CHOOSE AEROSPACE

703.548.2030
CAREERS@CHOOSEAEROSPACE.ORG
CHOOSEAEROSPACE.ORG

Aviation Maintenance Curriculum

Hand Tools and Measuring Devises Course Syllabus

About The Course:

The Hand Tools and Measuring Devices course was developed in alignment with the general knowledge and skill requirements set forth in the Federal Aviation Administration's Mechanic Airman Certification Standards.

The course is divided into three modules and introduces the hand tools and measuring devices used by aviation maintenance technicians during routine and special maintenance tasks. Topics include common hand tools, metal cutting and shaping tools, drilling and thread preparation tools, and measuring and marking devices. Each lesson provides a deeper understanding of each tool's purpose, proper use, limitations, care, storage, and application in aviation maintenance tasks.

This course establishes a working knowledge of the skills required to safely and accurately use hand tools and measuring devices when maintaining aircraft. Technicians will learn how to select appropriate tools, perform basic measuring and marking tasks, support fabrication and installation procedures, and prevent damage to tools, materials, fasteners, and aircraft components.

The information in this course serves as a general guide for the proper use, application, care, and safety of common hand tools and measuring devices used by aviation maintenance technicians. Manuals for specific aircraft, equipment, and tools should always be reviewed and understood before performing any operation.

Couse Number: FAA-ACS-AM-IK-HTM

ACS Reference: N/A (No specific ACS General subjects cover this topic)

Revision Number: 03

Revision Date: 10/26/26

Original Issue Date: 07/13/21

CHOOSE AEROSPACE

703.548.2030
CAREERS@CHOOSEAEROSPACE.ORG
CHOOSEAEROSPACE.ORG

Course Objectives:

1. Identify common hand tools used by aviation maintenance technicians to perform routine maintenance, repairs, and installations.
2. Describe the proper use, care, storage, and safety practices for common hand tools and measuring devices.
3. Select appropriate tools for striking, turning, gripping, cutting, shaping, drilling, measuring, marking, and thread preparation tasks.
4. Identify common measuring and marking tools used to perform maintenance, repairs, fabrication, and installations with accuracy.
5. Explain how correct tool selection and proper technique help prevent damage to tools, materials, fasteners, and aircraft components.

Module 1: General Purpose Hand Tools

- Lesson 1.1 – Hammers and Screwdrivers
- Lesson 1.2 – Pliers, Punches, and Wrenches

Module 2: Metal Cutting Tools

- Lesson 2.1 – Hand Snips and Hacksaws
- Lesson 2.2 – Chisels and Files
- Lesson 2.3 – Drills
- Lesson 2.4 – Hole and Bolt Preparation Tools

Module 3: Layout and Measuring Tools

- Lesson 3.1 – Measuring and Marking Tools

SkilRedi simulations included in this course:

- n/a

Hands on labs

- Tool Recognition
- Use of Precision Measurement Tools

Revision Number: 03

Revision Date: 10/26/26

Original Issue Date: 07/13/21

703.548.2030
CAREERS@CHOOSEAEROSPACE.ORG
CHOOSEAEROSPACE.ORG

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

Revision Number: 03

Revision Date: 10/26/26

Original Issue Date: 07/13/21