Required Text:Possession of a production/operations management textbook and a computer program, such as QM for Windows, capable of performing all the quantitative calculations required to solve production/operations management cases.

Prerequisites:SCM 352 - Students are expected to bring to the course a current knowledge of the concepts used in MGRS 352 to analyze and build management decision models.

Objectives of the Course

The purpose of this course is to understand and improve how we make quantitative and qualitative decisions in the organizational environment. A basic premise of the course is that a manager needs analytical skills to discover optimal solutions to problems. The concepts, issues, and problems of managers are emphasized by requiring students to identify operational problems, analyze the available alternatives, and recommend solutions. Problem solving and application will be emphasized.

Orientation and Format of the Course

The class will center on case analysis, simulation games, one exam and a semester project. The class will include some lectures, but the emphasis will be placed on class presentation of class cases and projects. Attendance and willingness to become involved in what the class is doing is of primary importance.

Cases

Fourteen cases are listed for analysis. You must successfully complete 10 of these 14 with at least one case from each topic area. Each of the ten cases is worth 30 points. As part of the class participation grade, each student must present and lead the discussion of two of these cases.
Term Project

The purpose of the project is to have you explore, in modest depth, one of the operations functions of your choosing relevant to manufacturing and/or service organizations. During the third week of the semester you should turn in a one-page summary of the topic chosen and the proposed analysis that is to be carried out. On completion of the project you should have explored in-depth the particular operations management activity.

In order to achieve this goal, you are expected to:

1. Carefully detail in depth one of the following OM activities:
   a. Capacity planning
   b. Scheduling techniques
   c. Managing for quality
   d. Decision models for inventory management
   e. Materials requirement planning
   f. Facility location analysis
   g. Layout planning
   h. Forecasting as applied to operations management decisions
   i. Decision-making analysis as applied to operations management decisions
   j. Linear programming applications
   k. Waiting line modeling
   l. Learning curves
   m. Project planning, scheduling, and control
   n. Simulations applications to operations management decisions

2. Present a topical lecture on the subject chosen. The concepts of the topic must be explored from both a qualitative and quantitative perspective.
3. *Identify a problem and propose a solution.* For the activity chosen, identify an operating problem, describe the problem as you best understand it, and suggest one or more tentative solution applications to the problem. Although not a requirement for the presentation, a significant plus would be to explore an applicable operational problem of an organization of your choosing in order to show “real-world” use of the concepts that you have presented.

4. *Prepare a written report.* Be prepared to report your findings to the rest of the class. You will also be required to submit a copy of your report to the instructor. You also may be required to submit a copy of your report to the firm if you have chosen that option, and hence you should use professional standard in preparing your report.

**Guidelines on Topic Preparation**

Plan the topic presentation carefully so as to develop an organized and non-redundant report. It should be organized and assembled as a continuous report and should *not* be several independent segments bound together.

1. *Organizational analysis.* Your analysis should show how the micro environment affects the tactical and operational decisions made by the organization. To complete this section to the report, you will need to do some research via the Web, library, and textbook sources. In particular, be specific when formulating this section. *Do not make open-ended statements.*

2. *Problem identification and solution.* When identifying a problem, be specific and also make sure that the problem relates to the activities you are to study. As before, be thorough about solutions that are proposed; that is, make sure that you consider all aspects of the problem.

3. *Summary.* You should summarize your project, including what you did, how you did it, the major problems, and the solutions proposed.

4. *Exhibits, tables, and figures.* All calculations, figures, and other information should be summarized in this section. Additionally, any appendix, exhibit, table, and/or figure attached to the report must be typed and referred to in the report.

The project can be an individual effort, or it can involve two people. Thus, collaboration is possible; indeed, encouraged. The choice of size is up to you.

The class project presentations will be scheduled during the final five weeks of the semester. We will limit the number of presentations to two each period. You may sign up for a presentation date at any time. The project will comprise 20% of your final grade.

**Simulation Exercises**

Simulations play an important role in the course, providing you an opportunity to apply concepts learned in production/operations management and to experiment with new
approaches to competitive situations. Two in-class simulations, Metro Hospital and Lamson Corporation will be carried out on two separate occasions throughout the semester.

**Class Participation**

Students are expected to participate in all aspects of the class and to be actively involved in class discussions. Class participation is a very important part of the learning process in this course and is also part of what will make the course interesting for you and your fellow students. You will be evaluated on the quality of your contributions and insights. Quality comments possess one or more of the following properties:

- offer a different and unique, but relevant perspective
- contribute to moving the discussion and analysis forward
- build on other comments
- transcend the “I feel” syndrome. (They include some evidence, argumentation, or recognition of inherent tradeoffs and demonstrate some reflective thinking.)

While your participation grade is subjective, it will not be random or arbitrary. And clearly, more frequent quality comments are better than less frequent quality comments.

As a beginning point for class participation you should explore the Web, the Wall Street Journal, and other periodicals concerning the latest innovations in operations management. You should be prepared to present your findings beginning the second week of class. You should provide me with a printout of significant material you might derive from your efforts on the Web.

**Class Demeanor**

Students will not be allowed to bring pagers or cellular telephones into the classroom. If a student cannot remain for the entire class period, he/she should not attend the class for that particular period. Students arriving late or leaving the class early will be counted absent for the entire period.

**Grading**

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
<th>Grade</th>
<th>Percentage of Total Possible Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases</td>
<td>300</td>
<td>A</td>
<td>93-100%</td>
</tr>
<tr>
<td>Exam</td>
<td>100</td>
<td>A-</td>
<td>90-92%</td>
</tr>
<tr>
<td>Term Project</td>
<td>100</td>
<td>B+</td>
<td>87-89%</td>
</tr>
<tr>
<td>Simulation Exercises</td>
<td>20</td>
<td>B</td>
<td>83-86%</td>
</tr>
<tr>
<td>Class Participation</td>
<td>50</td>
<td>B-</td>
<td>80-82%</td>
</tr>
<tr>
<td>Total Points</td>
<td>570</td>
<td>C</td>
<td>73-76%</td>
</tr>
</tbody>
</table>

C- = 70-72% of total possible points  
D+ = 67-69% of total possible points  
D = 63-66% of total possible points  
D- = 60-62% of total possible points