

AVIATION MAINTENANCE ENGINEERING TECHNOLOGY: AVIONICS (DAAET) : DIPLOMA

Diploma in Aviation Maintenance Engineering Technology: Avionics (DAAET)

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

Students seeking the Diploma degree in Aviation Maintenance Engineering Technology (Avionics) must successfully complete a minimum of 77 credits, as follows:

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

Code	Title	Credit Hours
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		
Humanities or Arts		

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	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		
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 2253	Workshop Practices and Safety for Avionics	3
AVT 2263	Aircraft Materials for Avionics	3
AVT 2303	Aircraft Fundamentals and Basic Aerodynamics	3
Credit Hours		15
Semester 2		
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
Credit Hours		14

Summer

AES 1003	Emirati Studies	3
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.