COURSE OUTLINE

Aviation and Transportation 112 Private Pilot Laboratory I

I. <u>Catalog Statement</u>

Aviation and Transportation 112 is a flight training laboratory course intended to begin the student's preparation for the Federal Aviation Administration Private Pilot Certificate Oral and Practical Tests. Topics covered include: Preflight inspection, weather briefings, starting procedures and use of checklists, taxi procedures, normal and cross wind takeoffs and landings, slips, four fundamentals of aircraft control, emergency procedures, traffic patterns, ground reference maneuvers, stalls, and radio communications.

Total Lecture Units: 0.0 Total Laboratory Units: 2.0 **Total Course Units: 2.0**

Total Lecture Hours: 0.0 Total Laboratory Hours: 96.0 **Total Faculty Contact Hours: 96**

Prerequisite: AT 120 or equivalent.

II. <u>Course Entry Expectations</u>

Skill level ranges: Reading 5; Writing 5; Listening/Speaking 5; Math 1.

Prior to enrolling in the course, the student should be able to:

- 1. apply Federal Aviation Regulations to flight;
- 2. express an understanding of aerodynamics and the science of flight;
- 3. demonstrate basic engine operating principles;
- 4. perform tasks of enroute communication procedures;
- 5. demonstrate knowledge of weather theory;
- 6. evaluate aviation weather information;
- 7. develop the skills of navigation, including, radio, pilotage, and dead-reckoning.

III. Course Exit Standards

Upon successful completion of required coursework, the student will be able to:

- 1. obtain a Federal Aviation Administration Student Pilot Certificate;
- 2. safely complete a first supervised solo flight.

IV. <u>Course Content</u>

Total Faculty Contact Hours = 96

A.	 Preflight and Orientation-Dual Preflight inspections and aircraft documents Starting procedures Taxi and use of controls on ground Pre-takeoff check/use of checklists Four fundamentals (climbs, straight and level, turns, descents) Use of trim Scan techniques Departure procedures 	8 hours
B.	 Four Fundamentals-Dual Review of the four fundamentals Climbs Straight and level Turns Descents Scan techniques Navigation to and from practice area 	8 hours
C.	 Slow Flight and Stalls-Dual Collision avoidance, clearing turns Use of flaps and trim Pitch-power correlation Slow flight (various configurations) Stall demonstration 	8 hours
D.	 Ground Reference Maneuvers and Stalls-Dual 1. Rectangular pattern 2. S-turns across a road 3. Turns around a point 4. Stalls (power-on and power-off) 	8 hours
E.	 Ground Reference Maneuvers and Stalls 1. Rectangular pattern 2. S-turns across a road 3. Turns around a point 4. Stalls (power-on, power-off and accelerated) 	8 hours
F.	 Stall and Emergency Procedures-Dual Stalls (power-on, power-off, accelerated) Demonstration of cross-control and secondary stalls Emergencies (strikes, fire, radio failure, lost) 	8 hours

	4. Emergency landing procedures	
	5. Radio procedures	
G.	 Takeoffs and Landings-Dual 1. Traffic pattern procedures 2. Normal takeoffs 3. Normal landings 4. Go-arounds 5. Aborted takeoffs 6. Emergencies in pattern 7. Wake-turbulence avoidance 8. Determining aircraft performance 	8 hours
H.	Cross Wind Takeoffs and Landings-Dual1. Cross wind takeoffs2. Cross wind landings3. Slips	8 hours
I.	Pre-Solo Practice (at instructor's discretion)-Dual	12 hours
J.	Remedial/Review Instruction at Instructor's Discretion	12 hours
K.	First Supervised Solo Flight-Solo1. Pre-solo written examination2. Student pilot certificate and logbook endorsements3. First solo flight	8 hours

V. <u>Method of Instruction</u>

The following instructional methodologies may be used in the course:

- 1. classroom lecture and demonstration;
- 2. flight lessons in airplane;
- 3. student observation of flight lesson in airplane;
- 4. student practice in airplane.

VI. Out of Class Assignments

The following out of class assignments may be used in this course:

- 1. Written examinations following each module.
- 2. Successful completion of FAA private pilot certificate examination.
- 3. Take off and landings utilizing area airports.

VII. <u>Methods of Evaluation</u>

The following methods of evaluation may be used in this course:

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- 1. written assignments;
- 2. mid and final examinations;
- 3. completion of FAA exam.

VIII. <u>Textbook</u>

Jeppesen, Elroy Borge, *Private Pilot (FAA Practice Test Study Guide) (JA312404-010.* East Englewood, CO: Jeppesen Sanderson, Inc, 2006. 10th Grade Reading Level ISBN: 9780884874287

VIII. <u>Student Learning Outcomes</u>

- 1. Student will understand how to function the four fundamentals to flight and have comprehensive knowledge of ground reference maneuvers.
- 2. Student will recognize and simulate stall and emergency procedures.
- 3. Student will be able to obtain a Federal Aviation Administration Student Pilot Certificate.
- 4. Student will be able to safely complete a first supervised solo flight.