澳門理工大學
Universidade Politécnica de Macau
Macao Polytechnic University

FACULTY OF BUSINESS

BACHELOR OF E-COMMERCE

LEARNING MODULE OUTLINE

Academic Year	2025 / 2026	Semester	2
Module Code	ECOM3130 - 321		
Learning Module	Supply Chain Management		
Pre-requisite(s)	Nil		
Medium of Instruction	English		
Credits	3	Contact Hours	45
Instructor	Billy Yu	Email	billyyu@mpu.edu.mo
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MODULE DESCRIPTION

This course covers principles of SCM, the major components of SCM, the importance of information in SCM, and the role of Information Technology plays on SCM. The course also discusses the characteristics of SCM and its role under an E-Commerce environment. Basics of Enterprise Resource Planning (ERP) will also be included in this course. A commercial software product such as Microsoft Dynamics or Oracle E-Business Suite will be used as students' labs.

MODULE INTENDED LEARNING OUTCOMES (ILOS)

On completion of this learning module, students will be able to:

M1.	explain the concept of design in supply chains with considerations of product, market, and / or customer characteristics
M2.	explain how information can substitute for the stock of physical resources
M3.	examine the design and performance of supply networks and processes
M4.	examine outsourcing in aspects such as its advantages and tactics
M5.	discuss and evaluate the value of optimization in SCM

These ILOs aims to enable students to attain the following Programme Intended Learning Outcomes (PILOs):

PILOs	**M1**	**M2**	**M3**	**M4**	**M5**
P1. Demonstrate an understanding of the business processes and operations and the skillful realization of information technologies required to practice electronic commerce;	✓	✓	✓		

P2. Apply knowledge in business, mathematics, programming, computing, web development, and database to address complex problems in the context of electronic commerce;		✓	✓	✓	
P3. Analyze critically the effect of web technology use on organizational performance and develop electronic commerce strategies that fit organizational objectives;			✓	✓	✓
P4. Select and apply tools and technologies to effectively implement electronic commerce systems in business intelligence, enterprise resources planning, supply chain management, and customer relationship management;			✓	✓	
P5. Develop relationships, motivate others, manage conflicts, lead changes, and work across differences in multi-disciplinary electronic commerce projects;					
P6. Communicate and work effectively using written and spoken word, non-verbal language, and electronic tools with fellow professionals and different stakeholders in the electronic commerce industry;					
P7. Demonstrate a global electronic commerce perspective as evidenced by an understanding of foreign languages and the role of Macau as an interface between the East and the West;					
P8. Cope with and manage contemporary advancement related to electronic commerce development and demonstrate lifelong learning attitudes and abilities;	✓	✓			✓
P9. Conduct research and devise innovative electronic commerce models to exploit business opportunities; and			✓	✓	
P10. Reflect on professional responsibilities and keep up with the latest electronic commerce issues on legal, environmental, ethical, and societal considerations to benefit society comprehensively.	✓		✓		

MODULE SCHEDULE, COVERAGE AND STUDY LOAD

Week	Content Coverage	Contact Hours
1	Chapter 1 Introduction - An Introduction and project overview Chapter 2 SCM - SCM basics	3 hours
2	Chapter 3 Inventory management - Inventory levels and cost - EOQ	3 hours
3	Chapter 3 Inventory management - Inventory policies - Optimization	3 hours
4	Chapter 3 Inventory management - Basic Forecasting - Risk Pooling	3 hours
5	Chapter 4 Network - Considerations and basic design	3 hours

6	Midterm Exam I - Reviewing midterm exam result	3 hours
7	Chapter 4 Network - Optimization models - Heuristic methods	3 hours
8	Chapter 5 Bullwhip effect - Causes and remedies	3 hours
9	Project Demo - Project audit, comments and corrections	3 hours
10	Chapter 6 Distribution Strategies - Introduction - Economies of Scale in Transportation - Cross-Docking	3 hours
11	Chapter 7 Strategic Alliance - Third Party Logistics (3PL) - Retailer–Supplier Partnerships (RSP) - Distributor Integration (DI)	3 hours
12	Chapter 8 Outsourcing & Risk management - Outsourcing - Risk management	3 hours
13	Chapter 9 Supply Chain Design - Mass Customization - Metrics for Measuring Supply Chain Performance	3 hours
14	Midterm Exam II - Reviewing midterm exam result	3 hours
15	Project Presentation	3 hours

TEACHING AND LEARNING ACTIVITIES

Students are required to prepare for and actively participate in lectures. Other than passive listening, they are expected to practice, take notes and ask questions in class. The projects expect students to be creative. Students should apply the module material as well as knowledge from other subjects for their group project. For the examination preparation, they are encouraged to study in group discussions with all sorts of reference materials, including videos. Students are also strongly encouraged to participate in class learning activities. As mature university students, they should demonstrate the efforts to think and answer questions in classes and show active learning attitude. In this learning module, students will work towards attaining the ILOs through the following teaching and learning activities:

Teaching and Learning Activities	**M1**	**M2**	**M3**	**M4**	**M5**
T1. Lectures: related management theories, concepts, and approaches will be presented using multimedia instructional materials. Q&A: It allows interactions between instructor and among students.	✓	✓	✓	✓	✓

T2.	Project: 5 to 7 students will be required to work as a group to complete a group project. This group project will be designed to promote students intellectual, social and presentation skills and help to prepare them for the real world in which teamwork and collaboration are important. Q&A: It allows interactions between instructor and among students.		✓	✓	✓	✓
T3.	Preparation: Students must read teaching materials before coming to the class. They will be asked to work on problems or respond to key conceptual issues during the class hour. - Midterm exam will be given to students in order to motivate them to review what they have learned.	✓	✓	✓		

ATTENDANCE

Attendance requirements are governed by the Academic Regulations Governing [Doctoral/Master's/Bachelor's] Degree Programmes of the Macao Polytechnic University. Students who do not meet the attendance requirements for the learning module shall be awarded an 'F' grade.

ASSESSMENT

In this learning module, students are required to complete the following assessment activities:

Assessment Activities	**Weighting (%)**	**ILOs to be Assessed**
A1. Project	40	M2 – M5
A2. Midterm I	30	M1, M3, M5
A3. Midterm II	30	M1 - M5

The assessment will be conducted following the University's Assessment Strategy (see www.mpu.edu.mo/teaching_learning/en/assessment_strategy.php). Passing this learning module indicates that students will have attained the ILOs of this learning module and thus acquired its credits. Project is not assignment. Students are required of their critical thinking, problem solving skills, collaboration, and various forms of communication. To answer a driving question and create high-quality work, students need to do much more than remember information. They need to use higher-order thinking skills and learn to work as a team. (ref. https://www.pblworks.org/what-is-pbl)

MARKING SCHEME

	Assessment Tasks	Criteria	Excellent (A, A-)	Very Good, Good (B+, B, B-)	Satisfactory (C+, C, C-)	Pass (D+, D)	Fail (F)
			88-100	73 - 87	58 - 72	50 - 57	0 – 49

1.	Group Project	Demonstrate the **understanding** of the subject and the **ability** to solve problems with articulated arguments in well-organized oral presentation and written report	High	Significant	Moderate	Basic	Not even reaching marginal levels
2.	Mid-term examinations	Demonstrate the **ability** to **identify, apply** and **compare** appropriate concepts, methods and techniques	High	Significant	Moderate	Basic	Not even reaching marginal levels

REQUIRED READINGS

Textbook(s)

1. Simchi-Levi, David et al. (2021) Designing and Managing the Supply Chain, McGraw Hill, ISBN 1259997707
2. Edward A. Silver, David F. Pyke, Douglas J. Thomas (2021) Inventory and Production Management in Supply Chains, ISBN 1032179325.

REFERENCES

1. Hugos, M. H. (2024). Essentials of supply chain management. John Wiley & Sons. ISBN: 9781119464495.
2. Veena Grover et al. (2024). Blockchain, IoT, and AI technologies for supply chain management: apply emerging technologies to address and improve supply chain management. Apress Publishing. ISBN 979-8-8688-0315-4.
3. Brau, J. C., Gardner, J., DeCampos, H. A., & Gardner, K. (2023). Blockchain in supply chain management: a feature-function framework for future research. Supply Chain Management: An International Journal.
4. Ivanov, D., Tsipoulanidis, A., & Schönberger, J. (2017) Global supply chain and operations management. A Decision-Oriented Introduction to the Creation of Value, Springer, ISBN 978-3-319-94313-8.

STUDENT FEEDBACK

At the end of every semester, students are invited to provide feedback on the learning module and the teaching arrangement through questionnaires. Your feedback is valuable for instructors to enhance the module and its delivery for future students. The instructor and programme coordinators will consider all feedback and respond with actions formally in the annual programme review.

ACADEMIC INTEGRITY

The Macao Polytechnic University requires students to have full commitment to academic integrity when engaging in research and academic activities. Violations of academic integrity, which include but are not limited to plagiarism, collusion, fabrication or falsification, repeated use of assignments and cheating in examinations, are considered as serious academic offenses and may lead to disciplinary actions. Students should read the relevant regulations and guidelines in the Student Handbook which is distributed upon the admission into the University, a copy of which can also be found at www.mpu.edu.mo/student_handbook/.

Note:

1. The above class schedule is tentative and subject to change depending on the progress of the students.
2. Students are responsible for ALL materials covered in class AND in the textbook.