Advanced Aviation Education Programme (Helicopter) 2014
Programme Outline & Rules and Regulations

(27-1-2014)

1. Programme Aims and Objectives

Made possible by the support from the Community Chest, Hong Kong, this non-profitable programme aims at introducing the world of helicopter aviation to those air-minded people who wish to learn more about the latest helicopter technology & development as well as the pilot training aspect.

The programme provides the participants with Private Pilot Licence (Helicopter) Visual Flight Rules (PPLH VFR) theories according to Australian Civil Aviation Safety Authority (CASA) from initial stage to General Flying Practical Test (GFPT) stage.

2. Eligibility

The programme is open to HKACC members, members of HK Uniformed Youth Groups and the general public at a **minimum age of 16**. A reasonable understanding of English with science academic background is desirable.

3. Course Structure

With reference to the PPLH VFR Syllabus of Australian CASA, candidates are required to obtain a full understanding of the following subjects in two separate Modules.

MODULE ONE (Mar 2014 – Jul 2014)

No.	Topic	No. of Session
1	Introduction to the World of Helicopter Aviation and Hong Kong Helicopter Operators	2
2	Helicopter Pilot Flight Training Introduction	1
3	Helicopter Aerodynamics	6
4	Air Traffic Control	1
5	Helicopter Piston/Gas Turbine Engine, System and Instruments	4
6	Flight Rules & Air Law	2
7	Aviation Meteorology	2
8	Module One Examination (Covered 4 subjects)	1

MODULE TWO (Sept 2014 – Dec 2014)

9	Air Navigation and Flight Planning	4
10	Helicopter Performance	1
11	Helicopter Weight and Balance	1
12	Helicopter Type Knowledge	1
13	Radio Telephony	1
14	Aviation Physiology and Psychology	2
15	Module Two Examination (Covered 5 subjects)	1

4. Mode of Attendance

Part-time evening (Please refer to programme timetable on page 4).

5. Method of Teaching

Classroom Lectures
Tuition language will be Cantonese supplemented with English.

6. Assessment

There are two examinations to be conducted at the end of each module Each exam carries 4 and 5 subjects respectively.
Passing mark for each examination: 50 %

7. Recognition

Students who have passed the two examinations will be awarded “Certificate of Achievement” issued by HKACC. Students who have obtained not less than 70% attendance will be awarded “Certificate of Participation”. (Only one certificate will be issued) Cadets who have completed the course could apply for parallel recognition of all aviation subjects required for the Senior Cadet and Staff Cadet classifications.

8. Scholarships

In order to encourage a deeper understanding of helicopter aviation, scholarships are to be presented to the best performing candidates.

Scholarship (One or Three)	: 5-hour mini flight training course in Australia and air ticket
Scholarship (One)	: Commercial Pilot Theory Course plus exam in Australia and air ticket
Scholarship (Two)	: B737 Flight Simulator Training Course
Scholarship (Three)	: (Phoenix Award) R44 and R22 Helicopter Flight Experience
Scholarship (Four)	: MD902 Helicopter Flight Experience

**No. of Flying Scholarship is based on the number of application as course fee will be the major income.

Special thanks to our sponsors: Mr. Hogan Loh, Australia Becker Helicopter Pilot Academy, Cathay Pacific Airways and Heliservices (HK) Ltd. who have been providing continuous support and sponsorship to the programme.

9. Course Fee

General Public	**: $2600**
Members of HK Uniformed Youth Group	**: $2200**
HKACC Senior member (21 of age or above as at the course commencement date)	**: $2000**
HKACC Cadet member (Below 21 of age as at the course commencement date)	**: $1100**

The course income is used to cover the cost of course materials, scholarship and graduation dinner. (All programme staff and instructors are volunteers) Course fee will not be refundable after the applicants have accepted the offer of a place in the programme. Enrolment fee of $30 is applicable for non-HKACC member to enroll as HKACC Associate Member. 4 text books and 3 navigation tools are recommended for the programme (Approx. $1600-$1800 and $200-$300 respectively) at candidates' own decision and expense. (Books and navigation tools ordering procedures will be announced in the first lesson)

10. Activities

Student gathering, visits to Hong Kong aviation organizations and/or government departments may be organized from time to time during the programme period.

11. Application Procedure

Applicant should submit a completed application form (with two passport photos), together with a crossed cheque payable to "Hong Kong Air Cadet Corps". **The application shall reach HKACC HQ General Registry (in person or by representative) on or before the closing date. The closing date of application for AAEP(Helicopter) 2014 is 25 Feb 2014 (Tue).** Incomplete applications will not be processed.

12. Selection Procedures

Applicants with recommendation from immediate supervisor will be an advantage for members of HKACC and other organizations. Applicants may be required to attend an interview organized by the Work Team

13. Code of Conduct

Students shall observe the customs and courtesy of HKACC. Classroom discipline applies.

14. Programme Administration

The HKACC reserve all rights to alter, revise and administer all materials and activities in the programme without prior notification and consultation with the students.

15. Admission Enquiries

Enquiries can be addressed to:

Advanced Aviation Education Programme (Helicopter) 2014
Hong Kong Air Cadet Corps Headquarters
Sung Wong Toi Road
Kowloon City
Telephone: 2712 8900
Fax: 2715 6944
Email: hq@aircadets.org.hk
Website : http://www.aircadets.org.hk
Facebook: http://www.facebook.com/hkacc.aewing

Helicopter Pilot Training in Australia

1. Opportunities of Flying Training

The AAEP(H) Work Team is pleased to provide information of helicopter flight training in Australia in order to render support to those participants who may pursue flying as a hobby or as a career.

2. Pathway to Helicopter Pilot Licence in Australia

Phase	Theory Exam	Practical Flying**	Attainment / Licence	HKACC's Recognition
One	Pre-solo	(1-15 hrs)*	First solo	Aircrew Badge
Two	Pre-area solo	(15-25 hrs)*	Area solo	Aircrew Badge
Three	BAK	(25-50 hrs)*	General Flying Progress Test	Aircrew Badge
Four	PPLH Exam	(50-70 hrs)*	Private Pilot Licence	Pilot Badge
Five	CPLH Exam	(125 hrs up)	Commercial Pilot Licence	Pilot Badge

3. Recognition of Qualifications

All member states of International Civil Aviation Organization (ICAO), including United Kingdom, United States, China and Hong Kong, recognize the Australian Private Pilot Licence (Helicopter)(PPLH). However, conversion to local licence may be necessary as stipulated by Individual Civil Aviation Authorities.

4. Cost & Expenses

Student pilots should expect that the cost of flying vary with individual in learning progress. On average, the cost to obtain a PPLH is expected to be AU$32,000 ~ AU$38000 in 2014. The cost includes study tools, pilot's gear, flying fee and examination fee.

5. Programme Staff

Programme Advisors :

HONG KONG AIR CADET CORPS
Air Commodore Norman LO
Group Captain Lee Kwok Wing
Group Captain Len LEUNG
Wing Commander Wilson CHAN
Wing Commander John LI
Wing Commander Ivan CHAN
Squadron Leader Kenneth LEUNG
Specialist Squadron Leader Steve WONG
Specialist Squadron Leader Marcus CHAN
Mr. Hogan LOH

CIVIL AVIATION DEPARTMENT
Mr. Norman LO (DGCA)

BECKER HELICOPTERS PILOT ACADEMY
Captain Mike BECKER

HONG KONG AVIATION CLUB
Mr. John LI

HONG KONG HELICOPTER CLUB
Mr. Hogan LOH

Guest Instructor Pool	Work Team Coordinators
Captain Alan CHONG (Safety & Accident Investigation)	Flt Lt Hermes HO
Captain Cody WONG (Search & Rescue)	Ag Plt Off Carrie KWONG
Captain Victor LAU (Search & Rescue)	Instr SIN K H Hugo
Captain Erik YOUNG (Search & Rescue)	
Pilot Jim Tang (Search & Rescue)	
Specialist Squadron Leader Johnny YEE (Chief Aircraft Engineer)	
Specialist Squadron Leader Dandy WONG (Aircraft Engineer)	
Squadron Leader Albert HONG (Air Traffic Control Expert)	
Specialist Flying Officer Sunny CHAN (Experienced Airline Pilot)	

6. Venue

Hong Kong Aviation Club or suitable venue (Venue is subject to change with prior notice)

7. Class Size
40-60

8. Programme Calendar (2014)

Module One

Date	Time	Subject
7 Mar 2014	1930-2200	Programme Introduction An Introduction to the World of Helicopter Aviation 1
14 Mar 2014	1930-2200	An Introduction to the World of Helicopter Aviation 2 An Introduction to Hong Kong Helicopter Operators
21 Mar 2014	1930-2200	Helicopter Pilot Training
28 Mar 2014	1930-2200	Helicopter Aerodynamics 1
4 Apr 2014	1930-2200	Helicopter Aerodynamics 2
11 Apr 2014	1930-2200	Helicopter Aerodynamics 3
25 Apr 2014	1930-2200	Air Traffic Control
2 May 2014	1930-2200	Helicopter Aerodynamics 4
9 May 2014	1930-2200	Helicopter Aerodynamics 5
16 May 2014	1930-2200	Helicopter Aerodynamics 6
23 May 2014	1930-2200	Helicopter Engine/Gas Turbine/Systems/Instrument 1
30 May 2014	1930-2200	Helicopter Engine/Gas Turbine/Systems/Instrument 2
6 Jun 2014	1930-2200	Helicopter Engine/Gas Turbine/Systems/Instrument 3
13 Jun 2014	1930-2200	Flight Rules and Air Law 1
20 Jun 2014	1930-2200	Flight Rules and Air Law 2
27 Jun 2014	1930-2200	Meteorology 1
4 Jul 2014	1930-2200	Meteorology 2
11 Jul 2014		Off Week
18 Jul 2014	1930-2230	Module One Examination

Module Two

5 Sept 2014	1930-2200	Air Navigation and Flight Planning 1
12 Sept 2014	1930-2200	Air Navigation and Flight Planning 2
19 Sept 2014	1930-2200	Air Navigation and Flight Planning 3
26 Sept 2014	1930-2200	Air Navigation and Flight Planning 4
3 Oct 2014	1930-2200	Helicopter Performance
10 Oct 2014	1930-2200	Helicopter Weight and Balance
17 Oct 2014	1930-2200	Helicopter Type Knowledge
24 Oct 2014	1930-2200	Radio Telephony
31 Oct 2014	1930-2200	Aviation Physiology and Psychology Knowledge 1
7 Nov 2014	1930-2200	Aviation Physiology and Psychology Knowledge 2
14 Nov 2014		Off Week
21 Nov 2014	1930-2230	Module Two Examination
25 Nov 2014		Application for Scholarship
5 Nov 2014	1930-2300	Scholarship Assessment and Interview
12 Dec 2014 TBC	1930-2230	Graduation dinner and certificate presentation

Important Reminder

***Since the Hong Kong Aviation Club does not guarantee the availability of lecture room booking for each lesson, in case any Friday lecture room booking is not available, the lecture will be changed to Thursday of the same week with prior notice. In this case applicants should consider carefully for the availability of both Thursday and Friday evening before submit the application.**

***Owing to the special shift duty of the instructors (eg. Pilot, Engineer and Air Traffic Controller), the lecture topics are subject to change with prior notice.**

***Applicants must take a careful consideration before applying this programme regarding the availability to attend both examinations as there will be no alternative examination arrangement. (Exam date: 18 Jul 2014 and 21 Nov 2014)**

Do You Want To Know ??? Just Come and Join Us

- 現今最先進的直升機爲甚麼不能以超音速飛行 **(Supersonic flight)**？
- 除已面世第一架隱形直升機 **RAH-66** 外，現今是否還有未對外公佈之第二架隱形直升機**(Stealth Helicopter)**？
- 直升機師如何從異常飛行狀態中獲知直升機已進入旋風環狀態**(Vortex Ring State)**及應如何作出糾正？
- 爲甚麼直升機師須要求更高之手眼協調能力**(Eye-hand coordination)**，才可令直升機進行懸浮？
- 爲甚麼有些直升機槳葉內須注入壓縮隋性氣體？
- 兩槳式直升機於無重量狀態飛行時將遇到甚麼危險情況？
- 直升機在無動力狀態下如何以『自轉下降』**(Autorotation)**方式安全降落地面之原理？
- 無尾槳直升機如何應用流體力學之**"Coanda Effect"** 使直升機尾部產生橫向升力？
- 爲甚麼大型直升機 **(30** 人以上**)** 不能使用兩槳葉之結構而須用多葉式？
- 爲甚麼美製中小型直升機於降落時左邊起落架首先著地而不是右邊？
- 爲甚麼有些直升機能作倒轉飛行而一般直升機不可以？
- 直升機爲甚麼於懸浮**(Hovering)**時會自動漂向右邊？
- 爲甚麼中小型直升機使用起落架而不使用輪子？
- 爲甚麼兩槳直升機不可以在無重量狀態**(Weightless)**飛行而三槳或以上直升機則可以？
- 爲甚麼地面共振**(Ground Resonnance)**可對直升機結構做成很大破壞及如何避免和作出糾正？
- 爲甚麼直升機懸浮時轉向左邊時下降而轉向右邊時則上升？
- 直升機師如何知道於飛行時槳葉出現結冰現象**(Blade Icing)**及應作出甚麼相應行動？
- 直升機師如何計算在不同動力及重量下之爬升率？
- 直升機師如何計算在不同高山機場能否進行正常降落程序？
- 直升機師如何計算當天飛行最高載重量？
- 直升機師如何計算所駕駛之直升機安全重心及燃料重量達到法例上之要求？
- 直升機師如何計算貨物倉之最大載重量？
- 直升機活塞式引擎點火系統如何運作？
- 爲甚麼引擎『爆振現象』**(Detonation)**可做成很大之破壞力及如何防止發生？
- 爲甚麼引擎會出現『早燃』**(Pre-ignition)**『逆火』**(Back Fire)**及『排氣口噴火』**(After Fire)**之現象？
- 直升機之電力供應系統**(Electric System)**如何運作？
- 直升機之油壓系統**(Hydraulic System)**如何運作？
- 爲甚麼直升機部份儀表須採用陀螺**(Gyro)**運作系統？
- 爲甚麼直升機師須倚靠『方向指示儀』**(Directional Indicator)**作爲主要方向導航儀表而非指南針？
- 『人工地平儀』**(Artificial Horizon)**如何協助直升機師在雲中辨別飛行姿態？
- 爲甚麼直升機師每隔一段時間須進行『指南針技術修正程序』？

- 直升機遇意外時爲甚麼可自動發出國際求救訊號**(International Distress Signal)**？
- 直升機於進行目視飛行**(VFR)**時有甚麼法例規管？
- 直升機師如何透過『應答機』**(Transponder)**將飛行狀態資料傳送到航空交通管制員面前之雷達螢光幕
- 爲甚麼當飛機飛越一萬呎高空時須採用國際標準氣壓？
- 飛機師如何採用『精密進場航迹指示器』**(PAPI)**及『目視進場坡道指示系統』**(VASI)**準確降落機場跑道？
- 直升機師進行越域導航飛行時，如何採用國際標準決定合適飛行高度？
- 直升機師遇到緊急情況時，如何使用無線電通訊程序求救？
- 濃積雨雲**(Cumulomibus)**對飛行構成那幾方面危險？
- 爲甚麼直升機須避免在透鏡雲**(Lenticular Cloud)**或旋轉雲**(Rotor Cloud)**下飛行？
- 爲甚麼當逆溫層出現時有機會出現『風切變』**(Windshear)**？
- 雷暴**(Thunderstorm)**如何對飛行構成危險？
- 龍捲風**(Tornado)**及高低空捷流**(Jet Stream)**如何影響飛行安全？
- 颱風形成因素及其移動特性？
- 爲甚麼旋翼結冰**(Rotor Blade Icing)**對飛行構成危險及如何避免發生？
- 如何解讀 **ATIS** 自動終端信息服務及如何應用於起飛及降落程序？
- 如何解讀各種航空天氣預報/報告及應用於飛行計劃？
- 如何使用航空通訊用語於飛行過程與航空交通控制員進行溝通？
- 如何操作直升機內之航空通訊設備？
- 國際民航組織**(ICAO)**如何將航空英語能力分爲六級？
- 如何透過航空心理學測試人類心理質素及性格取向是否適合成爲飛行人員？
- 如何透過航空生理學讓直升機師/飛機師認識飛行時所遇到之不同幻覺及如何作出糾正？
- 在直升機駕駛艙內正副機師雙方應如何採用適當合作模式以確保飛行安全？
- 直升機師如何透過各種導航設施如 **ADF** 自動定向儀及 **VOR** 甚高頻全向無線電信標識別在空中之所在位置？
- 直升機師如何透過 **DME** 測距儀及 **GPS** 全球衛星定位系統協助進行越域飛行？
- 直升機師如何透過飛行電腦(飛行計算尺)計算飛行中所遇真實風向及風力？
- 直升機師於發現偏離原來航道時，如何透過運用 **1in60** 原理計算出應修正之角度？
- 直升機師計劃於海上及沙漠上飛行時，如何預先計算『不可回航點』**(Point of No Return)** 在那裡？
- 直升機師制定飛行計劃時須接受甚麼法例規管？
- 直升機師如何透過專用航空圖座標尋找目的地機場位置？
- 直升機師如何透過專用航空尺及量角器尋找目的地機場之距離和方向？
- 直升機師如何計算所須燃料以到達目的地機場，並符合法例規定之最低後備燃料要求？
- 直升機師如何計算起飛後到達目的地機場所須時間？
- 直升機師如何識別天空不同飛行禁區，限制區及危險區域？
- 航空交通控制員如何管理每一架在飛行中的飛機和直升機之安全？

- 還有 . . . .