Instructor : Professor Thomas Lee Fall 2008
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IDS532 : INTRODUCTION TO OPERATIONS MANAGEMENT

Required Textbooks :

1. **Production And Operations Analysis** by S. Nahmias, 6^{th} edition, Irwin, 2004.

2. **IDS532 Lab Manual**.

Operations management is a field of study that focuses on the efficient transformation of resource inputs, such as labor and materials, into useful outputs, such as products or services. As a result of increased global competitiveness, the practice of operations management, especially in the manufacturing sector of the US economy, is evolving from a traditional approach of meeting production goals within budget, into more strategic function in which design and control of operations are an integral part of the strategic mission of the organization. The purpose of this course is to introduce problems and analysis related to the design, planning, control, and improvement of manufacturing and service operations. In particular, this course looks at operation management from an integrated viewpoint. The course materials integrates marketing, strategy, technology and organizational issues.

The course contains a mixture of case discussions and lectures by the instructor. The lectures will present mathematical models helpful in the analysis of various aspects of inventory management. The cases are chosen to illustrate the application of these models, as well as to demonstrate their limitations. The challenge to the students is to appreciate these limitations but still use the insight generated from theses models to analyze a wide range of issues in operations management. Study questions on each assigned case should serve as a starting point and the students are encourage to introduce additional issues. Attendance is mandatory. If you must miss a class, please let me know. Active participation is expected throughout the entire class and students should make thoughtful contributions to the discussion. Please note that the frequency (i.e., the quantity) of contributions in class is not a key criterion for effective class participation. The classroom should be considered a laboratory for in which the student can test his/her ability to convince peers of the correctness of one's approach to complex problems and one's ability to achieve the desired results by using that approach. Criteria that are useful in measuring effective class participation include: Are the points that are made relevant to the discussion? Are they linked to the comments of others? Is there a willingness to test new ideas, or are all comments *safe* (*safe* is defined as simply repeating case facts without analysis and conclusions)? Do comments clarify or build upon the important aspects of earlier comments and lead to a clearer statement of the concepts being covered and problems being addressed?

There are regular assignments (both exercises and case write-ups) to be turned in. To master the material in this course, you are advised to digest, thoroughly, the portion of the

text that are assigned and to work the assignment problems by yourself before seeking any help. But do form a *study group* and use it to puzzle out the material that perplexes you or other members of the group. You are likely to find that you and the other members of your group can help each other learn. It should also improve the quality of assignment preparation and write-up. Groups are limited to a maximum of 4 members. A single assignment can be turned in per group. There will be two midterms and a final examination. The grade in the course will be determined on the basis of class participation (5%), assignments (26%), two midterms (34%), and a final examination (35%). Class participation is understood in a broad sense, ranging from class discussions to the development of pedagogical material. Bringing interesting and relevant material (e.g. articles, books, etc.) to the attention of class and the instructor (with possibly a critique) is yet a third form of class participation. Needless to say, perhaps, doing the assignments is more than 28% of the course because it gets you ready for the exams.

TENTATIVE TOPICS

Topic	Chapter
A Primer on Excel	*Lab Manual*
Aggregate Planning	*Chapter 3*
Inventory Management	*Chapter 4 and 5*
Material Management	*Chapter 7*
Capacity Management	*Lab Manual*
Project Management	*Chapter 9*
Supply Chain Management	*Chapter 6*
Operations Planning and Control	*Chapter 8*
Purchasing Management	*Lab Manual*
Logistical Management	*Lab Manual*