

The Hong Kong Polytechnic University

Subject Description Form

Subject Code	LGT5152
Subject Title	Information Systems for Supply Chain Management
Credit Value	3
Level	5
Normal Duration	1-semester
Exclusion	ISE527 Logistics Information Systems
Objectives	<p>The objective of this subject is to better prepare the student to meet the following challenges:</p> <ul style="list-style-type: none">• Understand the managerial issues concerning the integration of information systems and supply chain management, as well as the emerging information technologies behind.• Provide solutions to the issues which are relevant to the design, management, and improvement of information technology-enabled supply chain systems.• Exploit the inherent capabilities of operations, supply chain, and information systems, and weave them into an integrated strategy capable of providing competitive advantage and operational resilience for the enterprise. <p>This subject contributes to the following Intended Learning Outcomes for the MSc programme(s):</p> <p>MSc/PgD in Global Supply Chain Management</p> <p>#4 Make good use of information technology in supply chain management</p>
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none">1. To demonstrate a clear and relevant understanding of the definitions, importance, potential benefits, and structures of information technology and systems not only from a technical point of view but also from organizational and management perspectives.2. To understand and analyse how emerging information technologies can challenge and benefit the integration of information systems and supply chain management.3. Being able to illustrate how the management of supply chains can be enhanced through the use of information technologies and systems.4. To put together the concepts and tools studied in class to develop best practices of information technology and systems in managing supply chains for real business.

Subject Synopsis/ Indicative Syllabus	Topics	Sub-topics
		Basic Concepts on Information Systems and Supply Chain Management
Information systems for global business		
Information Technology (IT) Infrastructure of Information Systems for Supply Chain Management		IT Fundamentals on hardware and software, networks, and database, as well as their recent developments, such as Mobile Computing, Cloud Computing, Quantum Computing, Open Source, etc.
Strategic impact of information systems (IS)		Information resources and strategic values of information systems: Porter's Generic Model, Five Force's Model, Value Chain Model, New 7S Model for Hyper-competition
Key Applications of Information Technology & Information Systems for Supply Chain Management (1)		Data Management for Supply Chain Management: Radio Frequency Identification (RFID), Electronic Data Interchange (EDI), 5G Communication, Internet of Things (IoT), Block Chain, Database System, Business Intelligence (BI), and Big Data
		Achieving Operational Excellence: Enterprise Resource Planning (ERP)
		E-Commerce: Digital Markets and Digital Goods
Information Systems Project: Development and Management		Designing and Building Information Systems: System Development Process and Fast Development Methods (Prototyping, Agile Development, etc.)
		Managing Information System Project:
Key Applications of Information Technology & Information Systems for Supply Chain Management (2)		Enhancing Decision Making: Business Intelligence, Decision Support System, and Applications of Artificial Intelligence (AI) and Operations Research (OR)
Project Presentation and Course Review		
Teaching/Learning Methodology	<ul style="list-style-type: none"> ▪ During lectures, basic concepts of information systems and supply chain management will be introduced. ▪ During tutorials, students will be guided to discuss case studies. 	

Assessment Methods in Alignment with Intended Learning Outcomes	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)					
			1	2	3	4		
	Coursework	50%	✓	✓	✓	✓		
	Examination	50%	✓	✓	✓			
	Total	100 %						
	<p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>The coursework includes assignments of case studies and a group project. They are used to assess the intended outcomes 1, 2, 3, and 4, respectively. The final exam is based on questions relevant to basic concepts of information systems and a case study about information system management, which are relevant to intended outcomes 1, 2, and 3.</p> <p>To reflect the significant technology content in this subject, 10% (or more) of the overall weighting of this subject is based on individual assessment concerning technology-related knowledge.</p>							
Student Study Effort Expected	Class contact:							
	▪ Lectures / Tutorials		39 Hrs.					
	Other student study effort:							
	▪ Assignment and Self Study		45 Hrs.					
	▪ Group Project		42 Hrs.					
	The total student study effort		126 Hrs.					
Reading List and References	<p>Recommended Textbook:</p> <p>Laudon, K.C., and Laudon, J.P. (2017) <i>Management Information Systems: Managing the Digital Firm</i>, 15 Edition, Pearson/Prentice Hall.</p> <p>References</p> <p>Chopra, S., and Meindl, P. (2015) <i>Supply Chain Management: Strategy, Planning, and Operation</i>, 6th Edition, Pearson/Prentice Hall.</p> <p>O'Brien, J.A., and Marakas, G.M. (2010) <i>Management Information Systems</i>, 10th Edition, McGraw-Hill.</p> <p>Sanders, N. R. (2014) <i>Big Dat Driven Supply Chain Management</i>, Pearson.</p>							

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