

The Hong Kong Polytechnic University

Subject Description Form

Subject Code	LGT5133
Subject Title	Strategies and Technologies in Warehousing Management
Credit Value	3
Level	5
Normal Duration	1-semester
Exclusion	ISE512 Warehousing and Material Handling Systems LGT5131 Warehousing and Materials Management
Objectives	To provide students with the strategies and technologies necessary for the design and management of warehousing, materials handling systems, and inventory control. In particular, this subject emphasizes the applications and implications of the latest technologies in logistics and supply chain management in warehousing, the handling of products, and control of inventories. On completion students will be able to both analyze existing systems and recommend improvement solutions.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: <ul style="list-style-type: none"> a. Design and manage warehousing, material handling and inventory control systems. b. Improve existing warehousing, material handling and inventory control systems. c. Apply the latest technologies and understand their implications in the relevant design, management, and improvement activities.
Subject Synopsis/ Indicative Syllabus	<ul style="list-style-type: none"> • Introduction to warehousing management and strategies • Warehouse location, layout and design: Qualitative and quantitative techniques • Materials handling systems: Technologies, equipment, and packaging • Warehousing management systems and the relevant IT applications • Warehouse quality management • Warehouse performance management, measurement, and databases • Warehouse safety and security • 3PL and warehousing management • Advanced technologies: AI, analytics for warehousing decisions, warehousing automation, blockchain applications in materials management, etc. • Inventory management and control: Tools, methods, and strategies
Teaching/Learning Methodology	Concepts, theories and key issues will be introduced to students in lectures. Case studies will be used to illustrate some application aspects and to stimulate discussions leading to context-specific knowledge. Students are required to apply the knowledge to analyze some contemporary issues.

Assessment Methods in Alignment with Intended Learning Outcomes	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)				
			a	b	c		
	Continuous Assessment	50%	✓	✓	✓		
	Examination	50%	✓	✓	✓		
	Total	100 %					
Student Study Effort Expected	Class contact:						
	<ul style="list-style-type: none"> ▪ Lectures / Tutorials 	39 Hrs.					
	Other student study effort:						
	<ul style="list-style-type: none"> ▪ Preparation for lectures and seminars 	45 Hrs.					
	<ul style="list-style-type: none"> ▪ Preparation for assignments/projects 	42 Hrs.					
	Total student study effort	126 Hrs.					
Reading List and References	<p>Wood, D.F., Wardlow, D.L., Murphy, P.R., Johnson, J.C., (the latest edition) <i>Contemporary Logistics</i>, Prentice Hall, Upper Saddle River, N.J.</p> <p>Frazelle, E., (the latest edition) <i>World-Class Warehousing and Material Handling</i>, McGraw-Hill, Boston.</p> <p>Render, B., Stair, R.M. Jr., (the latest edition) <i>Quantitative Analysis for Management</i>, Prentice-Hall.</p>						

	<p>Francis, R.L., McGinnis, L., and White, J.A., (the latest edition) <i>Facility Layout and Location: An analytical Approach</i>, Prentice-Hall, Englewood Cliffs, NJ.</p> <p>Mulcahy, D., (the latest edition) <i>Warehouse Distribution & Operations Handbook</i>, McGraw-Hill, Boston.</p> <p>Ackerman, K.B., (the latest edition) <i>Practical Handbook of Warehousing</i>, Chapman & Hall, New York</p> <p>Stephens, M.P., Meyers, F.E., (the latest edition) <i>Manufacturing Facilities Design and Material Handling</i>, Prentice Hall.</p> <p><u>Example Articles</u></p> <p>Anthony, S.D., Cobban, P., Nair., R., Painchaud, N. 2019. Breaking Down the Barriers to Innovation, <i>Harvard Business Review</i>, November-December.</p> <p>Earley, S., Bernoff, J. 2020. Is Your Data Infrastructure Ready for AI? <i>Harvard Business Review</i>, April.</p> <p>Gaur, V., Gaiha, A. 2020. Building a Transparent Supply Chain: Blockchain can Enhance Trust, Efficiency, and Speed, <i>Harvard Business Review</i>, May-June.</p> <p>Kress, G., Posner, B. 2016. Internet of Things in Motion: Analytics and Transportation. <i>MIT Sloan Management Review</i>, May.</p> <p>McGrath R.G., McManus, R. 2020. Discovery-Driven Digital Transformation, <i>Harvard Business Review</i>, May-June.</p>
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