

DIPLOMA IN UNMANNED AERIAL VEHICLES TECHNOLOGY

Program Description

The program aims to equip learners with the fundamental knowledge and hands-on skills required in the field of Unmanned Aerial Vehicles (UAVs). The curriculum integrates theoretical instruction with practical applications, culminating in an on-job training to ensure industry readiness. The program aligns with QFEmirates Level 4 descriptors, focusing on applied learning, problem solving and workplace competencies.

Program Learning Outcomes

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

1. Demonstrate fundamental knowledge of Unmanned Aerial Vehicles components, applications and operational protocols.
2. Apply technical skills in the assembly, integration and testing of UAV systems.
3. Conduct Unmanned Aerial Vehicles flights.
4. Exhibit professional workplace competencies, including communication, teamwork, safety and adherence to confidentiality and ethical standards.

Occupation and Industry Sector

Requirements

Completion Requirements

Students seeking the Diploma in Unmanned Aerial Vehicles Technology qualification must successfully complete the required 60 credits as follows:

- General Studies Course: 3 credits
- Core Courses: 31 credits
- Work Placemement Courses: 24 credits
- Optional Courses: 2 credits

Code	Title	Credit Hours
Mandatory General Studies Courses		
Required Credits : 3		
GED 100	Develop English language skills	3
Mandatory Core Courses		
Required Credits : 31		
MAT 210	Apply fundamental concepts and skills in algebra, geometry, and trigonometry	4
MCT 125	Perform CAD CAM	4
UMA 100	Explore Fundamentals of Unmanned Aerial Vehicles	3
UMA 101	Investigate Electrical and Electronic Principles	3
UMA 102	Explore UAV Safety, Regulations and Applications.	3
UMA 103	Examine UAV Propulsion and Power Systems	4

UMA 104	Examine UAV Control, Communication and Navigation Systems	4
UMA 105	Assemble and Integrate an Unmanned Aerial Vehicle	3
UMA 201	Perform UAV Operations and Flight Training	2
UMA 205	Plan and Execute UAV Autonomous Missions	1

Mandatory Work Placement Courses

Required Credits : 24

UMA 231	Apply Workplace Practices in UAV Environments	4
UMA 232	Assist in UAV Assembly and Basic Maintenance	4
UMA 233	Perform UAV Systems Integration and Testing	4
UMA 234	Support UAV Operations and Flight Activities	4
UMA 235	Perform UAV Maintenance and Troubleshooting	4
UMA 236	Execute UAV Operations and Professional Tasks Independently	4

Optional Courses

Required Credits : 2

MEC 213	Operate and Maintain Computer Numerical Control (CNC) machines	2
MEC 214	Explore 3D printing technologies in engineering	2

Description	Data
Today Required Credits	60
Maximum Duration of Study	3 years
Minimum Duration of Study	2 years
Program Code	DPUMA
Major Code	UMA

Ideal Study Plan

Recommended Sequence of Study

Diploma in Unmanned Aerial Vehicles Technology

Year 1

Semester 1		Credit Hours
GED 100	Develop English language skills	3
MAT 210	Apply fundamental concepts and skills in algebra, geometry, and trigonometry	4
UMA 100	Explore Fundamentals of Unmanned Aerial Vehicles	3
UMA 101	Investigate Electrical and Electronic Principles	3
MCT 125	Perform CAD CAM	4
Credit Hours		17

Semester 2

MEC 213	Operate and Maintain Computer Numerical Control (CNC) machines	2
UMA 102	Explore UAV Safety, Regulations and Applications.	3
UMA 103	Examine UAV Propulsion and Power Systems	4
UMA 104	Examine UAV Control, Communication and Navigation Systems	4
UMA 105	Assemble and Integrate an Unmanned Aerial Vehicle	3
Credit Hours		16

Year 2

Semester 3

UMA 201	Perform UAV Operations and Flight Training	2
UMA 231	Apply Workplace Practices in UAV Environments	4
UMA 232	Assist in UAV Assembly and Basic Maintenance	4
UMA 233	Perform UAV Systems Integration and Testing	4
Credit Hours		14

Semester 4

UMA 205	Plan and Execute UAV Autonomous Missions	1
UMA 234	Support UAV Operations and Flight Activities	4
UMA 235	Perform UAV Maintenance and Troubleshooting	4
UMA 236	Execute UAV Operations and Professional Tasks Independently	4
Credit Hours		13
Total Credit Hours		60