FUNDAMENTALS OF FLIGHT
Course Syllabus

Course Number: PPGS-A1033  OHLAP Credit: No
OCAS Code: None
Course Length: 135 Hours
Career Cluster: Transportation, Distribution & Logistics
Career Pathway: Pilot
Career Major(s): Private Pilot (Ground School)

Pre-requisite(s):

Course Description:
In this course, students will be introduced to pilot training and the Federal Aviation Administration (FAA), which governs commercial and general aviation. They will learn about careers in aviation and the requirements needed to obtain pilot ratings, airplane class ratings, and medical certificates. The major systems and components of an airplane will be covered, along with the identification and purpose of various flight instruments and aerodynamic principles.

Textbooks:
Jeppesen Private Pilot Maneuvers
Airmens’ Information Manual

Course Objectives:

A. Pilot Training
1. Discuss the history of flight.
2. Discuss how to get started in pilot training.
3. What is the FAA?
4. Where can you obtain pilot training and ground school?
5. Flying lessons, cost, requirements, training course sequence?

B. Aviation Opportunities
1. Types of flight.
2. Aviation organizations
3. Pilot and aircraft ratings
4. Aviation careers

C. Intro to Human Factors
1. Decision making process
2. Pilot-in-command responsibilities
3. Communication
4. Importance of resource use, workload management, situational awareness
5. Aviation physiology
6. Alcohol, drugs and performance

D. Airplane Systems
1. Basic components (fuselage, wings, empennage, landing gear, brakes
2. Powerplant (engine and propeller) and related systems (fuel, oil, cooling, exhaust, electrical)
3. Pilot’s Operating Handbook (POH)

E. Flight Instruments
1. Airspeed indicator, altimeter, vertical speed indicator, etc.
2. Types of altitude
3. Gyroscopic instruments

F. Aerodynamic Principles
1. Four forces of flight (lift, weight, thrust and drag)
2. Stability (longitudinal, lateral, directional)
3. Aerodynamics of maneuvering flight

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.