PROPELLERS / PROP GOVERNING
Course Syllabus

Course Number: TRPPM-3100          OHLAP Credit: No
OCAS Code: None
Course Length: 77 Hours
Career Cluster: Transportation, Distribution & Logistics
Career Pathway: Aviation Maintenance Technology
Career Major(s): Powerplant Mechanic

Pre-requisite(s):

Course Description: Safety of operating propellers, propeller aerodynamics and propeller auxiliary systems will be studied. Students will inspect, service, maintain and repair propeller and control systems in this course.

Textbooks:
Dale Crane, Dictionary of Aviation Terms, Aviation Supplies and Academics, 1997
DOT, Aircraft Inspection and Repair, Jeppesen, Sanders, Inc., 1998

Course Objectives:

A. Lesson: INTRODUCTION TO PROPELLERS AND PROPELLER CONTROL SYSTEMS
1. Define terms related to propellers and propeller control systems.
2. Discuss and practice prop safety.
3. Discuss basic FAR's related to propellers.

B. Lesson: BASIC PROPELLER THEORY
1. Discuss propeller aerodynamics.
2. Describe basic propeller design and construction.
3. Compare and contrast operations of various types of propellers.
4. Discuss the operation of the governor control system, including the accumulator. (PP-R8,R11,R20)
5. Name the instruments involved in propeller control.
6. Describe the relationship of the instruments to propeller condition.
7. Describe turboprop propeller operation.

C. Lesson: AUXILIARY SYSTEMS
1. List basic propeller auxiliary systems.
2. Differentiate between, and discuss inspection, service, operational checks, and repair of synchronizing and synchro-phasing systems. (Level 1) (App. D, II, K, 33)
3. Discuss inspection, service, operational checks, and repair of anti-icing and deicing systems. (Level 1) (App. D, II, K, 33) (PP-R1)

D. Lesson: INSPECTION, SERVICE, MAINTAIN AND REPAIR OF PROPELLER CONTROL SYSTEMS
1. Identify propeller maintenance procedures that an A&P maintenance technician may
Teaching Methods: The class will primarily be taught by the lecture and demonstration method and supported by various media materials to address various learning styles. There will be question and answer sessions over material covered in lecture and media presentations. Supervised lab time is provided for students to complete required projects.

Grading Procedures:
1. Students are graded on theory and shop practice and performance.
2. Each course must be passed with seventy (70%) percent or better.
3. Grading scale: A=90-100%, B=80-89%, C=70-79%, F=0-69%.

Description of Classroom, Laboratories, and Equipment: Tulsa Technology Center campuses are owned and operated by Tulsa Technology Center School District No. 18. All programs provide students the opportunity to work with professionally certified instructors in modern, well-equipped facilities.

Available Certifications/College Credit: The student may be eligible to take state, national or industry exam after completion of the program. College credit may be issued from Oklahoma State University-Okmulgee or Tulsa Community College. See program counselor for additional information.

College Credit Eligibility: The student must maintain a grade point average of 2.0 or better.