

The Engineering Proposal

Final Design IV - ENGG*41X0

An engineering proposal is a written offer to perform specific work (e.g., research project, design or construction) for compensation (a grade in this case).

- a **special type of engineering report**, with common characteristics of all engineering reports (i.e., layout, front material, subject groupings, etc.)
- **writing style** can be more familiar than usual in scientific reports (e.g., can be written in 1st person active voice rather than 3rd person passive)
- must be **brief and to the point (5-8 pages of body text, not including appendices)**
- written so the reader **gets the main ideas** of the proposed work but not all the technical details
- **must clearly highlight benefits and costs (drawbacks) and other impacts**
- **may use a positive, optimistic tone** (persuasive without being misleading)

Points to Consider:

What?

- statement of need, problem definition, design ideas

Why?

- point out benefits to client (monetary profit, social need, a perceived operational problem, system improvement, etc.)

How?

- personnel involved, resources required (budget, facilities, equipment, personnel)
- plan of attack, methodology

When?

- plan of project with timeline (brief in proposal)
- deliverables and due dates
- duration and completion date

Layout of Proposal

Style - There is no fixed style format. Follow style guidelines of the engineering discipline (e.g., IEEE). Proposal should have a report cover, but does not need to be bound. Use a “standard” font such as Times Roman or Arial and 12 point size.

Front Matter

Letter of Transmittal if it is an external proposal, otherwise information at top of first page

Short summary up front, or at the end, to emphasize the strengths of the proposal

** Table of Contents, Lists of Figures or Tables **not required***

Body

Background section - relevance, importance, scope, your position, experience, knowledge of problem (constraints, performance criteria, regulations) etc..

Proposed Work - your basic ideas, requirements, benefits, plan of attack, personnel, resources, etc..

Schedule and Budget - estimated costs, time line, products, delivery dates

Appended Information

Technical Appendix, a particular body of information needed to make a decision, e.g., sketches, data, technical nomenclature (to be avoided if possible!)

Terms of Reference, not always part of a proposal, may be required to clarify agreement and forestall misunderstandings

- used to define specifics of a contract or agreement
- an agreement listing what each party should expect and should **not** expect
- protects both parties in the event of disagreement
- states explicitly: details of "product" e.g., shop drawings, specifications, cost/benefit analysis, prototype, reports, due dates for deliverables, schedule of payment, penalties, ownership of final product (e.g., patent rights, intellectual property, etc.)

Due Date: Monday Jan. 12, 2009 at 12:00 h