

**University of Zurich  
Services and Operations Management**

**COURSE SYLLABUS**

**Lecture in Operations Management – Master Level  
Aug./Sept. 2009**

Day, time, Classroom	Aug. 31 – Sept. 4, 2009
Instructor:	Prof. Dr. Raj Selladurai
Office:	PLM 208
Telephone:	044-634 53 11 (office Prof. Dietl)
Email:	<a href="mailto:rsellad@iun.edu">rsellad@iun.edu</a>
Website	<a href="http://www.iun.edu/~bnwrss/">http://www.iun.edu/~bnwrss/</a>
Conference Hours:	By appointment

**REQUIREMENTS:**

- **TEXTBOOK:** Stevenson, W., Operations Management, 10th ed., Boston, MA: Irwin McGraw Hill, 2009 (to organize prior to the seminar/one exemplar for copy available at the office of Prof. Dietl).
- **NOTEBOOK:** Each student has to bring his/her own notebook to class
- **FEE for SIMULATION:** The students have to pay a fee of \$55. To be paid on the first day of the seminar, Monday 31.08.2009.

**COURSE DESCRIPTION:**

Application of statistical and quantitative techniques to production management concepts in a business enterprise. Major functions, departmental activities, and policies for manufacturing firms and service organizations. Quantitative-based foundational course in production and operations management. Computer applications are included.

- **Course Format:** Methods of instruction will include lectures, in-class assignments, class discussions, online assignments, computer simulations and decision analyses, case analyses, video review and discussions, etc.
- **The instructor's website** <http://www.iun.edu/~bnwrss/> (user name and password will be given at the beginning of the class to all the students enrolled in the class) will be specifically used periodically throughout the semester for classroom instruction, quantitative models, problems and solutions, homework assignments,

**etc. It is strongly recommended that students regularly access, review, and study the course and some outside but related materials posted on the web.**

**COURSE OVERVIEW:** The subject matter, production and operations management, is a vital focus area related to our country's efforts to make improvements in quality and productivity. Our global competitiveness and survival in the current world economy depend a lot on our ability to make these improvements. Students in all functional areas of business must acquire a body of knowledge to apply the concepts that promote quality and productivity in their future jobs and careers.

**COURSE OBJECTIVES:**

- to provide students of business administration with a sound understanding of the concepts, techniques, and applications of production and operations management (P/OM)

- to help students acquire a thorough knowledge of the standard quantitative tools and techniques, including computer applications, used by production managers.

- to develop in students an interest and appreciation for managerial issues of P/OM with technical tools and quantitative applications -- practical applications in actual manufacturing/service organizations will be emphasized.

**COURSE PROCEDURES/GRADING POLICIES AND PROCEDURES:**

Students are expected to attend classes (in-class and for online assignments) regularly and participate, especially as this class **involves a lot of quantitative material and production management related problems**. Students are expected to have read the prescribed material before attending the lecture on the subject. Homework will be assigned following the lecture. **Students should make sincere effort to work out the assigned homework before coming to class/or next meeting online.**

- Every student is expected to bring your laptop computer to every class session as you will be using it in class for various assignments. You may wish to also bring two (2) blank diskettes/ or a flash drive, etc, and a calculator to class. Students will be given in-class assignments periodically to work on using the computer and will be expected to save their work on their disks to be used throughout the course.

Due to the Seminar nature of this class, NO EXAMS will be administered. Learning and student performance will be evaluated in other forms such as group assignments, presentations, simulation performance, etc.

**••Methods of instruction/learning will include lectures, in-class and online assignments, class discussions, computer simulations and decision analyses, case analyses, video review and discussions.**

Final Course Grade based on the following:

Homework Assignments	30%
Group Assignments (Case analyses)	30%
Online Simulation	30%
Class attendance and participation	10%

### Group Assignments/Projects

Each student would be assigned (usually self-selection) to a group; the groups would prepare and present in class and/or online on specific dates (as determined by the instructor) selected cases and exercises. These cases and exercises would illustrate the major ideas discussed in the chapter and the course. These assignments would require the students to apply what they have read/learnt from the chapters and classes to practical and realistic situations.

Students would also present a group project on an **Operations Management (OM) Simulation** that focuses on specific operation management related problems/decisions and solutions/improvements in the selected organization. Quantitative models discussed in class would be applied to real world organizations from an improvement/solution and case study format. More details on this would be provided later in class.

Late submissions will not be accepted. Each group member will be graded on the entire group assignments/project.

Overall grade for the group assignments and projects would be based on group members' evaluations of one another's performance and the instructor's evaluation of the whole group. Peer evaluation forms will be provided to obtain team members' evaluation. Handle group problems, if any, internally.

### Case Analysis Discussions

Specific cases may be assigned for students to read and prepare before class or during class. These cases would be discussed in class on specific days. Students are expected to come prepared to actively discuss the cases and to participate in the class discussions. Some cases may be discussed through individual participation and some may be group-based.

Administrative: Students are expected to attend classes regularly and be responsible to take down notes, lecture materials, and class handouts. To be fair to all students, no projects for any extra credit will be entertained.

## **COURSE OUTLINE AND CALENDAR:**

Schedule of Discussion  
(May be modified as necessary by Instructor)

Date	Reading Assignment	Topic/s
Days		
Mon	Ch. 1	Introduction to POM Basic Mathematical Models and Critical Issues
	Ch. 2, 5S	Competitiveness, Strategy, and Productivity Decision Theory
	Ch. 3	Forecasting and Time Series Analysis Judgmental and Statistical -- long term forecasting Short term and Intermediate forecasting
		<b>Students will be provided access to Online Simulation prior to day 1 to help them become familiar with the Simulation – students need to review the Simulation guidelines document on p. 7 prior to Day 1/class 1</b>
		<b>OM Simulation material discussion Week 1 (day 1) and submissions start day 1 (by 11:59 pm) and continue through day 5 (5 input decisions, 1 each per day by 11:59 pm)</b>
Tue	Ch. 4S, 5, 6	Reliability Capacity Planning -- Decision Analysis Techniques, Facility, Equipment, and Labor Planning, Learning Curve and Managerial Issues
	Ch.7S, 8	Learning Curves, Facility Location and Distribution System Design – Scoring Models, Center-of-Gravity Method, Service Facility Location
		<b>Group Oral Presentations in Class*</b>
Wed	Ch. 8S	Transportation Model
	Ch. 9	Quality

	Ch. 11	Supply Chain Mgmt, TQM
	Ch. 6S	Linear Programming -- Constraints, Graphical Solution, Exact Values, Managerial Applications
Thur	Ch. 18, 12	Waiting line models -- Arrival distribution, service time distribution, queue discipline, Single and multiple channel models Inventory models --EOQ, Economic Production Lot-size models, Measuring inventory performance
	Ch. 15, 15S	JIT Production --Components, Layout, Benefits, Implementation; Maintenance  Competitive Advantage -- planning and implementing world-class manufacturing for the future
Fri		Online Simulation “Report to the Board,” Presentations and Discussions
	To be assigned/announced	Online Assignments; OM Simulation start Day 1 and continue through Day 5
	(by 11: 59 pm each date)	Submit Decisions for OM Simulation

**\*Oral presentations start day 2 (depending on class size and no. of groups to present) and continue throughout the week as necessary.**