

Course discipline/number/title: AVIA 2600: Flight Instructor Ground**A. CATALOG DESCRIPTION**

1. Credits: 2

2. Hours/Week: 4

3. Prerequisites (Course discipline/number): AVIA 2200 and AVIA 2250

4. Other requirements: Requires completion of prerequisite program courses with a C or better and endorsement.

5. MnTC Goals (if any): NA

B. COURSE DESCRIPTION: Flight instructor ground school course in preparation for the Federal Aviation Administration (FAA) Certified Flight Instructor practical test and the Certified Flight Instructor written examinations. Includes Federal Aviation Regulations, learning the flight instructor role, demonstrating maneuvers, gaining proficiency demonstrating and explaining maneuvers, refining instructions skills and demonstrating instructional competence. Requires completion of prerequisite program courses with a C or better and endorsement.

C. DATE LAST REVISED (Month, year): February, 2025

D. OUTLINE OF MAJOR CONTENT AREAS:

1. Fundamentals of instructing
 - a) Learning processes
 - b) Physical skills
 - c) Memory and transfer of learning
2. Human behavior
 - a) Teaching processes
 - b) Critique and evaluation
 - c) Instructional aids
 - d) Instructor responsibilities
 - e) Lesson planning
3. Applicable Federal Aviation Regulations
 - a) Pilot certificate requirements and limitations
 - b) Aircraft maintenance and equipment
 - c) Rules to fly by, alcohol, drugs, and emergencies
4. Basic aerodynamics and principles of flight
5. Meteorology
 - a) Critical weather situations
 - b) Wind shear recognition and avoidance
 - c) Aeronautical weather reports and forecasts
6. Safe and efficient operation of aircraft
7. Weight and balance computations use of performance charts
8. Significance and effects of exceeding aircraft performance limitations
 - a) Aeronautical charts
 - b) Magnetic compass for pilotage and dead reckoning
 - c) Use of air navigation facilities
9. Aeronautical decision making and judgement
10. Principles and functions of aircraft systems
11. Maneuvers, procedures, and emergency operations, night and high-altitude operations
12. Operating within the National Airspace System

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

1. Describe fundamentals of instructing, lesson planning, Federal Aviation Regulations, aerodynamics, principles of flight, weather, flight operations, weight and balance.
2. Explain weather forecasting and impact of weather conditions on flight.
3. Identify aircraft performance, aircraft limitations, aeronautical decision making, aircraft systems, maneuvers.

- F. LEARNING OUTCOMES (MNTC):** NA
- G. METHODS FOR EVALUATION OF STUDENT LEARNING:** Methods may include but are not limited to:
1. Quizzes
 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