

To: MGMT 6355 Students

Re: Individual Case Assignment Instructions

The purpose of this assignment is to identify and apply OM (Operations Management) concepts/tools to solve operational problems and improve operational performance. To this purpose, you should find an interesting operational problem from the real business world and think about how you can apply the OM concepts/tools that you learned in this course to solve the problem.

More specifically, each individual should:

- Find an operational problem from the real business world (from his/her own work or from any company)
- Identify specific OM concepts/tools that can be applied to the problem
- Apply an appropriate OM concept/tool or a set of appropriate OM concepts/tools to propose a solution to the problem
- Analyze the expected results that may be obtained when the solution is implemented. This section should also include a comparison between best and worst scenarios of the potential outcomes.

The table in the appendix below will serve as the grading rubric for this assignment.

The report should be 8 - 10 pages in length including the cover and appendices, with 1" margins on all sides, double-spacing, and 12 point font. The cover of the report should include title, class code and name, section number, your full name, and date of completion.

The report **must** follow the outline below:

1. Executive summary (no more than one page)
 - Summarize what is the operational problem, what OM concepts/tools have been applied to the problem, and what are the expected results of the proposed solution.
2. Background information
 - Clearly state whether the operational problem is from your own work or from business articles/cases. If it is from business articles/cases, provide its source (title, author, name of the journal, date published).
 - Briefly introduce the company background (e.g., name, products, business size, location, internal/external interesting facts, etc).
3. Problem Description
 - Describe the operational problem clearly and specifically.
 - You should focus on a *single* **OPERATIONAL** problem, although you can introduce several other issues for informational purposes. General management problems are not acceptable.
 - The problem may involve either operational decision-making or process improvement.

- This section must include a problem statement starting with, e.g., “This paper considers the problem of determining ...”, “The main problem of the firm is how to ...”, etc, either in the beginning or at the end of the section.
4. OM concepts/tools that can be applied
 - Describe *what* specific OM concepts/tools can be applied to the problem and *why* they are appropriate to the problem. This section should make it clear that you understand the concepts/tools you are about to use.
 5. Application of OM concepts/tools
 - Choose an OM concept/tool or a set of OM concepts/tools among the ones provided in section 4 and apply it to propose a solution to the problem.
 - In this section you “must show your calculations”, which means that you must use **real or estimated/simulated data** in solving the problem or analyzing the process. It is NOT acceptable to provide only general descriptions of how the concepts/tools can be applied.
 6. Analysis of expected results
 - Analyze the expected results of the proposed solution.
 - You should **compare** between best and worst scenarios after the implementation of the proposed solution and justify the proposed solution clearly.
 - The expected results may include cost/revenue impact and/or improvement of operational performance such as throughput time, throughput rate, and inventory. You must be specific to receive full credit.
 7. Conclusion

The meaning of an operational problem will become clearer as you study this course (see the textbook contents). An operational problem may involve process design and improvement, supply chain management, capacity planning, inventory management, quality management, project management, production planning and control, forecasting, facility location and layout, supplier management, purchasing, distribution, etc.

You are strongly encouraged to find a problem from your own work, so that you may apply to your work the concepts/tools that you learned from this course. If you choose to find a problem from business articles/cases, you can find one from any journals/newspapers such as The Wall Street Journal, Bloomberg Businessweek, Forbes, Harvard Business Review, and so on. Or you can surf the Internet to find an interesting article/case.

The OM concepts/tools that can be applied to your problem may include process flowchart, theory of constraints, decisions trees, inventory models, six-sigma tools, critical path method, MRP, scheduling, lean manufacturing, Kanban production control method, forecasting methods, systematic layout planning, assembly line balancing, factor rating system, centroid method, learning curves, simulation, waiting line models, work measurement techniques, group technology, mass customization, etc.

CHECK LIST OF STUDENT UNDERSTANDING OF THE INSTRUCTION

In order to ensure students understand the requirements of this individual case assignment, please complete the following check list after you have perused the instructions above.

- () I understand section 1
- () I understand section 2
- () I understand section 3
- () I understand section 4
- () I understand section 5
- () I understand section 6
- () I understand section 7

If you fail to understand the expectations of each section, please contact your instructor for explanations.

Best regards,

Jie Yang

Appendix. Expectations for the individual case assignment

	Below Expectations	Meets Expectations	Exceeds Expectations
1. Identification of operational problem	Lack of understanding about what problems are faced by operations managers. Problem description may be vague.	Accurately identifies an operational problem that is faced by operations managers but may omit issues of minor significance.	Accurately identifies an operational problem that is faced by operations managers and describes the problems clearly and specifically.
2. Identification of appropriate OM concepts/tools	Fails to identify appropriate OM concepts/tools that can be applied to the identified problem or selects inappropriate OM concepts/tools.	Identifies appropriate OM concepts/tools that can be applied to the identified problem.	Identifies a novel approach that combines multiple OM concepts/tools that can be applied to the identified problem.
3. Application of OM concepts/tools	Inappropriately applies the selected OM concepts/tools to the identified problem.	Appropriately applies the selected OM concept/tools to the identified problem although the application may lack some depth.	Applies the selected OM concepts/tools expertly in detail and in depth to the identified problem.
4. Analysis of expected results	Superficial or absence of analysis. May analyze results that are not directly related to the solution.	Provides some analysis of results related to the solution. May omit discussion of some results.	Provides in-dept analysis of all significant results related to the solution.