B8108: Supply Chain Management for MSE

Spring 2018

Class schedule: Mondays & Wednesdays; 9:00-10:30 AM in Uris 329

Location: See detailed schedule on course website. First class is Wednesday Jan 24.

Instructor: Awi Federgruen
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Instructor office hours: By appointment.

TA
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This course covers the major issues in supply chain management, including the definition of supply chain, planning models to guide the design of a supply chain network, the role of inventories in make to stock systems, commonly used inventory models, supply contracts, the value of information and information sharing, risk pooling, design for postponement, managing product variety, information technology and supply chain management; international and environmental issues.

Prerequisites:

- IEOR 3402, IEOR 4000 or permission of instructor
- Students are expected to have a working knowledge of optimization, spreadsheet-based simulation, probability, and EXCEL.


Readings & Cases (available on Courseworks 2 website):

- CEMEX: Transforming a Basic Industry Company
- Fast, Global, and Entrepreneurial: Supply Chain Management, Hong Kong Style (An interview with Victor Fung)
- Multimarket Facility Network Design with Offshoring Applications
- Queuing Management and Models
- Dynamic Lot Sizing with Deterministic Demand, Principles of Inventory Management
Recommended References:


**Game Assignment:** Write-up Littlefield game (group assignment) (5% grade)

**Problem Assignments (You must turn in at least 6; you will be credited for the best 6 grades):**

1. Problem set 1: Deterministic continuous review models
2. Problem set 2: Single period stochastic inventory problems
3. Problem set 3: Sports Obermeyer analysis
4. Problem set 4: Make to order systems
5. Problem set 5: Supply contracts
6. Problem set 6: Multi-period stochastic inventory models
7. Problem set 7: Multi-period non-stationary models
8. Problem set 8: Inventory pooling
9. Problem set 9: Network design problems

**Grading:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Problem Sets</td>
<td>25</td>
</tr>
<tr>
<td>Final Exam</td>
<td>30</td>
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<tr>
<td>Midterm Exam</td>
<td>25</td>
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<tr>
<td>Littlefield game write-up (group assignment)</td>
<td>5%</td>
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<td>Illumexico case (group assignment)</td>
<td>5%</td>
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<td>Participation</td>
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**Participation:** For this course to be successful, everyone must participate in classroom discussion. The participation grade is based on the instructor’s evaluation of the quality of each student’s progress and contribution during the semester. You should note that, in general, *quality* is more important than *quantity*.

**Make-Up Exams:** The instructor requires written documentation of the student’s reason for missing the exam, as well as notification prior to the scheduled exam. If the instructor decides that the reason for the absence is valid, the student will be scheduled for the make-up exam.

**Re-Grading:** If you feel that your performance has been under-evaluated, please resubmit your work, along with a written statement directly to the course instructor, within seven days after receiving your grades, explaining clearly why you feel that your grade should be adjusted.