

LEVEL 6 ADVANCED DIPLOMA IN AIRCRAFT MAINTENANCE ENGINEERING (AEROPLANE TURBINE)

Recognized by NQC UAE National Qualification Code: ENG06015NQ24

Program Description

The Level 6 Advanced Diploma in Aircraft Engineering Technology (Aeromechanics) aims to impart knowledge and skills to the students who wish to obtain CAR 66 B1 or CAR 66 A Aircraft Maintenance Engineers Licence from the UAE General Civil Aviation Authority. This qualification will provide learners with a comprehensive knowledge and practical skills for all the subjects of aircraft maintenance in mechanical and electrical disciplines to build a career in the aviation industry or any other research or training organisation.

The Advanced Diploma in Aircraft Maintenance Engineering (Aeroplane Turbine) is structured to provide the foundational knowledge and specific skills required to meet the demands of modern aircraft maintenance industries. This qualification covers the essential knowledge and skills needed for the GCAA Category B1.1 and Category A license.

The duration of the program has been mapped against GCAA CAR 147 requirements and the units have been mapped against GCAA CAR 66 syllabus requirements. This qualification also satisfies NQC in terms of topics covered, assessment methods and procedures.

Program Learning Outcomes

Upon successful completion of this program, the graduates will be able to:

1. Apply mathematics, science, and applied sciences to aircraft engineering technology
2. Analyse and interpret aircraft engineering technology data
3. Work effectively on multi-disciplinary and diverse teams
4. Make professional and ethical decisions
5. Communicate effectively, using both written and oral communication skills
6. Engage in and recognize the need for life-long learning
7. Assess contemporary aircraft engineering technology issues
8. Use the techniques, skills, and modern technology necessary for professional practice
9. Assess the national and international aviation environment
10. Apply pertinent knowledge in identifying and solving aircraft engineering technology problems
11. Apply knowledge of business sustainability to aircraft engineering technology issues

Requirements

Completion Requirements

Learners must complete all the core and stream units to meet the minimum credit requirements for the advanced diploma. After earning the advanced diploma and gaining the required experience as specified in CAR 66, learners may apply to the GCAA for a B1.1 or A category license.

Code	Title	Credit Hours
ACT 140	Apply and solve problems in mathematics for aircraft maintenance	4
ACT 109	Demonstrate knowledge on physics fundamentals - Part 1	3
ACT 110	Demonstrate knowledge on physics fundamentals - Part 2	3
ACT 111	Demonstrate knowledge of electrical fundamentals - Part 1	4
ACT 112	Apply Principles of Electrical Fundamentals - Part 1	2
ACT 113	Develop knowledge of aircraft maintenance practices - Part 1	4
ACT 114	Apply skills of aircraft maintenance practices - Part 1	2
ACT 117	Demonstrate understanding of human factors in aviation industry	4
ACT 204	Demonstrate knowledge on applications of aerodynamic principles	3
ACT 205	Apply aerodynamic principles for aircraft maintenance	1
ACT 206	Demonstrate Knowledge on Electrical Fundamentals - Part 2	4
ACT 207	Apply Principles of Electrical Fundamentals - Part 2	3
ACT 208	Develop knowledge of aircraft maintenance practices - Part 2	3
ACT 209	Apply Skills of Aircraft Maintenance Practices - Part 2	2
ACT 115	Demonstrate knowledge of electronic fundamentals	3
ACT 116	Apply principles of electronic fundamentals	2
ACT 210	Demonstrate knowledge of aircraft materials and hardware - Part 1	4
ACT 211	Apply skills on using aircraft materials and hardware	2
ACT 212	Demonstrate knowledge of aircraft materials and hardware - Part 2	4
ACT 243	Develop knowledge of aircraft maintenance practices - Part 3	4
ACT 244	Develop Knowledge of Aircraft Maintenance Practices - Part 4	4
ACT 245	Apply Skills of Aircraft Maintenance Practices - Part 3	2
ACT 246	Demonstrate Knowledge of Construction, Operation, and Maintenance of Propeller	2
ACT 247	Apply Skills on Maintaining Propeller	1
ACT 240	Demonstrate knowledge of digital techniques and electronic instrument systems - Part 1	3
ACT 241	Demonstrate knowledge of digital techniques and electronic instrument systems - Part 2	3
ACT 242	Apply Principles of Digital Techniques and Electronic Instrument Systems	2
ACT 248	Demonstrate Understanding of the GCAA Aviation Legislation	4

ACT 249	Demonstrate Knowledge of Aeroplane Aerodynamics, Structures and Systems - Part 1	4
ACT 250	Demonstrate knowledge of aeroplane aerodynamics, structures and systems - Part 2	4
ACT 251	Apply Skills on Maintenance of Aeroplane Structures and Systems - Part 1	2
ACT 252	Apply skills on maintenance of aeroplane structures and systems - Part 2	2
ACT 303	Demonstrate Knowledge of Aeroplane Aerodynamics, Structures and Systems - Part 3	4
ACT 304	Demonstrate Knowledge of Aeroplane Aerodynamics, Structures and Systems - Part 4	4
ACT 305	Demonstrate Knowledge of Aeroplane Aerodynamics, Structures and Systems - Part 5	4
ACT 306	Demonstrate Knowledge of Gas Turbine Engine Principles - Part 1	4
ACT 307	Demonstrate Knowledge of Gas Turbine Engine Principles - Part 2	4
ACT 308	Demonstrate Knowledge of Gas Turbine Engine Principles - Part 3	4
ACT 309	Apply Gas Turbine Engine Principles	2
ACT 330	Perform Practical Aircraft Experience (On-Job-Experience-OJE) - Part 1	2
ACT 331	Perform Practical Aircraft Experience (On-Job-Experience-OJE) - Part 2	2
ACT 332	Perform Practical Aircraft Experience (On-Job-Experience-OJE) - Part 3	2
ACT 333	Perform Practical Aircraft Experience (On-Job-Experience-OJE) - Part 4	2
ACT 334	Perform Practical Aircraft Experience (On-Job-Experience-OJE) - Part 5	2
ACT 341	Apply Skills on Maintenance of Aeroplane Structures and Systems - Part 3	2

ACT 206	Demonstrate Knowledge on Electrical Fundamentals - Part 2	4
ACT 207	Apply Principles of Electrical Fundamentals - Part 2	3
ACT 208	Develop knowledge of aircraft maintenance practices - Part 2	3
ACT 209	Apply Skills of Aircraft Maintenance Practices - Part 2	2
ACT 115	Demonstrate knowledge of electronic fundamentals	3
ACT 116	Apply principles of electronic fundamentals	2
Credit Hours		25

Year 2

Semester 3

ACT 210	Demonstrate knowledge of aircraft materials and hardware - Part 1	4
ACT 211	Apply skills on using aircraft materials and hardware	2
ACT 212	Demonstrate knowledge of aircraft materials and hardware - Part 2	4
ACT 243	Develop knowledge of aircraft maintenance practices - Part 3	4
ACT 244	Develop Knowledge of Aircraft Maintenance Practices - Part 4	4
ACT 245	Apply Skills of Aircraft Maintenance Practices - Part 3	2
ACT 246	Demonstrate Knowledge of Construction, Operation, and Maintenance of Propeller	2
ACT 247	Apply Skills on Maintaining Propeller	1
Credit Hours		23

Semester 4

ACT 240	Demonstrate knowledge of digital techniques and electronic instrument systems - Part 1	3
ACT 241	Demonstrate knowledge of digital techniques and electronic instrument systems - Part 2	3
ACT 242	Apply Principles of Digital Techniques and Electronic Instrument Systems	2
ACT 248	Demonstrate Understanding of the GCAA Aviation Legislation	4
ACT 249	Demonstrate Knowledge of Aeroplane Aerodynamics, Structures and Systems - Part 1	4
ACT 250	Demonstrate knowledge of aeroplane aerodynamics, structures and systems - Part 2	4
ACT 251	Apply Skills on Maintenance of Aeroplane Structures and Systems - Part 1	2
ACT 252	Apply skills on maintenance of aeroplane structures and systems - Part 2	2
Credit Hours		24

Year 3

Semester 5

ACT 303	Demonstrate Knowledge of Aeroplane Aerodynamics, Structures and Systems - Part 3	4
ACT 304	Demonstrate Knowledge of Aeroplane Aerodynamics, Structures and Systems - Part 4	4
ACT 305	Demonstrate Knowledge of Aeroplane Aerodynamics, Structures and Systems - Part 5	4
ACT 306	Demonstrate Knowledge of Gas Turbine Engine Principles - Part 1	4
ACT 307	Demonstrate Knowledge of Gas Turbine Engine Principles - Part 2	4
ACT 308	Demonstrate Knowledge of Gas Turbine Engine Principles - Part 3	4
ACT 309	Apply Gas Turbine Engine Principles	2
Credit Hours		26

Semester 6

ACT 330	Perform Practical Aircraft Experience (On-Job-Experience-OJE) - Part 1	2
ACT 331	Perform Practical Aircraft Experience (On-Job-Experience-OJE) - Part 2	2
ACT 332	Perform Practical Aircraft Experience (On-Job-Experience-OJE) - Part 3	2

Ideal Study Plan

Recommended Sequence of Study

Level 6 Advanced Diploma in Aircraft Engineering Technology (Aeromechanics)

Year 1		Credit Hours
Semester 1		
ACT 140	Apply and solve problems in mathematics for aircraft maintenance	4
ACT 109	Demonstrate knowledge on physics fundamentals - Part 1	3
ACT 110	Demonstrate knowledge on physics fundamentals - Part 2	3
ACT 111	Demonstrate knowledge of electrical fundamentals - Part 1	4
ACT 112	Apply Principles of Electrical Fundamentals - Part 1	2
ACT 113	Develop knowledge of aircraft maintenance practices - Part 1	4
ACT 114	Apply skills of aircraft maintenance practices - Part 1	2
Credit Hours		22
Semester 2		
ACT 117	Demonstrate understanding of human factors in aviation industry	4
ACT 204	Demonstrate knowledge on applications of aerodynamic principles	3
ACT 205	Apply aerodynamic principles for aircraft maintenance	1

ACT 333	Perform Practical Aircraft Experience (On-Job-Experience-OJE) - Part 4	2
ACT 334	Perform Practical Aircraft Experience (On-Job-Experience-OJE) - Part 5	2
ACT 341	Apply Skills on Maintenance of Aeroplane Structures and Systems - Part 3	2
Credit Hours		12
Total Credit Hours		132