Course number and Title

AVSC 1013/ Aviation Powerplant

Catalog Description:

In-depth study of the fundamentals of engine design and operation with hands-on application of servicing, trouble shooting, inspection and repair of reciprocation and turbine engines, and their sub-systems. This course is taught off campus by Arkansas Aviation Technologies Center. It addresses one section of three to qualify for the FAA Airframe and Powerplant Technician Certificate.

Prerequisite:

AVSC 1010/ Aviation Maintenance

Credit hours/ Contact hours/ Load hours:

13/13/13 (Taught off-campus by contract instructors)

Target Audience & Transferability:

Designed for students majoring in either an Associate of Applied Science (AAS) Aviation Technology), or Associate of Science (Maintenance Management). Course lays the foundations for student understanding of basic aircraft maintenance to allow progress towards earning the FAA Airframe and Powerplant Licensure. Can be used towards either a terminal or transfer degree. Will transfer to Henderson State University, and several other out-of-state institutions offering Bachelor's Aviation Programs.

Common Objectives/ Student Outcomes:

Students completing this course will be able to:

1. Perform maintenance service on reciprocating, turboprop, and jet turbine aircraft engines and their associated accessories.
2. Demonstrate a knowledge of appropriate quality control mechanisms and FAA Regulations and Directives.

Required Text(s):

A & P Technician Series Jeppesen Sanderson, Inc., 1998

Optional Text(s):

Topics:

I. Intro.to Powerplant, Propellers, Lubrication & Cooling (P100to P102).
II. Induction, Airflow, Exhaust, Reversers, & Instrumentation (P103 & P104).
III. Fire Protection, Fuel & Ignition Systems (P105 to P107).
IV. Electrical systems & Auxiliary Power Units (P108 & P109).
V. Reciprocating & Turbine engines/Unducted Fans (P110).
VI. Engine Inspection & Review (P111).

Required Methods of Instruction:

Classes are taught off-campus in a full time day or night format, requiring maximum attendance.

Required Forms of Assessment:

Exams will be performed as required to insure progress towards completion. Student must take and pass FAA test for award of the FAA Powerplant Technician License.

Resources:

Arkansas Aviation Technologies Center resource center at Drake Field.