The instructor should be considered to be the client to whom the presentation is directed. The other students in the class are to be considered as members of the client’s organization. All persons in the audience are encouraged to ask questions.

Presentation Content:

Each presentation must contain at least the following:

- A title slide with the project name, team name, organization, presentation date, etc.
- An outline of the presentation
- An introduction of the design team members including a brief statement of each person's qualifications.
- An description of the project or problem without reference to possible solutions.
- A discussion of (general) design alternatives, including pros and cons of each alternative.
- A detailed discussion of the recommended approach, with evidence to support that it is the most appropriate approach.
- A project schedule with major tasks shown. Critical path analysis is recommended.
- A summary of why the proposal should be accepted.

The presentation will be a team effort. Each member of the group is expected to actively participate in preparation and presentation of the proposal. Additionally, each student in the class is expected to actively listen to all other presentations, to ask questions, etc.

The presentation is limited to 15 minutes, plus a 5- to 10-minute question and answer period following each presentation. Each team must practice their presentation to ensure adherence to time requirements, and to check that all slides are clear, understandable, and free of spelling and grammatical errors. Each team is encouraged to discuss the presentation with the instructor or the design team mentor; I will be happy to attend a rehearsal of your presentation and to provide comments and suggest improvements.