

Aviation Technology- Maintenance
Standard Course Outline

AVTP 1105 - TURBINE ENGINES/UNDUCTED FANS

Catalog Description: Theory and operation of turbine and turboprop engines. Clock hours: 56 lecture and 100 shop

Prerequisite: AVTG 1001

Credit hours/ Contact hours/ Load hours: 5/156/6 hours per day for 26 days

Target Audience & Transferability:

This course is designed for students seeking a Technical Certificate in Powerplant or, when combined with General and Airframe, 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.

Course Topics Student Outcomes:

REFERENCES: JSPT; AP.

FAA Standard: *FAA-S-8081-28* 4-2, Change 2 (9/24/2003)

By the end of the course, students will:

1. Exhibit knowledge of at least two of the following—
 - a. turbine engine theory of operation.
 - b. checks necessary to verify proper operation.
 - c. turbine engine troubleshooting procedures.
 - d. procedures required after the installation of a turbine engine.
 - e. causes for turbine engine performance loss.
 - f. purpose/function/operation of various turbine engine components.
 - g. turbine engine maintenance procedures.
2. N/A
3. Demonstrate the ability to perform at least one of the following—
 - a. repair a turbine engine compressor blade by blending. (Level 3)
 - b. remove and/or install a turbine engine component. (Level 3)
 - c. determine cycle life remaining between overhaul of a turbine engine life limited component. (Level 2)
 - d. check rigging of a turbine engine inlet guide vane system. (Level 3)
 - e. measure compressor or turbine blade clearance. (Level 3)
 - f. troubleshoot a turbine engine. (Level 3)
 - g. locate and identify turbine engine components. (Level 2)
 - h. inspect turbine engine components. (Level 3)

NOTE: AUXILIARY POWER UNITS may be tested at the same time as AREA B. No further testing of auxiliary power units is required.

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Required Text(s):

Powerplant Textbook (ASA)	ISBN # 1-56027-547-2
Powerplant Test Study Guide (ASA)	ISBN # 1-56027-572-3
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 Powerplant Textbook (Jeppesen)	ISBN # 0-88487-207-6
Technician Powerplant Workbook (Jeppesen)	ISBN # 0-88487-243-2
AC65-12A Aircraft Mechanics Handbook Powerplant (FAA)	ISBN # 1-56027-024-1

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 issued depending upon availability.

Required Methods of Instruction:

Classes are taught off-campus 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 Power-plant Section.