

Aviation Technology- Maintenance
Standard Course Outline

AVTA 1023 - ASSEMBLY AND RIGGING

Catalog Description: Basic Aerodynamics, theory of flight and the function and operation of flight control mechanisms. Clock hours: 36 lecture, 36 shop

Prerequisite: AVTG 1001

Credit hours/ Contact hours/ Load hours: 3/72/ 12 six hour days

Target Audience & Transferability:

This course is designed for students seeking a Technical Certificate in Airframe or, when combined with General and Powerplant, an AAS in Aviation Maintenance Technology, or an AS in Aviation Maintenance Management. Individual AVT courses or Certificates may be transferable to other FAA Certified Aviation Maintenance Technician schools under Federal Regulations.

Student Outcomes/ topics:

REFERENCES: AC 65-9A, AC 65-15A; AMT-A; AMT-G; JSAT.
FAA Standard: *FAA-S-8081-27* 2-6, Change 2 (9/24/03)

The student:

1. Exhibits knowledge of at least two of the following—
 - a. control cable.
 - b. control cable maintenance.
 - c. cable connectors.
 - d. cable guides.
 - e. control stops.
 - f. push pull tubes.
 - g. torque tubes.
 - h. bell cranks.
 - i. flutter and flight control balance.
 - j. rigging of airplane or rotorcraft flight controls.
 - k. airplane or rotorcraft flight controls and/or stabilizer systems.
 - l. types of rotorcraft rotor systems.
 - m. rotor vibrations.
 - n. rotor blade tracking.
 - o. aircraft jacking procedures.
 - p. jacking safety practices/precautions.
2. *Demonstrates the ability to:
 - a. Check and/or set control surface cable tension. (Level 3)*Core competency element.
3. Demonstrates the ability to perform at least one of the following—
 - a. install a control surface. (Level 3)
 - b. check the static balance of a control surface. (Level 3)

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- c. locate the procedures for rigging a helicopter. (Level 1)
- d. locate helicopter rotor blade tracking procedures. (Level 1)
- e. identify fixed-wing aircraft rigging adjustment locations. (Level 2)
- f. locate leveling methods and procedures for a specific aircraft. (Level 1)
- g. inspect a flight control system for travel and security. (Level 3)
- h. inspect a primary flight control cable. (Level 3)
- i. install one or more swaged cable terminals and check with appropriate gage. (Level 3)
- j. install one or more Nicopress sleeves and check with appropriate gage. (Level 3)
- k. check and adjust as necessary a push-pull flight control system. (Level 3)
- l. locate jacking points and leveling locations for a specific aircraft. (Level 2)
- m. determine the jacking requirements for a particular aircraft. (Level 2)
- n. jack an aircraft or portion thereof (e.g., as appropriate for tire/wheel change, or gear retraction). (Level 3)

Required Text(s):

Airframe Structures Textbook (ASA)	ISBN # 1-56027-339-9
Airframe Systems Textbook (ASA)	ISBN # 1-56027-340-2
Airframe Test Study Guide (ASA)	ISBN # 1-56027-571-5
FAR Handbook for AMT (ASA)	ISBN # 1-56027-563-4
AC43.13-1B Acceptable Methods, Practices, & Techniques (ASA)	ISBN # 1-56027-488-3

Optional Text(s):

Technician Airframe Textbook (Jeppesen)	ISBN # 0-89100-395-9
Technician Airframe Workbook (Jeppesen)	ISBN # 0-89100-402-5
AC65-15A Aircraft Mechanics Handbook Airframe (FAA)	ISBN # 1-56027-023-3

Supporting Reference(s)

O&P Study Guide (ASA)	ISBN # 1-56027-406-9
Maintenance Handbook (ASA)	ISBN # 1-56027-518-9
Dictionary of Aeronautical Terms (ASA)	ISBN # 1-56027-587-2

The workbooks and test study guides may be used to aid the instructor and students to reinforce the textbook information. Other Textbooks may be used depending upon availability.

Required Methods of Instruction:

Classes are taught in a full time day or night format, requiring maximum attendance. Attendance is taken every hour. Missed time must be made up outside of regular scheduled class time before moving to the next subject.

Required Forms of Assessment:

Periodic exams will be performed by FAA approved instructors as required to insure progress. Students must pass this course with a 70% or better to qualify for an FAA approved Certificate of Completion in the Airframe Section.