SUPPLY CHAIN MANAGEMENT (SCM)

**SCM.250 Analytical Methods for Supply Chain Management**  
Prereq: None  
G (Fall; partial term)  
3-0-3 units

Covers the primary methods of analysis required for supply chain management planning. The class solves various practical problems using simulation, linear programming, integer programming, regression, and other techniques. The work is primarily team based with a final exam. Restricted to students in the SCM program.  
B. Arntzen

**SCM.251 Supply Chain Financial Analysis**  
Prereq: None. Coreq: SCM.260[J] or permission of instructor  
G (Fall; partial term)  
4-0-2 units

Explores the linkages between supply chain management and corporate finance. Emphasizes how the supply chain creates value for both the shareholders of the company and for the stakeholders affected by the company’s operations. Sessions combine lectures and data-rich cases from the manufacturer, distributor, and retailer perspective. Topics include accounting fundamentals, financial analysis, activity-based costing, working capital management, cash flow projections, capital budgeting, and sustainability. Students should also register for SCM.253.  
J. Goentzel, J. Rice

**SCM.252 Supply Chain Software**  
Prereq: None  
G (IAP)  
2-0-1 units

Provides an overview of the main types of supply chain software including ERP, WMS, and TMS systems. Describes their main functionality, how they work, how they are used, their architecture, data flows, and how they are organized into modules. Also describes the software selection process and how software upgrade and implementation projects should be organized and managed. Limited to SCM students.  
B. Arntzen

**SCM.253 Case Studies in Supply Chain Financial Analysis**  
Prereq: SCM.251  
G (Spring; partial term)  
3-0-0 units

Students explore and discuss case studies that focus on financial analysis in real supply chains. Cases provide the opportunity for students to apply the theory and quantitative methods that they have studied in addressing actual supply chain challenges. These include decision making around sourcing, capital investments, inventory strategy, and new product introduction. Students present and defend their solutions to their peers.  
J. Goentzel, J. Rice

**SCM.259 Business Writing for Supply Chain Management**  
Prereq: None  
G (Fall, IAP)  
2-0-1 units

Focuses on analyzing and tailoring content for specific audiences, developing argumentation and persuasion skills, and writing clear, concise and well-structured documents (business letters, memos, executive summaries, and briefings). Covers business writing techniques and strategies through lectures and exercises, individual writing assignments, and peer review workshops. Restricted to students in the SCM program.  
P. Siska

**SCM.260[J] Logistics Systems**  
Same subject as 1.260[J], 15.770[J], IDS.730[J]  
Prereq: Permission of instructor  
G (Fall)  
3-0-9 units

Provides an introduction to supply chain management from both analytical and practical perspectives. Taking a unified approach, students develop a framework for making intelligent decisions within the supply chain. Covers key logistics functions, such as demand planning, procurement, inventory theory and control, transportation planning and execution, reverse logistics, and flexible contracting. Explores concepts such as postponement, portfolio management, and dual sourcing. Emphasizes skills necessary to recognize and manage risk, analyze various tradeoffs, and model logistics systems.  
Y. Sheffi, C. Caplice
SCM.261[J] Case Studies in Logistics and Supply Chain Management
Same subject as 1.261[J], 15.771[J]
Prereq: Permission of instructor
G (Spring)
3-0-6 units

A combination of lectures and cases covering the strategic, management, and operating issues in contemporary logistics and integrated supply chain management. Includes: logistics strategy; supply chain restructuring and change management; and distribution, customer service, and inventory policy.

J. Byrnes

SCM.262 Leading Global Teams
Prereq: SCM.260[J] or permission of instructor
G (IAP)
3-0-3 units

Reinforces supply chain concepts and develops management and teamwork skills. Focuses on practical, rather than theoretical tools, methodologies, and approaches that students will use throughout their supply chain career. Includes guest lectures, a case competition, and several large-scale, team-based simulation learning games. Restricted to students in the SCM program.

B. Arntzen, C. Caplice

SCM.263 Advanced Writing Workshop for SCM
Prereq: None
G (Spring)
1-0-2 units

Focuses on helping students write and present their ideas in cogent, persuasive arguments and other analytical frameworks. Designed to improve students' ability to communicate research information. Covers the basics of working with sources, including summarizing and paraphrasing, and synthesizing source materials. Workshops along with small team coaching sessions help students apply these lessons in the writing of their capstone project or thesis project. Limited to SCM students.

P. Siska

SCM.264 Database Analysis for Supply Chain Management
Prereq: None
G (Fall)
6-0-6 units

Introduces databases, data analysis, and information technology fundamentals for supply chain management. Covers database topics such as data modeling, relational databases, data extraction and SQL. Introduces data analysis tools for visualization, regression, supervised and unsupervised classification, which includes principal components and clustering analysis. Provides instruction on information technology topics such as software development process, UML, XML, service-oriented architectures, security and telecommunications. Term project includes implementation of data modeling, data visualization and data analysis techniques.

C. Cassa

SCM.265[J] Global Supply Chain Management
Same subject as 1.265[J], 2.965[J], 15.765[J]
Prereq: 1.260[J], 1.261[J], 15.761, 15.778, or permission of instructor
G (Spring)
2-0-4 units

Focuses on the planning, processes, and activities of supply chain management for companies involved in international commerce. Students examine the end-to-end processes and operational challenges in managing global supply chains, such as the basics of global trade, international transportation, duty, taxes, trade finance and hedging, currency issues, outsourcing, cultural differences, risks and security, and green supply chains issues. Highly interactive format features student-led discussions, staged debates, and a mock trial. Includes assignments on case studies and sourcing analysis, as well as projects and a final exam.

B. Arntzen

SCM.266 Freight Transportation
Prereq: SCM.260[J]
G (Spring; second half of term)
2-0-4 units

Provides an in-depth introduction to the fundamental concepts and techniques related to the design, procurement, and management of freight transportation. Examines freight transportation as a bridging function for a firm, considering the physical flow of raw materials and finished goods as well as connections to suppliers and customers. Also covers how freight transportation insulates a firm’s core operations from external disruptions and variability of supply and demand.

C. Caplice, Y. Sheffi
**SCM.267 Global Supply Chain Applications**  
Prereq: None. Coreq: SCM.265[J]  
G (Spring)  
2-0-1 units  

Discusses the basic theories of international trade, cultural differences in global supply chains, sustainability, risks, and security. Highly interactive format features student-led discussions, staged debates, and a mock trial. Assignments include case studies and student presentations. Meets with SCM.265[J].

*B. Arntzen*

**SCM.269 Supply Chain Risk Management**  
Prereq: None  
G (Spring)  
Not offered regularly; consult department  
3-0-9 units  

Ways to develop effective and innovative strategies for risk mitigation are introduced. Also covered are identifying methods for the enterprise to respond to disruptions that may effect it, its business eco-system and the larger economy. Teaches ways to apply the SCRM framework in industrial practice.

*Y. Sheffi, J. Rice*

**SCM.270 Current Challenges in Supply Chain Management**  
Prereq: None  
G (Spring)  
2-0-4 units  

Each week students study and then discuss a case and/or article(s) related to a current challenge in supply chain management. Led by faculty and researchers in the MIT Center for Transportation and Logistics (CTL) along with invited guest speakers from industry. Topics highlight the current areas of research at CTL as well as other challenging issues from industry. Includes several required case write-ups or research papers. Limited to SCM students.

*Y. Sheffi and CTL Staff*

**SCM.272 Supply Chain Management Workshop**  
Prereq: None  
G (IAP)  
2-0-1 units  

Introduces topics of maritime logistics, segmentation and revenue management, and sourcing and purchasing fundamentals in a series of hands-on workshops. Enrollment limited to SCM students.

*Y. Sheffi, B. Arntzen, I. Lagoudis, M. Gurbuz*

**SCM.283 Humanitarian Logistics**  
Subject meets with SCM.284  
Prereq: None  
G (Spring; first half of term)  
2-0-4 units  

Explores how logistics management principles apply in dynamic, resource-constrained contexts, ranging from humanitarian crisis response to international development. Class sessions combine interactive presentations, practical exercises, case discussions, and guest speakers from humanitarian organizations. Provides an introduction to supply chain concepts and the humanitarian context to accommodate students from various backgrounds.

*J. Goentzel*

**SCM.284 Humanitarian Logistics Project**  
Subject meets with SCM.283  
Prereq: None  
G (Spring)  
3-0-9 units  

Explores how logistics management principles apply in dynamic, resource-constrained contexts, ranging from humanitarian crisis response to international development. Combines interactive presentations, practical exercises, case discussions, and guest speakers from humanitarian organizations. Provides an introduction to supply chain concepts and the humanitarian context to accommodate students from various backgrounds. Team projects utilize data and information from the UN, NGOs, government agencies, and the private sector. Meets with SCM.283 first half of term.

*J. Goentzel*

**SCM.290 Sustainable Supply Chain Management**  
Prereq: None  
G (Spring; first half of term)  
3-0-3 units  

Introduces operational aspects of sustainable supply chains. Focuses on analyzing the implications of environmental considerations in logistics decisions. Topics include carbon footprint, sustainable logistics, closed-loop supply chains, reverse logistics, and sustainable supply chain strategy. Includes a team project that evaluates the sustainable supply chain strategy of an industry or a publicly-traded company.

*J. Velazquez*
SCM.301 Independent Study: Supply Chain Management
Prereq: None
G (Fall, IAP, Spring)
Not offered regularly; consult department
Units arranged
Can be repeated for credit.
Opportunity for research in Supply Chain Management and Logistics on an individual or group basis. Registration subject to prior arrangement and supervision by staff.
B. Arntzen

SCM.302 Independent Study: Supply Chain Management
Prereq: None
G (Fall, IAP, Spring)
Not offered regularly; consult department
Units arranged [P/D/F]
Can be repeated for credit.
Opportunity for research in Supply Chain Management and Logistics on an individual or group basis. Registration subject to prior arrangement and supervision by staff.
B. Arntzen

SCM.800 Capstone Project in Supply Chain Management
Prereq: None
G (Fall, Spring)
Units arranged
Can be repeated for credit.
Provides an opportunity for students to synthesize their coursework and professional experience in supply chain management. Students conduct research on a real-world problem of interest to supply chain practitioners. Projects may include site visits, in-person interviews and quantitative analysis of data provided by a sponsoring company, agency, or NGO. Students present their research results in both a report and to an audience of sponsors and supply chain executives. Restricted to students in the SCM program.
B. Arntzen

SCM.803 Supply Chain Leadership Workshop
Prereq: None
G (Fall; partial term)
2-0-1 units
Designed to enhance your ability to manage and lead in challenging times through a series of self assessment instruments, case studies, and workshops. The objectives are to increase awareness of your strengths and weaknesses as a leader, provide a battery of instruments and surveys to help one understand the way one operates in an organizational setting, and offer strategies and tips on how to leverage one’s strengths and work on areas in need of development. Restricted to students in the SCM program.
B. Arntzen

SCM.590 Special Subject: Supply Chain Management
Prereq: None
Acad Year 2018-2019: Not offered
Acad Year 2019-2020: G (Fall; second half of term)
Units arranged
Can be repeated for credit.
Opportunity for study of topics in Supply Chain Management not otherwise included in the curriculum.
Y. Sheffi, C. Caplice

SCM.591 Special Subject: Supply Chain Management
Prereq: None
G (Fall, IAP, Spring)
Not offered regularly; consult department
Units arranged [P/D/F]
Can be repeated for credit.
Opportunity for study of topics in Supply Chain Management not otherwise included in the curriculum.
B. Arntzen

SCM.592 Special Subject: Supply Chain Management
Prereq: None
G (Spring)
Units arranged [P/D/F]
Can be repeated for credit.
Opportunity for study of topics in Supply Chain Management not otherwise included in the curriculum.
Consult Y. Sheffi and CTL Staff
SCM.THG Graduate Thesis

Prereq: None
G (Fall, IAP, Spring, Summer)
Units arranged
Can be repeated for credit.

Program of research leading to the writing of a master’s thesis on a relevant supply chain management topic. Arranged by the student with a member of the Center for Transportation & Logistics (CTL) research staff.

B. Arntzen