

IE 1080 – Supply Chain Analysis Syllabus
Section 03
Course Number: 312026030
Fall 2024

Instructor: Sophia Zuoqiu, D.Sc.
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Credit Hours: 3
Lectures Time: Thursday 1:50pm-4:25pm
Lecture Location: SCUPI Building N210

Office Hours: TBD
Office: SCUPI Building, Office 423

Textbook David Simchi-Levi, Philip Kaminsky, Edith Simchi-Levi, *Designing and Managing the Supply Chain: Concepts, Strategies, and Case Studies*, 3rd Edition, McGraw-Hill/Irwin

Course Objective/Outline

This course intends to introduce essential topics regarding supply chain analysis and management. Supply chain management is an integrated approach to manage the process of manufacturing and distribution channel from the initial supplier to the ultimate customer. This course will introduce the development of the supply chain management concept and strategies. The focus of this course will be on major supply chain management functions including forecasting, resource planning, manufacturing scheduling, order management, logistics management, inventory control, and supply chain performance evaluation. Other important topics related to supply chain management practices, such as supply contracts, and future challenges of supply chain management will also be addressed. The real-world case study will also be an important part of this course.

Applicable ABET Outcomes:

- (a) An ability to apply knowledge of mathematics, science, and engineering
- (b) An ability to analyze and interpret data
- (c) An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- (d) An ability to identify, formulate, and solve engineering problems
- (e) An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

Pre-requisites: None

Grading

Attendance and participation	10%
In-class quiz	10%
Homework and final project	30%
Midterm	20%
Final Exam	30%

Note on Grading:

- If homework is turned in late, it will not be accepted and the student will receive no mark on the assignment.
- No make-up quiz will be issued.
- Midterm and final exams cannot be rearranged for individual student(s). Make-up midterm exam is only granted for student(s) with official absence notice (ideally prior to exam date). NO make-up final exam will be issued.

Course Policies:

- Students are expected to come prepared for each lecture by reading the appropriate material prior to class.
- Questions concerning the grading of homework assignments, project-related materials, or exams must be presented to the instructor or the TA within one week (7 calendar days) after the materials have been made available for return to the student.
- Late assignments will **NOT** be accepted, and all assignments, projects, and examinations must be **completed/taken at the scheduled time**. No exceptions will be made unless there are truly extenuating circumstances.
- Cheating or academic dishonesty in any form will result in a grade of F for the course; there will be no exceptions to this policy.
- Professional classroom demeanor is required; in particular, all cell phones and personal electronic devices must remain off or silent during the lecture.
- Do not conduct side conversations during the lecture as it is distracting to the lecturer and other students.

Audio-Video Recording

To ensure the free and open discussion of ideas, students may not record classroom lectures, discussion, and activities without the advance written permission of the instructor, and any such recording properly approved in advance should be used solely for the student's private use.

Tentative Schedule

Week 1: Course introduction and basic concepts for Supply Chain Management
Week 2: The Evolution and Scope of Supply Chain Management
Week 3: Inventory and Inventory Management
Week 4: Customer Value, Pricing and Smart Pricing
Week 5: Supply Chain Forecasting, Integration and Risk Pooling
Week 6: Resource Planning

Week 7: Distribution Strategies, Network Planning and Strategic Alliance
Week 8: Real-world Case Study 1
Week 9: Mid-term Exam
Week 10: Procurement and Outsourcing Strategies
Week 11: Global Logistics and Risk Management
Week 12: Information Technology
Week 13: Sustainable Supply Chain and LCA
Week 14: Real-world Case Study 2
Week 15: Challenges and Prospects in Supply Chain Management
Week 16: Final Project Presentation, Course Review
Week 17: Final Exam