

The Hong Kong Polytechnic University

Subject Description Form

Subject Code	LGT3800
Subject Title	Airline Operations and Revenue Management
Credit Value	3
Level	3
Normal Duration	1-semester
Pre-requisite	Nil
Role and Purposes	<p>Airlines operate in a highly competitive environment. Airlines therefore need to make the best use of all possible revenue sources and fully optimize operations and costs in order to ensure stable financial conditions and profitability. This subject provides students with the fundamental skills in airline operations and revenue management (Outcome 10). It helps them to understand the complexity but also the beauty of airline operation businesses and the different, effective and creative ways of revenue generation (Outcomes 3 and 8). These skills and the knowledge of the methods discussed in this subject are essential for the success of aviation business today (Outcome 11).</p>
Subject Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none">understand the challenges of airline operation and revenue generation in today's competitive airline market environment.apply the fundamental methods of airline revenue management and airline operations.contribute to the solution of airline operation related problems and develop a sensitivity to the ethical issues involved in airline business practice.foster intellectual and personal development, self-confidence and the ability to tackle problems without supervision and develop realism and practicality as a foundation for good business judgment;develop approaches to defining, analysing and solving operations and revenue management related problems, in a form which reflects sound airline industry business practices;develop the ability to communicate effectively and fluently in both written and spoken form; and <p>Studying this subject will also help develop students' global outlook, critical and creative thinking, social and national responsibility, cultural appreciation, life-long learning, and entrepreneurship and leadership.</p>

Subject Synopsis/ Indicative Syllabus	<ul style="list-style-type: none"> • Long-term and medium-term scheduling, route network optimization, optimal allocation of aircraft to routes, and fleet planning. • Principles of revenue management: class of reservation management, overbooking, innovative pricing strategies including dynamic pricing. • Airline cost structure: how airline costs can be separated into fixed and variable costs and why it is crucial to understand cost structures. • Management of cost and profitability using double matrix approaches based on route specific and airline-department specific information. • Fleet management and short-term planning, flight management and operations. • Details of airline operations: management of the technical and commercial crews, management of the stations and operation control centers. • Information technology and how it can be used to effectively optimize airline operations. • Cargo airline specificities: management of full cargo aircraft and mixed aircraft. 																																												
Teaching/Learning Methodology	A combination of lectures, guest lectures (face-to-face or online), seminars, case studies, group discussions and students-directed learning activities will be included in this subject																																												
Assessment Methods in Alignment with Intended Learning Outcomes	<table border="1" data-bbox="531 1099 1477 1538"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="6">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> <th>e</th> <th>f</th> </tr> </thead> <tbody> <tr> <td>Coursework</td> <td>50%</td> <td>✓</td> <td>✓</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> <td>✓</td> <td>✓</td> </tr> <tr> <td>Total</td> <td>100 %</td> <td colspan="6"></td> </tr> </tbody> </table> <p data-bbox="531 1592 1453 1659">Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p data-bbox="531 1686 1398 1753"><i>To pass this subject, students are required to obtain Grade D or above in BOTH the Continuous Assessment and Exam components.</i></p>							Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						a	b	c	d	e	f	Coursework	50%	✓	✓	✓	✓	✓	✓	Examination	50%	✓	✓	✓	✓	✓	✓	Total	100 %						
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Examination	50%	✓	✓	✓	✓	✓	✓																																						
Total	100 %																																												
Student Study Effort Expected	Class contact:																																												
	Lecture					26 Hrs.																																							
	Tutorial					13 Hrs.																																							

	Other student study effort:	
	Self study	87 Hrs.
	Total student study effort	126 Hrs.
Reading List and References	<ul style="list-style-type: none"> • Bazargan, Massoud (2010) <i>Airline Operations and Scheduling (2nd Edition)</i>, Ashgate: Aldershot, UK. • Doganis, Rigans (2010) <i>Flying Off Course (4th Edition)</i>, London: Routledge. • Talluri, Kalyan T., Van Ryzin, Garrett J. (2005) <i>The Theory and Practice of Revenue Management</i>, Springer. • Wu, Cheng Lung (2010) <i>Airline Operations and Delay Management</i>, Ashgate: Aldershot, UK. 	