



香港資優教育學苑  
The Hong Kong Academy for Gifted Education

**Aerospace Course (Level IV)**

A4AER003C

(Token- required)

# Space Mission (Phase III)

## - Aeronautical Engineering & Aircraft Design

10Botics Limited



### **Intended Learning Outcomes**

Upon completion of the programme, participants should:

1. Develop a firm understanding in the Science of Flight
2. Design, Build and Fly their own scaled model Aircraft to meet various Performance Specification
3. Learn about the latest trend in Aviation and the Bleeding Edge Technological Developments in the X-Planes program

**Application Deadline**  
**12 Apr 2023 12:00 noon**

**Result Release**  
**14 Apr 2023**



## ◆ Introduction

Ever looked up in the sky and wondered how those incredible machines are able to soar freely through the clouds with such speed and power? If you're captivated by the magic of flight and want to unlock the secrets of aircraft design, this ride is your first-class ticket to the sky!

The aeronautical engineering and aircraft design course is a hybrid lecture and project-based class that promote learning by hands-on experiments. We will learn about fundamental concepts in aerodynamics, the driving force behind flight, as well as jet propulsion and the various components that make up an aircraft system. Through a mixture of software simulation and scaled model building, students will be able to perform design trade studies and prototype their own airplane by the end of the course!

Your captain for this exciting flight is former NASA engineer, Billy Hau. During his time at the agency, Billy worked on projects such as electrical aircrafts, lunar space station and deep space mining robots. He also led the NASA Young Innovators STEM outreach program at local libraries for elementary through high school students.

## ◆ Schedule (Phase III) **Updated as of 2023.6.8**

Session	Date	Time	Venue	Topic
1	29 Apr 2023 <b>25 Jul 2023</b>	<b>9:00am – 1:00pm</b>	<b>HKAGE</b>	Introduction to Flights
2	6 May 2023 <b>28 Jul 2023</b>			Aerodynamics
3	13 May 2023 <b>2 Aug 2023</b>			Aircraft Propulsion
4	20 May 2023 <b>3 Aug 2023</b>			Flight Dynamics and Controls
5	27 May 2023 <b>8 Aug 2023</b>			Student Aircraft Design Project





## ◆ Target Participants

- **S1 – S6** HKAGE student members in 2022/23 school year
- Priority will be given to student members who have participated in phase 2 (A4AER002C)
- Class size: 30

## ◆ Medium of Instruction

Cantonese with English handouts

## ◆ Certificate

E-Certificate will be awarded to participants who have:

- fulfilled **80%** attendance of the programme; AND
- completed **all the assignments** with satisfactory performance

## ◆ Screening

All applicants please answer the screening question in the online application form.

\*The screening question is designed to help the applicant understands the course level and the course content. The question must be answered by the student applicant and it can only be attempted once. The answer cannot be changed once the application is submitted. Selection is based on students' performance in answering the question. Only students who can demonstrate passion, motivation and the knowledge of Aerospace Engineering in the screening question can be enrolled in the programme.

## ◆ Technical Requirements

- The course will make use of software for flight simulation, therefore, students **are required to** bring a **laptop** to attend the course.

