

Associate Degree Program

Specialization	المهمات الأرضية والآليات الخاصة في المطارات
Course Number	020300101
Course Title	أساسيات الكهرباء والإلكترونيات Basic Electrical And Electronic
Credit Hours	2
Theoretical Hours	2
Practical Hours	0

Short Description:

Concepts and definitions, electrical circuit elements, voltage, current, resistance, capacitance And inductance, ohms law and dc circuit Calculations, Ac Circuits, Three phase circuits, Transformers, and electrical machines, Basic electronic devices and circuits, Introduction to Electrical protection.

Course Objectives:

1. Understand Concept Of Basic Of Electricity And Electronic Devices.
2. To Know Basic Of Electronic Devices Component.
3. Understand Fundamental Of Electrical Circuit, Ohms Law, Kirchhoff's Law

Detailed Description:

No.	Unit Title	Unit Content	Hours
1	Basic electrical	<ul style="list-style-type: none"> - Concepts and definitions - electrical circuit elements - voltage, current - resistance, capacitance - inductance, ohms law and dc circuit Calculations <ul style="list-style-type: none"> - Ac Circuits - Three phase circuits 	14 Hours
2	Basic electronic	<ul style="list-style-type: none"> -Transformers, and electrical machines - Basic electronic devices and circuits 	10 Hours
3	Electrical protection	<ul style="list-style-type: none"> - Introduction to Electrical protection. 	5 Hours

Teaching Methods:

Method of teaching this material depends on instructor techniques and the facilities in the class such as data show (power point), board, parts found in workshop.

Books and references:

1. Electricity and electronics, ma'an hadadeen 2009
2. THOMAS L. FLOYD "principle of electric circuits" prentice hall, 2007

Associate Degree Program

Specialization	المهمات الأرضية والآليات الخاصة في المطارات
Course Number	020300102
Course Title	مختبر أساسيات الكهرباء والإلكترونيات Basic Electrical And Electronic lab.
Credit Hours	1
Theoretical Hours	0
Practical Hours	3

Short Description:

DC and AC circuits. Current and voltage measurements. Simple electronic circuits. DC and AC Machines. Single-phase transformers. Protection devices and circuits.

Course Objectives:

1. To Know Parallel And Series Connection Of Resistance In Electrical Circuit.
2. Using Multi Meter Device To Measure Voltage, Current And Resistance.
3. To Know Basic Of Control Devices In Electrical System.

Books and references:

1. Electricity and electronics, ma'an hadadeen 2009
2. THOMAS L. FLOYD "principle of electric circuits" prentice hall, 2007

Associate Degree Program

Specialization	المهمات الأرضية والآليات الخاصة في المطارات
Course Number	020607111
Course Title	كهرباء وإلكترونيات الآليات الخاصة Electrical And Electronic For Special Vehicle.
Credit Hours	2
Theoretical Hours	2
Practical Hours	0

Short Description:

Starting System, Charging System, Ignition System, Electronic Fuel Injection System, Safety And Signaling, Driver Information And Control Devices.

Course Objectives:

1. Explain Electricity In Terms Of Electronics.
2. Studying The starting, Charging, Fuel Injection And Electronics System.
3. Studying The Sensors Reporting To The ECM And Can Bus For Automotive.

Detailed Description:

No.	Unit Title	Unit Content	Hours
1	Basic electrical and electronics	<ul style="list-style-type: none"> - Explain the principles of electricity - Describe the principles of magnetism and magnetic fields - Identify basic electric and electronic terms and components 	
2	Automotive batteries	<ul style="list-style-type: none"> - Explain the operating principles of a lead-acid battery - Describe the basic parts of an automotive battery 	
3	Ignition system fundamentals	<ul style="list-style-type: none"> - Explain the operating principles of an automotive ignition system - Describe the function of major ignition system components 	
4	Starting system fundamentals	<ul style="list-style-type: none"> - Explain the principles of an electric motor - Describe the construction and operation of a starting motor 	
5	Charging system fundamentals	<ul style="list-style-type: none"> - List the basic parts of a charging system - Explain charging system operation - Describe the construction of major charging system components 	

Books and references:

1. STUDY GUIDE/WORKBOOK (SW) J3ABR2A632 046C-XI
2. Air Education and Training Command (USA)
3. Allen test- programmed training course.

Associate Degree Program

Specialization	المهمات الأرضية والآليات الخاصة في المطارات
Course Number	020607112
Course Title	مشغل كهرباء وإلكترونيات الآليات الخاصة Electrical And Electronic For Special Vehicle Workshop.
Credit Hours	2
Theoretical Hours	0
Practical Hours	6

Short Description:

Battery Testing, Starting System, Charging System, Ignition System: Diagnostics And Maintenance, Electronic Fuel Injection Services.

Course Objectives:

1. To Know How To Perform Automotive Electrical System Testing.
2. Gaining The Experience To Diagnose And Maintenance Of Electrical And Electronic Components.

Books and references:

1. STUDY GUIDE/WORKBOOK (SW) J3ABR2A632 046C-XI
2. Air Education and Training Command (USA)
3. Allen test- programmed training course.

Associate Degree Program

Specialization	المهمات الأرضية والآليات الخاصة في المطارات
Course Number	020607251
Course Title	تشخيص وصيانة أعطال الآليات الخاصة Diagnoses And Maintenance Faults For Special Vehicle
Credit Hours	3
Theoretical Hours	2
Practical Hours	3

Short Description:

Preventive maintenance for special vehicle, diagnoses of faults on special vehicle, applied maintenance for faults on special vehicle.

Course Objectives:

1. To Familiarizes With Basic Concepts In Preventive Maintenance For Special Vehicles.
2. Develop An Ability To Troubleshooting And Diagnoses Of Faults For Special Vehicle.
3. Develop An Ability To Make A Maintenance.

Detailed Description:

No.	Unit Title	Unit Content	Hours
1	Technology of special vehicle diagnoses	<ul style="list-style-type: none"> - diagnoses methods - maintenance of special vehicle - troubleshooting of faults 	6 Hours
2	Preventive maintenance	<ul style="list-style-type: none"> - introduction to preventive maintenance - preventive maintenance procedure - how to write report 	10 Hours
3	Application	<ul style="list-style-type: none"> - Main special vehicle systems troubleshooting - Main special vehicle systems maintenance 	8 Hours

Teaching Methods:

Method of teaching this material depends on instructor techniques and the facilities in the class such as data show (power point), board, parts found in workshop.

Books and references:

1. STUDY GUIDE/WORKBOOK (SW) J3ABR2A632 046C-XI
2. Air Education and Training Command (USA)
3. Allen test- programmed training course.

Associate Degree Program

Specialization	المهمات الأرضية والآليات الخاصة في المطارات
Course Number	020607121
Course Title	آلات هيدروليكية ورنوية Hydraulic And Pneumatic Machine.
Credit Hours	2
Theoretical Hours	2
Practical Hours	0

Short Description:

Fluid properties, fluid static's, fluid motion, continuity equation, momentum principle, energy Principle, Fluid flow in pipes, pipe friction, introduction to Pumps And Compressor, Types, Selection and Application of pumps.

Course Objectives:

1. Know The Basic Hydraulic And Pneumatic Terms
2. Know The Operation And Types Of Hydraulic And Pneumatic System Component.

Detailed Description:

No.	Unit Title	Unit Content	Hours
1	Properties of hydraulic	<ul style="list-style-type: none"> - Some terms used in the hydraulic system. - Classification of the hydraulic system. - Compare between the hydraulic system types. 	8 Hours
2	Statics of fluid	<ul style="list-style-type: none"> - Pascal's law in the pressure. - Convert of unit. - Measuring devices of the pressure. - The hydraulic lifter. - Forces on the flat surfaces 	8 Hours
3	Types of flow	<ul style="list-style-type: none"> - Stable and unstable flow. - Laminar and turbulent flow - Bernoulli equation in the hydraulic system. 	3Hours
4	Flow of fluid in the pipes	<ul style="list-style-type: none"> - Reynolds number - Power loss. 	2Hours
5	Hydraulic pumps	<ul style="list-style-type: none"> - Types of pumps used in the hydraulic system. - Compare between the types of pumps. - How to find the pump efficiency in the hydraulic system. 	4Hours

Teaching Methods:

Method of teaching this material depends on instructor techniques and the facilities in the class such as data show (power point), board, parts found in workshop.

Books and references:

1. STUDY GUIDE/WORKBOOK (SW) J3ABR2A632 046C-XI
2. Air Education and Training Command (USA)
3. Allen test- programmed training course.

Associate Degree Program

Specialization	المهمات الأرضية والآليات الخاصة في المطارات
Course Number	020607122
Course Title	مختبر آلات هيدروليكية ورئوية Hydraulic And Pneumatic Machine Lab.
Credit Hours	2
Theoretical Hours	0
Practical Hours	6

Short Description:

Measuring of physical properties of fluids, force on immersed plate, Jet force on plate, Bernoulli equation, Reynolds experiments, flow through orifices, and nozzle venture friction Factor

Course Objectives:

1. To Measuring The Atmospheric Pressure.
2. To Investigate The Main Factors Affecting The Performance Of Pump.
3. To Investigate The Main Factors Affecting The Performance Of Compressor.

Books and references:

1. STUDY GUIDE/WORKBOOK (SW) J3ABR2A632 046C-XI
2. Air Education and Training Command (USA)
3. Allen test- programmed training course.

Associate Degree Program

Specialization	المهمات الأرضية والآليات الخاصة في المطارات
Course Number	020607131
Course Title	محركات الآليات الخاصة Special Vehicle Engines.
Credit Hours	2
Theoretical Hours	2
Practical Hours	0

Short Description:

It deals with the design, construction, and operating principles of reciprocating engines; Its maintenance, removal, and overhaul, And diesel engine technology, four and two stroke engine.

Course Objectives:

1. To Identify The Internal Combustion Engine Design And Operation.
2. To Know The System Of The Internal Combustion Engine (Fuel System, Exhaust System, Cooling System)

Detailed Description:

No.	Unit Title	Unit Content	Hours
1	Introduction	<ul style="list-style-type: none">- Classification of engine- engine parts- engine parts working	4 Hours
2	Two stroke engine	<ul style="list-style-type: none">- Principle of two stroke engine	4 Hours
3	Four stroke engine	<ul style="list-style-type: none">- Principle of four stroke engine	4 Hours
4	Diesel engine	<ul style="list-style-type: none">- Working Principle	2 Hours
5	Gasoline engine	<ul style="list-style-type: none">- Working Principle	6 Hours
6	Cooling and lubrication system	<ul style="list-style-type: none">- Working Principle	6 Hours

Teaching Methods:

Method of teaching this material depends on instructor techniques and the facilities in the class such as data show (power point), board, parts found in workshop.

Books and references:

1. STUDY GUIDE/WORKBOOK (SW) J3ABR2A632 046C-XI
2. Air Education and Training Command (USA)
3. Allen test- programmed training course.

Associate Degree Program

Specialization	المهمات الأرضية والآليات الخاصة في المطارات
Course Number	020607132
Course Title	مشغل محركات الآليات الخاصة Special Vehicle Engines Workshop.
Credit Hours	2
Theoretical Hours	0
Practical Hours	6

Short Description:

Engine Performance Problems, Engine Mechanical Problems, Engine Removals And Disassembly, Engine Top And Bottom End Service, Engine Installation.

Course Objectives:

1. To Know The Most Common Engine Problems And Performed Testing Skills.
2. Perform Removal And Disassemble Of The Basic Parts Of The Engine.
3. Perform Engine Service In According With Manuals.

Detailed Description:

No.	Unit Title	Unit Content	Hours

Teaching Methods:

Method of teaching this material depends on instructor techniques and the facilities in the class such as data show(power point), board ,parts found in workshop,

Books and references:

1. STUDY GUIDE/WORKBOOK (SW) J3ABR2A632 046C-XI
2. Air Education and Training Command (USA)
3. Allen test- programmed training course.

Associate Degree Program

Specialization	المهمات الأرضية والآليات الخاصة في المطارات
Course Number	020607141
Course Title	النظم الميكانيكية في الآليات الخاصة Mechanical Systems For Special Vehicle
Credit Hours	3
Theoretical Hours	3
Practical Hours	0

No.	Unit Title	Unit Content	Hours
1	Clutch fundamentals	<ul style="list-style-type: none"> - Basic parts of automotive clutch - Explain the operation of a clutch - Describe the construction of major clutch components - Compare clutch design differences - Explain the different types of clutch release mechanisms 	7 Hours
2	Manual transmission fundamentals	<ul style="list-style-type: none"> - Describe gear operation principles - Identify and define all of the major parts of a transmission - Explain the fundamental operation of a manual transmission - Trace the power flow through transmission gears - Compare the construction of different types of manual transmission - Explain the purpose and operation of a transmission over drive ratio 	8 Hours
3	Automatic transmission fundamentals	<ul style="list-style-type: none"> - Identify the basic components of an automatic transmission - Describe the function and operation of the major parts of an automatic transmission - Trace the flow of power through automatic transmissions - Explain how an automatic transmission shift gears - Compare different types of automatic transmission 	8 Hours
4	Drive shaft and	<ul style="list-style-type: none"> - Identify the parts of a modern drive 	7

No.	Unit Title	Unit Content	Hours
	transfer cases	shaft – Explain the function of a drive shaft – List the different types of drive shaft –	Hours
5	Differential , rear – drive axle fundamental	– Identify the major parts of a rear drive axle assembly – List the function of a rear axle	6 Hours
6	Suspension system fundamentals	– Identify the major parts of a suspension system component – Describe the basic function of each suspension system component – Explain the operation of the four common types of springs.	6 Hours

Books and references:

1. STUDY GUIDE/WORKBOOK (SW) J3ABR2A632 046C-XI
2. Air Education and Training Command (USA)
3. Allen test- programmed training course.

Short Description:

Engine Parts And Operation, Engine Systems, Manual And Automatic Transmission, Suspension System, Steering System, Automotive Electrical And Electrical System.

Course Objectives:

1. To Identify The Main Automotive System Design And Operation.
2. Recognizing Principle Of Major Assemblies And Systems In The Automotive
3. Understand Procedure Of Referring To Automotive Technical Order.

Associate Degree Program

Specialization	المهمات الأرضية والآليات الخاصة في المطارات
Course Number	020607142
Course Title	مشغل النظم الميكانيكية في الآليات الخاصة Mechanical Systems For Special Vehicle Workshop
Credit Hours	2
Theoretical Hours	0
Practical Hours	6

Short Description:

Engine Parts , Engine System(Cooling, Lubrication , Ignition , Fuel) , Control Engine System , Gearbox Parts And Control , Automotive chassis , Brake System.

Course Objectives:

1. To Know The Most Common Automotive Problems And Performed Testing Skills.
2. Perform Removal And Disassemble Of The Basic Parts Of The Automotive System.
3. Perform Automotive System Service In According With Manuals.

Books and references:

1. STUDY GUIDE/WORKBOOK (SW) J3ABR2A632 046C-XI
2. Air Education and Training Command (USA)
3. Allen test- programmed training course.

Associate Degree Program

Specialization	المهمات الأرضية والآليات الخاصة في المطارات
Course Number	020607271
Course Title	نظم القياس والتحكم في المهمات الأرضية والآليات الخاصة Control And Measurement For Ground Support and Special Vehicle
Credit Hours	2
Theoretical Hours	2
Practical Hours	0

Short Description:

Ground Support and Special Vehicle sensors and transducers, Data acquisition, Signal conditioning, Interface, Control Loops, Units Of Measuring.

Course Objectives:

1. Identify The All Components And Sensors In The Special Vehicle.
2. How To Use The Different Measuring Tools.

Detailed Description:

No.	Unit Title	Unit Content	Hours
1	Kind of unit	<ul style="list-style-type: none"> - Basic and derive unit - Standard international unit - Significant figures - Unit conversion 	6 Hours
2	Measurement	<ul style="list-style-type: none"> - Introduction to measurement - Measuring device - Errors 	4 Hours
3	Automatic control	<ul style="list-style-type: none"> - Open loop control - Close loop control 	3 Hours
4	Sensors	<ul style="list-style-type: none"> - Definition of sensors - Types of special vehicle sensors 	6 Hours
5	Actuators	<ul style="list-style-type: none"> - Definition of actuators - Types of actuators 	6 Hours

Teaching Methods:

Method of teaching this material depends on instructor techniques and the facilities in the class such as data show(power point), board ,parts found in workshop,

Books and references:

1. STUDY GUIDE/WORKBOOK (SW) J3ABR2A632 046C-XI
2. Air Education and Training Command (USA)
3. Allen test- programmed training course.

Associate Degree Program

Specialization	المهام الأرضية والآليات الخاصة في المطارات
Course Number	020607272
Course Title	مشغل القياس والتحكم في الآليات الخاصة Control And Measurement For Special Vehicle Lab.
Credit Hours	2
Theoretical Hours	0
Practical Hours	6

Short Description:

Testing and Troubleshooting Ground Support and Special Vehicle sensors and transducers.
Practical experiments related To Ground Support and Special Vehicle instrumentation and control.

Course Objectives:

1. The Ability For Testing Sensors And Transducers In Special Vehicle.
2. Practical Training How To Use The Instrument And Controls.

Detailed Description:

No.	Unit Title	Unit Content	Hours
1	Application	Apply theory and using of measuring device	***

Teaching Methods:

Method of teaching this material depends on instructor techniques and the facilities in the class such as data show(power point), board ,parts found in workshop,

Books and references:

1. STUDY GUIDE/WORKBOOK (SW) J3ABR2A632 046C-XI
2. Air Education and Training Command (USA)
3. Allen test- programmed training course.

Associate Degree Program

Specialization	المهام الأرضية والآليات الخاصة في المطارات
Course Number	020607281
Course Title	شبكات إنقاذ الطائرات Aircraft Arresting Barriers
Credit Hours	2
Theoretical Hours	1
Practical Hours	3

Short Description:

General Information And Description, Aircraft Arrestment Procedure, Pendant System, Nylon Tape And Energy Absorber, BEFAB Engaging System, Hydraulic And Electrical System.

Course Objectives:

1. To know Main Arresting Barrier Parts And Description.
2. To Understand The Procedure Of Rewinding.
3. Making Inspection And Maintenance.

Detailed Description:

No.	Unit Title	Unit Content	Hours
1	BAK/12 Aircraft Arresting Barrier	<ul style="list-style-type: none"> - Introduction - Pendant Assembly - Nylon Tape - Runway Edge Sheave - Fairlead Tube Kit - Tape Brush And Mounting Assembly - Tape/Pendant Connector - Energy Absorber 	16 Hours
2	BEFAB/ Aircraft Arresting Barrier	<ul style="list-style-type: none"> - Introduction - Engaging System - Engaging System Support - Stanchions MK8-2 - Hydraulic System - Electrical Cabinet - Control Box 	16 Hours

Teaching Methods:

Method of teaching this material depends on instructor techniques and the facilities in the class such as data show(power point), board ,parts found in workshop,

Books and references:

1. STUDY GUIDE/WORKBOOK (SW) J3ABR2A632 046C-XI
2. Air Education and Training Command (USA)
3. Allen test- programmed training course.

Associate Degree Program

Specialization	المهمات الأرضية والآليات الخاصة في المطارات
Course Number	020607261
Course Title	ضواغط السوائل للطائرات Hydraulic Test Stand For Aircraft
Credit Hours	2
Theoretical Hours	1
Practical Hours	3

Short Description:

Hydraulic System Principles, (Supply, Fill, Bleed System), Low Pressure System, High Pressure System, Electrical System.

Course Objectives:

1. Know The Principle Operation Of The Equipment.
2. Understand Troubleshooting And Diagnoses The Malfunction Of The Equipment.
3. Using Different System At The Same Time.

Detailed Description:

No.	Unit Title	Unit Content	Hours
1	Hydraulic System Principles	<ul style="list-style-type: none"> - Hydraulic Terms - Hydraulic Fluids - Basic Hydraulic System - Hydraulic Pumps 	7 Hours
2	Supply, Fill , Bleed System	<ul style="list-style-type: none"> - Purpose Of The Supply System - Purpose Of The Fill and Bleed System - Supply System Operational Fundamentals - Fill And Bleed System Operational Fundamentals 	5 Hours
3	Low Pressure System	<ul style="list-style-type: none"> - Purpose Of Low Pressure Boost System - Low Pressure System Operational Fundamentals 	5 Hours
4	High Pressure System	<ul style="list-style-type: none"> - Purpose Of High Pressure System - High Pressure System Operational Fundamentals - Purpose Of Return System - Return System Operational Fundamentals - High Pressure Operational Check Setup 	5 Hours
5	Electrical System	<ul style="list-style-type: none"> - Dead Cable - Input Power - Control Transformer - Fill Pump Motor Control - Main Motor Start And Hold-In - Main Motor Run - Fan Motor Control And Hour Meter 	5 Hours

No.	Unit Title	Unit Content	Hours
		<ul style="list-style-type: none">- High Temperature Warning Horn- High Pressure Filter Warning Light- Auxiliary Light	

Teaching Methods:

Method of teaching this material depends on instructor techniques and the facilities in the class such as data show(power point), board ,parts found in workshop,

Books and references:

1. STUDY GUIDE/WORKBOOK (SW) J3ABR2A632 046C-XI
2. Air Education and Training Command (USA)
3. Allen test- programmed training course.

Associate Degree Program

Specialization	المهمات الأرضية والآليات الخاصة في المطارات
Course Number	020607262
Course Title	مشغلات الطائرات Aircraft Power Unit
Credit Hours	2
Theoretical Hours	1
Practical Hours	3

Short Description:

Operational Fundamentals For Gas Turbine Engine, Main Operation Systems, Generator And Electrical System For/AM32A-60A, Operational Fundamentals For HOBART GPU.

Course Objectives:

1. Know The Principle Operation Of The All Equipment.
2. Understand Troubleshooting And Diagnoses The Malfunction Of The Equipment's.
3. Using The Different Electrical Mode.

Detailed Description:

No.	Unit Title	Unit Content	Hours
1	Operational Fundamentals For Gas Turbine Engine Main Operation Systems	<ul style="list-style-type: none"> - Description - Accessory Island Section - Compressor Section - Turbine Section 	8 Hours
2	Generator And Electrical System For/AM32A-60A Operational Fundamentals For Gas Turbine Engine	<ul style="list-style-type: none"> - Lubrication System And Components - Fuel System And Components - Bleed Air System And Components - Control System And Components - Electrical Control System 	8 Hours
3	Main Operation Systems	<ul style="list-style-type: none"> - Generator Description And Components - AC Generator Circuits - DC Circuits - Fault Circuits 	8 Hours
4	Generator And Electrical System For/AM32A-60A	<ul style="list-style-type: none"> - General Description - Mechanical System - Electrical System - Operation And Control - Troubleshooting 	8 Hours

Teaching Methods:

Method of teaching this material depends on instructor techniques and the facilities in the class such as data show (power point), board, parts found in workshop.

Books and references:

1. STUDY GUIDE/WORKBOOK (SW) J3ABR2A632 046C-XI
2. Air Education and Training Command (USA)
3. Allen test- programmed training course.

Associate Degree Program

Specialization	المهمات الأرضية والآليات الخاصة في المطارات
Course Number	020607263
Course Title	روافع القنابل Bomb Lift
Credit Hours	3
Theoretical Hours	1
Practical Hours	6

Short Description:

Introduction To The Equipment, Main Systems Operation, Lift System Operation, Electrical System, Flight Line Driving.

Course Objectives:

1. Applying Theory Gained Within The Aircraft Bomb Lift Workshop And Operation.
2. Gained Practical Experimentation In Routine Maintenance And Safety Practices.

Detailed Description:

No.	Unit Title	Unit Content	Hours
1	Introduction	<ul style="list-style-type: none"> - Chassis Description - Engine Description 	10 Hours
2	Main Systems Operation	<ul style="list-style-type: none"> - Fuel System - Supply System - Drive System - Power Steering System 	10 Hours
3	Lift System Operation	<ul style="list-style-type: none"> - Lift System Purpose - Lift System Components 	10 Hours
4	Electrical System	<ul style="list-style-type: none"> - Electrical System Description - Identify Electrical Circuits 	10 Hours
5	Flight Line Driving	<ul style="list-style-type: none"> - Flight Safety Precautions - Parked Aircraft - Crossing Runway - Night Driving 	8 Hours

Teaching Methods:

Method of teaching this material depends on instructor techniques and the facilities in the class such as data show(power point), board ,parts found in workshop,

Books and references:

1. STUDY GUIDE/WORKBOOK (SW) J3ABR2A632 046C-XI
2. Air Education and Training Command (USA)
3. Allen test- programmed training course.

Associate Degree Program

Specialization	المهمات الأرضية والآليات الخاصة في المطارات
Course Number	020607252
Course Title	أنظمة الآليات الخاصة في المطارات Systems for Runway Special Vehicles
Credit Hours	3
Theoretical Hours	1
Practical Hours	6

Short Description:

Introduction To Special Vehicle, Supply Fuel System, Towing System, Vacuum system, Firefighting System.

Course Objectives:

1. Applying Theory Gained Within The Special Topic In Aerospace Ground Equipment.
2. To Prepare The Student To Follow The Technical Order.
3. Understand How To Make Inspection And Maintenance Procedure.

Detailed Description:

No.	Unit Title	Unit Content	Hours
1	Introduction To Special Vehicle	<ul style="list-style-type: none"> - Aircraft Refueling Tank - Aircraft Towing Tractor - Runway Sweeper Truck - Aircraft Fire Fighting Truck 	10 Hours
2	Supply Fuel System	<ul style="list-style-type: none"> - Components Description And Location - Fuel And Defuel System - Pressure control System - System Operation And Troubleshooting 	10 Hours
3	Towing System	<ul style="list-style-type: none"> - Drive Train System - Hydraulic System - Brake System - Operation, Inspection, And Lubrication 	10 Hours
4	Vacuum system	<ul style="list-style-type: none"> - Components Description And Location - Vacuum System Principle - Operation, Inspection, And Lubrication 	10 Hours
5	Firefighting System	<ul style="list-style-type: none"> - Components Description And Location - Types Of Firefighting system - Pressure Control System - Operation, Inspection, And Lubrication 	8 Hours

Teaching Methods:

Method of teaching this material depends on instructor techniques and the facilities in the class such as data show(power point), board ,parts found in workshop,

Books and references:

1. STUDY GUIDE/WORKBOOK (SW) J3ABR2A632 046C-XI
2. Air Education and Training Command (USA)
3. Allen test- programmed training course.

Associate Degree Program

Specialization	المهام الأرضية والآليات الخاصة في المطارات
Course Number	020607264
Course Title	المهام الأرضية للطائرات Ground Support Aircraft
Credit Hours	3
Theoretical Hours	1
Practical Hours	6

Short Description:

Air Compressor, Air Conditioning Unit /C-5, Air Conditioning Unit /C-10, Self-Generation Nitrogen Cart.

Course Objectives:

1. Applying Theory Gained Within The Special Topic In Aerospace Ground Equipment.
2. To Prepare The Student To Follow The Technical Order.
3. Understand How To Make Inspection And Maintenance Procedure.

Detailed Description:

No.	Unit Title	Unit Content	Hours
1	Air Compressor	<ul style="list-style-type: none"> - Operational Principles - Major Components - Air Flow System - Electrical System 	12 HOURS
2	Air Conditioning Unit /C-5	<ul style="list-style-type: none"> - Refrigeration Fundamentals - Basic Refrigeration System - Operation System - Air Flow - Refrigerant Maintenance 	12 HOURS
3	Air Conditioning Unit /C-10	<ul style="list-style-type: none"> - Main Purpose - Primary Air Operating Mode - High Pressure Air Operating Mode - Combined Air Operating Mode 	12 HOURS
4	Self-Generation Nitrogen Cart	<ul style="list-style-type: none"> - Introduction - Air Flow - Nitrogen Flow - Hydraulic System 	12 HOURS

Teaching Methods:

Method of teaching this material depends on instructor techniques and the facilities in the class such as data show(power point), board ,parts found in workshop,

Books and references:

1. STUDY GUIDE/WORKBOOK (SW) J3ABR2A632 046C-XI
2. Air Education and Training Command (USA)
3. Allen test- programmed training course.

Associate Degree Program

Specialization	المهمات الأرضية والآليات الخاصة في المطارات
Course Number	020607291
Course Title	التدريب Training
Credit Hours	3
Theoretical Hours	0
Practical Hours	*