

AVIATION TECHNOLOGY II

MIS03 17813

Students will be prepared to pass the Federal Aviation Administration (FAA) private pilot verbal exam.

Prerequisite: Aviation Technology I

Credit 1 or 2 credits

Level Grades 11-12

Standard 1	<i>BASICS AND CONTROL SYSTEMS</i>	
Topic 1.2	Aircraft Flight Instruments	
	Student Competencies	
	1.2.5	Describe how instruments will function when the pitot-static system is blocked.
	1.2.6	Explain how the principles of gyroscopic precession and rigidity in space affect the gyroscopic instruments.
	1.2.7	Explain how to cope with magnetic compass errors.
Topic 1.4	Aircraft Construction	
	Student Competencies	
	1.4.1	Construct a model aircraft.
	1.4.2	Interpret plans/instructions for homebuilt aircraft.
	1.4.3	Identify techniques used for homebuilt aircraft.
	1.4.4	Assemble/re-assemble a full-scale aircraft part (e.g., fuselage, empennage, wing).

Standard 2	<i>SCIENCE OF FLIGHT</i>	
Topic 2.1	Aerodynamics of Flight	
	Student Competencies	
	2.1.10	Discuss the aerodynamics of a spin.
	2.1.11	Describe the hazards of wake turbulence.
	2.1.12	Explain ground effect.
Topic 2.2	Weather Theory	
	Student Competencies	
	2.2.9	Describe conditions that would be necessary for fog formation
Topic 2.3	Weather Products and Reports	
	Student Competencies	
	2.3.8	Describe how to obtain official weather briefings and FAA approved sources or products.
	2.3.9	Predict weather conditions in an area based on available data.
	2.3.10	Interpret current atmospheric conditions at an airport.
Topic 2.5	E6B Flight Computer	
	Student Competencies	
	2.5.3	Demonstrate accurate multi-step calculations using a flight computer.
Standard 3	<i>GROUND AND INFLIGHT OPERATIONS</i>	
Topic 3.1	Airport Operations	
	Student Competencies	
	3.1.7	Create an airport diagram using appropriate signs, lights, and markings.
	3.1.8	Demonstrate a standard traffic pattern using the simulator.
Topic 3.2	Airspace	
	Student Competencies	
	3.2.8	Identify airspace at a given location using a sectional chart.
	3.2.9	Determine special use airspace on a sectional chart.
Topic 3.3	Flight Communication	
	Student Competencies	
	3.3.7	Demonstrate flight in a simulated tower environment.
	3.3.8	Explain proper communication procedures in an emergency situation.
	3.3.9	Describe lost communications procedures.

Topic 3.4	Navigation	
	Student Competencies	
	3.4.6	Determine the most appropriate radio navigation technique for a flight.
Standard 4	<i>PEOPLE, TRENDS, AND CAREERS IN AVIATION</i>	
Topic 4.1	Events and Trends in Aviation	
	Student Competencies	
	4.1.4	Describe how events in aviation history are changing the future of aviation.
Topic 4.3	Flight Physiology	
	Student Competencies	
	4.3.10	Describe the effect on pilot performance time at various altitudes.
Topic 4.4	Aviation Careers	
	Student Competencies	
	4.4.4	Create an educational plan to pursue an aviation career.