

Aviation Technology- Maintenance  
Standard Course Outline

AVTA 1081 - COMMUNICATIONS AND NAVIGATION (AVIONICS)

Catalog Description: Fundamentals of avionics, their function and the appropriate terminology, functions of communications equipment and navigational equipment. Clock hours: 16 lecture and 8 shop

Prerequisite: AVTG 1001

Credit hours/ Contact hours/ Load hours: 1/24/ meets four 6-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.

Common Objectives/ Student Outcomes:

REFERENCES: AC 65-15; AMT-A; JSAT; 14 CFR part 91.  
FAA Standard: *FAA-S-8081-27* 3-5, Change 2 (9/24/03)

**Upon course completion, the student:**

1. Exhibits knowledge of at least two of the following—
  - a. 14 CFR part 91 emergency locator transmitter (ELT) maintenance requirements.
  - b. 14 CFR part 91 ELT record keeping requirements.
  - c. checking/inspecting coaxial cable.
  - d. coaxial cable installation and/or routing requirements.
  - e. communication and/or navigation systems commonly used.
  - f. proper installation of a com/nav radio in an existing radio rack.
  - g. means of identification of commonly used communication and/or navigation antennas.
  - h. autopilot system basic components and/or sensing elements.
  - i. static discharger function and operation.
  - j. static discharger maintenance procedures.
2. N/A
3. Demonstrates the ability to perform at least one of the following—
  - a. identify and inspect com/nav cable and connectors. (Level 3)
  - b. inspect an ELT and/or ELT installation. (Level 3)
  - c. determine ELT battery serviceability/status. (Level 2)
  - d. inspect one or more antenna installations. (Level 3)
  - e. inspect a coaxial cable installation. (Level 3)
  - f. inspect a com/nav radio installation. (Level 3)
  - g. inspect a shock mount base. (Level 3)
  - h. locate and identify various antennas installed on a particular aircraft. (Level 2)

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- i. inspect one or more static dischargers for security, resistance. (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.