

Stage I - Instrument Rating

Ground Lesson 4

Note: Students should read Chapter 2, Section C prior to Ground Lesson 4.

Lesson Objective:

- Learn the function, use, and limitations of VOR, DME, and ADF radio equipment navigation aids (navaids).
- Understand the concept of area navigation (RNAV).
- Learn the function, use and limitations of GPS navigation.

Academic Content:

Section C - Instrument Navigation

VOR Navigation

- Horizontal Situation Indicator
- Intercepting a Radial
- Tracking
- Determining Your Progress
- Time and Distance to a Station
- Station Passage
- VOR Limitations
- Distance Measuring Equipment
- DME Arcs

Date Completed _____

Time _____

ADF Navigation

- Automatic Direction Finder
- Radio Magnetic Indicator
- Intercepting a Bearing
- Tracking

Date Completed _____

Time _____

VOR and ADF Operational Considerations

- Ground Facilities
- VOR Checks
- Identification

Date Completed _____

Time _____

Area Navigation

- Flight Management Systems (FMS)
- Inertial Navigation System (INS)

Date Completed _____

Time _____

GPS Navigation

- Regulatory Requirements
- Programming and Flying Routes
- Course Deviation Indications

Date Completed _____

Time _____

ATD (Option)

- VOR Orientation
- Intercepting and Tracking A VOR Radial
- Intercepting and Tracking DME Arcs
- NDB Orientation
- Intercepting and Tracking NDB Bearings
- GPS Programming
- Intercepting and Tracking GPS Courses
- HSI and RMI Orientation
- Integrated Display Orientation

Date Completed _____

Time _____

Completion Standards:

- Demonstrate understanding of the use and limitations of navigation systems during oral quizzing by the instructor at completion of lesson.
- Student completes Chapter 2 questions for Section C with a minimum passing score of 80%, and the instructor reviews incorrect responses to ensure complete understanding before the student progresses to Ground Lesson 5.

I certify that the aforementioned training has been conducted and/or received in accordance with Leading Edge Aviation Standards and the current 141 approved Jeppesen Private Pilot Syllabus.

Instructor _____

Date _____

Student _____

Date _____