



**Aviation II
Flight**

Course Number	
Grade Level	8-12
Career Cluster	Supply Chain & Transportation
Pathway	Aviation
Course Sequence	Introduction to Aviation
CTSO	SkillsUSA
Industry Recognized Credential	Industry Recognized Credential
Minimum Equipment List	Minimum Equipment
Course Description	

CIP Codes	CIP Title
47.0607	Airframe Mechanics and Aircraft Maintenance Technology/Technician
49.0102	Airline/Commercial/Professional Pilot and Flight Crew

SOC Codes	SOC Title
53-2011	Airline Pilots, Copilots, and Flight Engineers
49-2091	Avionics Technicians



Course Standards

Domain 1.0 Advanced Aviation Safety, Regulations & Professional Practice	
Standard 1.1 Discuss Advanced Federal Aviation Administration Regulations & Certification Pathways.	
Performance Indicators	
1.1.1	Identify FAA certificate types.
1.1.2	Explain the important of medical certifications requirements and limitations for pilots.
1.1.3	Distinguish between Federal Aviation Regulations Parts 43, 61, 65, 91, and 145 and their applications.
1.1.4	Interpret pilot logbooks for currency, compliance, and training documentation.
1.1.5	Explain Transportation Security Administration requirements related to flight training and aircraft security.
1.1.6	Compare recreational, professional, and instructional aviation privileges and limitations.



Standard 1.2	
Explore Safety Management Systems (SMS) & Risk Analysis	
Performance Indicators	
1.2.1	Define Safety Management Systems (SMS) and its four components.
1.2.2	Identify hazards related to flight operations, maintenance activities, and human performance.
1.2.3	Apply FAA-approved risk management models (e.g., Pilot, Aircraft, Environment, External pressure, 3P-Perceive hazards, Process risk, Perform mitigation, SRM-Single-Pilot Resource Management).
1.2.4	Analyze accident and incident reports to identify root causes.
1.2.5	Demonstrate safety reporting procedures and documentation standards.
1.2.6	Explain the role of safety culture in aviation organizations.
Standard 1.3	
Discuss Professional Ethics & Aviation Career Readiness.	
Performance Indicators	
1.3.1	Explain ethical responsibilities of pilots.
1.3.2	Describe professional standards for decision authority and accountability.



1.3.3	Demonstrate proper professional communication in aviation environments.
1.3.4	Analyze ethical dilemmas involving safety vs. operational pressure.
1.3.5	Identify postsecondary training pathways, certifications, and apprenticeships.
1.3.6	Explain the importance of continuous training and recurrency.
1.3.7	Evaluate how professionalism impacts public trust and aviation safety.
Domain 2.0 Advanced Aerodynamics & Aircraft Performance	
Standard 2.1 Examine Aerodynamic Forces & Stability.	
Performance Indicators	
2.1.1	Explain lift, weight, thrust, and drag and how they interact in all phases of flight.
2.1.2	Analyze the effects of angle of attack on lift production and stall onset.
2.1.3	Distinguish between static and dynamic stability in pitch, roll, and yaw.



2.1.4	Describe how center of gravity location (e.g., forward vs aft CG) affects aircraft stability and control.
2.1.5	Explain the aerodynamic causes of stalls and spins.
2.1.6	Interpret airflow changes during turns, climbs, and descents.
Standard 2.2 Analyze Aircraft Performance Charts & Weight/Balance.	
Performance Indicators	
2.2.1	Calculate aircraft weight and balance.
2.2.2	Determine whether an aircraft is within CG limits for a given flight scenario.
2.2.3	Interpret takeoff and landing distance charts from a Pilot Operating Handbook.
2.2.4	Analyze climb performance and service ceiling limitations.
2.2.5	Explain how aircraft loading affects stall speed and controllability.
Standard 2.3 Evaluate High-Altitude & Density Altitude Operations.	



Performance Indicators	
2.3.1	Define pressure altitude, density altitude, and their relationship.
2.3.2	Calculate density altitude using temperature and pressure data.
2.3.3	Explain how density altitude affects engine power, lift, and propeller efficiency.
2.3.4	Analyze accident case studies involving high-density altitude.
2.3.5	Apply density altitude considerations to flight planning decisions.
Domain 3.0 Navigation, Weather & Flight Planning	
Standard 3.1 Clarify Sectional Charts & Airspace Systems.	
Performance Indicators	
3.1.1	Identify Class A–G airspace and operating requirements.
3.1.2	Interpret airspace boundaries, floor/ceiling altitudes, and special use airspace.
3.1.3	Identify airport symbols, runways, and communication frequencies.



3.1.4	Determine airspace authorization requirements for flight.
3.1.5	Use latitude and longitude to identify geographic positions.
Standard 3.2 Describe Weather Theory & Interpretation.	
Performance Indicators	
3.2.1	Explain atmospheric structure and weather formation processes.
3.2.2	Decode Meteorological Aerodrome Report, Terminal Aerodrome Forecast, and Pilot Report.
3.2.3	Identify hazardous weather conditions affecting Visual Flight Rules.
3.2.4	Analyze frontal systems and cloud formations.
3.2.5	Evaluate weather trends for go/no-go decisions.
3.2.6	Apply weather information to cross-country planning.
Standard 3.3 Interpret Cross-Country Planning & Fuel Management.	
Performance Indicators	
3.3.1	Plan a VFR cross-country flight using sectional charts.



3.3.2	Calculate magnetic heading, groundspeed, and time en route.
3.3.3	Apply wind correction angle and fuel burn calculations.
3.3.4	Determine fuel reserve requirements under FAR Part 91.
3.3.5	Identify alternate airports and diversion strategies.
3.3.6	Evaluate navigation accuracy using pilotage and dead reckoning.
Domain 4.0 Flight Operations, ATC & Human Factors	
Standard 4.1 Evaluate Airport Operations & Traffic Patterns.	
Performance Indicators	
4.1.1	Identify airport signage, markings, and lighting systems.
4.1.2	Explain standard traffic pattern procedures.
4.1.3	Analyze right-of-way rules for aircraft operations.
4.1.4	Describe runway incursion hazards and prevention strategies.



Standard 4.2 Clarify Radio Communication & Air Traffic Control Interaction.	
Performance Indicators	
4.2.1	Identify ATC facilities and their functions.
4.2.2	Use standard aviation phraseology in simulated communications.
4.2.3	Interpret Automatic Terminal Information Service, Automated Weather Observing System, and Automated Surface Observing System broadcasts.
4.2.4	Demonstrate proper radio call sequence and readbacks.
Standard 4.3 Discuss Aeronautical Decision Making. (ADM)	
Performance Indicators	
4.3.1	Explain ADM principles and FAA risk management models.
4.3.2	Apply PAVE and 3P models to flight scenarios.
4.3.3	Analyze accident reports for decision-making failures.
4.3.4	Demonstrate go/no-go decision-making.



4.3.5	Understand personal risk tolerance and bias and be able to develop personal flight minimums.
Domain 5.0 FAA Private Pilot Knowledge Test Preparation	
Standard 5.1 Evaluate FAA Knowledge Areas & Test Strategy.	
Performance Indicators	
5.1.1	Identify all FAA Privat Pilots License knowledge test subject areas.
5.1.2	Analyze Airman Certification Standards task elements and learning objectives.
5.1.3	Apply test-taking strategies for FAA written exams.
Standard 5.2 Outline Logbook, Endorsements & Written Exam Completion.	
Performance Indicators	
5.2.1	Explain instructor endorsement requirements for FAA testing.
5.2.2	Maintain accurate training documentation records.



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