

Course discipline/number/title: AVIA 2250: Commercial Pilot Lab

A. CATALOG DESCRIPTION

1. Credits: 2
2. Hours/Week: 4
3. Prerequisites (Course discipline/number): AVIA 1310, AVIA 1320, AVIA 1321
4. Other requirements: Requires current medical certificate, airport security clearance, completion of prerequisite program courses with a C or better and program approval to register.
5. MnTC Goals (if any): NA

B. COURSE DESCRIPTION: This course provided advanced commercial rating ground preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical test and the Commercial Pilot written examinations. Includes commercial pilot Federal Aviation Regulations, advanced meteorology, advanced airplane systems, advanced radio navigation, physiology of flight, advanced weather, flight planning and commercial maneuvers. Requires current medical certificate, airport security clearance, completion of prerequisite program courses with a C or better and program approval to register.

C. DATE LAST REVISED (Month, year): November, 2022

D. OUTLINE OF MAJOR CONTENT AREAS:

1. Cross-country flight operations
  - a) Night operations,
  - b) Sectional charts
  - c) Towered airport operations
  - d) Radio navigation
  - e) Flight instruments
  - f) Pre-flight inspections
  - g) Normal and crosswind takeoff
  - h) Filing flight plan
  - i) Power settings
  - j) Collision avoidance
2. Constant airspeed climbs and descents, power off stalls, power on stalls,
3. Night cross country operations, airspace, weather minimums
4. Short field
  - a) Takeoff and climb,
  - b) Field approach and landing,
5. Soft field
  - a) Takeoff and climb,
  - b) Field approach and landing,
6. Power off 180-degree approach and landing
7. Solo cross-country flight at least 250 nautical miles and 3 landings
8. Complex airplane operations,
  - a) Aerodynamics
  - b) Complex aircraft systems
  - c) Flying complex airplanes in visual flight conditions
  - d) Flying complex airplanes in simulated instrument conditions
9. Flight Maneuvers
  - a) Steep turns and spirals
  - b) Load factors
  - c) 180-degree maximum climb maneuver
  - d) Chandelle
  - e) Lazy eights

E. LEARNING OUTCOMES (GENERAL): The student will be able to:

1. Apply proficiency planning and executing cross-country flight techniques.
2. Demonstrate proficiency in communications with controlled fields.



- E. LEARNING OUTCOMES (GENERAL): The student will be able to: Continued. . .
  - 3. Demonstrate normal and crosswind takeoffs and landings.
  - 4. Demonstrate short and soft fields take-off and landing.
  - 5. Demonstrate commercial maneuvers.
  - 6. Describe complex airplane operations and system in visual and instrument conditions.
  
- F. LEARNING OUTCOMES (MNTC): NA
  
- G. METHODS FOR EVALUATION OF STUDENT LEARNING: Methods may include but are not limited to:
  - 1. Demonstrations
  - 2. Exams
  
- H. RCTC CORE OUTCOME(S). This course contributes to meeting the following RCTC Core Outcome(s):  
Critical Thinking. Students will think systematically and explore information thoroughly before accepting or formulating a position or conclusion.
  
- I. SPECIAL INFORMATION (if any): None