

Data Sciences and Operations

USC Marshall School of Business

DSO 581

Supply Chain Management (section 16288 R)

SPRING 2022 (3.0 units)

When: Tue, Thu 2:00– 3:20 PM

Professor Bala Subramanian

psbalasu@marshall.usc.edu

DSO 581

Who should take this course?

Anybody interested in consulting, marketing, operations, manufacturing, or entrepreneurship. Firms need a sound knowledge of how supply chains work, what are the key metrics, and what incentives have to be provided for the systems to work well.

Course Objectives

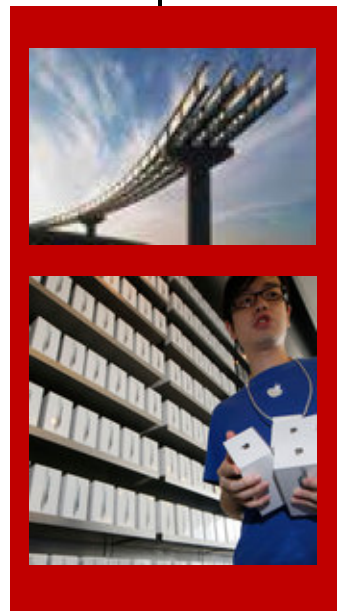
To provide students with an understanding of the intricacies of supply chains. To learn tools for management and improvement of supply chain processes and performance.

Key Concepts

- Inventory management
- Cycle and safety inventory
- Newsvendor model
- Distribution system design
- Supply chain coordination
- Logistics
- Forecasting
- Network design
- Aggregate planning
- Enterprise resources planning
- Just-in-time manufacturing
- Supplier management
- IT in supply chains
- Sustainability and supply chains

Course Description

Supply chains have been in the news a lot since the pandemic ... from shortage of PPE/toilet paper to the more recent backup in the port of LA. We explore important supply chain metrics, the primary tradeoffs in making supply chain decisions, and the basic tools for effective and efficient supply chain management, production planning and inventory control, order fulfillment and supply chain coordination. Several recent trends such as mass-customization, sustainability & supply chain resiliency, and influential innovations such as revenue management, fast fashion, reverse logistics, RFID and SaaS will be discussed.



USC Marshall School of Business

DSO 581 – Supply Chain Management – Syllabus

Day of week:	Sec 16288 Tue and Thu	Time:	2:00-3:20 PM PST
Instructor:	Professor Bala Subramanian	Class sessions:	JKP 112
E-mail:	psbalasu@marshall.usc.edu	Telephone:	310-880-3673
Office Hrs.:	Thu 12-2 PM (email in advance for priority slot)	Grader:	TBD

COURSE OBJECTIVE

Understanding key supply chain foundations is crucial to any company's success. In this required course, graduate students in GSCM program will build a groundwork for understanding the multiple facets of supply chain management.

Upon successful completion of this course, students will be able to:

1. Describe the role of supply chain management in customer experience, cash flow and profitability
2. Explain the key functions in an organization's manufacturing or distribution operations: DESIGN, PLAN, SOURCE, MAKE, DELIVER, and RETURN, as described in the **Supply Chain Operational Reference** (or SCOR) model
3. Define, measure, analyze, improve and control the 'end-to-end supply chain' and its significant impact in all aspects of a business
4. Explain the basic principles of supply chain components and metrics, and the primary cost tradeoffs
5. Describe Collaborative Planning, Forecasting and Replenishment (or CPFR), and Sales and Operations Process (or S&OP)
6. Describe Vendor Managed Inventories (or VMI), Risk Pooling, and Virtual Integration
7. Explain how information technologies have advanced supply chain integration and coordination, particularly supplier management, outsourcing decisions, and the impact of electronic commerce
8. Describe supply chain incentive conflicts and possible solutions to those conflicts

Learning objectives are met through understanding of scientific theories, readings of practical articles, problem solving, and rigorous analysis of case studies. This course **will** significantly enhance a student's tool kit no matter what sector of the economy they may work for, as it concerns over 8% of US GDP. It will be invaluable for anyone seeking a career in consulting or a position in operations, supply chain, marketing or finance in a manufacturing or distribution firm.

DELIVERY MODE

The lectures will incorporate pre-recorded lectures, and facilitated discussions, and your level of preparation before class meetings and active participation in class will make it more fun, and can enhance the group learning process. **Your contribution to class participation would substantially depend on staying on top of pre-readings and weekly pre-recorded lecture sessions** (as reflected in the quality of discussion questions raised, and volunteering to summarize key learnings when requested), **as well as student team presentations of cases and projects.**

COURSE DESCRIPTION

Matching supply with demand is a primary challenge for a firm: excess supply is too costly, inadequate supply irritates customers. Matching supply to demand is easiest when a firm has a flexible supply process, but flexibility is generally expensive. In this course, we will discuss how to assess the appropriate level of supply flexibility for a Global organization and explore strategies for economically increasing a company's supply flexibility based on a worldwide supply strategy, including outsourced manufacturing, supplies, resources, the vast mesh of the complex distribution network that all of the above are spread around.

We will study coordination and incentives across multiple groups or players in a supply chain. While tactical models and decisions are part of this course, the emphasis is more on the qualitative and quantitative insights needed by general managers or consultants. We will demonstrate that companies can use (and have used) the principles from this course to significantly enhance their competitiveness. The course applies best industry practices as well as academic research on Global Supply Chains to current industry problems, and allows students to test their learning through a Global Supply Chain Simulation Game (Harvard) where all the management techniques, tools, methodologies, and core insights are applied, within the context of some 'real-world' organizational dynamics.

A supply chain is a network of all firms and relationships that get a product to market, including the original acquisition of raw materials, production of the item at a manufacturing facility, distribution to a retailer, sale of the finished item to the customer, and any installation, repair, or service activities that follow the sale. How to effectively manage the supply chain is the central issue for all levels of management, regardless of industry. More demanding global markets, a varied multitude of savvy customers, the Internet-driven global economy, and digital technology, growing competitive pressures, globalization (and more recent contra-trends of traditional nationalism, protectionism and localization), and heightened interest in sustainability create new opportunities and challenges for how supply chains should be configured and managed. Many innovations and new business models have emerged, arising from application of information technology and reconfiguration of the supply chain network.

This course will examine how innovators are responding to rapid market changes through smart supply chain design (or redesign) and management. We begin with supply chain basics and primary tradeoffs, understand how to keep score of the effectiveness of supply chain components, then introduce several influential innovations, and how technology is advancing the game. Throughout the course we will cover current topics in the business press pertaining to how leading companies are optimizing and leveraging their supply chains.

COURSE MATERIAL

Digital Course Reader (required):

The course reader (CR) is available with USC Bookstore. It has the following material (in syllabus, a number such as CR5 refers to 5th article in sequence in course reader):

Cases:

1. **Cisco** – Collaborative New Product Introduction
2. Competing Online Models at **Tesco & Ocada**
3. Supply Chain Going Global at **Uniqlo**
4. **Seven Eleven Japan** – Building a Responsive Supply Chain
5. Sustainability at **IKEA Group**
6. **Zappos.com** – Developing a Supply Chain to Deliver Wow!

Articles and Readings:

1. Making the Supply Chain Business Case
2. What everybody needs to know about Supply Chain Management
3. Which Supply Chain design is right for you?
4. The Seven Principles of Supply Chain Management
5. Aligning Supply Chain strategies with product uncertainties
6. Manager's Guide to Forecasting
7. Note on Forecasting
8. Understanding Demand – the case for Sales and Operations Process (S&OP)
9. Chapter 8: Aggregate Planning in Supply Chain Management (pp. 209-230) SCM text by Chopra and Meindl, 6th Edition
10. Ten Procurement pitfalls
11. Building Deeper Supplier Relationships
12. What it takes to re-shore manufacturing successfully?
13. Triple A Supply Chain
14. Managing Supply Chain Inventory – pitfalls and opportunities
15. Note on Managing Inventories – fundamentals
16. Staple yourself to an order
17. Rapid Fire Fulfillment at Zara's
18. Aligning incentives in Supply Chain
19. We're in this Together
20. Can Product Returns Make you Money?
21. Managing product returns for Competitive Advantage
22. Supply Chain Analytics
23. Leading a Supply Chain Turnaround
24. Coronavirus is a Wakeup Call for Supply Chain Management
25. Coronavirus is proving we need more Resilient Supply Chains
26. Coronavirus is Widening the Corporate Digital Divide
27. Delivery Technology is Keeping Chinese Cities Afloat through Coronavirus
28. Ensure that your Customer Relationships Outlast Coronavirus
29. How Western Multinationals are Responding to the Escalating US-China Trade War

This course reader is a curated compilation of “**timeless**” articles and cases that we will use in this class. The insights and concepts that we will draw from these are foundational to any serious practice of Supply Chain Management. Students are **expected** to come prepared to class having reviewed these materials according to the schedule included in the syllabus.

Reference Books (optional):

1. *Supply Chain Management*. Chopra and Meindl. Prentice Hall
2. *Matching Supply and Demand: An Introduction to Operations Management*. Cachon and Terwiesch. McGraw Hill

GRADING

Your grade in this course will be based on individual class participation in case studies, midterm and final tests, individual assignments and simulation game. The breakdown is as follows:

Grading Category	Weight
Individual – Active Class Participation (video on, coming to class prepared, contribution in class meetings, discussion boards (criteria will be how much value you add to discussions)	6%
Team – Short Submission Assignments (5 total)	10%
Team – Case study write-up (6 total)	18%
Midterm (2 hour test at your convenience within 24-hour exam window)	25%
Team Project	10%
Final (2 hour test at your convenience within 24-hour exam window)	25%
Individual – Global Supply Chain Management Simulation	6%

LECTURE DISCUSSIONS/ARTICLE SUMMARIES/CURRENT BUSINESS TOPICS (CLASS CONTRIBUTION)

Each of you (as individuals) will be required to stay on top of pre-recorded class lectures and assigned articles and come prepared to class-meetings. You may be requested in class to summarize the 'key takeaways' from the lectures and pre-readings of the past week. You will also be expected to stay abreast with current business topics in the news and debate the impact of developments on supply chains. All this will keep you informed and ready for the next topics, and ensure that you are tracking along with the material. As an online participant, you also have the option of contributing in the class discussion board (via Blackboard), sharing and commenting on current supply chain topics of interest. Criteria is "are you adding value to class". **6% of the course grade is based on class participation.** And scores in this category can range from 0 to 6%, depending on how you 'show up' in class. Please take this seriously ... this can help raise or lower your final grade.

CASE WRITE UP

- Team sizes: 5 students per team (teams to be decided in week 1, and will stay together for all group cases and team project).
- **Case reports account for 18% of your course grade.**

Each team is expected to submit a "**professionally**" written business case report *prior* to the in-class discussion on the cases (before 10 am PST on the day when the case will be discussed). **The report should include a background, key issues of the case, written answers to the questions on the cases** (typically given at the end of the cases), **overall conclusions and recommendations to management.** Please note that one-two liners of qualitative responses would not suffice for each question. If the cases require rigorous quantitative analysis, you are expected to submit your work, including Excel spreadsheet to show your logic with commentary. There are a total of 6 case write ups throughout the semester referred in the calendar below as C1, C2,...,C6. **One submission per team.**

Experience has shown that students who consistently put in the effort into the case write-ups, homework assignments, and stay current on all lectures and articles in the course reader tend to do well in the exams

and the course overall. Specifically, students who reflect on the material within the context of an industry they are familiar with or interested in, tend to absorb a lot more.

TEAM ASSIGNMENT SUBMISISION

There are 5 short submissions to practice problems that will allow you to exhibit your analytical abilities ... these are referred in the calendar as A1, A2, A3, A4, A5. These submissions must be uploaded to Blackboard before class on the due date and can use Excel ... be sure to submit the files along with your answers. **10% of course grade is based on this. One submission per team.**

MIDTERM EXAM

It counts for **25% of your course grade**. Combination of problems, multiple choice and discussion questions.

FINAL EXAM

It counts for **25% of your course grade**. Combination of problems, multiple choice and discussion questions.

Exceptions on Exams: No exceptions. For conflicts with other classes, reach out early to me and the TA to discuss.

SIMULATION GAME

Harvard's Global Supply Chain Simulation Game (online purchase) counts for **6% of your course grade**.

TEAM PROJECT

Supply Chain Management Team Project and Presentation Instructions

- Team sizes: 5 students per team (teams to be decided in week 1, and will stay together for all group cases and projects).

*Each team will select a **unique** company that they are interested in (could be small, medium, large; US or International; publicly traded or private or non-profit; successful or failing), and understand its supply chain using all the concepts learned in this class. Thoroughly research the firm you have chosen to evaluate, and use the following questions to guide your presentation. It is imperative that you thoroughly address questions 1-5:*

1. What is the firm's overall strategy and mission? Who are their closest competitors? Who are their customers? (Please make this a very brief executive overview!)
2. Why did you choose the firm?
3. How does supply chain management fit into the firm's overall strategy?
4. How are the firm's SCM operations differentiating them/adding value?
5. How does product flow through the pipeline? Who are the players? "Staple yourself to an order ..." (see the article in your course reader). Be sure that this is clearly explained.

Other issues to be addressed (as appropriate):

6. Any evidence of segmentation on supply chain service offerings?
7. Any evidence of partnership/strategic alliances in the firm's supply chain? Does the firm outsource any of its activities?

8. What technologies does your firm use to make supply chain operations more effective (i.e. bar-coding, satellite tracking, RFID, Internet of things, etc.)? How are these things utilized to make the supply chain more efficient and effective?
 9. How does the firm utilize e-business? Does its website enable business to business e-commerce? How do industrial customers use it? (only if relevant – and keep this focused on SCM and not consumer issues)
 10. Any good examples/stories of best practices in popular business press or trade journals/newspapers?
 11. What could the firm be doing better in your opinion (only if relevant)?
 12. Try to integrate key ideas from the lectures and readings into your presentations if and when possible (i.e., apply what you have learned)
- **As soon as possible, but not later than Week 9, each group must present a 1-page Project Proposal with company, deep dive area, and outline of approach.** *Please note: If 2 teams select the same company, the team submitting their proposal earlier will keep their chosen company; whereas the other group will be asked to pick a different company to analyze.*
 - A copy of the PowerPoint presentation (Notes format/3 slides per page) is due at the beginning of class on the day the group presents. Limit to 10-12 slides maximum for the in-class presentation (that will be limited to 20 minutes); however, you could include about 5-6 extra slides in the PPT submission, and also include sufficient detail in the notes section of the slides ... so it makes a complete standalone report of the company's supply chain. In addition, please attach and submit a bibliography that contains a minimum of 10 credible references to your sources to demonstrate the level of research you have done for your presentation. Please make every effort to integrate these references into your presentation to back up your statements. **No separate written report is required.**
 - Groups will present their projects in the last 2 sessions prior to the final exam. Presentations should be about 15 minutes for each team followed by 5-10 minutes of Q&A. Each group may be required to evaluate and rank other group's presentations. The instructor will take into account the class' ranking of the team presentations when final grades are assigned. Students may also be asked to provide peer ratings for team mates for all team efforts. This will also be used to discriminate individual performance on team projects and case reports. The team presentation is worth 50% of your total grade on the project. Please do not hesitate to consult me or TA if you have any questions ... don't wait till the last minute!

NOTICE ON ACADEMIC INTEGRITY

The use of unauthorized material, communication with fellow students during an examination, attempting to benefit from the work of another student, and similar behavior that defeats the intent of an examination or other class work is unacceptable to the University. It is often difficult to distinguish between a culpable act and inadvertent behavior resulting from nervous tensions accompanying examinations. Where a clear violation has occurred, however, the instructor may disqualify the student's work as unacceptable and assign a failing mark on the paper.

Academic dishonesty includes: (*Faculty Handbook*, 1994: 21-22):

- Examination behavior – any use of external assistance during an examination shall be considered academically dishonest unless expressly permitted by the teacher.
- Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, “Behavior Violating University Standards” <https://policy.usc.edu/scampus-part-b/>. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct>. If the words or ideas of another are used, acknowledgement of the original source must be made through recognized referencing practices.
- Other types of academic dishonesty – submitting a paper written by or obtained from another, using a paper in more than one class without the teacher’s express permission, obtaining a copy of an examination in advance without the knowledge and consent of the teacher, changing academic records outside of normal procedures and/or petitions, using another person to complete homework assignments without the knowledge or consent of the teacher.

FOR STUDENTS WITH DISABILITIES

USC is committed to making reasonable accommodations to assist individuals with disabilities in reaching their academic potential. If you have a disability which may impact your performance, attendance, or grades in this course and require accommodations, you must first register with the Office of Disability Services and Programs (www.usc.edu/disability). DSP provides certification for students with disabilities and helps arrange the relevant accommodations. Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or to your TA) as early in the semester as possible. DSP is located in GFS (Grace Ford Salvatori Hall) 120 and is open 8:30 a.m.–5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776. Email: ability@usc.edu.

STATEMENT ON TECHNOLOGY USE

Please note that communication devices such as cell phones, smart phones, tablets, etc. capable of sending and/or receiving electronic communication and all entertainment devices are to be turned off and kept off throughout the class session. Receiving or sending communication or entertainment during class disrupts the learning environment and is rude to those around you.

SUPPORT SYSTEMS

Student Counseling Services (SCS) - (213) 740-7711 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. <https://engemannshc.usc.edu/counseling/>

National Suicide Prevention Lifeline - 1-800-273-8255

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. <http://www.suicidepreventionlifeline.org>

Relationship & Sexual Violence Prevention Services (RSVP) - (213) 740-4900 - 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender-based harm. <https://engemannshc.usc.edu/rsvp/>

Sexual Assault Resource Center

For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: <http://sarc.usc.edu/>

Office of Equity and Diversity (OED)/Title IX compliance – (213) 740-5086

Works with faculty, staff, visitors, applicants, and students around issues of protected class. <https://equity.usc.edu/>

Bias Assessment Response and Support

Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. <https://studentaffairs.usc.edu/bias-assessment-response-support/>

Student Support & Advocacy – (213) 821-4710

Assists students and families in resolving complex issues adversely affecting their success as a student
EX: personal, financial, and academic. <https://studentaffairs.usc.edu/ssa/>

Diversity at USC – <https://diversity.usc.edu/>

Tab for Events, Programs and Training, Task Force (including representatives for each school),
Chronology, Participate, Resources for Students

COURSE CALENDAR DSO 581 (rough outline)

Session	Topic	Pre-Reading	Case/Homework	Due dates per Blackboard
Session 1	Intro to SCM and SCOR model	1. Making the Supply Chain Business Case (CR1) 2. What everybody needs to know about SCM (CR2) 3. The 7 principles of SCM (CR3) 4. Corona – A Wake-up Call for SCM (CR31) 5. Corona – Proves Need for Resilient Supply Chains (CR32)		
Session 2	DESIGN: Supply Chain Designs and Collaborative Product Design	1. Which Supply Chain Design is right for you (CR5) 2. Aligning supply chain strategies with product uncertainties (CR6)	Cisco New Product Introduction (CR4)	- Cisco case report (C1) - Mass customization assignment .. (A1)
Session 3	PLAN 1: Demand Planning – I (Forecasting)	1. HBR: Manager’s Guide to Forecasting (CR7) 2. Note on Forecasting (CR8)	Review Forecasting Basics	- Forecasting assignment (A2)
Session 4	PLAN 2: Demand Planning – II (S&OP Process), Capacity Planning & Aggregate Planning	1. Understanding Demand – the Case for S&OP (CR10) 2. Breakthrough Sales & Operations Process (posted on Blackboard) 3. Aggregate Planning (CR11)	Competing Online Models at Tesco & Ocada (CR9)	- Tesco/Ocada case report (C2) - Aggregate Planning Assignment (A3)
Session 5	SOURCE: Sourcing, Procurement, Purchasing	1. Ten Procurement pitfalls (CR13) 2. Building Deep Supplier Relationships (CR14) 3. How Multi-nationals are responding to US-China Trade War (CR36)	Uniqlo Global Supply Chain Management (CR12)	- Uniqlo case report (C3)
Session 6	MAKE: Manufacturing & Inventory Planning – 1	1. What it takes to re-shore manufacturing successfully (CR15) 2. Triple-A Supply Chain (CR16)	Inventory Problem Solving - I	- Cycle inventory assignment .. (A4)
Session 7	STORE: Inventory in Supply Chains – 2	1. Managing Supply Chain Inventory – pitfalls and opportunities (CR17) 2. Note on Managing Inventories – fundamentals (CR18)	Inventory Problem Solving - II	- Inventory centralization assignment ... (A5)
Session 8	MIDTERM (25%)			
Session 9	DELIVER 1: Order to Cash, Plan to Fulfill	1. Staple yourself to an order (CR20) 2. Rapid Fire Fulfillment at Zara’s (CR21)	Seven Eleven Japan (CR19)	- 7-11 Japan case report (C4)
Session 10	DELIVER 2: Order Fulfillment & Logistics	1. Aligning incentives in Supply Chain (CR23) 2. We’re in this Together (CR24) 3. Delivery Technology keeps Chinese cities afloat through Corona (CR34)	Sustainability at IKEA (CR22)	- IKEA Group case report (C5)
Session 11	RETURN	1. Can Product Returns make you Money? (CR26) 2. Managing product returns for Competitive Advantage (CR27) 3. Ensure your Customer Relationships outlast Coronavirus (CR35)	Zappos.com – Delivering WOW Service (CR25)	- Zappos.com case report (C6)
Session 12	ENABLE: IT, Compliance	1. Supply Chain Analytics (CR28) 2. Leading a Supply Chain Turnaround (CR29) 3. Corona – Widening Corporate Digital Divide (CR33)		
Session 13	SIMULATION (6%)	Global Supply Chain Simulation (HBS) and REVIEW of CLASS RESULTS		
Session 14	Team Project (10%)	Team Project Presentations		
Session 15		Team Project Presentations		
Session 16	FINAL (25%)			

Session 1 – Introduction to Supply Chain Management & the SCOR Model

Discussion Questions

1. What is Supply Chain Management (SCM)? What are the key activities within this function?
2. What is the relationship of Supply Chain with Operations, Marketing, Finance, and other functions of an organization?
3. What are some approaches in analyzing Supply Chain Management processes?
4. What is a SCOR model, and what are its uses? What are the key metrics used in SCOR?
5. How would you make a business case for the discipline of SCM?

Session 2 – DESIGN – Supply Chain Designs and Collaborative Product Design

Discussion Questions

1. How do the features of the “product” you make affect supply chain decisions?
2. How are uncertainties of Demand and Supply of a Product so important in SCM?

Case Study write up to include answers to the following:

CISCO

1. What are the challenges and risks faced by new products in technology companies?
2. What are the risks and benefits of using Chinese contract manufacturing from the start?
3. In selecting Foxconn and expanding its role in the Supply Chain, what were the potential risks and values to Cisco?
4. What should Cisco do to mitigate these risks and ensure successful development and launch of the Viking router?

Mass customization assignment: Visit and explore 3 different mass customization websites for customized products – **Shoes at Nike By You** (nike.com/nike-by-you), **Jeans at Make Your Own Jeans** (makeyourownjeans.com), and **Perfume at MeFragrance** (mefragrance.com).

1. Are there any differences between their approaches to mass customization?
2. Which model is most difficult to implement and why?
3. What are the main difficulties/issues that mass customization imposes on supply chains designed for mass production?

Session 3 – PLAN 1 – Demand Planning and Forecasting

Discussion Questions

1. What are the components of Demand Planning?
2. What is time series forecasting and why is it a key requirement for better supply chain and operating performance?
3. What are some key approaches and tools for forecasting?

Forecasting assignment (posted on Blackboard):

Session 4 – PLAN 2 – Demand Planning II – S&OP Process, Capacity Planning and Aggregate Planning

Discussion Questions

1. What is S&OP process and who should participate in this process?
2. How would you implement an S&OP process in an organization?
3. Based on the decisions made in an S&OP process, how would you generate a Capacity Plan?
4. What is the main purpose of Aggregate Planning? What are the main strategies used in Aggregate Planning ... what are their main differences?
5. How do you choose an aggregate planning objective? Variables? Constraints?
6. How can you solve aggregate planning problems?

Case Study write up to include answers to the following:

TESCO & OCADA

1. As a customer, what do you want from an online grocery store? How do Ocada and Tesco.com perform on these dimensions?
2. Ocada delivers to customers from central, dedicated warehouses, while Tesco uses existing stores to deliver to nearby customers. What are the pros and cons of each model?
3. Does customers' behavior differ when shopping for groceries online vs. offline? If yes, how?
4. Should Tesco worry about Ocada? If yes, what should Tesco do?

Aggregate Planning Assignment (posted on Blackboard):

Session 5 – SOURCE – Sourcing, Procurement, Purchasing

Discussion Questions

1. What are the key functions of Procurement in a Supply Chain, and what are some of the known pitfalls in this function to be watchful of?
2. What are some leading practices in building deep supplier relationships?
3. What is a bidding process and how is an RFP/RFQ conducted?
4. What is spend analysis and how is it done?

Case Study write up to include responses on the following:

UNIQLO

1. What are the pros and cons of alternate models of supply chain orchestration ... e.g. hybrid governance model vs. vertical integration?
2. What are some unique elements of a "born-global" supply chain?
3. What are some critical differences in the Supply Chain approaches of Uniqlo vs. Zara and H&M?
4. How scalable/replicable are Uniqlo's Asian SCM practices as it aspires to expand into Europe and North America?

Session 6 – MAKE – Manufacturing and Inventory Planning - 1

Discussion Questions

1. What is re-shoring of manufacturing in the United States and what are its key drivers?
2. What are the implications of the three A's in supply chain management and manufacturing planning?
3. What are some ways that inventory can be classified?
5. What are inventory costs and the trade-offs that exist among them?
6. What is A-B-C analysis of Inventory Planning?
6. What is Economic Order Quantity (EOQ) and how is it computed?

Cycle Inventory Assignment (posted on Blackboard):

Session 7 – STORE – Inventory Management in Supply Chains - 2

Discussion Questions

1. How do manufacturing set up times affect inventory?
2. What is safety stock and how do we plan for safety stock in inventory planning? What are the factors for calculating safety stock?
3. What is the newsboy formulation and when is it used?
4. What is periodic review and continuous review of inventory and under what conditions would you pick one versus the other?
5. How do we optimize the placement of buffer stocks in a supply chain?
6. How to identify when to order and how much to order, with a particular emphasis on the economic order quantity?
7. How to differentiate the various inventory flow patterns?
8. How to discuss special concerns with inventory management?
9. How to identify several contemporary approaches to managing inventory?

Inventory Centralization Assignment (posted on Blackboard):

Session 8 – Midterm Review and MIDTERM

Session 9 – DELIVER 1 – Order to Cash, Plan to Fulfill

Discussion Questions

1. What are the ten functions in an organization that an order typically crosses as one tries to fulfill an order? How best to collaborate and ensure perfect order fulfillment?
2. Define Perfect order fulfillment, order fulfillment cycle time, and supply chain flexibility metrics.
3. What unique approach does Zara use to fulfill an order?

Case Study write up to include responses on the following:

SEVEN ELEVEN JAPAN

1. A convenience store attempts to be responsive and provide customers what they need, when they need it, and where they need it. What are some different ways that a convenience store supply chain can be responsive? What are some risks in each case?
2. Seven-Eleven's supply chain strategy in Japan can be described as attempting to micro-match supply and demand using rapid replenishment. What are some risks associated with this choice?
3. What has Seven-Eleven done in its choice of facility location, inventory management, transportation, and information infrastructure to develop capabilities that support its supply chain strategy in Japan?
4. Seven Eleven does not allow direct store delivery (DSD) in Japan with all products flowing through its distribution center. What benefit does Seven-Eleven derive from this policy? When is DSD more appropriate?
5. What do you think about 7dream concept for Seven-Eleven Japan? From a supply chain perspective, is it likely to be more successful in Japan or the United States? Why?
6. Seven-Eleven is attempting to duplicate the supply chain structure that has succeeded in Japan in the US with the introduction of CDC's. What are the pros and cons of this approach? Keep in mind that the stores are also replenished by wholesalers and DSD by manufacturers.
7. The US has food service distributors like McLane that also replenish convenience stores. What are the pros and cons to having a distributor replenish convenience stores versus a company like Seven-Eleven managing its own distribution function?

Session 10 – DELIVER 2 – Order Fulfillment and Logistics

Discussion Questions

1. How is Order Management and Service Management related?
2. How is 'customer service' measured in Logistics?
3. What is a Service Level Agreement (SLA), and how to determine optimum service levels?
4. How do you align incentives in a supply chain for better order fulfillment?

Case Study write up to include responses on the following:

IKEA GROUP

1. How would you assess Ikea's People and Planet Positive sustainability plan? Is the plan likely to help Ikea transform its business? Are the plan's targets too limited, appropriate, or too ambitious?
2. How do you feel about Ikea's progress in implementing this plan?
3. How does Ikea's sustainability strategy align with its business model? What are some overlaps and conflicts?
4. Which options should Ikea Group pursue to address Wood Supply Chain sustainability? Which has the highest leverage for Ikea?

Session 11 – RETURN

Discussion Questions

1. Can product returns make you money? If so, how?
2. How would you manage returns for competitive advantage?
3. Define 'reverse logistics'. Why is there a need to plan 'reverse' logistics?
5. How is Aftermarket and Spare Parts a part of logistics planning?

Case Study write up to include responses on the following:

ZAPPOS.COM

1. What are Zappos' core competencies and sources of competitive advantage? How sustainable are they? What role does corporate culture play in these questions?
2. How important is next-day air shipment to the customer experience? Is it worth the cost? How might you change it in the cost-conscious environment facing the company in late 2008?
3. How would you expand the business? Would you add more products, more geographies, or by selling private labels? As you expand the business, how can the company become more profitable, particularly in light of the costs associated with the focus on service?
4. How would you expect the environment of a more cost-conscious consumer to affect Zappos' business? What can Zappos do in such an environment to maintain sales growth?

Session 12 – ENABLE – IT and Compliance

Discussion Questions

1. Define the elements of decision making in Supply Chain that rely heavily on Information Technology?
2. What are some 'modules' of software out there that help with logistics decision making?
3. What are the key takeaways from Whirlpool's implementation experience of Supply Chain IT solutions?

Session 13 – GLOBAL SUPPLY CHAIN SIMULATION and Review

This *Global Supply Chain Management Simulation* includes an updated interface and modernized features for a smartphone product line managed by students. In this single-player simulation, students set up a global supply chain to deliver 2 models of mobile phones. The simulation takes place over 4 years and students visit 4 different "rooms" (design room, forecast room, production room and board room) each year. Students choose new mobile phone features and forecast demand. They choose among a geographically diverse group of suppliers, all with different lead times, and contract for production. The goal is to understand how to balance competing priorities and a supply chain that is flexible enough to react quickly to unexpected shifts in demand while remaining profitable. A scorecard keeps track of yearly profits and number of votes of confidence from board members. You will work in the same team as your cases and project.

Session 14 & Session 15 – Team Project Presentations

Session 16 – FINAL EXAM