Subject Description Form

Subject Code	AAE4902
Subject Title	Pilot Ground Theory
Credit Value	3
Level	4
Pre-requisite/ Co-requisite/ Exclusion	Pre-requisite: AAE2004 Introduction to Aviation System and Air Transport Regulation
Objectives	1. To teach the fundamental knowledge to students who wish to learn the technical and theoretical aspects of flying, and have the desire to pursue their PPL or CPL in the future; and 2. To familiarise student with the use of aeronautical information services, government references and publications for flight planning and navigation purposes; and 3. To teach students aeromedical factor and pilot decision-making to improve pilot's performance; and 4. To develop student's knowledge on the essential knowledge in airworthiness, preparation for flight, and the safe operation of aircraft.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: a. Possess good knowledge in pilot (aeroplane) ground theory including air law, flight rules and procedures; and b. Efficiently utilise aeronautical information services, government references and publications for flight planning and navigation purposes; and c. Recognise the influence and importance of human factor and human performance on flight safety; and d. Possess in-depth understanding of the principle of flight, operation of airplane, pre-flight and airworthiness.
Subject Synopsis/ Indicative Syllabus	**Aviation Law, Flight Rules and Procedure -** Aviation law, Flight Rules and Procedure covering: The Air Navigation Order, The Hong Kong Aeronautical Information Publication, Hong Kong Civil Aviation (Investigation of Accidents) Regulations, AOPA Ground Training Manual. **Navigation -** Meteorology, Aviation Weather Theory and Aviation Weather Services, Air Traffic Control and Airspace, Aeronautical Charts, Navigation Charts and Publications, Communication, Radar Navigation Systems. **Aircraft -** Airplane Instruments and Basics of Onboard Guidance and Navigation Systems from a pilot's perspective. Airplane Performance, Aircraft Weight and Balance. **Aeromedical Factors and Aeronautical Decision Making -** Basic Aviation Physiology and Health Maintenance, Human Limitations, Stress and Stress Management, Ergonomics of the Flight Deck, the Decision-Making Process and Situational Awareness.

Teaching/Learning Methodology

Lectures are used to deliver the fundamental theory, technical and operational knowledge, and civil aviation regulations that are studied by student private and commercial pilots in ground theory courses. The knowledge will provide the fundamental knowledge necessary to students who may wish to later pursue their private or commercial pilot's licenses (outcomes a to d).

Tutorials are used to illustrate and familiarise the application of fundamental knowledge to practical flight situations (outcomes b and c).

Homework assignments, in the form of investigations and evaluations, case studies and flight planning, are used to allow students to deepen their knowledge on a selected topic through search of information, analysis of data and report writing (outcomes a to d).

Teaching/Learning Methodology	Intended subject learning outcomes to be covered			
	a	b	c	d
1. Lecture	✓	✓	✓	✓
2. Tutorial		✓	✓	
3. Homework assignments	✓	✓	✓	✓

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed			
		a	b	c	d
1. Homework assignments	25%	✓	✓	✓	✓
2. Test	25%			✓	✓
3. 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

All homework assignments are designed to assist and enhance the understanding the fundamental theories and concepts taught during the course of the subject, and to be sufficiently practical to allow students to apply the theories and concept in practice.

Test and Examination serve to evaluate the student's ability in all of the intended learning outcomes.

Students must attend the final examination in order to attain a passing grade

	in the overall result.	
Student Study Effort Expected	Class contact:	
	▪ Lecture	33 Hrs.
	▪ Tutorial / Experiment	6 Hrs.
	Other student study effort:	
	▪ Course work	30 Hrs.
	▪ Self-study	36 Hrs.
	Total student study effort	**105 Hrs.**
Reading List and References	1. CAD 54 – Requirements Document: Pilot Licenses and Associated Ratings, Hong Kong Civil Aviation Department. 2. Paul E, Illman, The Pilot's Handbook of Aeronautical Knowledge, latest edition, McGraw-Hill, New York, latest edition. 3. FAA Pilot's Handbook of Aeronautical Knowledge, FAA-H-8083-25A, Flight Standard Service, US DOT FAA, latest edition.	

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