

AVIATION MAINTENANCE ENGINEERING TECHNOLOGY (AVIONICS): DIPLOMA

Program Mission

Working in partnership with industry, the Diploma in Aviation Maintenance Engineering Technology (Avionics) 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 regulation (CAR 66.25). The graduate would be required to complete an additional 9 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 (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: Avionics 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 (Avionics) program should demonstrate:

1. 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;
2. An ability to design systems, components, or processes meeting specified needs for well-defined engineering problems related to Aviation Engineering Technology;
3. 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;

4. An ability to conduct standard tests, measurements, experiments and practical activities and to analyze and interpret the results
5. An ability to function effectively as a member of a technical team.

Requirements Completion Requirements

Diploma in Aviation Maintenance Engineering Technology : Avionics

Students must successfully complete a minimum of 77 credits, including:

Code	Title	Credit Hours
Program Core Courses		38
Mathematics and Science Courses		15
General Studies course		24
Total Credit Hours		77

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.

Code	Title	Credit Hours
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Core Courses

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 2253	Workshop Practices and Safety for Avionics	3
AVT 2263	Aircraft Materials for Avionics	3
AVT 2273	Aircraft Hardware for Avionics	3
AVT 2283	Maintenance Procedures and Abnormal Events for Avionics	3
AVT 2293	Electrical Wiring Standards and Practices for Avionics	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

Mathematics and Science Courses

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

General Studies

Required Credits: 24

English, Arabic or other Languages

Required Credits: 9

LSC 1103, AES 1013 and AES 1033

Humanities or Arts

Required Credits: 3

AES 1003

Information Technology and Mathematics

Required Credits: 6

ICT 2013 and MTH 1113

The Natural Sciences

Required Credits: 3

PHY 1103

The Social or Behavioral Sciences

Required Credits: 3

LSS 1003

Description	Data
Total Required Credits	77
Maximum Duration of Study	3 years
Minimum Duration of Study	2 years
Cost Recovery Program	No
Program Code	DAAET
Major Code	AAE

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		
AES 1013	Arabic Communications I	3
AES 1033	Islamic Culture	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 3		Credit Hours
AES 1003	Emirati Studies	3
AVT 2103	DC Electrical Fundamentals	3
AVT 2253	Workshop Practices and Safety for Avionics	3
AVT 2263	Aircraft Materials for Avionics	3
AVT 2303	Aircraft Fundamentals and Basic Aerodynamics	3
MTH 2103	Calculus II	3
Credit Hours		18
Semester 4		
AVT 2113	AC Electrical Fundamentals and Electrical Machines	3
AVT 2273	Aircraft Hardware for Avionics	3
AVT 2283	Maintenance Procedures and Abnormal Events for Avionics	3

AVT 2293	Electrical Wiring Standards and Practices for Avionics	3
AVT 2902	Sophomore Design Project	2
ICT 2013	Computational Thinking and Coding	3
Credit Hours		17
Summer		
AVT 2806	Work Placement I for Aviation	6
Credit Hours		6
Total Credit Hours		77