PERFORMANCE AND NAVIGATION
Course Syllabus

Course Number: PPGS-A1036       OHLAP Credit: No
OCAS Code: None
Course Length: 90 Hours
Career Cluster: Transportation, Distribution & Logistics
Career Pathway: Pilot
Career Major(s): Private Pilot (Ground School)

Pre-requisite(s): In this course, students will learn to predict the performance (capabilities and limitations) of an airplane. Predicting performance is extremely important because it has to do with speed, maneuverability, load-carrying capacity, etc. For example, how much runway is needed for takeoff; how fast can the plane reach a certain altitude; how long will it take to reach your destination; how much fuel is needed; and what length runway will be sufficient for landing are some of the performance questions that students must be able to calculate. They will also learn the basics of flight planning and navigation using aeronautical charts, visual landmarks, and radio aids.

Textbooks:
Jeppesen Private Pilot Maneuvers
Airmens’ Information Manual

Course Objectives:

A. Predicting Performance
   1. Aircraft performance and design
   2. Takeoff and landing performance
   3. Climb performance
   4. Cruise performance

B. Weight and Balance
   1. Importance of weight/balance
   2. Terms
   3. Principles of weight and balance
   4. Determining total weight and center of gravity

C. Flight Computers
   1. Mechanical flight computers
   2. Electronic flight computers

D. Navigation
   1. Pilot age and dead reckoning
   2. Flight plan
   3. VOR navigation
   4. ADF navigation
   5. Advanced navigation
TTC objectives

**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%, D=60-69%, F=50-59%.

**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.