

# Research Method and Report Writing

## Lecture 2: How to Prepare a Proposal

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# What is Proposal

- ▶ A **proposal** is a description of the work you will complete on a project.
- ▶ The details of a proposal depends on **the project's scope** and **who will read the document**.
- ▶ Sometimes an organizations advertise a need and distribute and RFP
  - ▶ In this case the consulting engineers should prepare a proposal to respond to the RFP.
- ▶ Sometimes as an engineer, you may initiate a solution for a problem or improving the performance of a system
  - ▶ In this case, you must first convince the agency that the problem exists before proposing your solutions.

# Different Types of Proposal

## ▶ In academia,

- ▶ engineers prepare grant proposals or research proposals in order to receive funding from government agencies and non-profit organizations.
- ▶ Or they prepare a thesis proposal to pursue their study and accomplish their program.
  - ▶ In this case their proposed approach to solve a problem should have novelty and acceptable contributions

## ▶ In industry,

- ▶ engineers, especially consultants, write proposals or "bids."
- ▶ Engineers may prepare these proposals for the company they are working for or other organizations.
  - ▶ In this case they should address a specific problem in that organization and propose a practical and implementable solution

# The Audience of your Proposal

- ▶ The details of your proposal may change, depending on the people are going to support the project.
- ▶ If you are submitting a proposal to **your company's management**
  - ▶ Some details on the project costs or other background information does not required to be mentioned.
- ▶ If you produce a proposal for an organization outside your company
  - ▶ More details required such as rationale for why they should fund your project, the necessary materials and costs.
- ▶ **To prepare more wisely proposal, before writing a proposal, always research your audience's background.**

# Title for Academic Proposal

- ▶ It should provide a clear, Concise, and accurate description of your dissertation
- ▶ Do not make to too long
- ▶ It should be original and attractive
  - ▶ to encourage the interested people in your area of study to read your thesis
- ▶ It should contain the contribution of your thesis
  - ▶ Avoid use general topics which covers a wide range of approaches
  - ▶ If your contribution is to provide a novel method for solution of a problem, bring the name of the method
  - ▶ If your contribution is to a novel problem, name it

# Title for Academic Proposal

- ▶ Do not Use a complete sentence as a title. No Periods.
- ▶ Make certain that the title makes complete sense
- ▶ Do not use abbreviations
- ▶ Do not put forth the research question itself as the main title
- ▶ Create a title that sounds good and flows well

# Title for Business Product

- ▶ Choose a Short name, memorable and meaningful
  - ▶ It will be easier to remember
- ▶ Pick a unique name
  - ▶ Do not it after a pre-existing entity.
  - ▶ Check the proposed name in a search engine
- ▶ It should be easy to pronounce
- ▶ Combine words or make up new words entirely
  - ▶ e.g. YouTube, Facebook, and Myspace prove that using generic words in new ways can result in a very recognizable brand.



## Title for Business Product

- ▶ Decide if you want your project to carry a brand, e.g. Google, or if you want your project to describe its purpose, e.g. Lifehacker
  - ▶ "Google" did not have meaning when Google first started; they only got to where they are now through careful brand building.
  - ▶ Descriptive names can immediately introduce know what your project is about without having to build a brand beforehand.
- ▶ Check domain name availability
  - ▶ You need to have a web presenting your product.
  - ▶ Check name.net, or name.com domain be available.
- ▶ People would wear it on a t-shirt
- ▶ It can be paired with a good symbol or mascot
- ▶ It does not have negative connotations (in any major languages, including slang)

# General Format

- ▶ Your proposal should include
  - ▶ a phone call or a quick e-mail.
  - ▶ outlining your ideas
  - ▶ other designs and theories to refer to as examples, critique, or comparison.
  - ▶ graphics or tables to help the audience visualize your ideas.
  - ▶ cost
  - ▶ time schedules,

# Introduction

- ▶ In this part, you should provide information about the need for a proposal.
- ▶ You should state your motivation for writing this proposal
- ▶ i.e., **Why** you write the proposal in the first place.
- ▶ and **How** your proposed solution may resolve the problem.
- ▶ Then an overview on what the rest of the proposal includes should be prepared.

# Qualifications

- ▶ In this section, you should show that you and your organization (if applicable) are skilled and capable of accomplishing the proposed work successfully.
- ▶ This section can be considered as a "resume" since in it, since you will depict your skills and experiences.
- ▶ Note that if your audience is your supervisor or other managing decision-makers, then this section is not required.

# Background

- ▶ In this section, the related work should be reviewed completely.
- ▶ Here, you should show that you thoroughly understand the problem and investigate different aspects of it.  
Also you are completely aware of state of art in this filed.
- ▶ Cite the references completely and critic them.
- ▶ Investigate the similar project has been done and the introduced approaches in the literature.

# Proposal Statement

- ▶ In this section, you should inform your audience of exactly what you are proposing.
- ▶ You should also include what you are not proposing.
- ▶ Explicitly mention the output of this project and your product.
- ▶ If you are proposing partial work on a project, state this and then verify what your work will not include.

# Methodology

- ▶ In this section, you should indicate how you will complete the project.
- ▶ You may propose more than one possible approach to investigate and promise to implement the best one in final stage.
- ▶ Here you have to discuss the steps you will have taken to reach a final goal.

# Results

- ▶ In this section, you should discuss the outcome of your proposal and what you are going to produce.
- ▶ The types of project production I cover a wide range:
  - ▶ A comprehensive report, or feasible study report.
  - ▶ Primer and laboratory product
  - ▶ Semi-industrial product
  - ▶ Industrial prototype and product.
- ▶ Be sure to state exactly what the Results will be.



# Work Schedule

- ▶ Split your plan to accomplish the project in different steps and mention in in this section.
- ▶ This section should present the time frame in which you will complete the proposed work.
- ▶ Therefore you inform your audience of what to expect from you and when.
- ▶ It also helps to keep you organized.
- ▶ Prepare the deadlines and schedule carefully as they will ask you the promised result at each step.
- ▶ If, after you begin working, you are unable to keep this schedule, you should always communicate changes in deadlines to the appropriate people.

# Costs

- ▶ In this section, present the costs you anticipate your project will involve.
- ▶ Divide your expenses into categories
- ▶ For example, labor costs for each worker, materials, required trips, and etc.
- ▶ Then, you might provide a total cost.

# Conclusion

- ▶ The Conclusion section is similar to the ending of a cover letter.
- ▶ You should summarize why you should be considered and how you can be contacted, in this section.
- ▶ You might also reiterate why you are the best person or group for the project.