

# Course Competency

## ASC 2670 Aircraft Systems

### Course Description

As preparation for commercial aviation requirements, this course is concerned with a detailed study of aircraft systems, their various sources of basic power and the functional application of mechanisms operated by these systems. Prerequisite: ASC1610.

Course Competency	Learning Outcomes
<b>Competency 1:</b> The student will demonstrate knowledge and understanding of aircraft systems by:	<ol style="list-style-type: none"><li>1. Information Literacy</li><li>2. Critical thinking</li></ol>
<ol style="list-style-type: none"><li>a. Distinguishing between different transport category aircraft models, including the B727, B737, DC-10, DC-9, and MD-80.</li><li>b. Explaining transport category aircraft Auxiliary Power Units (APU) systems, pneumatic systems, and environmental control systems.</li><li>c. Breaking down transport category aircraft anti-icing systems and rain protection systems and the critical role each system plays in the safe operation of the aircraft in instrument or icing conditions.</li><li>d. Analyzing transport category aircraft electrical power systems and the various roles of the electric system, redundancy features, and basic operational principles.</li><li>e. Understanding the different types of transport category aircraft flight control systems (manual control cables, hydraulic systems, and fly-by-wire systems).</li><li>f. Discussing transport category aircraft fuel systems, including design features, major components, and operational knowledge.</li><li>g. Explaining transport category aircraft hydraulic systems and the critical role they play in the safe operation of the aircraft.</li><li>h. Summarizing transport category aircraft</li></ol>	

<p>crew and passenger oxygen systems and the critical role they play in the safe operation.</p> <p>of the aircraft at high altitudes.</p> <p>i. Explaining transport category aircraft warning and fire protection systems and the critical role they play in the safe operation of the aircraft by the pilots and crew.</p> <p>j. Identifying transport category aircraft communication, instrumentation, and navigational systems and the critical role each system plays in the safe operation of the aircraft by the pilots and crew.</p> <p>k. Discussing miscellaneous systems found in transport category aircraft and their purpose.</p>	
<p><b>Competency 2:</b>The student will analyze and discuss the importance of aircraft systems knowledge by:</p>	<ol style="list-style-type: none"> <li>1. Communication</li> <li>2. Critical thinking</li> </ol>
<ol style="list-style-type: none"> <li>a. Normal aircraft operation</li> <li>b. Trainee programing</li> </ol>	
<p><b>Competency 3:</b>The student will analyze and discuss the importance of aircraft systems knowledge in the following situations by:</p>	<ol style="list-style-type: none"> <li>1. Critical thinking</li> <li>2. Information Literacy</li> </ol>
<ol style="list-style-type: none"> <li>a. Normal aircraft operation</li> <li>b. Training programs</li> <li>c. Emergency situations</li> <li>d. Abnormal situation</li> </ol>	

Updated: SPRING 2024