Teaching Plan of AAE2001 – Introduction to Aircraft and Aviation Systems Semester 1 2020/2021

1. Subject Code and Subject Title

AAE2001 – Introduction to Aircraft and Aviation Systems

2. Enrolment and Class Size

~120 students from BEng (Hons) in Aviation Engineering

3. List of Staff Members Teaching on the Subject

Staff Member (e-mail)	Department (Room)	Teaching Responsibilities	Teaching Hours
Dr. Frank Zou (frank.zou@polyu.edu.hk)	AEE (QR826)	Lecture	24
Dr. Yiping Jiang (yiping.jiang@connect.polyu.hk)	AAE (QR823)	Lecture	15

4. Texts and Reading List

I. Moir and A.G. Seabridge, "Aircraft Systems: Mechanical, electrical and avionics subsystems integration", 3rd Edition, Aerospace Series, John Wiley& Sons Ltd., 2008.

5. Detailed Teaching and Learning Plan

AAE2001 – Introduction to Aircraft and Aviation Systems
Plan of Teaching, Learning and Assessment – Semester 1 2020/2021

The following Table shows the teaching, learning and assessment plan of the subject throughout Semester 1 2020/2021:

Week	Topics Taught	Planned Learning Outcomes	Assessment	Timetable Staff (for co-teach subjects)
1	Fundamentals and Structure of Aviation System	• Gain the basic knowledge of aviation systems and their functions in the aviation industry including the roles. • Understand the interrelationships among civil aviation administration, airlines and airport operations; air traffic control; maintenance scheduling and aviation associated environmental issues.	Quiz Final Examination	Lecturer: Dr. Yiping Jiang Lecture: Monday 8.30 – 11.30 Venue: Online
2	Atmospheric Condition	• Demonstrate good understanding of the principles of key systems in civil transport aircraft (e.g., control system, fuel system, engine system, hydraulic system, electrical system, pneumatic system, environmental control system and emergency system).	Quiz Final Examination	Lecturer: Dr. Yiping Jiang Lecture: Monday 8.30 – 11.30 Venue: Online

Week	Topics Taught	Planned Learning Outcomes	Assessment	Timetable Staff (for co-teach subjects)
3	Air Traffic Control	• Gain the basic knowledge of aviation systems and their functions in the aviation industry including the roles. • Understand the interrelationships among civil aviation administration, airlines and airport operations; air traffic control; maintenance scheduling and aviation associated environmental issues.	Quiz Final Examination	Lecturer: Dr. Yiping Jiang Lecture: Monday 8.30 – 11.30 Venue: Online
4	Air Traffic Control	• Gain the basic knowledge of aviation systems and their functions in the aviation industry including the roles. • Understand the interrelationships among civil aviation administration, airlines and airport operations; air traffic control; maintenance scheduling and aviation associated environmental issues.	Quiz Final Examination	Lecturer: Dr. Yiping Jiang Lecture: Monday 8.30 – 11.30 Venue: Online
5	Electrical Systems	• Demonstrate good understanding of the principles of key systems in civil transport aircraft (e.g., control system, fuel system, engine system, hydraulic system, electrical system, pneumatic system, environmental control system and emergency system).	Quiz Final Examination	Lecturer: Dr. Yiping Jiang Lecture: Monday 8.30 – 11.30 Venue: Online
6	• Powerplant • Propeller • Fuel Systems	• Demonstrate good understanding of the principles of key systems in civil transport aircraft (e.g., control system, fuel system, engine system, hydraulic system, electrical system, pneumatic system, environmental control system and emergency system).	Individual Assignment Final Examination	Lecturer: Dr. Frank Zou Lecture: Monday 8.30 – 11.30 Venue: Online

Week	Topics Taught	Planned Learning Outcomes	Assessment	Timetable Staff (for co-teach subjects)
7	• Hydraulic Systems • Pneumatic Systems	• Demonstrate good understanding of the principles of key systems in civil transport aircraft (e.g., control system, fuel system, engine system, hydraulic system, electrical system, pneumatic system, environmental control system and emergency system).	Individual Assignment Final Examination	Lecturer: Dr. Frank Zou Lecture: Monday 8.30 – 11.30 Venue: Online
8	• Flight Control Systems • Landing Gear	• Demonstrate good understanding of the principles of key systems in civil transport aircraft (e.g., control system, fuel system, engine system, hydraulic system, electrical system, pneumatic system, environmental control system and emergency system).	Individual Assignment Final Examination	Lecturer: Dr. Frank Zou Lecture: Monday 8.30 – 11.30 Venue: Online
9	• Environmental Control Systems • Air Conditioning System	• Demonstrate good understanding of the principles of key systems in civil transport aircraft (e.g., control system, fuel system, engine system, hydraulic system, electrical system, pneumatic system, environmental control system and emergency system).	Individual Assignment Final Examination	Lecturer: Dr. Frank Zou Lecture: Monday 8.30 – 11.30 Venue: Online

Week	Topics Taught	Planned Learning Outcomes	Assessment	Timetable Staff (for co-teach subjects)
10	Aircraft Design and Testing	• Demonstrate good understanding of the principles of key systems in civil transport aircraft (e.g., control system, fuel system, engine system, hydraulic system, electrical system, pneumatic system, environmental control system and emergency system). • Gain the basic knowledge of aviation systems and their functions in the aviation industry including the roles. • Understand the interrelationships among civil aviation administration, airlines and airport operations; air traffic control; maintenance scheduling and aviation associated environmental issues.	Group Project Final Examination	Lecturer: Dr. Frank Zou Lecture: Monday 8.30 – 11.30 Venue: Online
11	Environmental Impact of Aviation	• Understand the interrelationships among civil aviation administration, airlines and airport operations; air traffic control; maintenance scheduling and aviation associated environmental issues.	Group Project Final Examination	Lecturer: Dr. Frank Zou Lecture: Monday 8.30 – 11.30 Venue: Online
12	Group Project Presentation		Group Project	Lecturer: Dr. Frank Zou Lecture: Monday 8.30 – 11.30 Venue: Online
13	Revision		Final Examination	Lecturer: Dr. Frank Zou, Dr. Yiping Jiang Lecture: Monday 8.30 – 11.30 Venue: Online

6. Assessment Methods

The subject will be assessed by: 60% Examination + 40% Continuous Assessment. Students need to achieve a grade of D or above in each of these components to pass the whole subject.

The final examination will be a close-book examination held at the end of the semester.

The continuous assessment will be a combination of the following tasks:

- Quiz (10%)
- Individual Assignment (10%)
- Group Project (20%)
