香港學術及職業資歷評審局
Hong Kong Council for Accreditation of
Academic & Vocational Qualifications

# SUMMARY ACCREDITATION REPORT

## TECHNOLOGICAL AND HIGHER EDUCATION INSTITUTE OF HONG KONG, VOCATIONAL TRAINING COUNCIL

## LEARNING PROGRAMME ACCREDITATION

## BACHELOR OF ENGINEERING (HONOURS) IN AIRCRAFT ENGINEERING

**MARCH 2019**

This accreditation report is issued by the Hong Kong Council for Accreditation of Academic and Vocational Qualifications (HKCAAVQ) in its capacity as the Accreditation Authority as provided for under the Accreditation of Academic and Vocational Qualifications Ordinance (Cap. 592) (AAVQO). This report outlines the HKCAAVQ's determination, the validity period of the determination as well as any conditions or restrictions on the determination.

## 1. Introduction

1.1 Technological and Higher Education Institute of Hong Kong (THEi), established in 2011, is a member institution of the Vocational Training Council (VTC). It was granted Institutional Review status by HKCAAVQ in September 2012. Currently, it offers 21 accredited bachelor degree programmes and a number of professional diploma/professional certificate programmes in various disciplines.

1.2 Based on the Service Agreement, HKCAAVQ was commissioned by the THEi to conduct a learning programme accreditation exercise with the following Terms of Reference:

(a) To conduct an accreditation test as provided for in the AAVQO to determine whether the Bachelor of Engineering (Honours) in Aircraft Engineering programme of THEi meets the stated objectives and QF standards and can be offered as an accredited programme; and

(b) To issue to the THEi an accreditation report setting out the results of the determination in relation to (a) by HKCAAVQ.

1.3 The accreditation exercise was conducted according to the relevant accreditation guidelines referred to in the Service Agreement and the Terms of Reference stated therein. A site visit took place on 24 and 25 January 2019.

## 2. HKCAAVQ's Accreditation Determination

Having due consideration of the accreditation panel's observations and comments as presented in this Report, HKCAAVQ makes the following accreditation determination:

2.1 **Learning Programme Accreditation**

☑ Approval

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| **Name of Operator** | Technological and Higher Education Institute of Hong Kong, Vocational Training Council<br>職業訓練局 - 香港高等科技教育學院 |
| **Name of Award Granting Body** | Vocational Training Council<br>職業訓練局 |
| **Title of Learning Programme** | Bachelor of Engineering (Honours) in Aircraft Engineering<br>飛機工程（榮譽）工學士 |
| **Title of Qualification (Exit Award)** | Bachelor of Engineering (Honours) in Aircraft Engineering<br>飛機工程（榮譽）工學士 |
| **Primary Area of Study and Training** | Engineering and Technology |
| **Sub-area (Primary Area of Study and Training)** | Electrical, Electronic and Mechanical Engineering and Services |
| **QF Level** | Level 5 |
| **QF Credits** | 529 |
| **Mode of Delivery and Programme Length** | Full-time, 4 years |
| **Intermediate Exit Award** | **Title of Qualification:**<br>Higher Diploma in Aircraft Engineering<br>飛機工程高級文憑<br><br>**QF Level:**<br>Level 4<br><br>**QF Credits:**<br>300 QF credits<br><br>**Attainment:**<br>Completion of 5 semesters in full-time mode of Bachelor of Engineering (Honours) in Aircraft Engineering |
| **Start Date of Validity Period** | 1 September 2019 |
| **End Date of Validity Period** | 31 August 2024 |
| **Number of Enrolment** | One enrolment per year |
| **Maximum Number of New Students** | 2019/20 academic year<br>45 Year 1 students per year<br>45 Year 3 students per year |

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| | From September 2020 to August 2024<br>75 Year 1 students per year<br>45 Year 3 students per year |
| **Specification of Competency Standards-based Programme** | ☑ Yes ☐ No |
| **Address of Teaching Venue** | Technological and Higher Education Institute of Hong Kong (Tsing Yi Campus)<br>20A Tsing Yi Road, Tsing Yi, New Territories, Hong Kong<br><br>Technological and Higher Education Institute of Hong Kong (Chai Wan Campus)<br>133 Shing Tai Road, Chai Wan, Hong Kong<br><br>Hong Kong Institute of Vocational Education (Tsing Yi Campus)<br>20 Tsing Yi Road, Tsing Yi, New Territories, Hong Kong |

2.1.1 Recommendations

(a) THEi should monitor the effect of rounding decimal QF credits at module level to avoid the misalignment between the actual learning volume and QF credits at the programme level.

(b) THEi should closely monitor the design of assessments to ensure that all assessments align with the appropriate QF Level and intended learning outcomes.

## 3. Programme Details

The following programme information is provided by the THEi.

3.1 Programme Objectives

The programme objectives (POs) are to enable students to:

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| PO1 | Equip students with a solid foundation in scientific and technical knowledge, which will benefit them throughout their careers; |
| PO2 | Build up students' ability to pursue careers as practicing aircraft engineers and to assume professional leadership roles; |

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| PO3 | Develop students' problem-solving, teamwork, communication, leadership/management skills, and ethical attitudes, which will prepare them for professional practice; |
| PO4 | Equip students with an understanding of health, safety, legal, social, environmental and contemporary issues, and consequent responsibilities relevant to their professional practice; and |
| PO5 | Strengthen students' commitment to keep abreast of developments in the profession, and to pursue independent and lifelong learning. |

3.2 Programme Intended Learning Outcomes

Upon completion of the Programme, graduates will be able to:

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| PLO1 | apply knowledge of mathematics, science, engineering fundamentals and relevant specialised areas in the field of aircraft engineering; |
| PLO2 | apply skills from a multi-disciplinary perspective in aircraft maintenance practice and aircraft engineering to maintain and improve operations in the aircraft industry; |
| PLO3 | design, develop solutions or make recommendation in the field of aircraft maintenance or aircraft engineering with appropriate and effective technologies and practices; |
| PLO4 | contribute to the design of engineering system, component or process which lead to or engineering solutions meeting specified needs with appropriate consideration for public health and safety, regulations, societal, and environmental considerations; |
| PLO5 | conduct experiments, tests and measurements, and interpret data to conclude results for engineering analysis; |
| PLO6 | identify, analyse and suggest solutions for both technological and practical issues about aircraft engineering, aircraft maintenance, quality control and management in the field of aircraft industry; |
| PLO7 | recognise the impact brought by engineering solutions in aircraft engineering, particularly in the areas of health, safety and environmental protection, to both workers and general public; |
| PLO 8 | recognise the professional responsibility in engineering or aircraft related tasks and demonstrate integrity and ethical conduct; |
| PLO9 | interpret scientific or engineering information, technical data and related contemporary issues to provide engineering and scientific recommendations professionally; |
| PLO10 | communicate effectively in the workplace with fellow |

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| | professionals and stakeholders in aircraft industry or related engineering disciplines by utilizing verbal and written communication skills and other soft skills facilitating teamwork; |
| PLO11 | apply computer aided technology, scientific or IT tools to analyse engineering data and compile reports; and |
| PLO12 | reflect on career goals and personal development for continuous professional development and lifelong learning. |

3.3 The programme learning outcomes (PLOs) of the Higher Diploma (HD) qualification are as follows:

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| PLO1 | apply knowledge of mathematics, science and relevant knowledge in aircraft engineering technology, maintenance procedures, maintenance skill processes and regulations; |
| PLO2 | design and conduct experiments to provide valid conclusions as well as to conduct investigations of general aircraft problems and interpret engineering data; |
| PLO3 | suggest solutions for general engineering technology problems in the field of aircraft engineering and contribute to the suggestion of systems/subsystems, components or processes to meet specified needs with appropriate consideration for public health and safety, societal, and environmental considerations; |
| PLO4 | perform as a constructive team member under multi-disciplinary in aircraft engineering environment; |
| PLO5 | identify, formulate and solve general engineering problems in the field of aircraft engineering; |
| PLO6 | perform duties in the workplace professionally and ethically according to the codes of conduct and/or requirements of related engineering professional and/or regulatory bodies and/or approved organisations; |
| PLO7 | communicate effectively with trade specific presentation in workplace, other stakeholders in aircraft industry; |
| PLO8 | demonstrate understanding of the impacts of technology solutions in the aircraft industry in societal, health, safety and environmental context with consideration of the need for sustainable development; |
| PLO9 | stay abreast of the current and latest development on aircraft technology and regulations; |
| PLO10 | reflect on personal learning needs and construct a personal development plan for employment and/or further study upon learning experience gained throughout the programme; |
| PLO11 | select and apply appropriate techniques, resources, and modern engineering and IT tools to general engineering |

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| | activities in the field of aircraft industry; and |
| PLO12 | perform IT, numerical and soft skill-based tasks effectively on broadly defined engineering activities so that they can work independently as an individual, and as a member or leader in the workplace. |

3.4 Programme Structure

3.4.1 The Programme includes two components: General Education (GE) and Industry Profession Specific (IPS) modules. The table below illustrates the distribution of types of modules and credits across the components.

| Module Type | | Years 1 & 2 Credit Points (CPs) | | Years 3 & 4 Credit Points (CPs) | | No. of Modules | Credit Points (CPs) | | QF Credits |
|---|---|---|---|---|---|---|---|---|---|
| | | QF L4 | QF L5 | QF L4 | QF L5 | | No. | % | |
| GE Modules | GE Core (English) | 3 | - | - | 6 | 3 | 9 | | 36 |
| | GE Core (Chinese) | 3 | - | - | 3 | 2 | 6 | | 24 |
| | GE Core (from 3 domains) | 9 | - | - | - | 3 | 9 | **27.3%** | 36 |
| | GE Elective | - | 6 | - | 6 | 4 | 12 | | 48 |
| IPS Modules | Programme Core | 36 | 9 | 6 | 42 | 30 | 93 | | 373 |
| | Programme Elective | - | - | - | 3 | 1 | 3 | **72.7%** | 12 |
| | WIL** | - | - | - | - | 1 | 0 | | 0 |
| **Total** | | **66 (50%)** | | **66 (50%)** | | **44** | **132 (100%)** | | **529** |

* Except for the Final Year Project which carries six CPs, all credit-bearing modules carry three CPs each.

** Work-Integrated Learning (WIL) is not credit-bearing.

3.4.2 The intermediate exit HD qualification is in compliance with the requirement of at least 60% specialised content in the curriculum as stipulated by the *Revised Common Descriptors*. The tables below show the distribution of various types of modules of the HD award, and the corresponding CPs and QF credits:

| Module Type | | Years 1 & 2 Credit Points (CPs) | | Years 3 & 4 Credit Points (CPs) | | No. of Modules | Credit Points (CPs) | | QF Credits |
|---|---|---|---|---|---|---|---|---|---|
| | | QF L4 | QF L5 | QF L4 | QF L5 | | No. | % | |
| GE Modules | GE Core (English) | 3 | - | - | 3 | 2 | 6 | 24% | 24 |
| | GE Core (Chinese) | 3 | - | - | - | 1 | 3 | | 12 |
| | GE Core (from 3 domains) | 3 | - | 3 | - | 2 | 6 | | 24 |
| | GE Elective | - | - | - | 3 | 1 | 3 | | 12 |
| IPS Modules | Programme Core | 24 | - | 21 | 12 | 19 | 57 | 76% | 228 |
| | Programme Elective | - | - | - | - | - | - | | 0 |
| | WIL | - | - | - | - | 1 | - | | 0 |
| **Total** | | **33 (44%)** | | **42 (56%)** | | **26** | **75 (100%)** | | **300** |

3.5 Graduation Requirements

For the award of the degree qualification, students are required to obtain

(a) a minimum of 132 CPs; and
(b) a pass in the 480-hour WIL module.

Students can exit from the Programme with the intermediate exit award of a HD upon the completion of the following:

(a) a minimum of 75 CPs;
(b) a pass in the two non-credit bearing modules: e-Learning package on English for Workplace Communication and 90 hours WIL.

For the award of the degree qualification, Year 3 entrants are required to obtain

(a) a minimum of 66 CPs;
(b) a pass in the 480-hour WIL module; and
(c) complete identified additional core module requirements (where appropriate).

3.6 Admission Requirements

| **Standard Entry Route** | | ***Non-Standard Entry Route** |
|---|---|---|
| **Local Qualification** | **Non-local Qualification** | |
| HKDSE<br>Level 3 in<br>• Chinese Language<br>• English Language<br>Level 2 in<br>• Mathematics<br>• Liberal Studies<br>• 1 Elective Subject or an Applied Learning (ApL) Subject[#]<br>[#] An "Attained" in a relevant ApL subject is regarded as equivalent to an Elective Subject at Level 2.<br><br>HKALE<br>• Grade E in AS Chinese Language & Culture or AL Chinese Literature / Grade D in a HKCEE language other than Chinese and English, and<br>• Grade E in AS Use of English, and<br>• Grade E in 1 AL or 2 AS subjects, and<br>• Grade E / Level 2 in 5 HKCEE subjects, including Chinese Language and English Language | Mainland China<br>• A score for admission to Mainland 2nd-tier universities in the National College Entrance Examination (全國普通高等學校統一招生考試) (NCEE) or equivalent; and<br>• A score above 100 out of a maximum of 150 for both English Language and Chinese Language<br><br>International Baccalaureate (IB)<br>• Holder of an International Baccalaureate Diploma; and<br>• One of the following English Language results:<br>- Grade 4 or above in IB English A1 or A2 (Higher or Standard Level); or<br>- Grade 4 or above in IB English B (Higher Level); or<br>- Grade 5 or above in IB English B (Standard Level); or<br>- Grade 4 or above in IB English A: Language and Literature (Higher or Standard Level); or<br>- Grade 4 or above in IB English A: Literature (Higher or Standard Level); or<br>- Grade 4 or above in IB English Literature and Performance (Standard Level).<br><br>Business and Technology Education Council (BTEC)<br>• Holder of a BTEC Level 3 Diploma of "MM" Grades or a BTEC Level 3 Extended Diploma of "MPP" Grades*; and<br>• Grade C or above in IGCSE English Language or English as a Second Language.<br>*"M" stands for Merit and "P" stands for Pass* | • To be determined by the Faculty Dean on a case-by-case basis |

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| | Other Non-local Qualifications<br>• Equivalent HKDSE qualifications including Level 3 in English Language | |
| **Admission into Year 3**<br>Applicants with a VTC HD or equivalent sub-degree qualifications/studies in the relevant streams may be admitted into Year 3 of the degree programme, if they pass an interview to assess their suitability. | | |

3.7 Graduate Profile

- Please refer to Appendix.

## 4. Substantial Change

4.1 HKCAAVQ may vary or withdraw the Accreditation Report if it is satisfied that any of the grounds set out in section 5 (2) of the AAVQO apply. This includes where HKCAAVQ is satisfied that the Operator is no longer competent to achieve the relevant objectives and/or the Programme no longer meets the standard to achieve the relevant objectives as claimed by the Operator (whether by reference to the Operator's failure to fulfil any conditions and/or comply with any restrictions stipulated in this Accreditation Report or otherwise) or where at any time during the validity period there has/have been substantial change(s) introduced by the Operator after HKCAAVQ has issued the accreditation report(s) to the Operator and which has/have not been approved by HKCAAVQ. Please refer to the '*Guidance Notes on Substantial Change to Accreditation Status*' in seeking approval for proposed changes. These Guidance Notes can be downloaded from the HKCAAVQ website. The accreditation status of the Operator and/or Programme will lapse immediately upon the expiry of the validity period or upon the issuance of a notice of withdrawal of the Accreditation Report.

## 5. Qualifications Register

5.1 Qualifications accredited by HKCAAVQ are eligible for entry into the Qualifications Register (QR) at http://www.hkqr.gov.hk for recognition under the Qualifications Framework (QF). The Operator should apply separately to have their quality-assured qualifications entered into the QR.

5.2 Only learners who commence the study of the named accredited learning programme during the validity period and who have graduated with the named qualification listed in the QR will be considered to have acquired a qualification recognised under the QF.

**Appendix**

## Graduate Profile of Bachelor of Engineering (Honours) in Aircraft Engineering

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| **Qualification Title** | Bachelor of Engineering (Honours) in Aircraft Engineering |
| **Qualification Type** | Bachelor Degree (Honours) |
| **QF Level** | 5 |
| **Primary Area of Study and Training** | Engineering and Technology |
| **Sub-area (Primary Area of Study and Training)** | Electrical, Electronic and Mechanical Engineering and Services |
| **Programme Objectives** | PO1: equip students with a solid foundation in scientific and technical knowledge, which will benefit them throughout their careers;<br>PO2: build up students' ability to pursue careers as practicing aircraft engineers and to assume professional leadership roles;<br>PO3: develop students' problem-solving, teamwork, communication, leadership/management skills, and ethical attitudes, which will prepare them for professional practice;<br>PO4: equip students with an understanding of health, safety, legal, social, environmental and contemporary issues, and consequent responsibilities relevant to their professional practice; and<br>PO5: strengthen students' commitment to keep abreast of developments in the profession, and to pursue independent and lifelong learning. |
| **Programme Intended Learning Outcomes** | PLO1 apply knowledge of mathematics, science, engineering fundamentals and relevant specialised areas in the field of aircraft engineering;<br><br>PLO2 apply skills from a multi-disciplinary perspective in aircraft maintenance practice and aircraft engineering to maintain and improve operations in the aircraft industry;<br><br>PLO3 design, develop solutions or make recommendation in the |

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| | field of aircraft maintenance or aircraft engineering with appropriate and effective technologies and practices;<br><br>PLO4 contribute to the design of engineering system, component or process which lead to or engineering solutions meeting specified needs with appropriate consideration for public health and safety, regulations, societal, and environmental considerations;<br><br>PLO5 conduct experiments, tests and measurements, and interpret data to conclude results for engineering analysis;<br><br>PLO6 identify, analyse and suggest solutions for both technological and practical issues about aircraft engineering, aircraft maintenance, quality control and management in the field of aircraft industry;<br><br>PLO7 recognise the impact brought by engineering solutions in aircraft engineering, particularly in the areas of health, safety and environmental protection, to both workers and general public;<br><br>PLO 8 recognise the professional responsibility in engineering or aircraft related tasks and demonstrate integrity and ethical conduct;<br><br>PLO9 interpret scientific or engineering information, technical data and related contemporary issues to provide engineering and scientific recommendations professionally;<br><br>PLO10 communicate effectively in the workplace with fellow professionals and stakeholders in aircraft industry or related engineering disciplines by utilizing verbal and written communication skills and other soft skills facilitating teamwork;<br><br>PLO11 apply computer aided technology, scientific or IT tools to analyse engineering data and compile reports; and<br><br>PLO12 reflect on career goals and personal development for continuous professional development and lifelong learning. |
| **Education Pathways** | Graduates are able to articulate at the taught Master level or to register for research post-graduate degree programmes in aerospace engineering, mechanical engineering and aviation management from local and overseas universities. |

<table>
<tr><td>Employment Pathways</td><td>Graduates are capable of assuming different posts in the aircraft maintenance industry, aircraft engineering industry or other related engineering fields, such as in airlines and aircraft manufacturers. Some examples of job titles as an Engineer Trainee include but not limited to Aircraft Maintenance, Design, and Technical Services, and other job titles such as Quality Assurance Officer, Inventory Control Officer, Safety and Reliability Officer, Non-Destructive Test Trainee, Planning Officer, and Technical Support Officer. As the graduates accumulate relevant work experience and professional qualifications, they can advance to more senior positions.</td></tr>
<tr><td>Minimum Admission Requirements</td><td>
<table>
<tr><th colspan="2">Standard Entry Route</th><th rowspan="2">Non-Standard Entry Route</th></tr>
<tr><th>Local Qualification</th><th>Non-local Qualification</th></tr>
<tr>
<td><u>HKDSE</u><br>Level 3 in<br>• Chinese Language<br>• English Language<br>Level 2 in<br>• Mathematics<br>• Liberal Studies<br>• 1 Elective Subject or an Applied Learning (ApL) Subject#<br># An “Attained” in a relevant ApL subject is regarded as equivalent to an Elective Subject at Level 2.<br><br><u>HKALE</u><br>• Grade E in AS Chinese Language & Culture or AL Chinese Literature / Grade D in a HKCEE language other than Chinese and English, and<br>• Grade E in AS Use of English, and<br>• Grade E in 1 AL or 2 AS subjects, and<br>• Grade E / Level 2</td>
<td><u>Mainland China</u><br>• A score for admission to Mainland 2nd-tier universities in the National College Entrance Examination (全國普通高等學校統一招生考試) (NCEE) or equivalent; and<br>• A score above 100 out of a maximum of 150 for both English Language and Chinese Language<br><br><u>International Baccalaureate (IB)</u><br>• Holder of an International Baccalaureate Diploma; and<br>• One of the following English Language results:<br>- Grade 4 or above in IB English A1 or A2 (Higher or Standard Level); or<br>- Grade 4 or above in IB English B (Higher Level); or<br>- Grade 5 or above in IB English B</td>
<td>• To be determined by the Faculty Dean on a case-by-case basis</td>
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| | | | |
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| | in 5 HKCEE subjects, including Chinese Language and English Language | (Standard Level); or<br>- Grade 4 or above in IB English A: Language and Literature (Higher or Standard Level); or<br>- Grade 4 or above in IB English A: Literature (Higher or Standard Level); or<br>- Grade 4 or above in IB English Literature and Performance (Standard Level).<br><br><u>Business and Technology Education Council (BTEC)</u><br>• Holder of a BTEC Level 3 Diploma of "MM" Grades or a BTEC Level 3 Extended Diploma of "MPP" Grades*; and<br>• Grade C or above in IGCSE English Language or English as a Second Language.<br>*"M" stands for Merit and "P" stands for Pass*<br><br><u>Other Non-local Qualifications</u><br>• Equivalent HKDSE qualifications including Level 3 in English Language | |
| | **Admission into Year 3**<br>Applicants with a VTC HD or equivalent sub-degree qualifications/studies in the relevant streams may be admitted into Year 3 of the degree programme, if they pass an interview to assess their suitability. | | |
| **Operator** | Technological and Higher Education Institute of Hong Kong, Vocational Training Council | | |