



COURSE OUTLINE : AT 115
D Credit – Degree Applicable
COURSE ID 001332
Cyclical Review: October 2020

COURSE DISCIPLINE : AT
COURSE NUMBER : 115
COURSE TITLE (FULL) : Commercial Flight Training
COURSE TITLE (SHORT) : Commercial Flight Training

CATALOG DESCRIPTION

AT 115 is a flight training lab course preparing the student for the Federal Aviation Administration Commercial Pilot Practical Examination. Topics addressed include: operation of complex and high-performance aircraft including the use of constant-speed propellers and retractable landing gear, maximum performance takeoffs and landings, steep turns, chandelles, lazy eights, and eights on pylons. Students will log fifteen hours of complex aircraft time.

Total Lecture Units: 2.00

Total Laboratory Units: 2.00

Total Course Units: 4.00

Total Lecture Hours: 36.00

Total Laboratory Hours: 108.00

Total Laboratory Hours To Be Arranged: 0.00

Total Contact Hours: 144.00

Total Out-of-Class Hours: 72.00

Prerequisite: AT 114 or possession of FAA Private Pilot License (airplane, single-engine land) with instrument rating, minimum of 200 hours of total flight time, and proof of satisfactory completion of the FAA Commercial Pilot Knowledge Examination.



ENTRY STANDARDS

	Subject	Number	Title	Description	Include
1	AT	114	Instrument Flight Lab	pilot a single engine land airplane solely by instrument reference;	Yes
2	AT	114	Instrument Flight Lab	maintain slow flight and recover from stalls solely by instrument reference;	Yes
3	AT	114	Instrument Flight Lab	conduct precision and non-precision instrument approaches;	Yes
4	AT	114	Instrument Flight Lab	recover from unusual attitudes by reference to instruments;	Yes
5	AT	114	Instrument Flight Lab	enter and maintain holds and Distance Measuring Equipment (DME) arcs;	Yes
6	AT	114	Instrument Flight Lab	recognize and adapt to instrument failures;	Yes
7	AT	114	Instrument Flight Lab	plan and execute Instrument Flight Rule (IFR) cross-country flights	Yes
8	AT	114	Instrument Flight Lab	summarize the development of the concepts of instrument flight from visual flight;	Yes
9	AT	114	Instrument Flight Lab	outline advanced radio navigation concepts;	Yes
10	AT	114	Instrument Flight Lab	comply with the Air Traffic Control system;	Yes
11	AT	114	Instrument Flight Lab	interpret published material necessary for instrument flight;	Yes
12	AT	114	Instrument Flight Lab	solve problematic in-flight navigation situations.	Yes

EXIT STANDARDS

- 1 operate constant speed propeller systems;
- 2 operate retractable landing gear systems;
- 3 perform maximum performance takeoffs and landings in complex aircraft;
- 4 perform steep turns in complex aircraft;
- 5 perform chandelles;
- 6 perform lazy eights;
- 7 perform eights on pylons.

STUDENT LEARNING OUTCOMES

- 1 operate a complex single engine airplane with constant speed propeller system;
- 2 calculate weight and balance limitations and explain the results of exceeding aircraft limitations;
- 3 explain the differences between a private pilot license and a commercial pilot license.



COURSE CONTENT WITH INSTRUCTIONAL HOURS

	Description	Lecture	Lab	Total Hours
1	Complex aircraft systems • Constant speed propellers • Retractable landing gear	2	6	8
2	Review of four fundamentals • Climbs • Descents • Straight and level • Turns	2	6	8
3	Steep turns	2	6	8
4	Chandelles	2	6	8
5	Lazy eights	2	6	8
6	Eights on pylons	2	6	8
7	Short field takeoffs and landings	2	6	8
8	Soft field takeoffs and landings	2	6	8
9	Federal Aviation Administration oral examination preparation • Airspace system • Airplane weight and balance • Airplane performance • Complex airplane systems • constant-speed propellers • retractable landing gear • Flight planning	5	15	20
10	Cross-country and emergency procedures	4	12	16
11	Individualized practice as needed	4	12	16
12	Aeronautical Decision Making • Pre-flight risk assessment • In-flight risk assessment • Fitness for flight • Human factors • Use of checklists	3	9	12
13	Simulated FAA oral and practical test	4	12	16
				144



OUT OF CLASS ASSIGNMENTS

- 1 written examinations following each module;
- 2 successful completion of FAA private pilot certificate examination;
- 3 take off and landings utilizing area airports.

METHODS OF EVALUATION

- 1 daily verbal evaluation by flight instructor;
- 2 phase checks conducted by Chief Pilot;
- 3 mock oral and practical tests.

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
No text required.							