

IE 1080 – Supply Chain Analysis
Syllabus
Fall Term 2021 - 2022

Instructor: Prof. Yang Liu
Credit Hours: 3
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Office Hours: Tuesday, Wednesday, Thursday, 10 AM - 12 PM, 4:30 PM - 5:30 PM
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Teaching Assistant:

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Lectures Wednesday, 1:50 PM - 4:25 PM
Classroom Room 101, Zone 3

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 No specific courses, but students must show a solid engineering background and sufficient academic maturity.

Co-requisites None

Grading

Mid-term Exam	25%
Final Exam	25%
Project	25%
Homework	25%

Final grades:

Level	Letter Grade	Reported Numerical Score	Grade Points
Superior Performance	A	90 - 100	4.0
	A-	85 - 89	3.7
Meritorious Performance	B+	80 - 84	3.3
	B	76 - 79	3.0
	B-	73 - 75	2.7
Adequate Performance	C+	70 - 72	2.3
	C	66 - 69	2.0
	C-	63 - 65	1.7
Minimal Performance	D+	61 - 62	1.3
	D	60	1.0
Insufficient Performance (Failure)	F	< 60	0.0

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.

Email Policy

Email will be responded as promptly as possible. For detailed technical questions, please come to the TA or the instructor during office hour.

Teamwork

The project will be team-based. Detail description will be provided during class. It is designed to apply supply chain analysis and management functions to enterprises to solve real-world problems. Evaluation of these works will be based on both the presentations and the written reports. In the team-based report, the student will need to identify which part of the report he/she is responsible for. The overall performance of the team reports and presentations will account for 50% of the student's grade, and the student's personal performance of the report and presentation will account for the other 50%. That means, while project is team-based, the evaluation will be individual-based.

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

Make-up exam Policy

Make-up exam grading is only to replace your final exam grading. Students who pass the course after the make-up exam will receive only a passing grade as the final grade.

Special Accommodations

If the student has a disability for which the student is or may be requesting an accommodation, the student is encouraged to contact the instructor.

Tentative Schedule

Week 1: Introduction to Supply Chain Management
Week 2: The Evolution and Scope of Supply Chain Management
Week 3: Inventory Management and Risk Pooling
Week 4: Network Planning
Week 5: Supply Contracts
Week 6: National Holiday
Week 7: Value of Information
Week 8: Supply Chain Integration
Week 9: Distribution Strategies
Week 10: Mid-term Exam
Week 11: Strategic Alliances
Week 12: Procurement and Outsourcing Strategies
Week 13: Global Logistics and Risk Management
Week 14: Coordinated Product and Supply Chain Design
Week 15: Customer Value
Week 16: Smart Pricing
Week 17: Project Presentation
Week 18: Final Exam