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Aviation Maintenance Curriculum

Aircraft Drawings Syllabus

About The Course:

The Aircraft Drawings course is designed to align with the general knowledge and skill requirements set forth in the Federal Aviation Administration's Mechanic Airman Certification Standards.

This course helps learners understand how aviation information is communicated through drawings, schematics, diagrams, flowcharts, charts, graphs, sketches, and images. Learners will interpret lines, symbols, notes, tables, and other drawing data used in aircraft maintenance documents.

The course also introduces methods for creating, reading, storing, and accessing aircraft drawings and related visual information. By the end of the course, learners will understand the role of drawings in aircraft manufacturing, inspection, maintenance, and repair.

Couse Number: FAA-ACS-AM-IB-ACD

ACS Reference: Aircraft Drawings (AM.I.B)

Revision Number: 01
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Course Objectives:

1. Identify the importance of geometry, applied geometry, aircraft drawings, diagrams, and flowcharts.
2. Compare and contrast detail, assembly, installation, sectional view, orthographic projection, pictorial, perspective, isometric, oblique, and exploded-view drawings.
3. Recognize information found on aircraft drawings, such as the title block, bill of materials, revision block, universal numbering system, and scale.
4. Compare and contrast installation, schematic, block, and wiring diagrams, as well as logic and troubleshooting flowcharts.
5. Describe how to create and use a sketch.
6. Identify the appearance and meaning of various lines and symbols used in aircraft drawings.
7. Describe how graphs, charts, and nomographs display information.
8. Explain how to properly care for drafting instruments.
9. Discuss computer technologies used in the creation, review, storage, and access of aircraft drawings.

Module 1: Computer Graphics and Aviation Drawings

- Lesson 1.1 – Introduction to Aircraft Drawings
- Lesson 1.2 – Types of Drawings
- Lesson 1.3 – Title Blocks and Universal Numbering System
- Lesson 1.4 – Bill of Material and Other Drawing Data

Module 2: Illustration Methods and Meanings of Symbols

- Lesson 2.1 – Methods of Illustration: Orthographic Projections and Drawings
- Lesson 2.2 – Methods of Illustration: Diagrams and Flowcharts
- Lesson 2.3 – Lines and Symbols in Drawings

Module 3: Reading, Interpreting, and Storing Drawings

- Lesson 3.1 – Interpreting Drawings and Sketches
- Lesson 3.2 – Equipment, Visual Data, and Storage

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SkilRedi simulations included in this course:

- Aircraft drawing identification
- Creating a repair sketch

Hands on labs

- Aircraft Drawings
- Build-a-Plane

Each lesson contains the following:

- Lesson Objectives
- Video lecture
- Multiple readings with interactive animations
- Assigned readings in the applicable FAA 8083 Chapter
- Summary and Key Terms
- Assessment Activities

Each Module contains the following:

- Standards and Objectives
- Pre-Assessment
- Key Concepts and Terms
- Further Study
- Module Quiz
- Module Critical Thinking Activity
- Module Survey

Each Course contains the following:

- Course Pre-Test
- Course Introduction
- Course Comprehensive Assessment
- Course Survey

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