

# Course Competency

## ATT 1100 Private Pilot Theory

### Course Description

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. When this course is taken concurrently with ATT1101, it will prepare students for the FAA (Federal Aviation Administration) Private Pilot Knowledge Examination and allow them to take the FAA exam (IAP047) upon completion of the course. This course meets the requirements of FAR part 141 for a ground school for the FAA Private Pilot Certificate. Corequisite: ASC1210.

Course Competency	Learning Outcomes
<p><b>Competency 1:</b> The student will demonstrate 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:</p>	<ol style="list-style-type: none"> <li>1. Communication</li> <li>2. Numbers / Data</li> <li>3. Critical thinking</li> <li>4. Computer / Technology Usage</li> </ol>
<ol style="list-style-type: none"> <li>a. Identifying the various airplane components and design features found in most modern aircraft.</li> <li>b. Discussing principles of aerodynamics and the forces which cause an airplane to fly.</li> <li>c. Analyzing stall awareness, spin entry, spins, and spin recovery techniques.</li> <li>d. Explaining design and function of reciprocating engine's electrical systems.</li> <li>e. 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.</li> <li>f. Completing weight and balance computations for a typical training aircraft</li> <li>g. Describing weather phenomena, their causes, the hazards they pose to aviation and how to recognize critical weather situations from the ground and in flight.</li> </ol>	

<ul style="list-style-type: none"> <li>h. 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.</li> <li>i. Discussing Federal Aviation Regulations that apply to Private Pilot privileges, limitations, and certification and those regulations applicable to flight operations under FAR Part 91.</li> <li>j. Demonstrating basic knowledge of human factors and aeronautical physiology (such as hypoxia) affecting pilots and passengers in flight.</li> <li>k. Discussing Aeronautical Decision Making (ADM) and judgment and summarizing the preflight actions required by FAR Part 91.</li> </ul>	
<p><b>Competency 2:</b>The student will analyze and interpret aircraft checklists, aircraft manuals, charts, tables, publications, regulations and produce reasoned, critical responses to common aeronautical concerns by:</p>	<ol style="list-style-type: none"> <li>1. Critical thinking</li> <li>2. Numbers / Data</li> <li>3. Computer / Technology Usage</li> </ol>
<ul style="list-style-type: none"> <li>a. Completing a standard weight and balance form for a preplanned flight.</li> <li>b. Calculating take-off and landing distances for a preplanned flight.</li> <li>c. Figuring out climb, cruise, and descent performance for a preplanned flight.</li> <li>d. Analyzing and listing the proper procedures to be performed by the pilots during various normal, abnormal, and emergency procedures. (Such as an engine failure)</li> <li>e. describing the procedures to be performed by pilots to recover from a stall or spin.</li> </ul>	
<p><b>Competency 3:</b>The student will demonstrate the ability to act as a private pilot by:</p>	<ol style="list-style-type: none"> <li>1. Communication</li> <li>2. Numbers / Data</li> <li>3. Critical thinking</li> <li>4. Computer / Technology Usage</li> </ol>

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| <ul style="list-style-type: none"><li>a. Describing 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.</li><li>b. Analyzing an emergency situation set up by the instructor.</li><li>c. Concerning aircraft power plant or systems malfunction.</li><li>d. Providing both the probable cause for the emergency and the proper course of action that should be taken by the pilot to resolve the situation.</li></ul> |  |
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