

University of Florida
Warrington College of Business Administration
Department of Information Systems & Operations Management
Spring 2016 – Module 4

Module 2 (Fall 2016)
MAN 6511 – Production Management Problems

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Office Location: 355D Stuzin Hall
Class Times: Tuesday and Thursday Periods 7-8 (1:55 – 2:45 pm; 3 – 3:50 pm)
Class Location: Hough 340
Office Hours: Tuesday and Thursday 10:30 – 11:30 am.

Course Description

MAN 6511 is a course designed to focus on the Operations function in a Supply Chain (MAN 6573 focuses on Purchasing while MAN 6528 focuses on Distribution). This function is concerned with managing the process by which inputs (such as technology and material) are transformed into desired goods and services using facilitating goods (such as personnel, equipment, and information). The importance of Operations as an integral component to the overall success enjoyed by a wide variety of firms has been well documented. Thus, the effective management of operations plays a critical role in the current competitive business environment.

The major thrust of this course is on understanding operations from a tactical standpoint. To achieve this goal, the course focuses on two modules: Process Management; and Supply Chain Management. The topics to be covered under Process Management are: Macro Perspective on Processes; Managing Process Capacity, and Planning Process Capacity; and the topics to be covered under Supply Chain Management are: Supply Chain Coordination, Revenue Management, and Service Levels and Lead Times in Supply Chains.

It is a well-recognized fact that managing operations effectively led to early successes of our major industries (such as steel, automobiles, and electronics). Given our leadership in the quality and efficiency of our operations processes, a sense of complacency pervaded the top management of several corporations. Thus, the operations function was relegated to the "back room" and considered to be *reactive rather than proactive*. The repercussions of this low prioritization of operations were felt in the early 1970's and through most of the 1980's when U.S. products and services were perceived to be inferior to those of the offshore competitors in Europe and the Far East. In fact, these competitors gained a significant market share in the US (one of the largest and richest markets in the world) and this still exists to date. Reactions to such a situation were at first, disorganized and fragmented. For example, certain companies simply copied the practices of the offshore competitors (e.g., JIT) without evaluating their applicability while others focused on convincing the customers that their products were still the "best" ("Quality is Job 1"). Over time, these efforts have been coordinated and implemented with more success. In fact, in today's business climate, one of the key goals of all organizations is to continually improve the productivity, quality, and efficiency of their operations processes.

This course will examine key managerial decisions in two complementary areas: Process Management and Supply Chain Management. In Process Management (PM), we will focus on: (a) describing relationships between in-process inventory, cycle time, and throughput; and (b) managing and planning process capacity.

In Supply Chain Management (SCM), we will examine: (a) information sharing in a supply chain; (b) the benefits of coordinated decision making in supply chains; (c) the use of consumer segmentation to effectively increase capacity utilization (and hence, ROI) in key industries; and (d) how service levels and lead times in a supply chain can be maintained using an order-up-to Inventory model.

Course Objectives

This course provides an introduction to Operations and Supply Chain Management. More specifically, the objectives of this course are: (a) To introduce students to the basic concepts in OM; (b) To familiarize students with the terminology in the area; and (c) To expose students to some of the more common decision making tools used by contemporary operations and supply chain managers. You will also be required to analyze one short case; participate in one online simulation exercise; and take 2 exams. Finally, I hope that during the course of the semester all of you will use EXCEL, an extremely valuable tool in the context of our course material.

Instructional Materials

The following instructional materials will be used during the course.

- *Course Packet* which contains copies of the power point slides for each topic covered in the course, case, and practice problems (with solutions) for both exams. These are available at Target Copy (1412 W. University Avenue, (352) 376-3826).
- *Online Simulation*: Instructions for registering for the simulation will be distributed in class.

Grading Policy

The course grades will be determined ON A CURVE by assigning the following weights to the case analysis (team), individual assignments, and two simulation exercises (team and individual).

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| • Case 1 (Team) | 10% |
| • Exam 1 (Individual) | 30% |
| • Simulation Exercise 1 Performance (Team) | 5% |
| • Simulation Exercise 1 Report (Team) | 5% |
| • Peer Evaluation (Individual) | 5% |
| • Exam 2 (Individual) | 45% |

University Policies

Accommodating Students with Disabilities: Students requesting accommodation for disabilities must first register with the Dean of Students Office (<http://www.dso.ufl.edu/drc/>). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

Academic Misconduct: Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the UF Student Honor Code at <http://www.dso.ufl.edu/students.php>.

Honor Code: It is critical that each student familiarize himself/herself with the university honor code which can be reviewed at: <http://www.registrar.ufl.edu/catalog/policies/students.html>. There is ZERO tolerance for violations of this honor code.

Course Schedule (subject to change)

Tuesday October 25 – Thursday October 27

Course outline/content; Introduction to the course.
An Introduction to Process Management
Macro/Micro Perspective on Processes

Tuesday November 1 – Thursday November 3

Macro/Micro Perspective on Processes (contd.)
Capacity Management
Capacity Planning

Tuesday, November 8

Case 1 Report Due (10 am) – Team Effort

Tuesday November 8

Capacity Planning (contd.)
Exam 1 Review

Thursday November 10

Exam 1 (1:55 – 3:55 pm) – Individual Effort

Tuesday November 15 – Thursday November 17

An Introduction to Supply Chain Management
Online Simulation Exercise (in class)
Newsvendor Problem

Tuesday November 22 – NO Class

Tuesday November 29 – Thursday December 1

Supply Chain Coordination
Revenue Management

Thursday, December 1

Completion deadline for Online Simulation Exercise (10 noon) – Team Effort

Tuesday, December 6

Deadline for submission of Report on Online Simulation Exercise (10 am) – Team Effort

Thursday, December 8

Deadline for submission of Peer Evaluation (10 am) – Individual Effort

Tuesday December 6 – Thursday December 8

Service Levels and Lead Times in Supply Chains
Exam 2 Review

Tuesday December 13

Exam 2 (1:55 – 3:55 pm) – Individual Effort

Process Management Case (NoBull Burger)
Team Assignment (10% of course grade)
Case Report Due: Tuesday November 8 2016 (all submissions ONLINE through Canvas)

This case is attached (in your course packet). Each team is required to turn in a case report (see instructions for writing the case report below) which addresses the following questions:

1. Prepare a process-flow diagram for the current cooking process as described in the case.
2. Determine NoBull's existing weekly capacity assuming a batch size of 80 and only 1 cook is available. For this setting, please specify:
 - a. The capacity utilization of the grill assuming the process is operating at full capacity.
 - b. The capacity utilization of the cook when the process is operating at full capacity.
3. Determine NoBull's existing weekly capacity assuming a batch size of 80 and 2 cooks are available and there are no assigned tasks to each cook.
4. Determine NoBull's existing weekly capacity assuming a batch size of 80 and 2 cooks are available and the following tasks are assigned to each cook:
 1. Cook 1: lentils (step 1); and additional ingredients (step 2).
 2. Cook 2: grill (step 3); and pack/label (step 4)
5. What options are available for NoBull to increase capacity? How would you choose among them? What are your capacity recommendations for NoBull?

Instructions for Case Analysis Write-Up for Case 1

1. General

Write the paper as if you were an external consultant writing a report to an extremely busy president of the company under study. If the president likes your report, you will not only receive the last portion of your fee, but you will also be retained (at a considerable additional fee) to help with the implementations of the recommendations of your report!

The report should be hard-hitting and persuasive. Read your report. Is it sufficiently persuasive to convince a tight-wad president to spend the money to implement your recommendations and to retain you for implementation purposes?

Be concise! Do not bore the president with descriptive material that does not lead to some point in your analysis. However, descriptive material is fine as long as it has some implications for your analysis and recommendations. A long-winded introduction describing the company's industry and environment would bore the president to tears. It is not necessary to describe every element of the business unless this is essential in your analysis and recommendations.

Be quick to the punch! Like most big-wigs, the president has a very limited attention span. After about the second page of the report, he/she starts to lose interest. Just give the president what he/she needs to know. For example, what are the problems, the causes of the problems and what must be done to solve them?

2. *Specifics*

- **Descriptive Material:** Descriptive material is a repeat of the facts of the case. Who? What? When? As a general rule, this should account for less than 15 % of the total content of the report unless it contributes substantially to your analysis.
- **Analysis:** This accounts for a major portion of the report. Specifically it answers How? and Why? questions. Determining what specific issues should be addressed in the analysis is the most challenging aspect of case analysis. Carrying out the analysis is typically less challenging. Discussion questions for the case are merely general guidelines for the important issues in the case. Merely answering the questions will not lead to a satisfactory analysis.
- **Recommendations:** This section follows naturally from the case analysis. If it does not, something is wrong with the analysis!! In this section, give the president something he/she can use. Suggestions which are infeasible will naturally get you thrown out of the office by Du..H the company bouncer!! Be decisive. There should be *absolutely no* "should possibly consider" in this section of the report.

Finally, attach as many Exhibits as you feel are necessary to support your computations and recommendations. Make sure to reference every Exhibit attached in the main body of the report.