

# AIRCRAFT MAINTENANCE TECHNOLOGY (AIRM)

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## **AIRM 65A Aircraft Powerplant Theory**

**13 Units** (Degree Applicable, CSU)

Lecture: 108 Lab: 378

Advisory: AIRM 71

Theory and overhaul of aircraft reciprocating and turbine powerplants. Approved and required for the FAA powerplant certification.

## **AIRM 65B Aircraft Powerplant Systems**

**13 Units** (Degree Applicable, CSU)

Lecture: 108 Lab: 378

Prerequisite: AIRM 65A

Advisory: AIRM 71

Reciprocating and turbine engine systems and components. Approved and required for the Federal Aviation Administration (FAA) powerplant certification.

## **AIRM 66A Aircraft Airframe Maintenance Structures**

**13 Units** (Degree Applicable, CSU)

Lecture: 108 Lab: 378

This course is approved by the Federal Aviation Administration and meets requirements for all Aircraft Powerplant and Airframe Maintenance Technology majors. Structure topics span nomenclature and aerodynamics, set back and bend allowance, riveting, wood, fabric, paint, repairing aluminum, plastics, composites, rigging, and periodic inspections.

## **AIRM 66B Aircraft Airframe Maintenance Systems**

**13 Units** (Degree Applicable, CSU)

Lecture: 108 Lab: 378

Airframe systems in hydraulics, landing gear, pneumatics, pressurization, instruments, fuel, fire, communication, navigation, autopilots, and RADAR. Approved by the Federal Aviation Administration (FAA).

## **AIRM 70A Aircraft Maintenance Electricity and Electronics**

**3 Units** (Degree Applicable)

Lecture: 36 Lab: 71

Advisory: AIRM 71

Electrical theory, series and parallel circuits, batteries, and electrical measuring instruments. Required for Federal Aviation Administration (FAA) certification.

## **AIRM 70B Aircraft Maintenance Electricity and Electronics**

**3 Units** (Degree Applicable)

Lecture: 36 Lab: 71

Prerequisite: AIRM 70A

Advisory: AIRM 71

Principles of alternating current electricity with emphasis on components and circuits. Required for FAA certification.

## **AIRM 71 Aviation Maintenance Science**

**6 Units** (Degree Applicable)

Lecture: 108

Federal aviation regulations, interpretation of aircraft drawings, basic physics, technical mathematics, and aircraft weight and balance computations. Federal Aviation Administration (FAA) approved course required of all aircraft powerplant and airframe maintenance technology majors.

## **AIRM 72 Aircraft Materials and Processes**

**2 Units** (Degree Applicable)

Lecture: 22 Lab: 54

Advisory: AIRM 71

Part 147 Federal Aviation Administration (FAA) approved course covering aviation materials, non-destructive testing, basic heat-treating and machining.

## **AIRM 74 Aircraft Maintenance Technology - Work Experience**

**2 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 120-150

Prerequisite: Compliance with work experience regulations as designated in the College Catalog.

Combines aircraft maintenance experience in addition to classroom instruction for college credit. Two units of credit will be earned as a result of 150 unpaid or 120 paid work hours. The employer and evaluator will have the student perform aircraft maintenance work under direct supervision at a maintenance facility.

## **AIRM 80 Laboratory Studies in Aircraft Maintenance Technology**

**0.5-1 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 27-54

Additional lab instruction for students lacking Federal Aviation Authority (FAA) mandated hours to complete a training certificate, required remediation of program modules, or laboratory assignments.

## **AIRM 90A Airframe Theory**

**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Advisory: AIRM 70A or AIRM 70B or AIRM 71 or AIRM 72

A Federal Aviation Administration (FAA) approved course covering aircraft flight, flight control, and construction methods and procedures.

## **AIRM 90B Airframe Wood, Fabric, and Paint**

**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 90A

Aircraft structural designs, wood structures, fabric covering, and aircraft finishes. Approved by the Federal Aviation Administration (FAA) and required for the Airframe and Aircraft Powerplant Maintenance Technology major.

## **AIRM 91A Airframe Aluminum Repair and Plastics**

**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 90A and AIRM 90B

Aircraft structural repair of aluminum and aircraft plastics. Approved by the Federal Aviation Administration (FAA) and required for the Airframe and Aircraft Powerplant Maintenance Technology major.

**AIRM 91B Airframe Composites, Rigging, and Inspection**

**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 90A and AIRM 90B and AIRM 91A

Composite materials used in aircraft construction, rigging, and inspection. Approved by the Federal Aviation Association (FAA) and required for the Airframe and Aircraft Powerplant Maintenance Technology major.

**AIRM 92A Airframe Hydraulics and Pneumatics**

**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 90A and AIRM 90B and AIRM 91A and AIRM 91B

Aircraft hydraulic and pneumatic power systems, landing gear, and wheel and brake systems. Approved by the Federal Aviation Administration (FAA) and required for the Airframe and Aircraft Powerplant Maintenance Technology major.

**AIRM 92B Airframe Fuel and Environmental Systems**

**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 92A

Aircraft environmental systems, instrument systems, and fuel systems. Approved by the Federal Aviation Association (FAA) and required for the Aircraft Airframe and Powerplant Maintenance Technology major.

**AIRM 93A Airframe Warning and Fire Systems**

**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 92A and AIRM 92B

Federal Aviation Administration (FAA) approved course covering aircraft cabin heating and cooling, communication and navigation systems, and ice and rain control systems in small and large aircraft.

**AIRM 93B Aircraft Communication, Navigation, Radar, and Autopilot Systems**

**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 92A and AIRM 92B and AIRM 93A

Aircraft navigation and communication systems, radar systems, and autopilot systems. Course approved by the Federal Aviation Administration (FAA) and required for the Airframe and Aircraft Powerplant Maintenance Technology major.

**AIRM 95A Aircraft Powerplant Theory**

**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Advisory: AIRM 70A and AIRM 70B and AIRM 71 and AIRM 72

Federal Aviation Administration (FAA) approved course covering piston powerplant theory. Includes calculations and construction methods.

**AIRM 95B Aircraft Powerplant Inspection and Maintenance**

**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 95A

Federal Aviation Administration (FAA) approved course covering piston engine overhaul, inspection, and troubleshooting procedures.

**AIRM 96A Aircraft Turbine Engines**

**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 95A and AIRM 95B

Aircraft turbine engine history, construction, thrust formulas and turbine engine types. Approved by the Federal Aviation Administration (FAA) and required for the Airframe and Aircraft Powerplant Maintenance Technology Major. Required for FAA certification.

**AIRM 96B Aircraft Propellers**

**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 95A and AIRM 95B and AIRM 96A

Propeller theory, nomenclature, application, constant speed devices, and propeller controls. Approved by the Federal Aviation Administration (FAA) and required for the Airframe and Aircraft Powerplant Maintenance Technology Major. Required for FAA certification.

**AIRM 97A Aircraft Powerplant Instrumentation**

**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 95A and AIRM 95B and AIRM 96A and AIRM 96B

Federal Aviation Administration (FAA) approved course covering instrumentation, fire and smoke detection, and fire suppression systems used in small and large aircraft.

**AIRM 97B Aircraft Powerplant Fuel Systems**

**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 97A

Reciprocating engine and turbine engine fuels, fuel metering devices, and system operation. Approved by the Federal Aviation Administration (FAA).

**AIRM 98A Aircraft Powerplant Ignition Systems**

**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 97A and AIRM 97B

Reciprocating and turbine engine ignition system theory and maintenance. Approved by the Federal Aviation Administration (FAA).

**AIRM 98B Aircraft Powerplant Lubricating Systems**

**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 97A and AIRM 97B and AIRM 98A

Reciprocating and turbine engine lubricants and lubricating systems. Approved by the Federal Aviation Administration (FAA).