LEVEL 5 DIPLOMA IN MECHANICAL TECHNOLOGY – VEHICLES / MOD

Program Description

The Level 5 Diploma in Mechanical Technology - Vehicles program is designed to provide students with the skills and knowledge necessary to maintain and repair military vehicles. Students will learn about engine systems, drive trains, suspension systems, and electrical systems commonly found in military vehicles. The program typically includes hands-on training in equipment diagnosis, maintenance procedures, and repair techniques specific to military vehicles. Graduates of this program may pursue careers as military vehicle mechanics, maintenance technicians, or related roles in the defense industry.

Program Learning Outcomes

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

1. Apply knowledge, repair/troubleshooting techniques, metal working skills and modern tools of mathematics, science, engineering, and technology to solve technically and practically defined engineering problems appropriate to the discipline.

2. Collaborate effectively in a team environment to coordinate and complete maintenance tasks on military vehicles.

3. Apply knowledge of specialized military vehicle maintenance procedures, including preventive maintenance schedules and inspections.

4. Utilize diagnostic tools and equipment to identify mechanical issues and perform corrective actions in compliance with military standards and Safety procedure.

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Requirements

Completion Requirements

Students seeking the Level 5 Diploma in Mechanical Technology – Military Vehicle Mechanical Maintenance qualification must successfully complete 90 credits, including:

Code	Title	Credit Hours
Mandatory core course credits		16
Mechanical stream course credits (level 4)		12
Mechanical stream course credits (level 5)		26
Mechanical optional credits (level 4)		13
Mechanical optional credits (level 5)		23
Total Credits		90

Mandatory core Units

Required credits: 16

Code	Title	Credit Hours
MCT 201	Apply engineering technology to real or simulated situations to produce technical solutions	4
MCT 200	Interpret and document technical information	2
MCT 230	Perform practical training and support in electromechanical based industries	10

Stream Units

Required credits: 38

Code	Title	Credit Hours
MCT 110	Interpret and Prepare Technical Drawings	3
MCT 100	Perform basic machining	4
MCT 102	Discover Fluid Mechanics	2
MCT 220	Produce CAD technical drawings	2
MOD 120	Demonstrate Knowledge of Computer Hardware, Networks and Security	1
MCT 122	Analyse Static Loads	3
MOD 121	Conduct Basic Operations in Mathematics	1
MCT 124	Explore heat transfer and thermodynamics	4
MCT 123	Describe the fundamentals of material science	4
MCT 221	Explore the knowledge and skills of codes and standards in mechanical engineering	2
ECT 122	Maintain electrical circuits and systems	3
MCT 120	Solve problems in work and energy	5
MCT 222	Explore the fundamentals of mechatronic electromechanical drives	4

Optional Units

Required credits: 36

Code	Title	Credit Hours
GED 100	Develop English language skills	3
MCT 101	Perform basic mechanical maintenance	4
HSE 100	Explore Health, Safety and Environment at Workplace	2
MOD 110	Apply Health and Safety Procedures in Vehicle Maintenance	1
MOD 111	Conduct an Inspection of the Mechanical Systems in Heavy Vehicles	3
MOD 112	Manage Vehicle Technical Maintenance Equipment and Workshop Operations	2
MOD 113	Maintain Vehicle Ancillary Systems	4
MOD 210	Demonstrate Knowledge of the Fundamentals of a Vehicle Air Conditioning System	1
MOD 211	Demonstrate Knowledge of the Fundamentals of an Electrical System	2
MOD 212	Maintain Vehicle Diesel Engine, Gearbox, Transmission and Differential Systems.	4
MOD 213	Maintain Vehicle Chassis Systems	4
MOD 214	Conduct an Inspection of the Hydraulic Systems in Vehicles	3

MOD 215	Demonstrate Knowledge of the Military Technical Support Functions Within the United Arab Emirates	1
MOD 216	Maintain Vehicle Air Conditioning System	2

Ideal Study Plan

Recommended Sequence of Study

Level 5 Diploma in Mechanical Technology - Vehicles

Year 1

Semester 1		**Credit Hours**
GED 100	Develop English language skills	3
MCT 110	Interpret and Prepare Technical Drawings	3
MCT 100	Perform basic machining	4
MCT 101	Perform basic mechanical maintenance	4
HSE 100	Explore Health, Safety and Environment at Workplace	2
MCT 102	Discover Fluid Mechanics	2
MCT 200	Interpret and document technical information	2
	Credit Hours	**20**
Semester 2		
MCT 220	Produce CAD technical drawings	2
MOD 120	Demonstrate Knowledge of Computer Hardware, Networks and Security	1
MCT 122	Analyse Static Loads	3
MOD 121	Conduct Basic Operations in Mathematics	1
MCT 124	Explore heat transfer and thermodynamics	4
MOD 110	Apply Health and Safety Procedures in Vehicle Maintenance	1
MOD 111	Conduct an Inspection of the Mechanical Systems in Heavy Vehicles	3
MOD 112	Manage Vehicle Technical Maintenance Equipment and Workshop Operations	2
MOD 113	Maintain Vehicle Ancillary Systems	4
	Credit Hours	**21**
Year 2		
Semester 3		
MOD 210	Demonstrate Knowledge of the Fundamentals of a Vehicle Air Conditioning System	1
MCT 123	Describe the fundamentals of material science	4
MCT 221	Explore the knowledge and skills of codes and standards in mechanical engineering	2
MOD 211	Demonstrate Knowledge of the Fundamentals of an Electrical System	2
ECT 122	Maintain electrical circuits and systems	3
MOD 212	Maintain Vehicle Diesel Engine, Gearbox, Transmission and Differential Systems.	4
MOD 213	Maintain Vehicle Chassis Systems	4
MOD 214	Conduct an Inspection of the Hydraulic Systems in Vehicles	3
	Credit Hours	**23**
Semester 4		
MCT 120	Solve problems in work and energy	5
MOD 215	Demonstrate Knowledge of the Military Technical Support Functions Within the United Arab Emirates	1
MCT 230	Perform practical training and support in electromechanical based industries	10
MCT 201	Apply engineering technology to real or simulated situations to produce technical solutions	4
MCT 222	Explore the fundamentals of mechatronic electromechanical drives	4
MOD 216	Maintain Vehicle Air Conditioning System	2
	Credit Hours	**26**
	Total Credit Hours	**90**