APT A120: PRIVATE PILOT FLIGHT LAB

Item	Value
Curriculum Committee Approval Date	12/08/2021
Top Code	302020 - Piloting
Units	1 Total Units
Hours	54 Total Hours (Lab Hours 54)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Grading Policy	Pass/No Pass (B)

Course Description

During this course the student obtains the foundation for all future aviation training. The student will receive training in the maneuvers and procedures necessary for him/her to meet the standards contained in the FAA Private Pilot Practical Test Standards. Additionally, the student will receive training in safety awareness, crew resource management, and aeronautical decision-making. At the successful completion of this course the student will have gained the aeronautical experience necessary to attain a Private Pilot Certificate with an Airplane Single Engine Land Rating. NOTE: Instructor permission is required for enrollment in this class. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Performs within the tolerances for each flight maneuver required by in the Federal Aviation Administration (FAA) Practical Test Standards for Private Pilot Airplane.

Course Objectives

- 1. Compute flight time and fuel consumption for a scheduled flight.
- 2. Demonstrate proficiency to FAA Practical testing standards for the Private Pilot Rating.

Lecture Content

Lab only course.

Lab Content

The student will receive flight training from a college authorized and approved instructor on the following areas of aircraft operation: I. Introduction to flight trainingA. Course expectations and requirements A. Minimum hours for completion B. Required areas of aeronautical knowledge reference CFR 14 Federal Aviation Regulation Part 61.107 and 61.109B. Enrollment Prerequisites1. Verification of eligibility in accordance with CFR 14 Federal Aviation Regulation Part 61.103C. Homeland Security and Airport Security Requirements 1. Homeland Security verification of citizenship or Visa status 2. Airport badgingD. Aeromedical standards 1. Selecting an Aviation Medical Examiner 2. FAA Physical examE. Aircraft operating limits and emergency action items 1. Completion of aircraft Closed Book Emergency Procedures testing II. Solo Preparation and Solo FlightA. Aircraft Preflight and Pilot Operations 1. Special emphasis Areas a. Positive transfer of aircraft control b. Stall/Spin awareness c. Wake turbulence separation and avoidance d. Runway incursion e. Aeronautical decision making f. Checklist usage 2. Preflight procedures and inspection a. Aircraft status b. Aircraft documents c. External inspection d. Aircraft servicing e. Seat adjustment f. Securing doors and hatches 3. Airport ground operations a. Use of ATIS b. Taxi routings c. Engine start and taxiing d. Runup areasB. Flight Maneuvers 1. Takeoff and departure a. Application of power; rudder use b. Takeoff trim, elevator use and takeoff pitch picture c. Clearing d. Pattern departure procedures e. Checklist usage f. Short field takeoffs g. Soft field takeoffs 2. Straight and level flight a. Attitude picture, power setting and airspeed b. Use of trim c. Speed changes in level flight 3. Turns (level, climbing and descending) a. Attitude picture, power setting and rudder use during entry b. Pitch and power coordination during entry c. Pitch and power coordination during recovery 4. Slow Flight a. Pitch and power relationship b. Use of flaps and flap limitation speeds c. Visual picture d. Recovery to cruise flight 5. Power off (Approach to Landing) stalls a. Clearing b. Maneuver set up c. Visual picture d. Stall recognition, aural and tactile cues e. Recovery f. Effect of flaps 6. Power on (Departure) stalls a. Clearing b. Maneuver set up c. Visual picture d. Stall recognition, aural and tactile cues e. Recovery 7. Steep Turns a. Use of elevator and power b. Overbanking tendencies 8. Climbs and descents a. Constant airspeed climb by increasing power b. Constant airspeed climb with reduced power c. Constant airspeed descent by reducing power d. Constant power descent with increasing airspeed e. Constant rate and airspeed climbs f. Power off descent at best glide speed 9. Slips a. Bank angle versus rudder pre ssure in cruise and slow flight b. Sideslips and forward slips 10. Flap use a. Flap extension is slow flight at constant altitude and airspeed or power b. Flap extension while transitioning from cruise to slow flight c. Loss of lift due to flap retraction d. Simulated go-around from a landing configuration 11. Approach and Traffic Pattern a. Visual scanning for collision avoidance b. Speed adjustment for spacing from other aircraft c. Relation of pattern to runway and wind d. Key position and consistency of airspeed and altitude e. Power adjustment and flap use f. Visual clues for beginning the flare g. Touch down attitude 12. Ground reference maneuvers a. Tracking a straight line b. S-Turns along a road c. Rectangular course d. Turns about a point e. Effect of wind 13. Landings a. Aim point control b. Normal landings with various flap settings c. Short field landings d. Soft field landings 14. Emergency procedures a. Forced Landings 1. Best glide speed 2. Use of trim 3. Trouble shooting, restarting b. Lost procedures c. Use of checklists d. Door open in flight e. Systems emergencies f. Recovery from unusual attitudes g. Use of the attitude indicator II. Cross and Night Operations 1. Use of instruments a. Pitot static system b. Turn coordinator c. Magnetic compass d. Precision turns to headi ngs 2. Use of VOR a. Tuning and identifying b. VOR orientation c. Intercepting and tracking radials and bearings d. Fixing position using VOR e. Failure indications f. Station passage 3. Use of aircraft specific navigation systems a. ADF b. GPS 4. Visual Navigation a. Dead reckoning b. Pilotage c. Loss of visual references 5. Flight a. Computing time enroute b. Computing fuel consumption c. Effect of winds d. Departure and opening a flight plan e. Enroute procedures and flight following f. Arrival procedures at controlled and uncontrolled airports g. Closing flight plans h. Night flying 1. Night vision and limitations 2. Spatial disorientation 3. Aircraft lights 4. Airport lighting systems 5. Night takeoffs 6. Night approaches and landings i. Emergency landings enrouteIV. FAA Practical Evaluation Preparation

Method(s) of Instruction

- Lab (04)

Instructional Techniques

Equipment proficiency demonstrations

Reading Assignments

Study text material relating to completion of flight plans and flight logs, weight and balance exercises and aircraft performance problems.

Writing Assignments

Completion of flight plans and flight logs, weight and balance exercises and aircraft performance problems.

Out-of-class Assignments

Lab-only courses (outside assignments are not required).

Demonstration of Critical Thinking

In flight problem solving exercises based on FAA Private Pilot Practical Test Standards

Required Writing, Problem Solving, Skills Demonstration

Completion of flight plans and flight logs, weight and balance exercises and aircraft performance problems.

Eligible Disciplines

Aviation (flight, navigation, ground school, air traffic control): Any bachelors degree and two years of professional experience, or any associate degree and six years of professional experience.

Other Resources

1. Instructor handouts: E-6B Flight Computer, Course Plotter, Los Angeles VFR Sectional Chart