

MANA300001 Logistic and Supply Chain Management

Program : Global Summer Program

Term : Summer 2024

Duration : June 4, 2024 - July 26, 2024

Contact Hours : 54

Fudan Credits : 3

Course Description:

This subject is a survey of the fundamental analytic tools, approaches, and techniques which are useful in the design and operation of logistics systems and integrated supply chains. The material is taught from a managerial perspective, with an emphasis on where and how specific tools can be used to improve the overall performance and reduce the total cost of a supply chain. The three main topic areas we will focus on are:

- Demand forecasting, and planning,
- Inventory planning, management, and control, and
- Transportation planning, management, and operations.

While our main objective is to develop and use models to help us analyze these situations, we will make heavy use of examples from industry to provide illustrations of the concepts in practice. This is neither a purely theoretical nor a case study course, but rather an analytical course that addresses real problems found in practice.

Course Goals:

The four primary objectives of this course are:

1. Introduce the analytic model-based approach for solving logistics and supply chain problems,
2. Reinforce the importance of using total supply chain costs in all analysis,
3. Provide students with techniques for measuring and managing supply chain uncertainty, and
4. Introduce the idea of using segmentation and a portfolio of solutions, rather than a single approach, for real-world logistics problems.

Prerequisites:

The course presumes a basic understanding of calculus, statistics, and linear programming. Standard spreadsheet programs (such as Microsoft® Excel) will be sufficient for the required analysis.

Textbook:

- Silver, Edward, David Pyke, and Rein Peterson. Inventory Management and Production Planning and Scheduling. 3rd ed. New York, NY: John Wiley & Sons, 1998.
ISBN: 9780471119470.

Schedule:

Lecture	Date	Time	Topic
1	June 4, 2024	Online Sessions Lecture 1 - 8: 08:30-12:00 BJT (UTC+8)	Course introduction and objectives; Concepts and approaches to supply chain uncertainty
2	June 11, 2024		Demand forecasting I: Time series analysis
3	June 18, 2024		Demand forecasting II: New product forecasting
4	June 25, 2024		Inventory management I: Level demand, EOQ
5	June 28, 2024		Inventory management II: Time-varying demand
6	July 2, 2024		Inventory management III: Probabilistic demand, safety stock
7	July 9, 2024		Inventory management IV: Inventory management and optimization in practice
8	July 16, 2024		Supply chain contracts
9	July 22-July 26, 2024	Offline Sessions Lecture 9 - 12: TBD	Transportation I: Fundamental concepts, strategic networks, connection to inventory planning
10			Transportation II: Routing and scheduling approaches and algorithms
11			Transportation III: Carrier operations and yield management
12			Final Exam

Assessment:

Assessment Task	Weighting
1. Class Participation	5%
2. Problem Sets	70%
3. Final Exam	25%

Grading Scale:

Grades	A	A-	B+	B	B-	C+	C	C-	D	F
100	90-100	85-89	82-84	78-81	75-77	71-74	66-70	62-65	60-61	<60

The instructor will use the grading system as applied by Fudan University.

Credit Point Value:

Component	Contact Hours	Fudan Credits
Academic Lectures	44	3
Thesis/Exam	4	
Field Trip	3	
Seminar	3	
Total	54	

At Fudan University, the duration of one contact hour is 45 minutes, and 18 contact hours are equivalent to 1 credit.

Note: The document is subject to change at the discretion of School of Management, Fudan University.