

# SDNY BUSN 3380 Managing Global Supply Chains

## **CAPA SYDNEY PROGRAM**

## **Course Description**

Supply chain management (SCM) is becoming more and more important for businesses as the scope to outsource globally increases. Companies now have to deal with emerging countries just beginning to compete in global markets. A supply chain is the network of entities from the raw material supplier at one end, going through the plants, warehouses and distribution centres, to retailers, and sometimes the final customer, at the other end. Supply chain management is the integrated management of the flow and storage of materials, information and funds between the entities comprising the supply chain. The main objective of the supply chain is to create and enhance value as the product, in its intermediate or final form, progresses through the network. Supply chain management is by its very nature an international (global) discipline.

The focus of this course will be on key issues within operations, which are of relevance in a firm's ability to remain competitive in a global economy. Examples of companies collaborating across the globe will be used in the teaching and learning of SCM. We focus mainly on the operational and tactical aspects of managing the network of multiple facilities, but we will also investigate their strategic implications. Factors such as legal, ethical, operational, venture risk and reliability will be considered in addition to specialized topics in supply chain management within a global environment such as:

- Outsourcing and offshoring
- Role of information technology in operations
- Designing and managing global supply chains
- Assessment & Grading Managing inventory and global logistics
- Sustainability in supply chains and supply chain management

### Localized Context

Students undertaking this course in Sydney will be encouraged to take a regional perspective on topics. Asia Pacific countries play a leading role in global supply chains due to low cost and increasing specialization and capability expansion. The course will draw on case studies from the Asia Pacific region and look at emerging trends at a regional and individual country level in relation to the key drivers of successful supply chain

management. In addition, we will examine the structure of the Australian economy, in particular the dependence on mining and services (for GDP, employment, and trade), and the decline and offshoring of manufacturing capability. Australia's current and future position, not only in regional and global supply chains but also global value chains will be assessed in the light of these trends.

## **Course Aims**

The aim of this course is to equip students with an understanding and foundational knowledge of the analytical frameworks, tools, and methodologies for developing, implementing, and evaluating effective strategies and tactics for managing operations as a key driver of an organization's success in the global economy. In addition, students will develop an understanding of the dynamics and opportunities in the Asia Pacific region for global companies.

## **Requirements and Prerequisites**

There are no prerequisites. Students from a variety of backgrounds and interests are encouraged to take this class.

Supply Chain Management (SCM) deals with a broad spectrum of fields including procurement, inventory, and logistics. It is a part of Management, Scientific and Technical (MST) consulting industry that has been ranked among the fastest growing industries by the US Bureau of Labour Statistics. The "Management Analyst" category is wider than MST consultants and it includes SCM jobs. The bureau forecasts the need for management analysts to grow about 14% from 2020 to 2030. About 99,400 openings for management analysts are projected each year, on average, over the decade. Many of those openings are expected to result from the need to replace workers who transfer to different occupations or exit the labor force, such as to retire. In 2020 there were 907,600 management analysts specializing in management, scientific and consulting services earning an average salary of \$US87,660.

## Student Learning Outcomes (SLOs)

Following completion of this course, students should be able to:

- Explain how analytical methods and tools are used to design supply chain networks, create global supply chain business processes to manage the networks, embed continuous improvement in global supply chain operations;
- 2. Demonstrate an understanding and appreciation of the drivers and metrics for supply chains;
- 3. Discuss and evaluate key decision criteria for sourcing and outsourcing in the supply chain;
- 4. Demonstrate an understanding of the use of technology in managing the supply chain;
- 5. Develop a strategy for sustainability in the supply chain and demonstrate an appreciation of key sustainability issues in urban logistics and supply chain management.

## **Developmental Outcomes**

Students should demonstrate: responsibility & accountability, independence & interdependence, goal orientation, self-confidence, resilience, appreciation of differences.

## **Class methodology**

Classes will be conducted in blended learning mode, that is a mix of classroom, online and experiential learning. Class time will be dedicated to developing an understanding of the core content drawing on the textbook and supplementary readings, and application through group presentation and discussion to case studies. Online learning will focus on development of the final research paper and weekly online quizzes (non-cumulative). Experiential learning will comprise individual self-directed learning (under the guidance of your Faculty) exploring live examples of key supply chain issues and their solutions through visits to global businesses in Sydney and/or guest speakers. The GNL component of the course will involve supply chain simulations within a real business environment to demonstrate the theoretical constructs explained in the course.

#### Field Component(s)

CAPA provides the unique opportunity to learn about the city through direct, guided experience. Participation in the field activities for this course is required. You will actively explore the Global City you are currently living in. Furthermore, you will have the chance to collect useful information that will be an invaluable resource for the essays/papers/projects assigned in this course. A 300-word paper on an aspect of the field trip will form part of the Presentation section. Field components for this class will be announced in class during the semester.

#### **Assessment & Grading**

Task		Weighting	SLOs
1.	Case study presentations	15%	2, 3
2.	Online quizzes (to midterm)	15%	1, 2, 4
3.	Final exam	15%	1, 2, 4
4.	Multi-echelon S&OP	25%	2, 3, 4, 5
5.	Research paper	30%	2, 3, 4, 5

#### 1. In class case study presentations (15%)

#### Due: Session 2 - TBA

The case study presentations will be done either individually or in small groups depending on the class size. Your Faculty at the start of the semester will identify the case studies. The group presentation, 20 mins, will analyse the case and make specific recommendations on the course of action that you would recommend to the firm(s). As you write the brief you are writing an argument to be evaluated by your superiors – your career, your standing in the company as well as the outcome of the case's impact to the company is at STAKE. The presentation should be accompanied by a 500 word briefing paper submitted to your Faculty at the end of the presentation. The grading of the briefs will be based upon the quality of the analysis and argument made. In preparing your presentation, and writing the brief, assume you are a consulting company that has been called in by the management to analyse a business situation and make appropriate recommendations.

The second part of the presentation section will involve the submission of a 300-word paper on an aspect of the field trip. The submission should detail one or more aspects of supply chain theory observed during the field trip that you felt the business was doing well or badly. Higher marks will be given to those who clearly explain the "why" of their argument.

#### 2. Online quizzes (15%)

#### Due: Sessions 2-6

The weekly quizzes will consist of multiple-choice questions and will be completed and automatically graded online. The final overall grade will be the average of all quiz grades.

#### 3. Final exam (15%)

#### Due: Session 12

The final exam will consist of multiple-choice questions covering material from sessions 8-11. The exams will be automatically graded online.

#### 4. Multi-echelon S&OP (25%)

#### Due: Sessions 6 & 11

Sales and Operations Planning is generally taught from the perspective of a single business entity. This GNL exercise considers a multi-national corporation with production facilities in three countries and world-wide distribution.

GNL teams will work together to develop a recommended manufacturing model across three sites and monthly timetable for a multi echelon S&OP process.

#### 5. Research Paper (30%)

#### Due: Session 12

The research paper is a 2500 (+/- 10%) word essay due in Session 12. Select any one of the topics that we will be covering in this course. Bear in mind that these topics/chapters are rather broad and you will need to narrow down your research topic significantly. You should identify a small aspect of the theoretical or methodological discussion that interests you and focus sharply on it. In other words, you should not be providing a general overview of the chapter(s).

#### Localized Context

The students are required to identify relevant research paper topics within the localized context of the Australia and the Asia Pacific region to benefit from their presence in Australia and the region. These research paper topics should be discussed with the lecturer in advance.

The next step is to identify a case study or identify an accessible data set that fits your selected topic. You may choose current or recent global supply chain issues or events or alternatively examine an event/s from the perspective of recent history and forecasted trends.

The final step will be to provide a thorough analysis. How does the case study or evidence fit into the theoretical or methodological discussion? Are the facts consistent with the theory? Explain why (or why not). What lessons did you learn from this project? This analysis will carry the highest weight for this assignment.

To obtain an 'A' grade, the submission will have to meet three requirements: (1) theoretical / methodological discussion; (2) good presentation of case study / data set; and (3) thorough analysis. Any submissions that do not meet all the criteria will be downgraded.

You will provide 2 status updates (online) through the term on the progress you have made to date on your projects. This will enable the lecturer to provide you with the necessary guidance and feedback.

DESCRIPTOR	ALPHA	NUMERIC	GPA	REQUIREMENT/EXPECTATION
Outstanding (High Distinction)	A	93+	4.0	Maximum grade: In addition to description for grade "A-", the student shows detailed understanding of materials about which he or she can show independent analytical ability. This means the ability to question an issue from different perspectives and evaluate responses in an objective manner.
Excellent (Distinction)	A-	90 - 92	3.7	Student shows understanding of literature beyond the textbook/class hand-outs/class notes, and the work shows a high level of independent thought, presents informed and insightful discussion and demonstrates a well-developed capacity for evaluation.
Very good (High Credit)	B+	87 - 89	3.3	Shows evidence of a capacity to generalise from the taught content, or the material in literature, or from class lectures in an informed manner. Also, the work demonstrates a capacity to integrate personal reflection into the discussion and an appreciation of a range of different perspectives.
Good (Credit)	В	83 – 86	3.0	The work is well organised and contains coherent or logical argumentation and presentation.
Good (Credit)	В-	80 - 82	2.7	Student shows understanding of literature beyond the textbook and/or notes, and, there is evidence of additional reading.
Average (Good Pass)	C+	77-79	2.3	The work demonstrates a capacity to integrate research into the discussion and a critical appreciation of a range of theoretical perspectives. Also, the work demonstrates a clear understanding of the question and its theoretical implications and demonstrates evidence of additional reading.
Adequate (Pass)	С	73 - 76	2.0	Shows clear understanding and some insight into the material in the textbook and notes, but not beyond. A deficiency in understanding the material may be compensated by evidence of independent thought and effort related to the subject matter.

Below Average (Borderline Pass)	C-	70-72	1.7	Shows some understanding of the material in the textbook and notes. A deficiency in any of the above may be compensated by evidence of independent thought related to the subject matter.
Inadequate (Borderline Fail)	D+	67 - 69	1.3	Fails to show a clear understanding or much insight into the material in the textbook and notes.
Poor (Fail)	D	60 - 66	0.7 – 1.0	Besides the above for D+, student has not shown interest or engagement in the class work or study.
Poor (Fail)	F	<60	0	Shows little or no understanding of any of the material.
Incomplete	I			Please see CAPA policy in the Academic Handbook.

## **Course Materials**

**Required Readings** 

The following text is required for the course:

• Chopra, S., Meindl, P. (2015). Supply Chain Management – Strategy, Planning, and Operation. Pearson: London sixth edition

It is essential that all students have access to the above textbook.

**Recommended Reading** 

• Alliance for Supply Chain Innovation

http://www.asci.com.au/

• Supply Chain Asia Magazine

http://www.supplychainasia.org/

Supply Chain Management Review

http://www.manufacturing.net/scm/index.asp

• Supply Chain Management Journal

http://www.oberon.emeraldinsight.com/vl=761024/cl=49/nw=1/rpsv/scm.htm

Stanford University Global Supply Chain Forum. Research white papers

http://www.stanford.edu/group/scforum/Welcome/

Supply Chain Management Forum

http://www.supplychain-forum.com

• Supply Chain Council

http://www.supply-chain.org

• World Bank Logistics Performance Index

http://lpi.worldbank.org/

## Journals

- Californian Management Review
- European journal of purchasing and supply management
- Harvard Business Review
- International Journal of Operations and Production Management

- International Journal Of Physical Distribution And Logistics Management
- International Journal of Quality and Reliability Management
- International Journal of Service Industry Management
- Journal Of Industrial Technology
- Journal of Operations management
- Journal of Operations Research
- Journal of Purchasing and Supply Management
- Journal of Quality Management
- Management Science
- Operations Management Review
- Production and Inventory Management Journal (APICS)
- Sloan Management Review
- The Quality Management Journal

## **Weekly Schedule**

The framework below indicates sessions at CAPA. The schedule may be revised as the term progresses to incorporate field trips and guest speakers. Weekly class slides and relevant additional readings will be posted online. The students are expected to complete all weekly readings (textbook and additional) prior to the weekly session.

Weekly chapter references are from the required textbook.

Suggested case studies for group presentations are indicated. Students may choose an alternative in consultation with Faculty.

WEEK	Session topics	Class activities
1	Session 1 - Introduction to Supply Chain Management	Class
	Introductions, student interests, relevant prior coursework & experience	Introductions
	Course map, format, required work and assessments	Careers in SCM
	Definition, importance, processes, and examples of supply chains	Course introduction
	Careers in SCM	Lecture

	Required Reading Chapter 1: Understanding the Supply Chain Baldwin, R. 2012, Global Supply Chains: Why They Emerged, Why They Matter, and Where They Are Going, Working paper FGI – 2012 – 1: http://www.asiaglobalinstitute.hku.hk/en/wp- content/uploads/2016/06/richard-baldwin.pdf	
2	Session 2 - Strategy and product/service alignment Competitive and supply chain strategies align with product/service objectives Drivers and metrics including financial, facilities, inventory, transportation, information, sourcing, and pricing	Class Group presentation Discussion Lecture Online quiz
	Required Reading Chapter 2: Supply Chain Performance – Achieving Strategic Fit and Scope Chapter 3: Supply Chain Drivers and Metrics "The end of cheap China – What do soaring Chinese wages mean for global manufacturing?" The Economist, March 10, 2012 Retrieved September 4 2015 from <u>http://www.economist.com/node/21549956</u>	
3	Session 3 - Network design The role of distribution networks in the supply chain. Making design decisions, theory and practice. The role of network design in the supply chain Making design decisions – theory and practice Facility location and capacity allocation	Class Group Presentation Discussion Lecture Online Quiz
	Required Reading Chapter 4: Designing Distribution Networks and applications to Online Sales Chapter 5: Network Design in the Supply Chain Carsten, P., (2013). Alibaba to transform China's 'e-conomy' with a \$500 billion marketplace. Reuters. Retrieved 28 May 2014 from	

	http://www.reuters.com/article/2013/ 10/13/us-alibaba-retail-idUSBRE99C0BP20131013	
4	Session 4 – Off-shoring, on-shoring, re-shoring	Class
	Networked class with London: "Outsourcing, off-shoring and sustainability;	Group Presentation
	the case of fast fashion industry."	Discussion
	Globalization impacts	Lecture
	Making the decision: cost, risk	Networked video
	On shoring vs. off-shoring and uncertainty – theory and practice.	GNL 1 release
		Online Quiz
	Required Reading	
	Christopher, M., Peck H. and Towill, D. 2006, 'A taxonomy for selecting	
	global supply chain strategies', International Journal of Logistic Management, 17(2): 277-287 (compulsory for the GNL)	
	Chapter 6: Designing Global Supply Chain Network	
	KPMG March 2017 The reshoring opportunity. Could Brexit disruption	
	fire up UK factories? via:	
	https://home.kpmg.com/content/dam/kpmg/uk/pdf/2017/03/Brexit- and-reshoring.pdf	
	Case studies: Pacific Brands offshoring. "Time to re-evaluate Chinese	
	manufacturing? PacBrands fails to deliver". Crikey.com. Retrieved 28 May	
	2014 from http://www.crikey.com.au/2011/03/17/time-to-re-evaluate-	
	chinese-manufacturing-pacbrands-fails-to-deliver.	
	The Economist 19 January 2013, Here, There and Everywhere, Special	
	Report on Outsourcing and Offshoring, via:	
	https://www.economist.com/special-report/2013/01/19/here-there- and-everywhere	
5	Session 5 – Demand Forecasting and aggregate planning	Class
	Role of forecasting	Discussion
	Components of forecasting	Lecture
	Role of IT	Online Quiz
	Forecasting in practice	
	Role of aggregate planning	

	Aggregate planning problem	
	Role of IT	
	Aggregate planning in practice	
	Required Reading	
	Chapter 7: Demand Forecasting in a Supply Chain	
	Chapter 8: Aggregate planning in a Supply Chain	
6	Session 6 - Sales and Operations Planning	Class
	Managing supply and demand	Group presentation
	Predictable variability	Lecture
	Planning in practice	S&OP Basics
	End-to-end supply chain co-ordination	GNL 2 release
	Networked class with London: "Basic Sales and Operations Planning Processes"	Online quiz
	Required Reading	
	Chapter 9: Sales and Operations Planning – Planning Supply and Demand in a Supply Chain	
	Chapter 10: Co-ordination in a Supply Chain	
	Grimson, J.A. and Pyke, D.F. 2007, 'Sales and operations planning: an exploratory study and framework', The International Journal of Logistics Management 18(3): 322-346 ( <i>compulsory for the GNL</i> )	
7	Mid-Semester Break	
8	Field Class: Australian Steel Industry	Field Class
		GNL 1 due
9	Session 7 – Cycle and safety Inventory	Class
	Cycle inventory and related costs	Lecture
	Promotion and discounting effects and strategies	
	Safety inventory and appropriate level	
	Dealing with supply uncertainty	

	Aggregation vs. distribution	
	Replenishment policies	
	Required Reading	
	Chapter 11: Managing Economies of Scale in a Supply Chain: Cycle	
	Inventory	
	Chapter 12: Managing Uncertainty in a Supply Chain: Safety Inventory	
10	Session 8- Product availability and pricing management	Class
	Determining the optimal level of product availability	Lecture
	Improving supply chain profitability through optimal services levels	Research Paper
	Allocation of limited supply capacity	consultation
	Managerial levers to balance costs	
	Pricing and revenue management under conditions of limited capacity and	
	inventory	
	Required Reading	
	Chapter 13: Determining the Optimal Level of Product Availability	
	Chapter 16: Pricing and Revenue Management in a Supply Chain	
11	Session 9 – Transportation and IT in the Supply Chain	Class
	Modes of transportation and performance characteristics	Group presentation
	Infrastructure and Government policies	Lecture
	Designing the transport network	Case study
	Role of IT	Lecture
	Risk management	GNL 2 due
	Decisions in practice	
	Functions: customer relationship management, internal supply chain	
	management, supplier relationship management, transaction	
	management, risk management.	
	Looking to the future.	
	Required reading	

	Chapter 14; Transportation in a Supply Chain	
	Online chapter: Information technology in a supply chain	
	Case study: India and the domestic food supply chain. "The journey of an Indian onion – Lord of the Rings". The Economist, December 14, 2013	
	Case study: Australian meat livestock live export. "Ways to improve export of livestock sought." Australian Financial Review Print Edition, 17 April 2014	
	Case study: Australian rail infrastructure and food supply chain. "Decrepit rail network threatens food boom." Australian Financial Review Print Edition, 26 March 2014	
12	Session 10-Sourcing	Class
	Role of sustainability and key metrics	Group presentation
	Closed loop supply chains	Lecture
	CSR in the supply chain	Guest speaker
	Required Reading	Course survey
	Chapter 15: Sourcing Decisions in a Supply Chain	
	Case study: Toyota safety recalls 2010. "The machine that ran too hot" –	
	The Economist February 24, 2010.	
	http://www.economist.com/node/15581072	
13	Session 11 – Sustainability and Corporate Social Responsibility (CSR) in	Class
	the supply Chain	Group presentation
	Role of sourcing (procurement) in the supply chain	Lecture
	Outsourcing decisions and factors affecting	GNL wrap up
	Managing supplier performance and total cost	World Class S&OP
	Managing risk	GNL review
	The sourcing process – auctions and negotiations	
	Required Reading	
	Chapter 17: Sustainability and the Supply Chai	

Case study: Apple in China. "When the jobs inspector calls – working conditions in factories." The Economist, March 31, 2012	
Case study: Huawei Supply Chain: <u>https://www.huawei.com/au/about-</u> huawei/sustainability/win-win-development/develop_supplychain	

## Attendance, Participation & Student Responsibilities

**Attendance:** CAPA has a mandatory attendance policy. Attendance is taken at the beginning of every class. The first time a student has an unexcused absence for a class, their grade will not be impacted. The second time a student has an unexcused absence in that class, it will result in a 3 percent reduction of the final grade (for example: an A-[92] will become a B+ [89]). The student will be placed on academic probation at this time. Three unexcused absences per class will result in failure of the course. A pattern of three absences in more than one course will result in dismissal from the program. If a student arrives late for a scheduled class, it is the student's responsibility to notify the instructor to ensure that they are added to the class register for the session.

**Excused Absences:** Absences are only excused for medical reasons, for a family emergency or for a religious holiday. To request an excused absence, students must contact excused.absence@capa.org ahead of time and provide evidence (e.g. a doctor's note) of the reason for their absence, otherwise the absence will not be excused. Even if the student knows the absence will not be excused, the student should still contact CAPA to inform CAPA they will not be in class. In addition to contacting excused.absence@capa.org, it is the responsibility of the student to contact their instructor and make up any missed assignments.

**Class Participation**: Students are expected to participate in all classes and to participate actively and critically in class discussions, and the participation portion of the class will be graded accordingly. Students must read assigned reading BEFORE the class and arrive at the session on time. Participation is a vital part of students' grade: students are expected to participate in class and in online forums and discussions in a critical and evaluative manner; to interact with the faculty and fellow students with respect and tolerance; and to actively engage in discussion. Derogatory or inflammatory comments about the cultures, perspectives or attitudes of others will not be tolerated.

Academic Accommodations: Any student who feels they may need an accommodation based on the impact of a physical, psychological, medical, or learning disability should contact the instructor and/or the Director of Academic Affairs privately to discuss their specific needs. Students requesting accommodations must have their home institution's Disabilities Services or an appropriate licensed professional or healthcare provider submit official documentation directly to CAPA in a timely manner outlining their specific needs. If the documentation is submitted by a provider other than the home institution's Disabilities Services, it must be someone familiar with the history and functional limitations of the student's disability (not a relative or family member of the student). Any required accommodations will be approved by CAPA's Vice President for Academic Affairs, in consultation with relevant Academic Directors, before being relayed to faculty. Any student who requires an accommodation based on official documentation should also discuss their needs directly with their instructor.

Academic Integrity: A high level of responsibility and academic honesty is expected. Because the value of an academic course depends upon the absolute integrity of the work done by the student, it is imperative that a student demonstrates a high standard of individual honor in their scholastic work and class behavior. Plagiarism, self-plagiarism and cheating can result in dismissal from the program. Self-plagiarism, copying an assignment entirely or partially to submit to a different class in an attempt to receive credit twice for one piece of work is unacceptable and considered cheating by duplication. Students risk receiving a "0" for any assignments in which they have duplicated their own work. All substantial writing assignments will be run through the plagiarism checking software Turnitin when submitted via CANVAS. See CAPA's Academic Standards and Policies for more information and resources on plagiarism.

**Sexual Misconduct, Required Reporting, and Title IX**: CAPA: The Global Education Network is committed to encouraging a safe and healthy environment at our CAPA centers. This commitment includes the understanding of, and applicable adherence to, the guidelines outlined in Title IX of the Education Amendments of 1972. Title IX necessitates that US universities provide equity in all educational programs and activities without sex discrimination. CAPA understands the implications of Title IX compliance for our institutional partners and thus endeavors to support this compliance as a vital aspect of partnership. The safety and security of all students during a program is a matter of crucial importance to CAPA. To facilitate this, CAPA encourages students to openly disclose any and all information that is Title IX relevant so that CAPA staff can provide support and connect students with appropriate resources. Because students may not understand the implications of Title IX abroad, CAPA will work to advise students about the resources available through Title IX and explain the importance of compliance in Title IX reporting. CAPA will work to build student confidence in CAPA's status as a mandated reporter by outlining the advantage of disclosure for the student, reassuring them that any information disclosed will not be used in an inappropriate manner, and stressing that individuals will only be informed on a need-to-know basis.

**Use of Electronic Equipment in Class:** All devices such as laptops, i-pods, i-pads, netbooks, notebooks and tablets, smartphones, cell phones, etc. are NOT allowed unless students have express permission from the faculty, or they have been instructed to do so. If students require an accommodation to use any type of electronic equipment, they must inform the Director of Academic Affairs at the beginning of term.

**Use of Electronic Translators:** In language courses students are NOT allowed to use electronic translators for writing texts in the target language: those submitting compositions and texts of whatever kind translated in such a fashion will receive a "0" (F) grade for the course.

Late Submission: Late submission of papers, projects, journal entries, pieces of homework and portfolios is only permitted with prior approval. A request for an extension must be made to the relevant faculty member no later than two days prior to the due date. Late submission without prior approval will result in a 3 percent per day deduction of the final grade. In either case, work cannot be submitted after feedback has been provided to the rest of the class on the relevant assessment or one week after the due date whichever comes first, after which point a grade of "O" (F) will be given for the assessment.

**Behavior during Examinations:** During examinations, students must do their own work. Unless specifically instructed by the lecturer or instructor, talking during an exam is not permitted, and students may not access online resources of any kind, compare papers, copy from others, or collaborate in any way. Any failure to abide by examination rules will result in failure of the exam and may lead to failure of the course and disciplinary action.