UNSW Course Outline

INFS2702 Supply Chain and Logistics Design - 2024

Published on the 25 Aug 2024

General Course Information

Course Code : INFS2702
Year : 2024
Term : Term 3
Teaching Period : T3
Is a multi-term course? : No
Faculty : UNSW Business School
Academic Unit : School of Information Systems and Technology Management
Delivery Mode : In Person
Delivery Format : Standard
Delivery Location : Kensington
Campus : Sydney
Study Level : Undergraduate
Units of Credit : 6

<u>Useful Links</u>

<u>Handbook</u> <u>Class Timetable</u>

Course Details & Outcomes

Course Description

This is an intermediate (Level 2) Information Systems (IS) course. This course offers a broad
examination of the key issues involved in the management of supply chains within the broader
framework of an organisation's overall competitive strategy, including communication, sourcing,

inventory management, warehousing, and logistics. Students will learn the interconnectedness of business units and organisations within the supply chain. The COVID-19 pandemic has taught organisations the importance of logistics and supply chain management as a source of critical competitive advantage. In the post-pandemic future, logistics and supply chain management will represent a greater challenge as well as a tremendous opportunity for most organisations.

Course Aims

The aim of this course is for students to understand important concepts in supply chain network design, sourcing of materials, the relationships with suppliers and customers, the use of information from end consumers, the coordination of information flows and the ways in which incentive systems can be arranged so that the overall performance of the chain is optimised. Students will learn to evaluate inventory and procurement decisions and learn about ethical and sustainable issues in global supply chains.

Relationship to Other Courses

Supply chain management is a fast growing business area in today's business world. Global companies, such as HP, Wal-mart, and P&G, have heavily invested in supply chain management in order to gain competitive advantages. The coordination and integration of the flows of products, information, and funds within and across companies are critical in effective supply chain management. This course addresses both the general interactions of business units within a supply chain, and some logistics issues such as transportation and procurement.

The growing importance of supply chain management is also evident due to increasing use of outsourcing as firms focus on the parts of the value chain at which they excel. Web or Internet plays an important role in processing the information of products and services exchanged within the supply chain, a process commonly known as e-commerce. Therefore, courses about e-commerce have a direct application on supply chain management.

To improve the performance of a supply chain, one must streamline business operations in the firms. Therefore, understanding business operations is fundamental to design and planning of supply chains. INFS3604 Business Process Management covers more fundamental operational topics. The knowledge of operations management provided by INFS3604 can add value to supply chain performance.

Overall, the course aims to: develop knowledge about the interconnectedness of business units and organizations within the supply chain; develop knowledge about the strategies, such as

information sharing and contracts, that can be used to improve the performance of a supply chain; enhance analytical skills and capability to synthesize information from several perspectives; enhance communication, reflection and teamwork skills.

Course Learning Outcomes

Course Learning Outcomes	Program learning outcomes
CLO1 : Explain and analyse how logistical decisions (e.g., sourcing, facilities, inventory, and transportation) impact the performance of the firm as well as the entire supply chain.	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO6 : Global and Cultural Competence
CLO2 : Explain and analyse how cross-functional drivers, such as sourcing, pricing and information technology, may be employed to improve the performance of a supply chain.	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO6 : Global and Cultural Competence
CLO3 : Explain and analyse inventory issues and recognise the role of inventory in supply chain operations.	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO6 : Global and Cultural Competence
CLO4 : Explain and analyse the bullwhip effect of a supply chain, including its primary causes and the strategies to dampen the effect.	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO3 : Business Communication • PLO6 : Global and Cultural Competence
CLO5 : Explain and analyse the strategies for managing service supply chains including service capacity, demand, and customer waiting.	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO6 : Global and Cultural Competence
CLO6 : Interact and collaborate effectively with team members to achieve group objectives.	• PLO3 : Business Communication • PLO4 : Teamwork • PLO6 : Global and Cultural Competence

Course Learning Outcomes	Assessment Item
CLO1 : Explain and analyse how logistical decisions (e.g., sourcing, facilities, inventory, and transportation) impact the performance of the firm as well as the entire supply chain.	• Participation • Individual Assignment • Group project • Final Exam
CLO2 : Explain and analyse how cross-functional drivers, such as sourcing, pricing and information technology, may be employed to improve the performance of a supply chain.	• Group project • Final Exam
CLO3 : Explain and analyse inventory issues and recognise the role of inventory in supply chain operations.	• Participation • Individual Assignment • Group project • Final Exam
CLO4 : Explain and analyse the bullwhip effect of a supply chain, including its primary causes and the strategies to dampen the effect.	• Group project
CLO5 : Explain and analyse the strategies for managing service supply chains including service capacity, demand, and customer waiting.	• Individual Assignment • Group project
CLO6 : Interact and collaborate effectively with team members to achieve group objectives.	• Participation • Group project

Learning and Teaching Technologies

Moodle - Learning Management System | Microsoft Teams | Echo 360

Learning and Teaching in this course

It is important to note some interesting dual characteristics of the subject of supply chain management. First this subject is concerned with some of the most traditional business activities, such as communication, inventory management, warehousing, transportation, and facility location. However, supply chain management is also one of fast growing business areas that many companies have just started focusing on it fairly recently. Second, for even a single product, the corresponding supply chain may be vast involving hundreds or even thousands of hand-offs. The amount of information flow can also be large. These indicate the complexity of supply chain management. Given this subject that is dynamic and is constantly evolving, the learning experience offered by this course therefore includes homework assignments, case studies, simulation beer game, project and class discussions. Through the case studies, students will analyze logistic strategies of some existing supply chains. Students will also be engaged in classroom discussion about case studies and findings. One project is designed to expose students to conduct research on modern supply chain issues, such as supply chain

sustainability, food safety in supply chains, and/or blockchain applications. From two simulation games, the students will experience decision making in reality that may be complicated, interdependent and requires analysis.

To maximize the effect of classroom learning, students are expected to read assigned course materials before attending each class. Students should also be aware that real supply chain practices can be found in their surroundings and daily life. Therefore, students are encouraged to discover them.

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates	Program learning outcomes
Participation Assessment Format: Individual	10%	Start Date: Ongoing Due Date: Ongoing	• PLO1 : Business Knowledge • PLO3 : Business Communication • PLO6 : Global and Cultural Competence
Individual Assignment Assessment Format: Individual	20%	Start Date: TBA Due Date: TBA	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO3 : Business Communication
Group project Assessment Format: Group	30%	Start Date: TBA Due Date: TBA	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO3 : Business Communication • PLO4 : Teamwork • PLO6 : Global and Cultural Competence
Final Exam Assessment Format: Individual	40%	Start Date: Centrally scheduled Due Date: Centrally scheduled	• PLO1 : Business Knowledge • PLO2 : Problem Solving

Assessment Details

Participation

Assessment Overview

To encourage effective interaction, a mark will be awarded for your participation in terms of your attendance and the degree to which you engage in class discussions. Assessment will be based on your attendance, the frequency and quality of your contribution to class discussion, and your participation in team activities.

Assesses: PLO1, PLO3, PLO6

<u>Course Learning Outcomes</u>

- CLO1 : Explain and analyse how logistical decisions (e.g., sourcing, facilities, inventory, and transportation) impact the performance of the firm as well as the entire supply chain.
- CLO3 : Explain and analyse inventory issues and recognise the role of inventory in supply chain operations.
- CLO6 : Interact and collaborate effectively with team members to achieve group objectives.

<u>Assessment Length</u>

NA

<u>Assignment submission Turnitin type</u>

Not Applicable

<u>Generative AI Permission Level</u>

Not Applicable

Generative AI is not considered to be of assistance to you in completing this assessment. If you do use generative AI in completing this assessment, you should attribute its use.

For more information on Generative AI and permitted use please see here.

Individual Assignment

<u>Assessment Overview</u>

There are four homework assignments given in this course pertaining to case analysis and inventory analysis with each worth 5% of your grade. The assignments are designed to help the students' learning by practicing the concepts covered in the class. Each assignment is due one week after it is assigned. The instructor will mark and return it to you on the following week after it is submitted. The detailed due dates of the assignments will be posted on Moodle in the beginning of the term.

Assesses: PLO1, PLO2, PLO3

<u>Course Learning Outcomes</u>

- CLO1 : Explain and analyse how logistical decisions (e.g., sourcing, facilities, inventory, and transportation) impact the performance of the firm as well as the entire supply chain.
- CLO3 : Explain and analyse inventory issues and recognise the role of inventory in supply chain operations.
- CLO5 : Explain and analyse the strategies for managing service supply chains including service capacity, demand, and customer waiting.

<u>Assessment Length</u>

TBA

<u>Submission notes</u>

NA

<u>Assignment submission Turnitin type</u>

This assignment is submitted through Turnitin and students can see Turnitin similarity reports.

<u>Generative AI Permission Level</u>

No Assistance

This assessment is designed for you to complete without the use of any generative AI. You are not permitted to use any generative AI tools, software or service to search for or generate information or answers.

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Group project

<u>Assessment Overview</u>

Group Assignment 1: Littlefield Simulation Project

Littlefield is an award-winning, web-based simulation game developed by Stanford University. The game simulates the day-to-day operations of Littlefield Technologies, a company that produces digital satellite system receivers. The game is tackled by teams. ⬚ Your team will be responsible for making purchasing, inventory, and pricing decisions to maximise process output and sales profit. This game will utilise the quantitative models learned from this course such as inventory level, and order quantity.

You will be asked to play the simulation game in the 2-hour lecture time of Week 7. During the simulation, your team will need to make different decisions to increase the profit of the company. After the simulation game, your team is required to submit a report that summaries your actions, and in retrospect whether you think you did the right thing. Your team grade will be partially based on your performance (in terms of overall cash position), but mainly based on your reflections. This project is worth 15% of your grade.

Group Assignment 2: Supply Chain Management Project

Supply chain management has been evolving rapidly over time, while this course can only cover

its fundamental knowledge. Based on their interests, students will be asked to conduct research on a modern supply chain topic and complete a written report and a presentation in Week 10. Topics will be suggested by the instructor. Students are encouraged to conduct literature review and read additional materials to gain knowledge on the topic chosen. Example topics include:

- Corporates' sustainable supply chain strategies and practices
- Tracking food safety in supply chains
- Understanding blockchain and its applications on supply chains
- Big data and supply chain
- Supply chain impact by COVID-19

This project is worth 15% of your grade.

Assesses: PLO1, PLO2, PLO3, PLO4, PL06

Course Learning Outcomes

- CLO1 : Explain and analyse how logistical decisions (e.g., sourcing, facilities, inventory, and transportation) impact the performance of the firm as well as the entire supply chain.
- CLO2 : Explain and analyse how cross-functional drivers, such as sourcing, pricing and information technology, may be employed to improve the performance of a supply chain.
- CLO3 : Explain and analyse inventory issues and recognise the role of inventory in supply chain operations.
- CLO4 : Explain and analyse the bullwhip effect of a supply chain, including its primary causes and the strategies to dampen the effect.
- CLO5 : Explain and analyse the strategies for managing service supply chains including service capacity, demand, and customer waiting.
- CLO6 : Interact and collaborate effectively with team members to achieve group objectives.

Assessment Length

TBA

Submission notes

NA

Assignment submission Turnitin type

This assignment is submitted through Turnitin and students can see Turnitin similarity reports.

Generative AI Permission Level

No Assistance

This assessment is designed for you to complete without the use of any generative AI. You are not permitted to use any generative AI tools, software or service to search for or generate information or answers.

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Final Exam

Assessment Overview

The final exam will be held during the University examination period with the date and time determined by the University. It will cover materials covered in lectures and tutorials during Weeks 1 – 10 (inclusive).

Assesses: PLO1, PLO2

Course Learning Outcomes

- CLO1 : Explain and analyse how logistical decisions (e.g., sourcing, facilities, inventory, and transportation) impact the performance of the firm as well as the entire supply chain.
- CLO2 : Explain and analyse how cross-functional drivers, such as sourcing, pricing and information technology, may be employed to improve the performance of a supply chain.
- CLO3 : Explain and analyse inventory issues and recognise the role of inventory in supply chain operations.

Assessment Length

TBA

Submission notes

TBA

Assignment submission Turnitin type

This is not a Turnitin assignment

Generative AI Permission Level

Not Applicable

Generative AI is not considered to be of assistance to you in completing this assessment. If you do use generative AI in completing this assessment, you should attribute its use.
For more information on Generative AI and permitted use please see [here](#).

General Assessment Information

As a student at UNSW you are expected to display [academic integrity](#) in your work and interactions. Where a student breaches the [UNSW Student Code](#) with respect to academic integrity, the University may take disciplinary action under the Student Misconduct Procedure. To assure academic integrity, you may be required to demonstrate reasoning, research and the

process of constructing work submitted for assessment.

To assist you in understanding what academic integrity means, and how to ensure that you do comply with the UNSW Student Code, it is strongly recommended that you complete the Working with Academic Integrity module before submitting your first assessment task. It is a free, online self-paced Moodle module that should take about one hour to complete.

You are expected to complete all assessment tasks for your courses in the School of Information Systems and Technology Management. Classes are highly practical and relevant to your assessments, so you are expected to attend at least 80% of all scheduled classes.

Where group assignments are used, team members are expected to work in a harmonious and professional fashion, which includes adequate management of non-performing members. You should inform your tutor as soon as possible if you experience problems within a project team. You may be required to evaluate the contribution of each team member (including yourself) in group work and marks for individual students may be adjusted based on peer assessment.

Grading Basis

Standard

Requirements to pass course

In order to pass this course, you must achieve a composite mark of at least 50 out of 100. You are expected to attempt all assessment requirements in the course.

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 9 September - 15 September	Lecture	• Course introduction • Understanding the supply chain (Ch 1) • Supply chain performance (Ch 2)
	Tutorial	• Examples of supply chains
Week 2 : 16 September - 22 September	Lecture	• Supply chain drivers (Ch 3)
	Tutorial	• Case: Seven-Eleven Japan • Review of probability
	Assessment	• Assignment 1 handed out
Week 3 : 23 September - 29 September	Lecture	• Inventory I & II (Handout) – Inventory basis, EOQ, (R, Q) and (P, T) policies
	Tutorial	Exercise: EOQ, (R, Q), and (P, T) policies
	Assessment	• Assignment 1 due • Assignment 2 handed out • Group formation completed
Week 4 : 30 September - 6 October	Lecture	• Inventory II (Handout) – (R, Q), (P, T), and Newsvendor (handout) • Littlefield simulation introduction
	Tutorial	• Exercise: (R, Q), and (P, T), newsvendor
	Assessment	• Assignment 2 due • Project 1: Littlefield statement handed out • Littlefield simulation initiated after tutorial class • Assessment 3 handed out
Week 5 : 7 October - 13 October	Lecture	• Public holiday (no class) • Self-learning material will be provided
	Tutorial	• Littlefield simulation preparation
	Assessment	• Assignment 3 due
Week 6 : 14 October - 20 October	Lecture	• No class (Flexibility Week)
	Tutorial	• No class (Flexibility Week)
Week 7 : 21 October - 27 October	Lecture	• Littlefield simulation (in online class)
	Tutorial	• Beer game (bring your laptop) • Coordination in a supply chain (Ch 10)
	Assessment	• Project 2 statement handed out
Week 8 : 28 October - 3 November	Lecture	• Littlefield simulation debriefing • Designing distribution networks and applications to online sales (Ch 4)
	Tutorial	• Case: Blue Nile and Diamond Retailing
	Assessment	• Project 1 report due • Assignment 4 handed out
Week 9 : 4 November - 10 November	Lecture	• Sourcing decision in a supply chain (Ch 15) • Supply chain coordination using contracts (Handout)
	Tutorial	• Case: Lego Group - An Outsourcing Journey • Exercise: Supply chain contracts
	Assessment	• Assignment 4 due
Week 10 : 11 November - 17 November	Lecture	• Special topic (TBA) • Course review
	Tutorial	• Project 2 presentation
	Assessment	• Project 2 report due

Attendance Requirements

Students are strongly encouraged to attend all classes and review lecture recordings.

General Schedule Information

Note: for more information on the UNSW academic calendar and key dates including study period, exam, supplementary exam and result release, please visit: https://student.unsw.edu.au/new-calendar-dates

Course Resources

Prescribed Resources

The website for this course is on Moodle.

The textbook for this course is:

Sunil Chopra (2019), Supply Chain Management: Strategy, Planning, and Operation, 7th ed. Pearson Prentice Hall.

The materials for inventory management will be handed out on Weeks 4, 5, and 9.

Course Evaluation and Development

Feedback is regularly sought from students and continual improvements are made based on this feedback. At the end of this course, you will be asked to complete the myExperience survey, which provides a key source of student evaluative feedback. Your input into this quality enhancement process is extremely valuable in assisting us to meet the needs of our students and provide an effective and enriching learning experience. The results of all surveys are carefully considered and do lead to action towards enhancing educational quality.

We will seek feedback from the students about the offering of this course and use it as a basis for continual improvement. UNSW's myExperience survey is one of the ways in which student evaluative feedback is gathered. In this course, we shall use your course-level feedback, both quantitative and qualitative, to guide our continued review and redesigning of the course.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Chung-Li Tseng		Quad 2087	02 9385-9704	TBA	No	Yes

Other Useful Information

Academic Information

COURSE POLICIES AND SUPPORT

The Business School expects that you are familiar with the contents of this course outline and the UNSW and Business School learning expectations, rules, policies and support services as listed below:

- Program Learning Outcomes
- Academic Integrity and Plagiarism
- Student Responsibilities and Conduct
- Special Consideration
- Protocol for Viewing Final Exam Scripts
- Student Learning Support Services

Further information is provided on the Policies and Guidelines page.

Students may not circulate or post online any course materials such as handouts, exams, syllabi or similar resources from their courses without the written permission of their instructor.

STUDENT LEARNING OUTCOMES

The Course Learning Outcomes (CLOs) – under the Outcomes tab – are what you should be able to demonstrate by the end of this course, if you participate fully in learning activities and successfully complete the assessment items.

CLOs also contribute to your achievement of the Program Learning Outcomes (PLOs), which are developed across the duration of a program. PLOs are, in turn, directly linked to UNSW graduate capabilities. More information on Coursework PLOs is available on the Policies and Guidelines page. For PG Research PLOs, including MPDBS, please refer to UNSW HDR learning outcomes.

Academic Honesty and Plagarism

As a student at UNSW you are expected to display academic integrity in your work and interactions. Where a student breaches the UNSW Code of Conduct with respect to academic integrity, the University may take disciplinary action. To assure academic integrity, you may be required to demonstrate reasoning, research and the process of constructing work submitted for

assessment.

To assist you in understanding what academic integrity means, and how to ensure that you do comply with the UNSW Code of Conduct, it is strongly recommended that you complete the Working with Academic Integrity module before submitting your first assessment task. It is a free, online self-paced Moodle module that should take about one hour to complete.

Submission of Assessment Tasks

SHORT EXTENSIONS

Short Extension is a new process that allows you to apply for an extended deadline on your assessment without the need to provide supporting documentation, offering immediate approval during brief, life-disrupting events. Requests are automatically approved once submitted.

Short extensions are ONLY available for some assessments. Check your course outline or Moodle to see if this is offered for your assessments. Where a short extension exists, all students enrolled in that course in that term are eligible to apply. Further details are available the UNSW Current Students page.

SPECIAL CONSIDERATION

You can apply for special consideration when illness or other circumstances beyond your control interfere with your performance in a specific assessment task or tasks, including online exams. Special consideration is primarily intended to provide you with an extra opportunity to demonstrate the level of performance of which you are capable.

Applications can only be made online and will NOT be accepted by teaching staff. Applications will be assessed centrally by the Case Review Team, who will update the online application with the outcome and add any relevant comments. The change to the status of the application immediately sends an email to the student and to the assessor with the outcome of the application. The majority of applications will be processed within 3-5 working days.

For further information, and to apply, see Special Consideration on the UNSW Current Students page.

LATE SUBMISSION PENALTIES

LATE SUBMISSION PENALTIES

For assessments other than examinations, late submission will incur a penalty of 5% per day or part thereof (including weekends) from the due date and time. An assessment will not be accepted after 5 days (120 hours) of the original deadline unless special consideration has been approved. In the case of an approved Equitable Learning Plan (ELP) provision, special consideration or short extension, the late penalty applies from the date of approved time extension. After five days from the extended deadline, the assessment cannot be submited.

An assessment is considered late if the requested format, such as hard copy or electronic copy, has not been submitted on time or where the 'wrong' assessment has been submitted.

For assessments which account for 10% or less of the overall course grade, and where answers are immediately discussed or debriefed, the LIC may stipulate a different penalty. Details of such late penalties will be available on the course Moodle page.

FEEDBACK ON YOUR ASSESSMENT TASK PERFORMANCE

Feedback on student performance from formative and summative assessment tasks will be provided to students in a timely manner. Assessment tasks completed within the teaching period of a course, other than a final assessment, will be assessed and students provided with feedback, with or without a provisional result, within 10 working days of submission, under normal circumstances. Feedback on continuous assessment tasks (e.g. laboratory and studio-based, workplace-based, weekly quizzes) will be provided prior to the midpoint of the course.

Faculty-specific Information

PROTOCOL FOR VIEWING FINAL EXAM SCRIPTS

UNSW students have the right to view their final exam scripts, subject to a small number of very specific exemptions. The UNSW Business School has set a protocol under which students may view their final exam script. Individual schools within the Faculty may also set up additional local processes for viewing final exam scripts, so it is important that you check with your School.

If you are completing courses from the following schools, please note the additional school-specific information:

- Students in the **School of Accounting, Auditing & Taxation** who wish to view their final examination script should also refer to this page.
- Students in the **School of Banking & Finance** should also refer to this page.
- Students in the **School of Information Systems & Technology Management** should also refer

to [this page](#).

COURSE EVALUATION AND DEVELOPMENT

Feedback is regularly sought from students and continual improvements are made based on this feedback. At the end of this course, you will be asked to complete the [myExperience survey](#), which provides a key source of student evaluative feedback. Your input into this quality enhancement process is extremely valuable in assisting us to meet the needs of our students and provide an effective and enriching learning experience. The results of all surveys are carefully considered and do lead to action towards enhancing educational quality.

QUALITY ASSURANCE

The Business School is actively monitoring student learning and quality of the student experience in all its programs. A random selection of completed assessment tasks may be used for quality assurance, such as to determine the extent to which program learning goals are being achieved. The information is required for accreditation purposes, and aggregated findings will be used to inform changes aimed at improving the quality of Business School programs. All material used for such processes will be treated as confidential.

TEACHING TIMES AND LOCATIONS

Please note that teaching times and locations are subject to change. Students are strongly advised to refer to the [Class Timetable website](#) for the most up-to-date teaching times and locations.