

Course Code: AVI 129

Course Title: Commercial Instrument I

Department: Aviation

Effective Date: Summer 2026

PCS Code: 1.1 - Baccalaureate/Transfer

CIP Code: 14.0101

Repeatability: 0

Credit Hours

Catalog Notation: 2-2.5-3

Credit Hour Distribution:

Lecture: 2

Lab: 2.5

Clinical: 0

Total: 3

General Course Information

Catalog Description

First in a two-course sequence to add Instrument Airplane rating to FAA Private Pilot certificate. VFR review, aircraft systems, navigation, instrument procedures, and IFR cross-country flight planning and execution. Includes 36.2 hours flight and simulator training toward instrument rating and commercial pilot requirements.

General Course Objectives

Develop the knowledge and proficiency required to pass the AVI 129 stage check.

Minimum Placement Levels

English

None

Reading

None

Math

None

Prerequisites

FAA Private Pilot Certificate with Airplane Single Engine Land Rating

Recommended before enrolling (not required):

Credit in AVI 120

Methods of Evaluation

Written assignments, quizzes, exams, oral questioning and observation of flight performance.

Instructional Materials and Additional Supplies

Instrument Flying Handbook, FAA, Current edition

Instrument Procedures Handbook, FAA, Current edition

Federal Aviation Regulations and Aeronautical Information Manual (FAR/AIM), FAA, Current edition

Cost of aircraft use is covered by course fees.

Course Content

General Learning Outcomes (GLOs)

- Communication: Students will demonstrate the ability to read, write, listen, and speak effectively.
- Technology: Students will demonstrate the ability to evaluate, select, and appropriately use current and emerging tools.

Course Segments and Student Learning Outcomes

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Ground Lesson 31: Basic Attitude Flight	1. Demonstrate knowledge involved in acquiring the three fundamental skills in instrument flying: instrument cross-check, instrument interpretation, and aircraft control.	2	0	0
Ground Lesson 32: Aircraft Flight Instruments	1. Acquire knowledge of the various aircraft instruments to gain an understanding of their operating principles, limitations, and ground check procedures. 2. The student will be introduced to partial panel maneuvers.	2	0	0
Ground Lesson 33: VOR, DME, ILS	1. Acquire knowledge for the use of DME and the VOR/VORTAC, and be introduced to the instrument landing system.	2	0	0
Ground Lesson 34: Holding Procedures	1. Demonstrate knowledge of holding and gain an understanding of how to fly a holding pattern.	2	0	0
Ground Lesson 35: Approach Terminology/VOR and ILS approaches	1. Identify the basic terminology used in conducting instrument approaches and continue to learn about the instrument landing system and how to fly an ILS approach.	2	0	0
Ground Lesson 36: Procedure Turns and DME Arcs	1. Demonstrate knowledge of how to fly a procedure turn and a DME arc.	2	0	0
Ground Lesson 37: Various Types of Instrument Approaches	1. Acquire knowledge of the various types of instrument approaches.	2	0	0
Ground Lesson 38: Missed Approach Procedures	1. Demonstrate knowledge of how to fly a missed approach procedure.	2	0	0
Ground Lesson 39: Instrument Approach Charts	1. Acquire knowledge of how to read and use an instrument approach procedure chart for IFR approaches.	2	0	0
Ground Lesson 40: IFR Enroute Low Altitude Charts	1. Demonstrate knowledge of how to read and use an IFR Enroute Low Altitude Chart for IFR navigation.	2	0	0
Ground Lesson 41: IFR Communications	1. Demonstrate knowledge of the communication requirements in the instrument environment.	2	0	0
Ground Lesson 42: IFR Cross-Country Planning	1. Acquire knowledge of how to plan, file, and fly an IFR cross-country flight.	2	0	0
Ground Lesson 43: IFR Cross-Country Planning	1. Demonstrate knowledge of how to plan, file, and fly an IFR cross-country flight.	2	0	0

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Ground Lesson 44: IFR Cross-Country Planning	1. Demonstrate knowledge of how to plan, file, and fly an IFR cross-country flight.	2	0	0
Ground Lesson 45: Review and Final Exam	1. Demonstrate knowledge and proficiency of the content of Ground Lessons 31 through 44.	2	0	0
Flight Lesson 31: Private Pilot Review	1. Demonstrate knowledge to execute Private Pilot operations including maneuvering during slow flight; stall recognition and recovery; ground reference maneuvers; normal, cross-wind, short field, and soft field takeoffs and landings; emergency operations; and operations at non-tower airports. Correct any deficiencies. 2. Demonstrate knowledge of local operating rules and practices and be able to solo in the local area.	0	1.5	0
Flight Lesson 32: VFR X-C Checkout for Solo	1. Demonstrate ability to perform a VFR cross country flight using pilotage and dead reckoning. 2. Obtain solo cross-country authorization and fly the solo cross countries of the course. 3. File, open, and close a VFR flight plan.	0	1.5	0
Flight Lesson 33: Local Solo and Solo Cross Country Flights	1. Demonstrate proficiency in planning and executing cross country flight using pilotage, dead reckoning, and radio navigation. 2. Interpret weather information, anticipate possible enroute problems, and plan appropriate actions. 3. File, open, and close a VFR flight plan. 4. Practice Private Pilot maneuvers in the local practice area.	0	8.2	0
Flight Lesson 34: Basic Instrument Flight Skills	1. Practice flight procedures in the Flight Training Device. The time in this lesson should be utilized throughout the course to introduce and review instrument flight procedures as deemed necessary by the flight instructor. Emphasis shall be on developing proper crosscheck, interpretation, and control skills.	0	8	0
Flight Lesson 35: Basic Instrument Flight Skills	1. Demonstrate proficiency of the instrument reference flight skills appropriate to the Instrument Rating. Emphasis shall be on developing proper crosscheck, interpretation, and control skills.	0	1.5	0
Flight Lesson 36: VOR and VOR Intersection Holds	1. Demonstrate knowledge of VOR equipment use in instrument flying and holding at an intersection of VOR radials and at a VOR.	0	1.5	0
Flight Lesson 37: ILS and VOR Approaches	1. Acquire skills with ILS, Localizer, Localizer Back Course, and VOR approaches using all flight instruments.	0	1.5	0
Flight Lesson 38: DME Arcs, Review Holds, and Approaches	1. Acquire skills to perform DME arcs and review holds, VOR, and ILS approaches.	0	1.5	0
Flight Lesson 39: Review Holds, Approaches, DME Arcs, GPS	1. Demonstrate proficiency in instrument flight operations, holds, ILS, VOR, LOC BC approaches, and DME arcs. 2. Cross-country procedures may be practiced enroute to local area airports. GPS operation will be introduced in the enroute and approach environment.	0	1.5	0
Flight Lesson 40: Review Holds, Approaches, DME Arcs, GPS	1. Demonstrate knowledge in instrument flight operations, holds, ILS, VOR, LOC, LOC BC approaches, and DME arcs. 2. Cross-country procedures will be practiced enroute to local area airports.	0	1.5	0

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Flight Lesson 41: Review, IFR Cross Country Flight, Holds	1. Demonstrate knowledge and skills learned in Lessons 31-40. Cross-country procedures will be practiced enroute to local area airports.	0	1.5	0
Flight Lesson 42: IFR Cross Country Flight	1. Acquire skills with IFR cross country flight planning and successfully execute an IFR cross-country flight. 2. At the completion of this lesson, the student should have a total of 3.5 hours dual/PIC cross country for the course. This lesson may be flown at night.	0	2	0
Flight Lesson 43: Practice Stage Check	1. Take a practice stage check (preferably with a different instructor) to determine the student's progress in preparation for the Lesson 45 Stage Check.	0	1.5	0
Flight Lesson 44: Review	1. Review any deficiencies and continue to improve IFR local area and basic cross country skills as required to meet course objectives.	0	1.5	0
Flight Lesson 45: Review, Stage Check	1. Successfully complete the Lesson 45 stage check.	0	1.5	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
30	36.2	0