

Course Description

ATT1100 | Private Pilot Theory | 3.00 credits

This course introduces basic subjects pertaining to pilot knowledge including basic aircraft systems, aircraft operation and performance, aerodynamic principles, human factors, and aeronautical decision making. This Course can be instructed as Part 61 or Part 141.

Course Competencies:

Competency 1: The student will demonstrate the knowledge and understanding required to meet the “aeronautical knowledge” standards set by Part 141 of the Federal Aviation Regulations (FAR) for a private pilot certificate by:

1. Identifying the various airplane components and design features in most modern aircraft
2. Discussing principles of aerodynamics and the forces that cause an airplane to fly
3. Analyzing stall awareness, spin entry, spins, and spin recovery techniques
4. Explaining the design and function of reciprocating engine's electrical systems
5. Fuel systems, describing the operation of aircraft instruments and the systems that power them, explaining the various factors affecting aircraft performance, and calculating aircraft performance under various conditions to include take-off/landing distances and climb/cruise performance
6. Completing weight and balance computations for a typical training aircraft
7. Describing weather phenomena, their causes, the hazards they pose to aviation and how to recognize critical weather situations from the ground and in flight
8. Pointing out the various resources available for the procurement of aviation weather reports and forecasts and demonstrating the application of weather knowledge on flight planning
9. Discussing federal aviation regulations that apply to private pilot privileges, limitations, and certification and those regulations applicable to flight operations under FAR part 91
10. Displaying basic knowledge of human factors and aeronautical physiology (such as hypoxia) affecting pilots and passengers in flight
11. Discussing aeronautical decision making (ADM) and judgment and summarizing the preflight actions required by FAR part 91

Competency 2: The student will analyze and interpret aircraft checklists, aircraft manuals, charts, tables, publications, and regulations and produce reasoned, critical responses to common aeronautical concerns by:

1. Completing a standard weight and balance form for a preplanned flight
2. Calculating take-off and landing distances for a preplanned flight
3. Figuring out a preplanned flight's climb, cruise, and descent performance
4. Examining and listing the proper procedures to be performed by the pilots during various normal, abnormal, and emergency procedures. (Such as an engine failure)
5. Describing the procedures to be performed by pilots to recover from a stall or spin

Competency 3: The student will demonstrate the ability to act as a private pilot by:

1. Describe how to make a competent, timely, and decisive “go/no-go” decision concerning the weather physiological factors, aircraft power plant or system problems, weight and balance problems, and aircraft performance limitations.
2. Analyzing an emergency set up by the instructor
3. Concerning aircraft power plants or systems malfunction
4. Providing both the probable cause for the emergency and the proper course of action that the pilot should take to resolve the situation

Learning Outcomes:

- Communicate effectively using listening, speaking, reading, and writing skills
- Solve problems using critical and creative thinking and scientific reasoning
- Use computer and emerging technologies effectively