

APT A140: FLIGHT INSTRUCTOR GROUND SCHOOL

Item	Value
Curriculum Committee Approval Date	12/09/2020
Top Code	302020 - Piloting
Units	3 Total Units
Hours	54 Total Hours (Lecture Hours 54)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Grading Policy	Standard Letter (S)

Course Description

Academic preparation for written and practical examinations for Certificated Flight Instructor, Airplane. Covers basic aerodynamics, aircraft performance, Federal Aviation Regulations, aviation weather factors and cross country navigation procedures. Provides in depth instruction in the fundamentals of teaching and learning and ground and in-flight instructional techniques. Meets the preparation requirements for the FAA Flight Instructor computerized knowledge examination and Fundamentals of Learning computerized knowledge examination. All training is conducted in accordance with Federal Aviation Regulation (FAR) Part 61 and Part 141. Students satisfying the pilot certificate prerequisite must present proof to the instructor during the first week of the course. ADVISORY: APT A139. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Successfully complete the preparation requirements of the Federal Aviation Administration (FAA) Knowledge Test for Flight Instructor, Airplane.
2. Successfully complete the preparation requirements of the FAA Practical Test for Flight Instructor, Airplane after receiving in-flight instruction from a Certificated Flight Instructor.

Course Objectives

- 1. Demonstrate basic aeronautical knowledge a. Identify the components of an aircraft. b. Define the characteristics of flight. c. Define flight controls and engine components.
- 2. Name and identify aerodynamic principles.
- 3. Distinguish and differentiate between parts of the national airspace structure.
- 4. Describe air traffic control procedures applicable to pilots.
- 5. Define Federal Air Regulations applicable to Private Pilots.
- 6. Demonstrate basic knowledge and concepts needed for the FAA Private Pilot written exam.
- 7. Define the safety concerns of operating an aircraft.
- 8. Demonstrate knowledge of radio communication and flight information.
- 9. Analyze and interpret weather and meteorology symbols.

- 10. Prepare, analyze and solve weight and balance problems for aircraft.
- 11. Review and analyze aircraft performance charts.
- 12. Apply advanced skills in navigation and chart reading.
- 13. Describe and explain navigation systems.
- 14. Evaluate decision-making processes.
- 15. Demonstrate sound teaching technique

Lecture Content

Introduction Requirements for becoming a Flight Instructor Federal Aviation Regulations relating to flight instruction Teaching aerodynamic Principles Teaching basic aircraft systems and instruments Teaching aircraft performance Weight and Balance computations Takeoff, cruise and landing performance charts Teaching airports, Air Traffic Control and Airspace Teaching meteorology for Pilots Teaching aircraft navigation Dead reckoning Pilotage Radio Navigation Advanced navigation systems Use of aeronautical charts and publications Fundamentals of flight instruction The Flight Training Syllabus Pre-sold flight instruction First solo to the private certificate Instrument instruction Commercial Instruction Fundamentals of Instruction Professionalism

Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)
- DE Online Lecture (02X)

Instructional Techniques

Lecture and application of ideas, slide and multimedia presentations, equipment demonstrations

Reading Assignments

Textbook reading and information supplements on Blackboard/Canvas will apply as required reading assignments.

Writing Assignments

Short answer written homework assignments will be used to demonstrate writing proficiency. As a final examination the student will be required to take a written test representative of the actual FAA Flight Instructor written examination.

Out-of-class Assignments

Weekly take-home projects, homework, and flight planning assignments will apply as required out-of-class assignments.

Demonstration of Critical Thinking

Written examinations based on FAA Private Pilot Question Bank Homework. Problem solving exercises

Required Writing, Problem Solving, Skills Demonstration

Short answer written homework assignments will be used to demonstrate writing proficiency. As a final examination the student will be required to take a written test representative of the actual FAA Flight Instructor written examination.

Textbooks Resources

1. Required Jeppesen-Sanderson. GFD Flight Instructors Textbook, ed. Englewood, CO: Jeppesen-Sanderson, 2007
2. Required Jeppesen-Sanderson. Flight Instructors Syllabus, ed. Englewood, CO: Jeppesen-

Sanderson, 2007 3. Required Federal Aviation Administration. FAR/ AIM, ed. Newcastle, WA: ASA Publications, 2009 4. Required Jeppesen-Sanderson. Aviation Instructors Handbook, ed. Englewood, CO: Jeppesen-Sanderson, 2007 5. Required Federal Aviation Administration. Flight Instructor Practical Test Standards, ed. Newcastle, WA: ASA Publications, 2009