In IE 563, you have been or will be introduced to the concepts and techniques in supply chain inventory management, sequencing and scheduling, material requirements planning (MRP-I), manufacturing resources planning (MRP-II), capacity requirements planning, and just-in-time manufacturing. One of the requirements of this course is that you work on a term project, and turn in a typewritten report. The problem should have the necessary characteristics that make it worthy of investigating and reporting as a term project. As this is an open-ended effort, you can select one of the two approaches described below to identify a problem, analyze, and present the results.

**Approach 1**
If possible, you are encouraged to identify a real problem. Those of you who have had an opportunity in the past to work in a manufacturing or service organization may have some idea as to the existence of such a problem. If so, you should take advantage of this.

**Approach 2**
If identifying a real problem is not possible, you will need to do a literature search to identify a suitable case problem that represents a realistic situation. You should refer to the texts that are specifically devoted to case problems in production planning and control that can be modeled, analyzed, and solved.

You must turn in your answers in report form, with names of teammates listed on the front cover page, using computer printouts as appendices.

Your report must be structured around the following sections:

- **Introduction** – A comprehensive introduction to the problem investigated and the motivation for selecting it.
- **Problem Statement** - A description of the problem in its entirety in your own words.
- **Methodology** – A description of the various methods used to analyze the problem. This should include a complete statement of the model (if one were developed for the problem) and the solution technique(s), and what it means within the context of the problem.
- **Analysis** – A description of the analysis performed by employing the various methods described above.
- **Results** – A description of the results obtained for the problem. **Note:** Depending upon the nature of the problem, the sections on analysis and results can be combined into one section.
- **Conclusions** – Conclusions, while being succinct, must cover the entire scope of the problem.
• **Recommendations** – A description of the recommendations resulting from the investigation of the problem.

You must include a copy of the real problem or case problem if it were obtained from published sources, and if necessary, copies of other selected articles that you have reviewed to identify a suitable solution to the problem. Use sections and subsections within a section as you deem appropriate in the write-up. The report must include a Table of Contents with page numbers of sections, subsections, and appendices listed. References, if used, must be cited in the body of the report and listed in the back under References. Remember that a collection of computer printouts as appendices without much by way of writing in the sections outlined above does not make a compelling report.

Make sure that your report is thorough and complete, addressing all of the issues including relevant discussions.

**Note:**
You must get my approval by turning in a one-page summary of the work you are proposing to do for this term project, including a copy of the real-problem statement or case study problem. This should be done well in advance, prior to writing up the report.