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Fall 2020

## EM 640-851: Distribution Logistics

Ismail Yagci

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## EM 640 Distribution Logistics

Fall 2020

Instructor: Art (Ismail) Yagci, PhD

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Online through the learning management system

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### COURSE DESCRIPTION

Over decades, the discipline of business logistics has advanced from the warehouse floor and transportation dock to the boardroom of leading global enterprises. Supply chain logistics management encompasses the development and fundamental of the logistic discipline within a supply chain structure. Logistics includes all the activities required to move product and information to, from and between members of a supply chain. The supply chain logistics management provides the framework for businesses and their suppliers to jointly deliver goods, services, and information efficiently, effectively, relevantly and in a sustainable manner to customers.

This course focuses on three fundamental objectives: 1) presents a comprehensive description of existing logistical practices in a global economy, 2) describes ways and means to apply logistics principles to achieve competitive advantage, 3) provide a conceptual approach for integrating logistics as a core competency within enterprise supply chain strategy.

Moreover, students will gain exposure to quantitative methodologies and analysis that support operations and supply chain logistics strategy and planning decisions, using case studies and development of analytical spreadsheet model for optimization problems.

### CANVAS LEARNING MANAGEMENT SYSTEM

The course activity will be completed online through the Canvas learning management system. There are no required face-to-face sessions but students are expected to follow a week-by-week schedule as outlined in the syllabus. Work is typically done in an asynchronous mode and students can complete the coursework without coming to campus.

The course will make extensive use of the Canvas system to optimize student-instructor communication. All course materials including lecture slides and homework etc. will be distributed through Canvas. All submission of homework and other assignments will also be through Canvas. To access the system please go to <https://canvas.njit.edu>, you will need a valid UCID to login.

### GRADING

Based on individual performance as follows:

10% Homework #1	25% Midterm Exam
10% Homework #2	25% Final Exam
30% Weekly Quizzes (including text book, case studies in text book, and lecture slides)	

### LECTURE SLIDES AND SUGGESTED READINGS

EM 640 Distribution Logistics lectures slides will be distributed electronically through Canvas.

Textbook: Contemporary Logistics, 12th edition Paul R. Murphy, Jr. and A. Michael Knemeyer

### COURSE POLICY

This syllabus is intended to give the student guidance in what may be covered during the semester and will be followed as closely as possible. However, the professor reserves the right to modify, supplement and make changes as the course needs arise.

Expectations of students: I expect you to

- keep up with the material covered every week
- complete your quizzes on time every week
- complete your homework, midterm and final exam on time

Expectations of the instructor: You can expect me to

- provide comprehensive learning material on time every week
- respond to student emails on every Wednesday and Friday
- create quizzes and exams that reflect the stated learning expectations for the course

Weeks	Date	Text book Chapters	Topics
Week 1	Sep 1-6, 2020	1 & 2	<b><u>Overview of Logistic</u></b> - What is logistic - Activities in logistic channel - Logistic and information technology -Case 1.1 KiddieLand and the Super Gym -Case 2.1 To Invest or not to Invest? That is the question <b>-Weekly Quiz (Submit via Canvas before midnight).</b>
Week 2	Sep 7-13, 2020	3 & 4	<b><u>Financial Logistic</u></b> -Strategic and financial logistic -Organizational and managerial issues in logistic -Case-3.1 Brant Freezer Company -Case- 4.1 Red Spot Markets Company <b>-Weekly Quiz (Submit via Canvas before midnight).</b>
Week 3	Sep 14-20, 2020	5 & 6	<b><u>Supply Chain Management &amp; Procurement</u></b> -Supply chain process framework -Barriers to SCM implementation -Supplier Selection and Evaluation -Homework -1 (make available to the students) -Case - 5.1 Johnson Toy Company -Case 6.1 Tempo Ltd <b>-Weekly Quiz (Submit via Canvas before midnight).</b>
Week 4	Sep 21-27, 2020	7	<b><u>Demand Management &amp; Customer Service</u></b> -Demand management -Order management -Customer management -Case 7.1 Handy Andy Inc. <b>-Weekly Quiz (Submit via Canvas before midnight).</b>
Week 5	Sep 28- Oct 4, 2020	8	<b><u>Inventory Management</u></b> -Inventory classification -Inventory cost -Inventory flows -Inventory management -Case 8.1 Low Nail Company <b>-Homework -1 (Submit via Canvas before midnight)</b> <b>-Weekly Quiz (Submit via Canvas before midnight)</b>

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Week 6	Oct 8, 2020 (Time: 6:00 PM-7:30 PM EST)	NA	Midterm Exam (includes text book chapter 1-8, case 1-5, and lecture slides)
Week 7	Oct 12-18, 2020	Lecture class / slides	<b>Distribution &amp; Logistics Solution Approaches</b> -Development of analytical spreadsheet model for optimization problems i.e., Linear Programming with excel solver
Week 8	Oct 19-25, 2020	9	<b>Facility Location</b> -Strategic importance of facility location -Factors influencing facility locations -Finding lowest cost location -Excel solution: Facility Location -Case 9.1 All-Indian Logistic Services <b>-Weekly Quiz (Submit via Canvas before midnight).</b>
Week 9	Oct 26–Nov 1,2020	10	<b>Warehousing</b> -Role of WH in logistic -Design consideration in WH -WH productivity analysis -Case 10.1 Minnetonka Warehouse -Homework -2 (make available to the students) <b>-Weekly Quiz (Submit via Canvas before midnight).</b>
Week 10	Nov 2-8, 2020	11	<b>Packing and Handling</b> -Packing fundamentals -Issues in packing -Materials handling -Excel solution: Partial Loading (Knapsack Problem) -Case 11.1 Let There Be Light Lamp Shade Company <b>-Weekly Quiz (Submit via Canvas before midnight).</b>
Week 11	Nov 9-15, 2020	12	<b>Transportation</b> -Trans. Infrastructure -Trans. modes -Trans. Regulations -Intermodal trans. -Excel solution: Transportation problems -Case 12.1 HDT Truck Company <b>-Homework -2 (Submit via Canvas before midnight)</b> <b>-Weekly Quiz (Submit via Canvas before midnight).</b>
Week 12	Nov 16-22, 2020	13	<b>Transportation Management</b> -Contemporary transportation management -Rate and pricing negotiation -Modal and carrier selection -Case 13.1 – Chippy Potato Chip Company <b>-Weekly Quiz (Submit via Canvas before midnight).</b>
Week 13	Nov 30-Dec 6,2020	Lecture class / slides	<b>Distribution &amp; Logistics Solution Approaches</b> -Development of analytical spreadsheet model for optimization problems i.e., how to solve Linear Programming for assignment problem, transshipment problem
Week 14	Dec 7-10, 2020	14	<b>Global logistic supply chain</b> -Macro environmental Influences on International logistic

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			-Case 14.1 Nurnberg Augsburg Maschinenwerke (N.A.M.) <b>-Weekly Quiz (Submit via Canvas before midnight).</b>
Week 15	Date-TBD (Time: 6:00 PM-7:30 PM EST)	NA	Final Exam (includes chapter 9-14, case 9-14, and lecture power points) (Check NJIT final Exam Dates)

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