

The Hong Kong Polytechnic University

Subject Description Form

Subject Code	LGT3007
Subject Title	Air Transport Logistics
Credit Value	3
Level	3
Normal Duration	1-semester
Pre-requisite	Nil
Objectives	To provide a fundamental knowledge of transporting goods by air. To establish an awareness of major economic, regulatory and operational issues regarding air cargo transportation and logistics. To provide students with a full understanding of current and future developments in the air cargo industry.
Subject Learning Outcomes	<p>The aim of this subject is to meet the demand in air freight industry. Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> Understand the basic concepts and features of air cargo transportation and logistics Demonstrate knowledge about various business models of air cargo operators and issues faced by various parties in the air cargo transportation chain Develop skills and knowledge which can be contributed to the workplace in the air transport logistics sector (BBA Outcome 11a) Demonstrate an understanding on the applications and implications of Artificial Intelligence in air cargo business (BBA Outcome 11c).
Subject Synopsis/ Indicative Syllabus	<p>Airfreight logistics market overview</p> <p>The market trend of airfreight volume in worldwide, China and Hong Kong; the key successful factors of Hong Kong being the primary gateway and hub of air cargo and challenges ahead</p> <p>Air cargo demand, air commodities and modal choice</p> <p>Characteristics of demand for air cargo, and factors influencing the choice between air and other modes of transport; multi-modal operation, such as air-road and air-sea operations and their rationales</p> <p>International policies/regulations of airfreight operations</p> <p>International convention, Air Service Agreement, various regulatory and trade organizations, ownership and control rules, air freedoms</p>

	<p>Business models of air cargo carriers</p> <p>Combination carriers, passenger airlines and integrators, choice of aircraft for cargo operation, cost allocation to air freight</p> <p>Airfreight forwarders and tariff structure</p> <p>The contractual relationship of airfreight operations, concept and rationale of consolidation, air freight rates (e.g. General Cargo Rate, Specific Cargo Rate, Class Rate, ULD Rate)</p> <p>Applications of artificial intelligence in air logistics</p> <p>The main features of AI, application of AI in air cargo business</p>																												
<p>Teaching/Learning Methodology</p>	<p>A combination of lectures, tutorials and student-directed learning activities will be included in this subject.</p>																												
<p>Assessment Methods in Alignment with Intended Learning Outcomes</p>	<table border="1" data-bbox="533 824 1481 1227"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="4">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>Coursework</td> <td>50%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>Examination</td> <td>50%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>Total</td> <td>100 %</td> <td colspan="4"></td> </tr> </tbody> </table> <p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>To reflect the significant technology content in this subject, <i>10% (or more)</i> of the overall weighting of this subject is based on individual assessment concerning technology-related knowledge.</p>	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)				a	b	c	d	Coursework	50%	✓	✓	✓	✓	Examination	50%	✓	✓	✓	✓	Total	100 %				
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<p>Reading List and References</p>	<p>Recommended Textbook</p> <p>Morrell, Peter S. (2019). <i>Moving Boxes by Air: The Economics of International Air Cargo</i>, 2nd edition, Routledge.</p>																												

Useful References

Doganis, Rigas (2019). *Flying off Course: Airline Economics and Marketing* (5th ed.), Routledge.

IATA (2018). AI in Aviation: Exploring the fundamentals, threats and opportunities of Artificial Intelligence (AI) in the aviation industry, *White paper*, IATA.

Sales, M. (2016). *Aviation Logistics: The Dynamic Partnership of Air Freight and Supply Chain*, Kogan Page.

Wensveen, John G. (2016). *Air Transportation: A Management Perspective* (7th ed.), Ashgate.

Zhang, A., Hui, G.W.L., Leung, L.C., Cheung, W. and Hui, Y.V. (2004). *Air Cargo in Mainland China and Hong Kong*, Ashgate.