Subject Description Form

Subject Code	AAE3007
Subject Title	Air Transport Operations
Credit Value	2
Level	3
Pre-requisite/ Co-requisite/ Exclusion	Nil
Objectives	1. To provide an overview of air transport operations to a diverse audience that has an interest in the development of careers in aviation; and 2. To develop students' understanding of the up-to-date operational concepts and practices.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: a. Identify and explain mandatory airworthiness requirements; and b. Describe the aviation environmental impact and published mitigating measures; and c. Explain the roles of the International Civil Aviation Organization and the International Air Transport Association in fostering safe and efficient air transport.
Subject Synopsis/ Indicative Syllabus	**Airline Organization -** Air Operator's Certificate. Route planning. Engineering operations. Flight operations. Take-off and landing minima. Reduced vertical separation minima. Aviation security training. **Airport Operations -** Overview of airport planning and operations. Passenger and cargo terminal operations. Maintenance of electrical, mechanical and electronic systems. Safety management on airport operations. Operation and development of airport facilities. Air traffic controls. Aviation security and Runway system design. **Aviation and the Environment -** Environmental impacts of aviation – aircraft emissions and noise. HK CAD noise abatement departure and noise mitigating measures. **International Associations -** International Civil Aviation Organization (ICAO). Airport Council International (ACI). International Air Transport Association (IATA).
Teaching/Learning Methodology	Lectures are used to deliver the fundamental knowledge in relation to various aspects of aviation systems (outcomes a to c). Tutorials are used to illustrate the application of fundamental knowledge to practical situations (outcomes a to c).

Group mini-projects are used to help students to deepen their knowledge on a specific topic through search of information, analysis of data and report writing (outcomes a to c).

Special seminar(s) delivered by invited industrial professionals may be used to relate the concepts learnt in class to current engineering practices. Students are expected to achieve better understanding of aviation operations through this activities (outcomes a to c).

Teaching/Learning Methodology	Intended subject learning outcomes to be covered		
	a	b	c
1. Lecture	✓	✓	✓
2. Tutorial	✓	✓	✓
3. Mini-project	✓	✓	✓
4. Seminar	✓	✓	✓

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed		
		a	b	c
1. Assignments	15%	✓	✓	✓
2. Group mini- project	15%	✓	✓	✓
3. Test	20%	✓	✓	✓
4. Examination	50%	✓	✓	✓
Total	100%			

Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:

Overall Assessment:

0.5 × End of Subject Examination + 0.5 × Continuous Assessment

Examination is adopted to assess students on the overall understanding and the ability of applying the concepts. It is supplemented by continuous assessment including assignments, group mini-project, and test. The continuous assessment is aimed at enhancing the students' comprehension and assimilation of various topics of the syllabus. In particular, group mini-project is used to assess the students' capacities of self-learning and problem-solving and effective communication skill in English so as to fulfill the requirements of working in the aviation industry.

Student Study Effort Expected	Class contact:	
	▪ Lecture	22 Hrs.
	▪ Tutorial / Seminar	4 Hrs.
	Other student study effort:	
	▪ Course work	14 Hrs.
	▪ Self-study	30 Hrs.
	Total student study effort	**70 Hrs.**
Reading List and References	1. Richard De Neufville. Airport Systems: Planning, Design, and Management, McGraw-Hill, latest edition. 2. HK Government. Air Navigation (Hong Kong) Order, latest amendment. 3. HK CAD. Aeronautical Information Publication, latest update.	

April 2021