

## **Course Description**

## ATT2110 | Commercial Pilot Theory 3 | 3.00 credits

This 35-hour course provides students with the aeronautical knowledge required to act as Commercial Pilot. Students will prepare for the FAA Commercial Written Exam. Private Pilot Certificate with Instrument Rating required. Prerequisite: ATF2305.

## 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 commercial pilot certificate by:

- 1. Recalling the federal aviation regulations that apply to commercial pilot privileges, limitations, and flight operations
- 2. Summarizing accident reporting requirements of the national transportation safety board
- 3. Explaining basic aerodynamics and the principles of flight
- 4. Understanding meteorology, including recognition of critical weather situations, wind shear recognition, and avoidance, and the use of aeronautical weather reports and forecasts
- 5. Discussing the safe and efficient operation of aircraft
- 6. Performing weight and balance computations
- 7. Analyzing the use of performance charts
- 8. Pointing out the significance and the effects of exceeding aircraft performance limitations
- 9. Explaining the use of aeronautical charts and a magnetic compass for pilotage and dead reckoning
- 10. Demonstrating the use of air navigation facilities
- 11. Understanding aeronautical decision-making and judgment
- 12. Defining the operating principles and functions of various aircraft systems
- 13. Describing maneuvers, procedures, and emergency operations appropriate for training aircraft
- 14. Recalling the dimensions and procedures for operating within the national airspace system

**Competency 2:** The student will analyze and interpret charts, tables, publications, and regulations and produce reasoned, critical responses to common aeronautical concerns in high-performance/multi-engine aircraft by:

- 1. Completing a standard weight and balance form for a preplanned flight
- 2. Charting and completing a navigational log for a preplanned long-range flight
- 3. Filling out a standard flight plan form for a preplanned flight
- 4. Solving various performance calculations for a preplanned flight
- 5. Interpreting symbols in terminal, sectional, and world aeronautical charts

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

- 1. Discussing how to make a competent "go/ no-go" decision and all the factors considered
- 2. Planning and explaining a cross-country flight using real-time weather to the first fuel stop and computations based on maximum allowable passenger, baggage, and/or cargo loads
- 3. Producing reasoned, decisive procedures to be implemented in case of system and/or equipment malfunctions during commercial operations while carrying passengers and/or cargo
- 4. Making competent decisions representative of a commercial pilot related to daily commercial operations, including adding, removing, and/or shifting weight (such as passengers or baggage)

## Learning Outcomes:

- Use quantitative analytical skills to evaluate and process numerical data
- Solve problems using critical and creative thinking and scientific reasoning
- Use computer and emerging technologies effectively