

AVIATION MAINTENANCE ENGINEERING TECHNOLOGY (AIRFRAME AND AEROENGINES): DIPLOMA

Program Mission

Working in partnership with industry, the Diploma in Aviation Maintenance Engineering Technology (Airframe and 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

Diploma program curriculum is aligned with General Civil Aviation Authority (GCAA) CAR-66 syllabus for License Categories A1 and A3 and is compatible with European Aviation Safety Agency (EASA). Diploma graduates who passed GCAA module exams will be awarded with a Certificate of Recognition on behalf of GCAA. After working in a GCAA CAR-145 approved Aircraft Maintenance Organisation for 1 year, they will be eligible to apply GCAA for an Aircraft Maintenance Engineer License in categories A1 or A3. Students seeking a Certificate of Recognition, must complete AVT 2806 Work Placement in Aviation in an actual maintenance working environment and the duration shouldn't be less than 300 hours.

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 of 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

Diploma in Aviation Maintenance Engineering Technology: Airframe and Aeroengines

Students must successfully complete a minimum of 74 credits, including:

Code	Title	Credit Hours
Core Courses		59
Mathematics and Science Courses		3
General Studies course		12
Total Credit Hours		74

Note : Work placement I is 8 weeks. HCT will use its best endeavors to provide work placement opportunities. However, HCT is not able to guarantee work-placement positions.

Students requiring a Certificate of Recognition (COR) at the completion of the program will be required to complete approximately 300 hours of the above-mentioned Work Placement in an "actual maintenance working environment"

Code	Title	Credit Hours
Core Courses		
Required Credits: 59		
AVT 1003	Aviation Mathematics and Physics	3
AVT 2003	Gas Turbine Engine	3
AVT 2013	Aeroplane Aerodynamics, Structures and Systems	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
AVT 3113	Digital Techniques Electronic Instrument Systems	3
AVT 3203	Maintenance Practices Workshop	3
AVT 3403	Human Factors	3
AVT 3413	Aviation Legislation	3
AVT 3733	Propeller	3
EGN 1133	Design Thinking in Technology	3

Mathematics and Science Courses

Required Credits: 3

MTH 1203 Calculus I 3

General Studies Courses

Required Credits :12

English, Arabic or other Languages

Required Credits: 6

LSC 1103 and AES 1013

Humanities or Arts

Required Credits:

Information Technology and Mathematics

Required Credits:

The Natural Sciences

Required Credits: 3

PHY 1103

The Social or Behavioral Sciences

Required Credits: 3

LSS 1003

Description	Data
Total Required Credits	74
Maximum Duration of Study	3 years
Minimum Duration of Study	2 years
Cost Recovery Program	No
Program Code	DAVET
Major Code	AVE

Ideal Study Plan

Recommended Sequence of Study

Year 1

Semester 1		Credit Hours
AVT 1003	Aviation Mathematics and Physics	3
AVT 2303	Aircraft Fundamentals and Basic Aerodynamics	3
EGN 1133	Design Thinking in Technology	3
MTH 1203	Calculus I	3
PHY 1103	Physics I	3
Credit Hours		15
Semester 2		Credit Hours
LSS 1003	Life and Future Skills	3
AVT 2103	DC Electrical Fundamentals	3
AVT 2113	AC Electrical Fundamentals and Electrical Machines	3
AVT 3403	Human Factors	3
AVT 3413	Aviation Legislation	3
Credit Hours		15
Summer		Credit Hours
AVT 2203	Workshop Practices and Safety	3
LSC 1103	Professional Communication and Reporting	3
Credit Hours		6

Year 2

Semester 3		Credit Hours
AES 1013	Arabic Communications	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 2902	Sophomore Design Project	2
Credit Hours		17
Semester 4		Credit Hours
AVT 2003	Gas Turbine Engine	3
AVT 2013	Aeroplane Aerodynamics, Structures and Systems *	3
AVT 3203	Maintenance Practices Workshop	3
AVT 3113	Digital Techniques Electronic Instrument Systems	3
AVT 3733	Propeller	3
Credit Hours		15
Summer		Credit Hours
AVT 2806	Work Placement I for Aviation *	6
Credit Hours		6
Total Credit Hours		74

* In case some the students aim Category A3 Helicopters with Turbine Engine, instead of this course AVT 2023 Helicopter Aerodynamics, Structures and Systems will be offered.