Private Pilot

Exam Information

Exam number
959

Items
35

Points
35

Prerequisites
None

Recommended course length
One semester

National Career Cluster
Transportation, Distribution & Logistics

Performance standards
Included (Optional)

Certificate available
Yes

Description

The Private Pilot ground school will give students the knowledge to take and pass the FAA written exam and prepare them for flight. Some of the areas of study will include aircraft operations, airplane controls, systems, navigation, and weather. Students will also study human factors and safety.

Exam Blueprint

Standard	Percentage of exam
1. Fundamentals of Flight	26%
2. Flight Environment & FAR/AIM	23%
3. Aviation Weather Products	17%
4. Airplane Performance	17%
5. Navigational Skills	17%
6. Career Readiness	0%

Standard 1

Students will be able to understand, demonstrate, and apply fundamentals of flight.

Objective 1 Students will identify opportunities within aviation.

1. Pilot training and license requirements.
2. Aviation opportunities and pathways (military, commercial, private, corporate, charter, Emergency Services, cargo, etc.).
3. License privileges and limitations.
4. Category, class, and type.

Objective 2 Students will understand and identify aircraft systems.

1. Parts of an aircraft including flight controls.
2. The powerplant and related systems.
3. Flight instruments (glass cockpits, steam instruments, etc.).

Objective 3 Students will collaboratively apply aerodynamic principles.

1. Four forces of flight (lift, weight, drag, and thrust).
2. Generation of lift (Bernoulli's Principle and Newton's Laws of Motion).
3. Three axes of flight.
4. Effects of center of gravity.
5. How aircraft design affects stability.
6. Aerodynamics of maneuvering flight.
7. Recognize stalls, spins, and recovery techniques.

Objective 4 Students will understand Aviation Physiology affecting Pilot Performance.

1. Medical Certificates.
2. Aeronautical decision making.
3. Aeromedical Factors

Standard 1 Performance Evaluation included below (Optional)

Standard 2

Students will be able to understand and demonstrate the flight environment and Federal Aviation Regulation/Aeronautical Information Manual (FAR/AIM).

Objective 1 Students will be able to identify the components of safety of flight.

1. Right of way.
2. Collision Avoidance.
3. Visual Scanning.
4. Maneuver Safety.
5. Minimum Safe Alt.

Objective 2 Students will be able to identify and interpret the airport environment.

1. Controlled vs Uncontrolled airports.
2. Runway markings and signs and airport lighting.
3. Traffic pattern.
4. Runway incursions and Land and Hold Short Operations (LAHSO).
5. Sources of flight information.

Objective 3 Students will be able to operate safely and effectively within the National Airspace System.

1. Controlled and Uncontrolled Airspace.
2. Transponders/Automatic Dependent Surveillance-Broadcast(ADS-B).
3. Pilot/equipment requirements for airspace.
4. Special use airspace.
5. Temporary Flight Restrictions(TFR)/Air defense identification zone (ADIZ).
6. Intercept procedures.

Objective 4 Students will be able to effectively communicate throughout the flight process.

1. Radar and ATC services.
2. Radio procedures.
3. Proper radio phraseology.
4. Universal Coordinated Time (UTC or ZULU).
5. Emergency procedures.
6. Flight Service and filing flight plans.

Standard 2 Performance Evaluation included below (Optional)

Standard 3

Students will develop and demonstrate an ability to understand and interpret aviation weather products.

Objective 1 Students will be able to recognize meteorology for pilots.

1. Basic weather theory.
2. Weather patterns.
3. Weather hazards.

Objective 2 Students will analyze aviation weather services.

1. The forecasting process.
2. Printed reports and forecasts.
3. Graphic weather products (prognosis chart, surface analysis chart, etc.).
4. Sources of weather information (METAR, TAF, PIREP, etc.).
5. Interpret weather data.
6. Importance of using official aviation weather sources.

Standard 3 Performance Evaluation included below (Optional)

Standard 4

Students will be able to understand, predict, and calculate performance.

Objective 1 Students will demonstrate and calculate airplane performance.

1. Predicting performance (takeoff, climb performance, and landing data). Weight, balance, and proper aircraft loading.
2. Flight computers (E6B).
3. Calculate cross winds

Standard 4 Performance Evaluation included below (Optional)

Standard 5

Students will apply navigational skills to the flight planning process.

Objective 1 Students will be able to use navigational skills while flight planning and flying.

1. Navigational and aeronautical charts.
2. Pilotage and dead reckoning.
3. Radio-based navigation (VOR & ADF).
4. Satellite/GPS-based navigation.

Objective 2 Students will be able to plan a cross-country flight.

1. The flight planning process.
2. Navigational Log.
3. Obtain all available information in regard to the flight.
4. Filing a flight plan.
5. Post-flight debrief.

Standard 5 Performance Evaluation included below (Optional)

Standard 6

Students will understand the importance of career readiness skills as it relates to participation in TSA (Technology Student Association), SkillsUSA, or any other related CTSO in aviation-related fields.

Private Pilot

Performance assessments may be completed and evaluated at any time during the course. The following performance skills are to be used in connection with the associated standards and exam. To pass the performance standard the student must attain a performance standard average of 8 or higher on the rating scale. Students may be encouraged to repeat the objectives until they average 8 or higher.

Student's Name: _____

Class: _____

Performance standards rating scale

0	Limited skills	2	→	4	Moderate skills	6	→	8	High skills	10

Standard 1 – Fundamentals of Flight **Score:**

- Investigate and identify parts of an aircraft.
- Describe Airplane systems.
- Collaboratively engage in discussions of Aerodynamic principles (Instrument failures)

Standard 2 – Flight Environment & FAR/AIM **Score:**

- Identify and describe different air space on charts
- Demonstrate communication and radio procedures in a traffic pattern

Standard 3 – Aviation Weather Products **Score:**

- Read and interpret weather data from reports and charts.

Standard 4 – Airplane Performance **Score:**

- Calculate weight and balance
- Calculate takeoff and landing data
- Read and interpret performance charts

Standard 5 – Navigational Skills **Score:**

- Read, understand, and interpret navigational and aeronautical charts
- Complete a navigational log

Performance standard average score:

Evaluator Name: _____

Evaluator Title: _____

Evaluator Signature: _____

Date: _____