

HONG KONG AIR CADET CORPS



MULTICOPTER/UAV PILOT CERTIFICATE PROGRAM 2017 – 2018

Supporting organizations:



香港大學機械工程系
DEPARTMENT OF MECHANICAL ENGINEERING
THE UNIVERSITY OF HONG KONG



Mechanical, Marine, Naval Architecture & Chemical Division
機械、船隻、造船及化工分部



Training details

Origin: The Hong Kong Air Cadet Corps 香港航空青年團

Hong Kong Air Cadet Corps is a uniformed group under the policy aegis of the Home Affairs Bureau. A registered charitable body and a member organization of the Hong Kong Community Chest, we offer quality aviation education programs to prepare young people for possible future service in the local Aviation industry, thereby contributing to the economic well-being of Hong Kong. (<http://www.aircadets.org.hk/web/main.php>)

Training targets:

- 1) Configurations of multicopter and construction.
- 2) Safety of UAV management.
- 3) Basic to advanced multicopter flying skill.

Beneficiaries:

Description	Age
Hong Kong Air Cadet Corps Officer	21 or above
Hong Kong Air Cadet Corps members Students of the University of Hong Kong.	14 or above
Members of the Hong Kong Institution of Engineers	21 or above
Members of the Hong Kong Aviation Club	21 or above
Remarks: i) Applicants who has experience on RC model will be considered in advance. ii) Additional requirements can be imposed by the specific organizations during recruitment.	

Supporting organizations:

- 1) The Department of Mechanical Engineering, HKU
- 2) HKIE- Mechanical, Marine, Naval Architecture and Chemical Division
- 3) The Hong Kong Aviation Club

Training schedule:

Class code	Date	Application deadline
DRPT0702	April, 2017	31 March 2017

*The quota for each class is about 15~20.

Time schedule (Indoor class)		
Module	Time	Venue
1 st Lecture + Award delivery for 1 st class.	8, April 2017 (SAT, 4:00pm to 7:00pm).	HKU (KB223)
2 nd Lecture	10, April 2017 (Mon, 7:00pm to 9:00pm)	HKU (COBLG109)
Flight simulation	11, April 2017 (Tue, 6:30pm~8:30pm)	HKU (COBLG202)
Indoor flight practice	22,29, April 6, 13May (Sat 9:30am – 1:00pm or 2:00pm to 5:00pm)	HKU (COBLG109)
Indoor flight exam	20, May (Sat 9:30am – 1:00pm)	

Time schedule (Outdoor class)		
Module	Time	Venue
Multicopter construction	27, May (Sat 9:30pm-1:30pm)	HKU (COBLG109)
Outdoor flight practice*	3, 10,17,24, June 8, 15 July (Sat 9:30am – 1:00pm)	The Hong Kong Aviation Club
Outdoor flight exam*	22, July	

*Notice: For outdoor flight activities, the time schedules are tentative. They may be subjected to change due to weather condition and student examination period.

Training fee

Class	Content	Requirement	Basic Course Charge (HK\$)	HKACC associate member fee for non-HKACC member (HK\$)
Indoor	Indoor flight training, Beginner level.	None	600	30
Outdoor	Outdoor flight training, Junior to senior level	Pass the Junior (Indoor) level	500	No additional charge

The above charges are collected by HKACC (A registered charitable body under the law of Hong Kong). The fee cover all training materials and insurance. This is a non-profit making activity and the charges are non-refundable.

All trainees must bring along a **Laptop computer**, with Windows 7 or above, for the quadcopter construction in senior section.

After joining the program, additional charge is required for 2nd or more attempts of written test or practical flight test.

Number of attempts	Charge per attempt (HK\$)
1	0
>1	200

Course material:

Item	Description	Source
1	Handout	Provided
2	Quadcopter for indoor training (size =100)	Will be given to each trainee for indoor flight practice and home practice.
2	Multicopter for outdoor training (Size = 250)	Provided
3	Multicopter for outdoor training (Size ≥ 450)	Provided
4	Laptop computer for flight controller setup & flight simulation.	Not provided, trainee should bring their own computer.

Instruction language:

Cantonese & English

Application procedures:

- a) Submit the application form to uav.trg.1@gmail.com before the deadline.
- b) Due to quota limitation, the number of trainee will be limited to 15-20 in each class.
- c) Applicants will be informed of the results of enrolment within 5 working days after the deadline and they need to transfer the fee accordingly within 5 working days.
- d) A successful non-HKACC member applicant is also required to join HKACC as an associate member to fulfil the requirement of insurance policy for this activity.

Certificate requirement:

A training logbook will be kept for each trainee. Before taking the practical flight test, a trainee need to fulfil the following requirements:

- a) Pass the written test
- b) Attended the lectures, the flight simulation section and the model construction section
- c) Attended at least 3 indoor flight practice sections and 4 outdoor flight practice section.

Level of certificate	Requirement	Award/Wing
Beginner	Submission: <ul style="list-style-type: none">• A training Logbook. Pass: <ul style="list-style-type: none">• Written test.• Specific practical flight test. Capability: <ul style="list-style-type: none">• Able to manipulate a Multicopter indoor with drone heading forward.• Able to hover the Multicopter and fly paths levelly with compass (head free mode) available.	Certificate
Junior (Indoor)	Submission: <ul style="list-style-type: none">• A training Logbook. Pass: <ul style="list-style-type: none">• Beginner level• Specific practical flight test. Capability: <ul style="list-style-type: none">• Able to manipulate a Multicopter indoor with drone heading any directions.• Able to hover the Multicopter and fly paths without compass (head free mode).	Certificate
Junior (Outdoor)	Submission: <ul style="list-style-type: none">• A training Logbook Pass: <ul style="list-style-type: none">• Junior (Indoor) level• Specific practical flight test. Capability: <ul style="list-style-type: none">• Able to control a Multicopter indoor or outdoor with drone heading any directions.• Able to hover the Multicopter and fly paths with compass (head free mode), GPS and height sensor available.	Certificate

Intermediate	<p>Submission:</p> <ul style="list-style-type: none"> • A training Logbook. <p>Pass:</p> <ul style="list-style-type: none"> • Junior (Outdoor) • Specific practical flight test. <p>Capability:</p> <ul style="list-style-type: none"> • Able to control a Multicopter indoor or outdoor with drone heading any directions. • Able to hover the Multicopter and fly paths without using compass (head free mode), GPS and height sensor. 	Certificate + Bronze wing
Senior	<p>Submission</p> <ul style="list-style-type: none"> • A training Logbook. <p>Pass:</p> <ul style="list-style-type: none"> • Intermediate level. • Specific practical flight test. <p>Capability:</p> <ul style="list-style-type: none"> • Able to control a Multicopter indoor or outdoor with drone heading any directions. • Able to hover the Multicopter and fly complicated paths without using compass (head free mode), GPS and height sensor. 	
Coach	<ul style="list-style-type: none"> • Pass the Senior level. • Attend coach level lecture. • Capable of controlling a Multicopter with FPV in a short course. • Train up 5 trainees or more who can achieve the intermediate level test under the program. 	Certificate + Silver wing

Code of Conduct

Trainees violate the following codes of conduct will be disqualified.

- The instructions of our instructors must be complied at all times.
- Solo flight is straightly prohibited without the permission of our instructors.
- Do no harm to the others.
- Be honest during test, cheating on test is strictly prohibited
- Follow all the safety guidelines.

Dress code

Smart casual with sport shoes for non-HKACC members. Dressing should prevent sunburn.

Test arrangement

The test is divided into two parts:

Written test (common to both junior level & senior level certificate, multiple choice questions):

- History of Multicopter.
- Architecture of multicopter.
- Flying theory of multicopter.
- Safety measure of multicopter operation and battery handling.

Pass Mark

A trainee should pass the indoor practical flight test as well as the written test before taking the outdoor practical flight training. The time in between two attempts of written test should be at least 5 days. Once you have passed the indoor practical flight test and written test, you will not be required to take the same test again.

Practical flight test

During the test, the applicant must complete the required flying missions in solo accordingly.

In all the tests, there will be at least two examiners, including the chief instructor.

- a) For the test from beginner to junior level, the applicant will get a pass if he/she can get 60 marks out of 100 and none of the specific flying mission gets marks less than 50.
- b) For the test from intermediate to senior level, the applicant will get a pass if he/she can get 75 marks out of 100 and none of the specific flying mission gets marks less than 60.

Arrangements during bad weather

For outdoor flight practice, the air field manager will check the whether the weather is appropriate or not, outdoor flight practice will be cancelled under the following condition:

- 1) Raining
- 2) Wind speed > 10 knots (~5m/s)
- 3) Tropical Cyclone Warning Signal No. 3 (or above)
- 4) Thunderstorm Warning in forced by Hong Kong Observatory
- 5) Strong Monsoon Signal in forced by Hong Kong Observatory
- 6) Any Rainstorm Warning in forced by Hong Kong Observatory

When Tropical Cyclone Warning Signal No. 8 (or above) or Black Rainstorm Signal is hoisted, the following arrangements will apply:

a) **For indoor/outdoor classes and tests not yet started**

If either of the warnings is hoisted or in force at or after "2 hours before the activity".	All classes and tests commencing will be cancelled automatically.
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b) **For indoor/outdoor classes and tests already started**

When Tropical Cyclone Warning Signal No. 8 or above is hoisted	<ul style="list-style-type: none"> • All classes will be suspended immediately. • All tests will continue until the end of that examination session.
When Black Rainstorm Signal is hoisted	<ul style="list-style-type: none"> • All classes and tests, except those held outdoors, will continue. • For outdoor classes and tests, the responsible staff members on the spot should suspend the activities immediately, ensure that all trainee are taken to a safe place, and remain there until it is safe for them to return home.

When Tropical Cyclone Warning Signal No. 3 or below or Red or Amber Rainstorm Signal is in force, it should be assumed that all indoor classes and tests will be held as scheduled unless an announcement to the contrary has been made by the organization.

c) For outdoor activity not yet started

Before outdoor activity, the chief instructor will check whether the weather condition is appropriate for UAV flight training, e.g. raining or wind speed. The result will be announced through WhatsApp group of the specific class.

Application form
(Multicopter/UAV Pilot Certificate Program)

Name (English)	<hr/>	<div style="border: 1px solid black; padding: 20px; width: 100%;">Recent Photo (Mandatory) X 2</div>
Name (Chinese)	<hr/>	
Gender	<hr/> Marital status <hr/>	
Date of birth	<hr/> (enter as yyyy-mm-dd)	
HKID Card	<hr/> ()	
*HKACC member No. /University No./ HKIE member No.:	<hr/>	
Age:	<hr/> Telephone (Home) <hr/>	
Education Level	<hr/> (Office) <hr/>	
Occupation/ Position	<hr/> (Mobile) <hr/>	
Company/ College	<hr/>	
Email address (Primary, with large capacity)**	<hr/>	
Email address (Secondary)	<hr/>	
Home address	<hr/> <hr/>	
In case of emergency	1. Contact: <hr/> Relationship: <hr/> Telephone (Mobile): <hr/>	
	2. Contact: <hr/> Relationship: <hr/> Telephone (Mobile): <hr/>	
Previous experience on RC model flying:	<hr/> <hr/> <hr/>	

* Please circle the correct type

** This is mandatory as official course notice will be distributed via e-mail

The information collected from you will be used for the purpose of processing your application and communication only. We will not provide your personal data to third parties for direct marketing or other unrelated purposes without your consent.

All application forms are required to reach uav.trg.1@gmail.com on or before the specific deadline through email.

Address: Headquarters, Hong Kong Air Cadet Corps, Sung Wong Toi Road, Kowloon City.

Tel: 27128900

Fax: 27156944

Email: uav.trg.1@gmail.com

Programme Fee

HK\$600 (Indoor class) and **HK\$500 (Outdoor class)** will be applied to HKACC members/ HKU students/ HKIE members (Please circle the selected type)

For non-HKACC member applicants, an associate membership fees of **HK\$30** will be charged for the application of HKACC Associate Member in addition to the aforementioned course fee.

After receiving an offer of a place in the programme, I will submit the total course fee (and Associate Membership*) fee of HK\$_____ by either sending cheque to HKACC HQ or through ATM to HKACC account within 5 working days. Otherwise, the offer will be cancelled automatically.

- a) Crossed cheque payable to "Hong Kong Air Cadet Corps"
- b) For ATM transfer, a pre-arrangement with HKACC HQ staff is required. The HSBC Deposit Slip/ATM Bank Transfer Slip (HSBC a/c 808-620280-007 "Hong Kong Air Cadet Corps" should be sent back to the HKACC HQ accordingly.

*Note that application form without photos attached will not be accepted.

And I understand that the programme fee will not be refunded once I have accepted the offer of a place in the programme.

I certify that the above information provided is accurate.

Date: _____

Applicant Signature: _____

Official Use

Application received on: _____ Date of interview (if appropriate): _____

Status : **Rejected / Approved**

Checked by : _____