Management B325-001
Production and Operations Management
Spring 2006 II

Date, Time and Location of Class: Mon.Tues. Wedn. & Thur. 10:00-11:50 am; Miller 112

Instructor: Dr. Jing Li
Office: Miller 328
Phone: 864-7932
Email: jingli@loyno.edu
Office Hours: Mon.,Tues. Wedn. & Thur. 1:50-2:50 pm
Also by appointment

Course Description

This course deals with decision-making involved in selecting, designing, operating and controlling activities of the production system for competitive advantages. Topics cover: production system, operations strategies, quality management, product and service design, process selection, capacity planning, facility layout, location selection, supply-chain management, inventory management, and material requirement planning & ERP.

** Class materials such as course materials, assignments, announcements, etc. are posted online with Loyola’s Blackboard system: http://loyno.blackboard.com

Expected Outcomes

Students completing this course should:

* be able to analyze the components of a real world production system
* understand the philosophy of Total Quality Management and be familiar with the tools used for quality management
* know the basic concepts of quality control and be able to use simple statistical process control techniques to determine the stability of a process
* be familiar with the principles of product and service design
* know how to select an appropriate production process, and understand the role of technology in operations management
* be able to develop and select an appropriate capacity plan
* be able to identify key criteria in location selection
* understand the key objectives of facility layout
* understand the role of supply-chain management and the impact of e-commerce on operations management
* be able to apply some of the inventory control models to manage inventory
* be familiar with the procedure of developing MRP for the components and parts of the finished goods
* understand the relationship between MRP and ERP
* have the consciousness of the strong impact of information technology on operations management, and be able to apply different techniques and tools to improve the learning process of this course

Courses Prerequisites

* ECON -B200 and DECS -B203.
* Junior standing, please note that only those students who have completed at least 55 credit hours may enroll in 300 or 400 level business courses.
* A basic knowledge of Microsoft Excel.
Required Textbook


Course Policy

1. Homework and Quizzes

Homework is assigned to enhance the understanding of the materials covered in class, and is crucial for preparing for the quizzes and examinations. Assignments will be selectively collected at the beginning of the class on the due date. Deduction on late assignments will be 50% of the total points for three days, and 100% after that.

Quizzes are based on materials covered in assignments and classroom discussions. No late make-up quizzes will be given unless you have a good excuse (e.g. medical excuses or emergency events), and turn in the related document within one week.

2. Exams

There are three non-comprehensive mid-term examinations and a final in this semester. Only the best three exam grades will be kept. All the exams will include materials from textbook reading assignments and classroom discussions.

No late make-up examination will be given unless you have a medical excuse or an emergency event, and turn in the related document on time.

3. Instructional Methods

The delivery approaches used in this course include lecture-discussion, teamwork, and group presentation.

4. Grading Policy

The weights of the exams and homework assignments in the semester grade are counted as follows:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Mid-Term Examination</td>
<td>100</td>
</tr>
<tr>
<td>Second Mid-Term Examination</td>
<td>100</td>
</tr>
<tr>
<td>Third Mid-Term Examination</td>
<td>100</td>
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<tr>
<td>Final Examination</td>
<td>100</td>
</tr>
<tr>
<td>Homework and Group Presentation</td>
<td>35</td>
</tr>
<tr>
<td>Quizzes</td>
<td>60</td>
</tr>
<tr>
<td>Participation</td>
<td>5</td>
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</tbody>
</table>

The course grade will be awarded according to the scale below:

- 360 – 400 points A
- 345 – 359 points B+
- 320 – 344 points B
- 305 – 319 points C+
- 280 – 304 points C
- 265 – 279 points D+
- 240 – 264 points D
- below 240 points F
5. **Attendance Policy:**

It is my long-term teaching experience that class discussions and practices are key factors to the learning process of this course. Because of the importance of classroom experience to the course, class attendance is required and attendance will be recorded. Unexcused absences will be reflected in your final grade and **three or more unexcused absences** will lead to the deduction of 30 points or more on the course score.

Coming into class late or leaving early is disruptive. Please come into the class on time. If you need to leave during the class period, please tell your instructor in advance. In order to provide a good learning environment, cell-phones are not allowed being used during the class period.

6. **Participation policy**

Preparation before coming to class and enthusiastic participation during each class are essential for every student. It is only through prior preparation that you will be able to participate meaningfully in the in-class discussion of each topic. You will be graded on the **quality** of your participation.

7. **Disability Services and Accommodations**

A student with a disability that qualifies for accommodations should contact Sarah Mead Smith, Director of Disability Services at 865-2990 (Academic Resource Center, Room 405, Monroe Hall). A student wishing to receive test accommodations (e.g., extended test time) should provide the instructor with an official Accommodation Form from Disability Services in advance of the scheduled test date.

8. **Academic Integrity Statement:**

I reserve the right to retest (or assign additional homework assignments to) the whole class or any individual in the class if I believe an exam, quiz or homework assignment has been compromised. Violations of the University’s academic code include, but are not limited to: possession of, or use of unauthorized materials during exams or quizzes; or providing information to any student. Violations may result in academic penalties, including receiving an “F” in this course. (See page 50-52 of the 2005-2006 Loyola University Undergraduate Bulletin.)

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**TENTATIVE COURSE OUTLINE**

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>June</td>
<td>Introduction to OM</td>
<td>Ch.1 &amp; Ch.2</td>
</tr>
<tr>
<td></td>
<td>Introduction to OM (continue)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HW: Productivity Analysis (Prob. 1.8 &amp; 1.9 on p.22)</td>
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<tr>
<td></td>
<td>Managing Quality</td>
<td>Ch.6</td>
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<tr>
<td></td>
<td>Managing Quality (continue)</td>
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<tr>
<td></td>
<td>HW: Pareto Analysis (Prob. 6.12 on p.214)</td>
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<td></td>
<td>Quality Cost Analysis (Notes of Ch.6)</td>
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<tr>
<td></td>
<td>Design of Goods and Services</td>
<td>Ch.5</td>
</tr>
<tr>
<td></td>
<td>Design of Goods and Services (continue)</td>
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<tr>
<td></td>
<td>In-class exercises: B-E Analysis</td>
<td></td>
</tr>
</tbody>
</table>

3
19 Quiz I
Maintenance and Reliability Ch.17
HW: Reliability
(Prob 17.11 on p.667
Prob.17.12 & 17.14 on p. 668
Prob. 17.18 on p. 669 )

20 1st Mid-Term Examination (Tuesday)
Group meeting I

21 Capacity planning Supplement 7
Chapter 13 (p.528-521)
Chapter 15 (p.590-592)

22 Capacity planning (continue)
HW: Capacity Planning (Notes of supplement 7)
Apply Linear programming to solve Quan. Module B
Decicion-making Problems in OM

26 Apply Linear programming to solve Decicion-making Problems in OM (continue)
HW: Linearar Programming Application
(Prob. C.6 on p. 714 & Prob.C.23 on p.717)
Process Strategy Ch.7

27 Quiz II
Process Strategy (continue)

28 2nd Mid-Term Examination (Wednesday)
Presentation article due

29 Statistical Process Control Supplyment 6
HW: Statistical process control (Notes of Supplyment 6)

July 3, 4 Independence Day holidays

5 Layout Strategy Ch.9
HW: Line-balancing (Prob.9.9 on p.373)

6 Layout Strategy (continue)

10 Inventory Management (continue)
HW: Inventory Control
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
</table>
| 11   | Quiz III  
Group meeting II |
| 12   | 3rd Mid-Term Examination (Wednesday)  
Presentation material due |
| 13   | Material Requirements Planning & ERP  
HW: MRP Development (Notes of Ch.14)  
Ch.14 |
| 17   | Location Strategies  
HW: Factor Rating (Prob.8.6 & Prob.8.7 on p.330)  
Ch.8 |
| 18   | Quiz IV  
Group meeting III |
| 19   | SCM, E-Commerce & Operations Management  
(Group presentation)  
Ch.11, Ch. 14, Ch. 16  
Supplement 11 |
| 20   | Final Examination (Thursday) |