



COURSE OUTLINE : AT 125
D Credit – Degree Applicable
COURSE ID 001339
Cyclical Review: September 2020

COURSE DISCIPLINE : AT
COURSE NUMBER : 125
COURSE TITLE (FULL) : Instrument Rating Ground School
COURSE TITLE (SHORT) : Instrument Rating Ground Schl

CATALOG DESCRIPTION

AT 125 introduces the student to the use of radio navigation, weather briefing, advanced navigation, standard instrument approaches, procedures and Federal Aviation Regulations pertaining to instrument flight. Students are prepared for the Federal Aviation Administration Instrument Pilot Written Examination.

Total Lecture Units: 3.00

Total Laboratory Units: 0.00

Total Course Units: 3.00

Total Lecture Hours: 54.00

Total Laboratory Hours: 0.00

Total Laboratory Hours To Be Arranged:0.00

Total Contact Hours: 54.00

Total Out-of-Class Hours: 108.00

Recommended Preparation: AT 120 or possession of a private pilot's certificate.



ENTRY STANDARDS

	Subject	Number	Title	Description	Include
1	AT	120	Private Pilot Ground School	Apply Federal Aviation Regulations to flight;	Yes
2	AT	120	Private Pilot Ground School	express an understanding of aerodynamics and the science of flight;	Yes
3	AT	120	Private Pilot Ground School	demonstrating basic engine operating principles;	Yes
4	AT	120	Private Pilot Ground School	performing tasks of enroute communication procedures;	Yes
5	AT	120	Private Pilot Ground School	demonstrating knowledge of weather theory;	Yes
6	AT	120	Private Pilot Ground School	evaluating aviation weather information;	Yes
7	AT	120	Private Pilot Ground School	developing the skills of navigation, including, radio, pilotage, and dead-reckoning.	Yes

EXIT STANDARDS

- 1 Explain the proper procedures in the event of lost communication;
- 2 recite the steps required to file an instrument flight plan;
- 3 compare and contrast ground-based and satellite-based navigation systems;
- 4 interpret published material necessary for instrument flight;
- 5 solve problematic in-flight navigation situations.

STUDENT LEARNING OUTCOMES

- 1 summarize the development of the concepts of instrument flight from visual flight
- 2 outline advanced radio navigation concepts
- 3 demonstrate an understanding of the Air Traffic Control system

COURSE CONTENT WITH INSTRUCTIONAL HOURS

	Description	Lecture	Lab	Total Hours
1	The basic flight instruments • the pilot-static instrument • the gyro instruments	3	0	3
2	Use of and the relationship between the instruments • straight flight • climbing and descending • turns • transition from one phase to another	4	0	4



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3	Attitude instrument flight • instrument cross check • instrument interpretation • aircraft control • primary and supporting instruments	4	0	4
4	Air navigation radio aids • the air traffic control system • non-directional beacons • ASR and PAR • radar beacons • VHF marker beacons • VOR • DME • RNAV	8	0	8
5	Instrument landing system • ground installation and characteristics • airborne equipment • flight procedures	4	0	4
6	Instrument charts • enroute and area • approach and landing • standard instrument departures • standard instrument arrivals	8	0	8
7	Air traffic control procedures • at airports • departures • enroute and holding • approach • communications	8	0	8
8	Federal aviation regulations • pilot certification • general operating rules • air traffic rules	8	0	8
9	Obtaining and evaluating weather reports	4	0	4
10	Aviation Decision Making • Risk Management • Human Factors in Aviation	3	0	3
				54



OUT OF CLASS ASSIGNMENTS

- 1 worksheets regarding FAA regulations, IFR flight planning, aircraft performance, and related subjects;
- 2 chart study (e.g. IFR Departure, Enroute, Arrival, and Approach charts).

METHODS OF EVALUATION

- 1 written section exams;
- 2 final exam.

METHODS OF INSTRUCTION

- Lecture
- Laboratory
- Studio
- Discussion
- Multimedia
- Tutorial
- Independent Study
- Collaboratory Learning
- Demonstration
- Field Activities (Trips)
- Guest Speakers
- Presentations

TEXTBOOKS

Title	Type	Publisher	Edition	Medium	Author	ISBN	Date
Instrument Rating Airman Knowledge Test Guide	Required	Jeppesen			Jeppesen	9780884870609	2015
Guided Flight Discovery: Instrument/Commercial Textbook	Required	Jeppesen			Jeppesen	9780884871309	2015