Class Project Guidelines

Class Project Objectives

- Appreciation of breadth and depth of work design and analysis.
- Apply principles of methods improvement.
- Apply knowledge of mathematics, science, and engineering.

Class Project Objectives

- Apply basic steps of calculating standard times for manual work.
- Analyze and interpret data and results.

Class Project Objectives

- Design, develop, implement, and improve:
  - process,
  - component, and/or
  - integrated system
- to meet desired needs within realistic constraints.

Class Project Objectives

- Understand professional and ethical responsibility.
- Understand the impact of engineering solutions in:
  - global,
  - economic,
  - environmental, and
  - social context.

Project Contents

1. Title Page
2. Summary
3. Table of Contents, list of tables and list of figures
4. Introduction and Problem Definition
5. Background
6. Objectives
7. Methodology
8. Data and Results
9. Discussion
10. Conclusions
11. References
12. Appendices

Title Page

- Project title on the cover page.
  - Related to the problem under investigation.
    - Example: Motion and time study of bank account opening at……..
    - Bad Example: IE 342 PROJECT.
- Course name and students' names and ID numbers.

Summary

- Brief information about:
  - location of the project.
  - problem found.
  - objectives related to the problem.
  - Method.
  - Most important results and final conclusions.

- Should not exceed 200 words.

Table of Contents

- Contains all chapters, sections, and subsections of the project along with their page numbers.
- List of tables and list of figures.
- Any table or figure should have a number and a caption.
- Any table or figure should be referred to in the text.

Introduction and Problem Definition

- Importance of the job, task or process under investigations to the general population.
- Problems associated with the job, task or process under investigations.
- Problem of interest to be investigated.
  - Size, importance, and effect from an engineer's point of view.
  - Motivation for investigating such problem.

Background

- Location of the study.
- Complete description and representation
  - causes or consequences
- Related factors and variables.
- Engineering concepts and information related to the nature of investigation.
- Should **NOT** be treated as a summary of the course.

Objectives

- Clear.
- Justified.
- Related to the problem defined.

Methodology

- Steps needed to achieve objective(s)
- Reason for choosing methodology steps.
  - Are they appropriate?
  - Are there any other steps?
  - If yes, why were not used?
- Limitations and/or assumptions.
- Realistic constraints to be addressed in the project

Data and Results

- All data and results of the project.
- All results are expected to achieve the project objective(s).

Discussion

- All results should be discussed clearly.
- Interpretation of results and their relation to problem and objectives.
- Effect of the proposed realistic constraints on the applicability of the proposed solution(s)

Conclusions

- Conclusions of investigation.
- Objectives achieved
- Should **NOT** be a repetition of the results section.

References

- Any research paper, thesis, conference paper, or book used in the project.
- Never contain a reference which was not referred to in the text.
- The format should be acceptable.

Appendices

Any related data or information that should be presented but can’t be fit to the project body of text.

General Rules

- Overall quality of the project should be acceptable.
- Spelling mistakes or grammatical errors should be avoided.