

# AVIATION MAINTENANCE ENGINEERING TECHNOLOGY: AIRFRAME AND AEROENGINES (DAVET) : DIPLOMA

**Diploma in Aviation Maintenance Engineering Technology: Airframe and Aeroengines (DAVET)**

## Program Mission

Working in partnership with industry, the Diploma in Aviation Maintenance Engineering Technology (Airframe & Aeroengines) program provides quality education that prepares highly skilled technicians capable of serving the community and fulfilling personal ambitions with excellence. Graduates may choose to continue into the additional two years of the program to become innovative engineers.

### License Requirement

After exiting the Aviation Maintenance Engineering Technology program with the diploma, students could continue training for aviation maintenance licenses in accordance with GCAA regulations (CAR 66.25). The graduate would be required to complete an additional 10 modules in a self-study program, with the examinations carried out at HCT under the provisions of GCAA as an approved Examination Center. The entire course must be completed within a 10 year period. Refer to [www.gcaa.gov.ae](http://www.gcaa.gov.ae) (E-Publications – (CAR's-CAR Part II- Chapter 7)) for full details and specific information.

## Program Goal

*The Program Educational Objectives of the Diploma in Aviation Maintenance Engineering Technology: Airframe and Aeroengines program are to:*

1. Provide aviation graduates with the technical knowledge and skills required by the aviation industry to maintain a variety of aircraft systems to the highest standards.
2. Prepare graduates for a successful career with strong communication and teamwork skills and an understanding of the global, ethical and social implications of the aviation industry.
3. Prepare graduates with a strong commitment to lifelong learning, continuing education and professional growth.
4. Provide graduates the commitment to contribute actively to achieving the regulatory authorities' mission.

## Program Learning Outcomes

*Upon graduation, a HCT graduate in Diploma in Aviation Maintenance Engineering Technology: Airframe and Aeroengines program should demonstrate:*

a. An ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to identify, explain, formulate and solve well-defined engineering problems appropriate to the aviation maintenance and in accordance with regulations and manufacturer's instructions.

b. An ability to design systems, components, or processes meeting specified needs for well-defined engineering problems related to Aviation Engineering Technology.

c. An ability to apply written, oral, and graphical communication in well-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature, computer software, information and communication technologies at a level required for basic aviation maintenance.

d. An ability to conduct standard tests, measurements, experiments and practical activities and to analyze and interpret the results.

e. An ability to function effectively as a member of a technical team.

## Requirements

### Completion Requirements

*Students seeking the Diploma degree in Aviation Maintenance Engineering Technology: Airframe &*

*Aeroengines must successfully complete a minimum of 77 credits, as follows:*

- a. Program major requirements of 38 credits, including AVT 1003 and a work placement for 8 weeks. HCT will use its best endeavors to provide work placement opportunities, however HCT is not able to guarantee work-placement positions.
- b. Math and Science requirements of 15 credits.
- c. General Studies' requirements of 24 credits according to the General Studies breakdown.

| Code                                      | Title  | Credit Hours |
|---|--|--------------|
| <b>Core Courses</b>                       |  |              |
| Required Credits: 38                      |  |              |
| AVT 1003                                  | Aviation Mathematics and Physics                   | 3            |
| AVT 2103                                  | DC Electrical Fundamentals                         | 3            |
| AVT 2113                                  | AC Electrical Fundamentals and Electrical Machines | 3            |
| AVT 2203                                  | Workshop Practices and Safety                      | 3            |
| AVT 2213                                  | Aircraft Materials                                 | 3            |
| AVT 2223                                  | Aircraft Hardware                                  | 3            |
| AVT 2233                                  | Maintenance Procedures and Abnormal Events         | 3            |
| AVT 2243                                  | Electrical Wiring Standards and Practices          | 3            |
| AVT 2303                                  | Aircraft Fundamentals and Basic Aerodynamics       | 3            |
| AVT 2806                                  | Work Placement I for Aviation                      | 6            |
| AVT 2902                                  | Sophomore Design Project                           | 2            |
| EGN 1133                                  | Design Thinking in Technology                      | 3            |
| <b>Mathematics and Science Courses</b>    |  |              |
| Required Credits: 15                      |  |              |
| CHM 1103                                  | Engineering Chemistry                              | 3            |
| MTH 1103                                  | Pre Calculus                                       | 3            |
| MTH 1203                                  | Calculus I   | 3            |
| MTH 2103                                  | Calculus II  | 3            |
| PHY 1203                                  | Physics II   | 3            |
| <b>General Studies Courses</b>            |  |              |
| Required Credits :24                      |  |              |
| <b>English, Arabic or other Languages</b> |  |              |
| Required Credits: 9                       |  |              |
| <b>Humanities or Arts</b>                 |  |              |

Required Credits: 3

AES 1003

**Information Technology and Mathematics**

Required Credits: 3

MTH 1113

**The Natural Sciences**

Required Credits: 3

PHY 1103

**The Social or Behavioral Sciences**

Required Credits: 6

| Description               | Data    |
|---------------------------|---------|
| Total Required Credits    | 77      |
| Maximum Duration of Study | 3 years |
| Cost Recovery Program     | No      |
| Minimum Duration of Study | 2 years |
| Program Code              | DAVET   |
| Major Code                | AVE     |

|                    |                                 |    |
|--------------------|---------------------------------|----|
| AVT 2806           | Work Placement I for Aviation * | 6  |
| MTH 2103           | Calculus II                     | 3  |
| Credit Hours       |                                 | 12 |
| Total Credit Hours |                                 | 77 |

\*Work Placement I shall start after year 2 Summer Semester is completed.

## Ideal Study Plan

### Recommended Sequence of Study

**Year 1**

| Semester 1   |  | Credit Hours |
|--------------|--|--------------|
| EGN 1133     | Design Thinking in Technology            | 3            |
| LSC 1103     | Professional Communication and Reporting | 3            |
| LSS 1003     | Life and Future Skills                   | 3            |
| MTH 1103     | Pre Calculus                             | 3            |
| PHY 1103     | Physics I                                | 3            |
| Credit Hours |  | 15           |
| Semester 2   |  |              |
| LSC 2103     | Academic Reading and Writing II          | 3            |
| LSS 1123     | Basic Research Methods                   | 3            |
| MTH 1113     | Statistics for Engineering               | 3            |
| MTH 1203     | Calculus I                               | 3            |
| PHY 1203     | Physics II                               | 3            |
| Credit Hours |  | 15           |
| Summer       |  |              |
| AVT 1003     | Aviation Mathematics and Physics         | 3            |
| CHM 1103     | Engineering Chemistry                    | 3            |
| Credit Hours |  | 6            |

**Year 2**

| Semester 1   |  | Credit Hours |
|--------------|--|--------------|
| AES 1013     | Arabic Communications I                            | 3            |
| AVT 2103     | DC Electrical Fundamentals                         | 3            |
| AVT 2203     | Workshop Practices and Safety                      | 3            |
| AVT 2213     | Aircraft Materials                                 | 3            |
| AVT 2303     | Aircraft Fundamentals and Basic Aerodynamics       | 3            |
| Credit Hours |  | 15           |
| Semester 2   |  |              |
| AVT 2113     | AC Electrical Fundamentals and Electrical Machines | 3            |
| AVT 2223     | Aircraft Hardware                                  | 3            |
| AVT 2233     | Maintenance Procedures and Abnormal Events         | 3            |
| AVT 2243     | Electrical Wiring Standards and Practices          | 3            |
| AVT 2902     | Sophomore Design Project                           | 2            |
| Credit Hours |  | 14           |
| Summer       |  |              |
| AES 1003     | Emirati Studies                                    | 3            |