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MANG 3402

Lillian Yee-Man Fok
University of New Orleans

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Professor: Lillian Yee-Man Fok
Office: Kirschman Hall 359
Office Hours: MWF 8:00 to 10:00 a.m.
Telephone: 280-6482 (Dept.)   280-7142 (Office)
E-mail: yfok@uno.edu
Text: (1) J. Heizer and B. Render, <u>Operations Management</u>, 10th Ed., Prentice Hall, 2011.
Prerequisites: MANG 3401, and QMBE 2785 or Math 2314

Course Objectives

This course involves the study of complex organizations -- service and manufacturing, from the viewpoint of the productive function. The focus is on planning, design, analysis, and control of the productive function with the emphasis of applying computer technology, quality, and quantitative methods in the decision making process.

Learn Objectives
1. Create competitive advantage through effective management of operations and supply functions in producing goods and services.
2. Design a productive process in an increasingly global and technological environment.
3. Solve operations problems with scientific tools and technologies.
4. Integrate operations with other functions to create long-term growth and profit.
5. Make operations decisions that can meet ethical, social, environmental, global, and technological challenges.

Students completing this course should be able to:
*   define a production system and be familiar with the environment of this system
*   be familiar with decision areas in operations management
*   be familiar with Total Quality Management philosophy
*   be familiar with the quality control tools and be able to apply them to real world problems
*   understand the process of product development
*   be able to use basic techniques to monitor and control forecasts
*   be able to develop and select the appropriate long term capacity plan
*   be familiar with key factors in process selection, analysis and reengineering
*   understand the key objectives of facility layout
*   identify the objective of location strategy, and use different tools for decision-making in location planning
*   understand the role of supply-chain management
*   understand the role of inventory management
*   understand the difference between dependent inventory model and independent inventory model
*   identify the importance of project management
*   be able to use PERT and CPM method to manage the time and the cost aspects of a project

Grading

Exams 1, 2, and 3 (30% quizzes + 45% problems)	75%
Assignments via MyOMLab site	20%
In-class Participation	5%
Total:	100%

The final course grade will be based on the scale below.

90% - 100%	A
80% - 89%	B
70% - 79%	C
60% - 69%	D
below 60%	F

Quizzes and Exams

1. Quizzes are all multiple-choice questions via the MyOMLab site. These are mostly conceptual questions and some computations, and are grouped by chapter. You have limited number of attempts (2 attempts) for each quiz and the time limit is approximately one minute/question. Only the attempt with the highest score will be kept for grade computation. **Make sure you have reliable Internet access before you start a quiz.**
2. Exam 1, 2, and 3 contain computational problems only. You can bring a 4" by 6" info sheet and a calculator to the exam. **You are required to show your work (key intermediate steps) for the problems. No credit will be given if you do not show your work.** Exam 1, 2, and 3 are not comprehensive. Please check the class schedule for the material that you are responsible for.
3. If you have any problem with the examination schedule, please let me know ASAP.

How to study for the exams

For computational problems or MC questions, read the How-To handout and the examples in the text. Then, practice the assignments until you fully understand the logic behind each type of computation. For concepts, read and understand the PowerPoint (PP) slides thoroughly. Read the corresponding sections in the text. **Please remember that not every section in the text is covered in PP slides.** The PP slides tell you what to focus on when reading the text.

How to study for the quizzes

For the concepts in each chapter, read and understand the PowerPoint (PP) slides thoroughly. Then, read the corresponding sections in the text. The PP slides tell you what to focus on when reading the text. Take the online quiz for that chapter. If there are questions that you don't know, study that chapter again. When you are ready, take the quiz again.

Online Assignments via MyOMLab

MyOMLab is a website provided by Prentice Hall for you to do assignments and quizzes online. For a complete list of online assignments/quizzes, check the MyOMLab site. Assignments and quizzes will be added periodically. **For each assignment, you are allowed to have multiple attempts and only the one with the highest score will be kept.** You have to complete the assignment on or before the due date listed on the site.

Line Balancing is a hand-written assignment. Check the Important Date section for due date.

Topics	Problem # (10th ed.)	Problem # (9th ed.)	Problem # (8th ed.)
Line Balancing	p. 374: 12, 14, 16, 17	p. 380: 12, 14, 16, 17	p. 372: 7, 8, 10, 11

How to register for MyOMLab?

If your text does not come with an access code, you can purchase it online.

1. To register for the MyOMLab course, go to:
http://www.myomlab.com
2. Follow the instructions on the screen. UNO zip code is 70148.
3. Course ID: **fok63184** (Copy and paste this course ID when registering.)

   Course Name: **MANG 3402 - Fall 2015 - Dr. Lillian Fok** (** If you register successfully, the course name displayed on the top of your screen should be same as the Course Name listed here.)

Class Policy

1. Participation in class is mandatory. You must sign the class roll when you come to class. You can have up to two absences. ***Every unexcused absence exceeding two will result in one point deduction in participation up to five points.***

2. You are required to download notes, "how-to" handouts, and class documents from Moodle. You need to check the Announcements in Moodle and your UNO email frequently (at least once per day).

3. <u>No</u> late assignments will be accepted. Assignment due dates are posted on MyOMLab site.

4. All assignments are individual assignments. Thus, both the person who copies and the person who lets other copy his work will not get any credit for the assignment.

5. I reserve the right to retest (or assign additional work to) the whole class or any individual in the class if I believe an exam or homework has been compromised. Violations of the University's academic integrity code include, but are not limited to: possession of, or use of unauthorized materials during exams; or providing information to any student. Violations may result in academic penalties. You can refer to the UNO Judicial Code for Academic Integrity for further information
(http://www.uno.edu/%7Estlf/Policy%20Manual/student_policy_manual_frames.htm).

6. Special accommodation will be given to students with certain learning disabilities. Student must register with UNO Disability Services (http://www.ods.uno.edu/ods_pdfs/ld_packet.pdf)

7. If you do not understand any of the material, seek help immediately. Email your questions or concerns to me at yfok@uno.edu. Be as specific as possible, e.g. give me the page number in the text, problem number, or the figures used in a problem. If I cannot address your question adequately via email, we can setup a conference call. Please do not wait until the day before an assignment is due or an exam.

ABC for Success

1. *A*lways keep up with the class material and do your homework/assignments.
2. *B*e a good time manager for studying and taking exams.
3. *C*ommunicate with your instructor.

Important Dates

8/19	**First Day of Class**
9/23	*** * EXAM 1 * ***
10/14	**Last day to drop**
10/26	*** * EXAM 2 * ***
	Homework due (Handwritten copy of Line Balancing HW)
12/4	*** * EXAM 3 * ***

* Check due date for online homework via the MyOMLab site

TENTATIVE CLASS SCHEDULE

Date	Topic
8/19-8/26	Syllabus Decision Tree
8/28-9/4	Linear Programming
9/9-9/18	Concepts: Introduction and Operations Strategies, Supply Chain Management, and E-Commerce
9/21	Forecasting
9/23	Exam 1
9/25-10/2	Line Balancing
10/5-10/21	Concepts: Forecasting, Product Design, Process Strategy, and Layout (Line Balancing)
10/23	Project Management
10/26	Exam 2 Homework due (Line Balancing)
10/28-11/11	Inventory Management
11/13 -12/2	Concepts: Project Management, Inventory Management, Location
12/4	Exam 3

1. Introduction **(Chapters 1, and Modules A, B)**
   Operations Management and how OM is related to MIS
   Productive System (inputs, outputs, conversion, environment)
   Service vs Manufacturing (outputs, conversion/delivery process, inputs)
   Productivity: Issues and Problems
   Total Quality Management
   Computer technology and information systems
   Quantitative Techniques: Decision Analysis (Module A), Linear programming (Module B), Statistical
   Process Control

2. Operations Strategies, Supply Chain Management, and E-Commerce **(Chapter 2, 11, s11)**
   Business vs functional area's planning

* * Exam 1: Concepts (Ch. 1, 2, 11, s11, Modules A and B) and Computations (Modules A and B)

3. Demand forecasting **(Chapter 4)**
   Demand forecast as the basis for operations planning
   Forecasting in manufacturing
   Forecasting in service
   Quantitative vs qualitative forecasting techniques
          factors that affect the choice of techniques

Quantitative Techniques: different forecasting techniques (time series models and causal models)

4.   Product/service design, selection of productive process, and facility layout **(Chapters 5, 7, 9)**
         Design of a product: physical and functionality design
         Design of a service: the service bundle
         Design process
         Product and service design/Marketing/Production
         Production process/technology in manufacturing
         Service delivery process
         CAD-CAM, CIM
         Product vs process layout
         Quantitative Techniques: Line balancing

* * Exam 2: Concepts (Ch. 4, 5, 7, 9) and Computations (4, 9)

5.   Project Management **(Chapter 3)**
         Quantitative Techniques: PERT, CPM, time-cost tradeoff

6.   Inventory and Material Management **(Chapter 12)**
         Types of inventory
         Inventory models for manufacturing (dependent demand)
                   MRP-II
         Inventory models for service (independent demand)
                   EOQ (economic order quantity) model
                   Periodic review model
         Quantitative Techniques: EOQ, Fixed Order Quantity System, Periodic Review System, service level

7.   Facility location **(Chapter 8)**
         Importance of location
         Factors that affect the location decision in Manufacturing
         Factors that affect the location decision in Service

* * Exam 3: Concepts (Ch. 3, 8, 12) and Computations (3, 12)