DSC3201 Supply Chain Management

Lecturer : Mark Goh

Session : Semester II, 2009/2010

Course Objectives

This course considers the operation of a supply chain from a managerial perspective, serving two main objectives: to provide basic tools for design, analysis, management and performance improvement of supply chains, and to introduce and discuss recent influential innovations in supply chain management. Students will be taught to appreciate the need to balance between responsiveness and efficiency in the four major components of the supply chain: Inventory, Transportation, Facilities, and Information. These four components will be introduced to the students through suitable mathematical and perceptual models.

This module builds on DSC2006 Ops Management, is companion to DSC3202 Purchasing & Materials Management, DSC3203 Service Operations Management, DSC3218 Physical Distribution Management, and prepares for continuation into DSC4002 Consulting Practicum, DSC4211 Seminars in Ops & Supply Chain Management. The objectives of the course are therefore to:

- Develop a systematic framework for analyzing the behavior of supply chain networks.
- Understand the relationship and motivation of suppliers and distributors to ensure supply of raw materials/services and markets for finished goods.
- Discuss the state of the art approaches that reduce landed costs as well as cycle time.
- Integrate production and inventory control methods in supply chain strategies.
- Provide students with understanding of Asian supply chain management.

Prerequisites:

Familiarity with Microsoft Excel.

Synopsis:

Fierce competition in today's global markets has forced enterprises to invest heavily in their supply chains. The supply chains involve producing goods at multiple locations,
transporting them to distribution centers, and finally delivering them to the end customers. To reduce cost and improve service levels, strategic decisions must take into account interactions of the various actors in the supply chain. This, together with the changes in communications and transportation technologies, e.g., m-Commerce communication and overnight delivery, has motivated continuous evolution in supply chain management. In recognition of these developments, the course offers an introductory study on the design and management of supply chains. We will in this course review state of the art planning models and practical tools for inventory control, distribution management and multi-plant coordination. The emphasis is on exploring robust tools and understanding process based supply chain management that have been proven effective in many industries.

In particular we address issues such as:

- Optimal design of the logistics network
- Adequate safety stock levels and the risk pooling concept
- Cost effective distribution strategies.
- Strategic alliances and outsourcing.
- Service supply chains

**Main Text:** Supply Chain Management: Strategy, Planning, and Operation, S. Chopra and P. Meindl, 3ed, Prentice Hall.

**Assessments:**

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<thead>
<tr>
<th>Assessment</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Group Case Write-Up</td>
<td>30 %</td>
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<tr>
<td>Individual Term Paper</td>
<td>30 %</td>
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<tr>
<td>Final Exam (closed book)</td>
<td>40%</td>
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