ISyE 6338: Strategy and Supply Chains
Spring 2027 (2026-10-27)

Instructor: Chelsea C. White III, Schneider Nat'l Chair of Transportation & Logistics
Email: cw196@gatech.edu
Office Hours: 8:00AM-9:00AM Weds; be sure to make an appointment. Also, if I do not have a conflict, I'm available at any time during the business day through the work week to communicate with you. Just be sure to send a meeting link. All out-of-class meetings will be remote unless decided otherwise.

Time: Tuesdays, 8:00am-10:45am

Place: TBD

TA: TBD
Email: TBD
Office Hours: TBD

Honor Code. The Honor Code will be strictly adhered to:
http://osi.gatech.edu/content/honor-code

Disability Services. If you are a student with learning needs that require special accommodation, contact the Office of Disability Services at 404-894-2563 or http://disabilityservices.gatech.edu/ as soon as possible to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail the course instructor as soon as possible to set up a time to discuss your learning needs.

Laptop, Tablet, and Cell Phone Use During Class. Laptops, tablets, and cell phones can be used during class but only if use is class related.

Student-Faculty Expectations. http://www.catalog.gatech.edu/rules/22/

Excused Absences. Officially, there are 2 ways a student can obtain formal excuses. A student can request an excused absence:

- From the Dean's office for illness or other personal issues by filling out a form at https://gatech-advocate.symplicity.com/care_report/index.php/pid122802?.
- From the Registrar for Institute approved conference attendance and religious observances (within the first two weeks of the semester) https://registrar.gatech.edu/info/institute-approved-absence-form-for-students.

Also (and the easy way), students can simply discuss any need for an excused absence directly or through email with the instructor or GTA.

Individual/Group Student Meetings. Time can be made available after the close of registration for voluntary individual or group meetings for any student(s) who wishes to schedule a meeting with the course instructor on a one-to-one or group basis.

Course Objectives. The course objectives are to provide models, concepts, and solution methods important in the design, control, operation, and management of supply chain systems. Basic topics that will be addressed include inventory management, logistics network design, distribution systems, and customer value. More advanced topics that will be addressed include strategic alliances, the value of information in the supply chain, information technology and decision support systems, geopolitical issues, supply chain disruptions and resilience, and coordinated product and supply chain design. Manufacturing supply chains will be emphasized. Links with mathematical modeling and analysis will be highlighted.

Supply chain strategy and corporate strategy. The supply chain leadership of a company should play a key role in the development of the company's supply chain strategy and its alignment with the overall business strategy and product design for the corporation and contribute to its implementation, evolution, and assessment. In this course, we will overview the fundamental concepts and frameworks of corporate strategy and strategic planning for context. Key decisions in supply chain strategy such as structure, dimension, location, segmentation and rationalization of stock keeping units (SKUs), and outsourcing should be evaluated considering the overall strategic direction of the company and the industry in which the firm operates with an understanding of uncertainty and flexibility requirements. The impact of the pandemic, disruptive geopolitical events, an increase in extreme weather events, AI-enabled big data analytics, and new players (e.g., the digital powerhouses, the emerging auto EV industry), and their business models on supply chain strategies and new concepts are topics of interest.

Text. David Simchi-Levi, Philip Kaminsky, Edith Simchi-Levi, Designing and managing the supply chain: concepts, strategies, and case studies, 4th Edition, 2022, McGraw-Hill, **ISBN10**: 1264206607 | **ISBN13:**9781264206605

Other Reading

- Lukasz Bednarski, Samuel Roscoe, Constantin Blome & Martin C. Schleper (2025) Geopolitical disruptions in global supply chains: a state-of-the-art literature review, Production Planning & Control, 36:4, 536-562, DOI: 10.1080/09537287.2023.2286283
- Nicoleta Tipi, "Supply Chain Analytics and Modelling: Quantitative Tools and Applications", Wiley, 2025, ISBN: 978-1-398-62077-3
- E. Iakovou and C. White, "A data sharing approach for greater supply chain visibility", 14 September 2022, TechStream, Brookings Institution, https://www.brookings.edu/techstream/a-data-sharing-approach-for-greater-supply-chain-visibility/
- G. Maihold, "A new geopolitics of supply chains", German Institute for International and Security Affairs, July 2022
- David Simchi-Levi, Philip Kaminsky, Edith Simchi-Levi, Ravi Shankar, Designing and managing the supply chain: concepts, strategies, and case studies, 4th Edition, 2022, Irwin, McGraw-Hill,
  ISBN10: 1264206607 | **ISBN13:** 9781264206605 Special Indian Edition (for sale only in India, Pakistan, Nepal, Bangladesh, Sri Lanka, and Bhutan)

- E. Iakovou, C. White, "How to build more secure, resilient, next-gen U.S. supply chains", 3 December 2020, TechStream, Brookings Institution, https://www.brookings.edu/techstream/how-to-build-more-secure-resilient-next-gen-u-s-supply-chains/
- Nada Sanders, Supply Chain Analytics, Prospect Press, 2019
- Sunil Chopra and Peter Meindl, Supply Chain Management: Strategy, Planning and Operation, Prentice-Hall, 7th Edition, 2018
- Lei Lei, et al, Managing Supply Chain Operations, World Scientific, 2017
- Wally Hopp, Supply Chain Science, McGraw-Hill, 2008
- Jeffery Macher and David Mowery (eds), Innovation in Global Industries, National Academies Press, 2008
- Suzanne Berger, How We Compete, Doubleday, 2006
- Richard Lester and Michael Piore, Innovation: The Missing Dimension, Harvard University Press, 2004
- Charles Fine, Clockspeed: Winning Industry Control in the Age of Temporary Advantage, Perseus Books Publishing, 1998
- Jeffery Liker (ed), Becoming Lean, Productivity Press, 1998
- Michael Porter, Competitive Strategy, First Free Press, 1998
- Michael Porter, Competitive Advantage, Simon & Schuster, 1998

Class Organization

- The class will be divided into three sections:
  - Industry studies
  - Case (firm level) studies
  - Projects (region level and trends/hot topics).
- Each section will have nine (9) groups.
- Each student will be assigned to one group in each section.
- Each group will be composed of 4-5 students and will be assigned 1 or 2 leaders. Everyone will be a leader/co-leader of one group.
- Each group will make a 30 to 35-minute presentation, followed by 10 to 15-minutes of Q&A. Absences will result in no credit. Please:
  - Number the slides
  - Identify the student presenting each slide of the slide presentation.
- Each group will write a 5 to 7-page final report.
- The leader(s) will be responsible for organizing the presentation and final report development.
- Presentations will be given in numerical order, as listed in the Schedule below.
- The final report and presentation slides are due one week after the presentation.
- *Class participation:* After each presentation and before Q&A, one or more students will be asked to either ask a question or present a takeaway to encourage active listening. Selection will be random. Students who are called on and are absent will receive no credit *unless their absence has been requested prior to the presentation or due to circumstances that prohibited the request being made prior to the presentation.*

- The instructor will lecture on material in the book immediately after 6 of the 9 case study presentations (lecture topics identified below in the Schedule).
- *Class participation:* pops quizzes may be given after any presentation or lecture. Students who are absent will receive no credit.

Grading Policy and Procedures

- The class grade will be based on:
  - Presentation 25%
  - Reports 25%
  - Peer evaluation 25%
  - Class participation 25%
- There will be no final examination.
- The final overall score for an A last year was 82 (out of 100) and above.
- For each section:
  - Each student will evaluate the other eight groups in each of the 3 sections based on (1) *content*, (2) *presentation*, and (3) *class engagement* by a distribution technique explained on presentation evaluation forms that will be provided to each of you by the GTA.
  - Each group member will evaluate all members of his or her group based on contribution to the presentation and report by a distribution technique explained on the peer evaluation form provided to each of you by the GTA.
- The evaluation of the other groups and the evaluation of members of your group will all be due a week after all section presentations have been completed.
- The report should go into more depth than the presentation and will be graded on *content* and *organization*.
- All presentations will be graded based on:
  - *Content* (How informative and detailed, both quantitatively and qualitatively, was the presentation?)
  - *Presentation* (Was the material made interesting and clearly presented?)
  - *Class engagement* during Q&A (Was class interest high? What was the quality of answers to questions asked?).

Industries (1.X) – logistics (primarily)

1. Trucking – truckload & less than truckload
2. Integrated freight transportation services (UPS, FedEx, DHL, Amazon)
3. Railroad freight transportation
4. Sea freight transportation
5. Air freight transportation
6. Cold supply chain (e.g., food & pharmaceutical distribution)
7. Warehousing & storage
8. Third party logistics (broadly, the asset light industry)
9. Coordinated product & supply chain design (Chapter 11, HP case study)

Topics suggested for inclusion in an industry study

- Industry size - annual revenue, number of employees, geographical distribution
- Regulatory environment
- Competitive environment
- Labor environment
- Industry segmentation: for each segment its size, supplier base, customer base
- Industry performance
- Industry trends
- Sources of innovation
- Firm structures throughout the industry
- Supply chain structures for manufacturing industries
- Best practices throughout the industry
- Comparison of two firms in the industry based on supply chain strategy
- The interrelationship with the other industries (e.g., adjacent industries)
- Impact on the national and international economies
- Identification of key challenges inhibiting industrial health, robustness, growth
- Impact of recent disruptions
- An analytics application
- Summary
- References

Case studies (2.X)

1. Inventory management and risk pooling (Chapter 2 in the text)
2. Network planning (Chapter 3)
3. Supply contracts (Chapter 4)
4. Value of information (Chapter 5)
5. Supply chain integration (Chapter 6)
6. Distribution strategies (Chapter 7)
7. Strategic alliances (Chapter 8)
8. Procurement and outsourcing strategies (Chapter 9)
9. Global logistics and risk management (Chapter 10)

Topics suggested for inclusion in a case study

- The material in the case study.
- Background information about the company's competitive landscape, e.g., information about the industry and the company's competitors.
- Update of the company, industry, and competitive landscape since the case study was written, including how the company has dealt with recent disruptive events.
- Questions for the class to engage them in a 10-15-minute discussion.

Many of the case studies in the text are now dated. As a result, we are replacing most of the case studies with more recently written case studies, which we think will greatly enhance the quality of the learning experience. The case studies often illustrate more than the topic of the chapter.

The case studies are by chapter:

1. Chapter 2: Inventory management. Tesla, Inc. (HBR MH0049-PDF-ENG). Note also Tesla's Entry into the U.S. Auto Industry (MIT Sloan LearningEdge).
2. Chapter 3: Network planning. Nissan Motor Company Ltd: Building Operational Resiliency (MIT Sloan LearningEdge). Also, First Solar (MIT Sloan LearningEdge).
3. Chapter 4: Supply contracts. Automakers in the Sharing Economy: An Examination of the Burgeoning Mobility Industry and Automakers' Strategies (HBR SM279N-HCB-ENG).
4. Chapter 5: Value of information. Reebok NFL Replica Jerseys, text.
5. Chapter 6: Supply chain integration. Managed by Q (MIT Sloan LearningEdge).
6. Chapter 7: Distribution strategies. Amazon, text. Note also Mumbai Dabbawallah: Adopting Different Distribution Strategies in the Special Indian Edition of the 4th edition of the text.
7. Chapter 8: Strategic alliances. Toyota Supplier Relations: Fixing the Suprima Chassis (MIT Sloan LearningEdge). Note also Restoration Affiliates (MIT Sloan LearningEdge).
8. Chapter 9: Procurement & outsourcing strategies. Zara, text.
9. Chapter 10: Global logistics & risk management. CEMEX: Globalization "The CEMEX Way" (MIT Sloan LearningEdge).

The two Harvard case studies require a copyright permission. In the past, ISyE has defrayed this cost, and we have requested that ISyE defray this cost again. We direct you to Harvard Business Review https://hbr.org/store/case-studies. You must create an account prior to checkout upon selecting the pdf, which consists of name and email address. The MIT case studies can be found on the following website: https://mitsloan.mit.edu/LearningEdge/strategy/Pages/default.aspx

Much of the information for the case study presentations and reports will come from a web search in part to inform the class what has happened to the company and industry since the case study was written. The case study should not be the only source of the presentation and report. Try to anticipate questions that the class, GTA, or instructor will ask and answer them during the presentation.

Project Topics (3.X)

1. International logistics infrastructure
2. PRC logistics industry
3. India logistics industry
4. Southeast Asia logistics industry
5. EU logistics industry
6. Latin & South American logistics industry
7. Semiconductor industry (tentative)
8. Automotive industry – ICE and EV comparison/contrast (tentative)
9. Aircraft industry - Boeing, Airbus, China (tentative)

Schedule. All classes are scheduled to be held 8:00AM till 10:45AM, each with either one 15-minute break or two 7-to-8-minute breaks. The instructor will lecture on material associated with case studies 2.X (X = 1, 3, 4, 5, 6, 8), and these lectures (meant to be interactive) are underlined in the schedule below.

Date	Material to be covered
2027-01-12	Syllabus review/Introduction
2027-01-19	Introduction/group assignments by 2027-01-22
2027-01-26	Introduction
2027-02-02	1.1, 1.2, 1.3
2027-02-09	1.8, 1.5, 1.6
2027-02-16	1.7, 1.4, 1.9
2027-02-23	2.1, 2.1, 2.2
2027-03-02	2.3, 2.3, 2.4
2027-03-09	Spring Break; no class
2027-03-16	2.4, 2.5, 2.5
2027-03-23	2.6, 2.6, 2.7
2027-03-30	2.8, 2.8, 2.9
2027-04-06	3.1, 3.2, 3.3
2027-04-13	3.4, 3.5, 3.6
2027-04-20	3.7, 3.8, 3.9
2027-04-27	Review (Last day of class).

Syllabus Inserts and Guidelines

Office Hours: To meet students' requirements, needs, and comfort levels, meetings and office hours will be offered in-person or virtually.

Dean of Students Office, CARE Center, Counseling Center, Stamps Health Services, and the Student Center: The CARE Center and the Counseling Center, Stamps Health Services, and the Dean of Students Office will offer both in-person and virtual appointments. Student Center services and operations are available on the Student Center website. For more information on these and other student services, contact the Dean of Students or the Division of Student Life.

Recordings of Class Sessions and Required Permissions: Classes may not be recorded by students without the express consent of the instructor unless it is pursuant to an accommodation granted by the Office of Disability services. Class recordings, lectures, presentations, and other materials posted on Canvas are for the sole purpose of educating the students currently enrolled in the course. Students may not record or share the materials or recordings, including screen capturing or automated bots, unless the instructor gives permission.