IE 505 PRODUCTION PLANNING AND CONTROL
Suggested Format for Term Project Reports
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1 Outline

This hand-out suggests a possible format for the term project progress and final reports. Deviations from this are permissible and necessary depending on the specific chosen project. However, the basic content of the material presented below should be a part of the report, and should be well structured. The progress report as well as final report have similar formats. The content and emphasis on particular sections is different (see section 2).

1. Cover Page
   Title of project, Submitted by (group names, SID), In partial requirement for, Date.

2. Abstract/Summary/Executive Summary
   This is a short section, usually one or two paragraphs, which summarizes the report. It is usually written at the end and requires more time/line than normal text. It sells the report. It should, summarize your entire contents/work documented, without getting into specific details. Major findings/contributions should be brought up without the lengthy details of how that was achieved.
   It may have Key words at the end.

3. Introduction
   Describes the environment of the project. It briefly describes the existing problem (without mathematical details, usually), and thus, the need for better techniques or procedures. This is usually the motivation for your work. It then documents the current state-of-the-art or previous work in this area. A completely new section can be devoted to this literature survey if it is substantial. It then states the objectives of your work or the work that has been performed so far. This is written as a consequence of your need and the ability/ inability of the previous methods to address your problem. It concludes with an outline of your report, i.e., section 2 describes the problem formulation, ..., conclusions and further work is presented in section X.

4. Problem formulation/Objectives
   This is the right place to present the precise description of the problem and state your objectives, mathematically if possible.

5. Approach/Methods/Solution Procedure
   This is the heart of the work. This section is usually the main body and is sub-sectioned due to its size. It contains the solution approach or methods you have adopted or developed, and their efficacy to solve your problem.

6. Numerical Study/Application
   This could be the most important section of the report, but in research type work it is secondary to the previous section. It describes the application of your methods to the problem data, and documents the results obtained.
   If the results are extensive, a separate section can be devoted to them.

7. Discussion/Benefit Analysis
   This is an important section from the point of view of the net benefit to the company. It discusses the results obtained in the previous section and their utility to the company; expected savings in $’s, time and quality improvement should be described in a quantitative manner. These discussions are based on solid arguments, and not guesses. Deviations from expected results should be explained.

8. Conclusions and Further work
   This section concludes the work without repeating the discussions or contents of another section. It is in a summary form and could be itemized. At this point few speculative remarks can be made. Future work that will enhance the scope of the project and enhance benefits should be included.
9. **Acknowledgments** if any.

10. **References**
    This includes your bibliography. Formal referencing style should be adopted (see IEEE journals, or any other journal).

11. **Appendices**
    Are numbered sequentially and should have a single “theme.” Detailed problem data, secondary proofs/algorithms, etc. should be a part of the appendices. A good way to know what should not be included in the main text but in appendices is to assess the importance of the material. If it is secondary or consists of long details, not critical to the understanding of the basic project, it should be in an appendix.

2 **Specific differences between progress and final reports**

The two reports are similar in structure. The emphasis on different sections, that comes about as a consequence of the scope of work performed, is the major difference. The following remarks are with regards the progress report.

- **Introduction (§3):** Should also refer to the work that will be performed as a part of the final report.
- **Problem Formulation (§4):** Similar remark.
- **Approach (§5):** May outline the overall approach, but should include the approach related to the work done so far.
- **Application (§6):** Should document approximately half of your intended application.
- **Discussion (§7):** Would be very preliminary (can be just one paragraph) that discusses the conclusive results (if any) that have been drawn from the study so far.
- **Conclusions (§8):** Should specifically outline the future work to be performed in the second phase.