



Aviation

Criticality Survey 2026

CONTENT STANDARD 1.0: PROFESSIONAL ORGANIZATIONS AND LEADERSHIP

Performance Standard 1.1: Effective Leadership and Participation in Career Technical Student Organizations (CTSO) and Professional Associations

1.1.1	Explore the role of professional organizations and/or associations in the Aviation Industry.	1.78
1.1.2	Define the value, role, and opportunities provided through career technical student organizations.	1.61
1.1.3	Engage in career exploration and leadership development.	2.11

CONTENT STANDARD 2.0: AERONAUTICAL KNOWLEDGE AND THEORY

Performance Standard 2.1: Principles of Flight

2.1.1	Describe how lift, drag, thrust, and weight affect aircraft performance.	2.28
2.1.2	Describe how weight and balance affect aircraft performance.	2.56
2.1.3	Calculate aircraft weight and balance.	2.39
2.1.4	Describe how aerodynamics affects aircraft performance.	2.39
2.1.5	Describe an airfoil, based on the principles of flight.	2.22

Performance Standard 2.2: Aircraft Systems

2.2.1	Identify major aircraft systems/UAS (Unmanned Aircraft Systems) (e.g., pitot-static, power plant, oil/lubrication, fuel system, electrical, primary and secondary flight controls, landing, avionics, vacuum, environmental, icing/de-icing) and their functions.	2.50
2.2.2	Diagram major systems in aircraft.	2.06
2.2.3	Identify major aircraft/UAS components (e.g. propeller, instrumentation, rotor) and their functions.	2.28
2.2.4	Describe common system malfunctions or failures.	2.33
2.2.5	Describe troubleshooting procedures for system and component problems, based on scenarios.	2.33
2.2.6	Identify types and purposes of performance charts.	2.17
2.2.7	Identify performance chart characteristics.	2.28

Performance Standard 2.3: Airspace and Charts

2.3.1	Interpret chart symbols.	2.33
2.3.2	Interpret sectional charts (e.g., visual flight rules [VFR], terminal area chart [TAC]).	2.33
2.3.3	Describe types of airspace (i.e., A, B, C, D, E, G).	2.39
2.3.4	Identify operational limits (e.g., special use and other use airspaces, special VFR, weather minimums), based on airspace.	2.39
2.3.5	Describe types of notices to airmen (NOTAMS) and temporary flight restrictions (TFRs) and their functions.	2.28

2.3.6	Access NOTAMS and TFRs.	2.33
Performance Standard 2.4: Aviation Weather		
2.4.1	Identify visual wind indicators at airfields (e.g., windsock, wind Tee, segmented circle system, wind tetrahedron).	2.56
2.4.2	Access sources of weather data.	2.56
2.4.3	Describe compositions of atmospheres (e.g., percentage of gasses, atmospheric layers, cloud type, turbulence, icing, frost, fog, mist).	2.13
2.4.4	Describe variables that affect density altitude performance (e.g., elevation, temperature, humidity, barometric pressure) and how they affect flight.	2.44
2.4.5	Describe weather reporting (e.g., aviation weather advisories).	2.31
2.4.6	Interpret weather depiction chart reading (e.g., digital display reading).	2.19
2.4.7	Interpret (i.e., decode) Meteorological Aerodrome Reports (METARs) and Terminal Aerodrome Forecast (TAFs).	2.44
2.4.8	Assess weather impacts on flight planning to determine a go or no-go decision.	2.44
2.4.9	Compare visual meteorological conditions (VMC) to instrument meteorological conditions (IMC).	2.25
Performance Standard 2.5: Navigation and Flight Planning		
2.5.1	Identify tools used in navigation (e.g., global positioning system [GPS], pilotage, VHF Omnidirectional Range [VOR], dead reckoning, magnetic compass), their functions and limitations.	2.25
2.5.2	Plot cross-country routes, using VFR charts in various methods (i.e., manually/on paper, electronically).	2.31
2.5.3	Calculate fuel/time, using performance charts (i.e., manually/on paper, electronically).	2.38
2.5.4	Calculate wind corrections, using performance charts (i.e., manually/on paper, electronically).	2.19
Performance Standard 2.6: Airport Operations		
2.6.1	Describe types of airports (e.g., civil, military, private, seaport, tower, non-tower, controlled, uncontrolled).	2.06
2.6.2	Identify airport lighting, signage, and markings.	2.19
2.6.3	Describe traffic patterns (e.g., air, ground, right-of-way rules, altitudes).	2.25
2.6.4	Describe runway incursions and avoidance.	2.19
2.6.5	Interpret airport diagrams.	2.19
Performance Standard 2.7: Communications		
2.7.1	Identify communication equipment (e.g., transponder, automatic dependent surveillance–broadcast [ADS-B], primary radar, secondary radar).	2.19
2.7.2	Describe emergency communication procedures (e.g., transponder codes, lost communication, emergency frequency, lost link).	2.13
2.7.3	Describe radio standardized protocol (e.g., phonetic alphabet, etiquette, phraseology, call signs, location, intention).	2.25
2.7.4	Describe requirements (i.e., when and where) of radio communications.	2.13
2.7.5	Describe air traffic control (ATC) services and roles/functions.	2.06
Performance Standard 2.8: Regulations		

2.8.1	Describe pilot responsibilities, applying Federal Aviation Regulations (FAR) and the Aeronautical Information Manual (AIM) (e.g., Part 1, 43, 61, 71, 73, 91, 107, 141; Code of Federal Regulations [CFR] 149, Part 830)	2.13
2.8.2	Describe pilot eligibility requirements (e.g., private pilot, UAS, minimum ages, medical).	2.06
2.8.3	Determine the level of flight medical certification required for various pilot licenses.	1.88
2.8.4	Access pilot-suggested study lists.	1.25
2.8.5	Describe applicable components of a FAR (i.e., Title 14, Chapter 1).	2.00
2.8.6	Identify the required parts of logbook entries.	1.88
Performance Standard 2.9: Flight Safety		
2.9.1	Describe the history of aeronautical decision-making (ADM).	1.25
2.9.2	Apply ADM, based on scenarios.	2.06
2.9.3	Identify safety checklists (e.g., Pilot-Aircraft-EnVironment-External pressures [PAVE], Illness-Medication-Stress-Alcohol-Fatigue-Eating/Emotional stability [IMSAFE], Detect-Estimate-Choose-Do-Evaluate [DECIDE], Perceive-Process-Perform [3Ps], Plan-Plane-Pilot-Passengers-Programming [5Ps]) to promote a safe environment.	1.94
2.9.4	Describe the causes of stalls and spins, and the importance of situational pilot responses based on changing conditions.	2.19
2.9.5	Describe hazardous attitudes and antidotes.	1.75
2.9.6	Describe safety procedures based on scenarios (e.g., engine failure, lost-link, fires, system malfunctions).	2.06
2.9.7	Assess operational risks, using crew resource management (CRM) principles.	2.00
2.9.8	Describe human physiological factors (e.g., hypoxia, hyperventilation, middle-ear problems, sinus problems, spatial disorientation, motion sickness, carbon monoxide poisoning, stress, fatigue, dehydration, nutrition, hypothermia, optical illusions, dissolved nitrogen in the bloodstream) and corrective actions related to flight safety.	1.94
2.9.9	Describe regulations pertaining to alcohol and drug use by aviation personnel.	1.94
2.9.10	Describe effects of alcohol, drugs, and over-the-counter (OTC) medication on aviation personnel.	2.06
Performance Standard 2.10: Aerospace Careers Exploration		
2.10.1	Describe aerospace pathways (e.g., instructor, commercial airline pilot, ATC, unmanned aircraft system [UAS] operator, military pilot, airport management, aviation maintenance technician, ground operations, flight engineer).	1.81
2.10.2	Describe educational requirements and educational options for pursuing aerospace careers.	1.81
CONTENT STANDARD 3.0: FLIGHT OPERATIONS AND RISK MANAGEMENT		
Performance Standard 3.1: Preflight Procedures		
3.1.1	Interpret airworthiness directives (ADs).	1.94
3.1.2	Interpret safety bulletins (SBs).	1.88
3.1.3	Compare directives to bulletins.	1.81

3.1.4	Identify required aircraft documents (e.g., Airworthiness certificate – Registration certificate – Operating limitations – Weight and balance data [AROW]).	2.31
3.1.5	Describe required inspections and maintenance (e.g., Annual inspection – VOR check, 100-hour inspection – Altimeter and pitot-static system – Transponder inspection – Emergency locator transmitter – SBs and ADs [AV1ATES], Federal Aviation Administration [FAA] Chapter 9 of Pilot's Operating Handbook [POH]).	2.13
3.1.6	Conduct aircraft/UAS inspections to verify airworthiness.	2.00
CONTENT STANDARD 4.0: UAS		
Performance Standard 4.1: UAS Regulations		
4.1.1	Describe Part 107 rules, waivers, and operational limitations.	1.56
4.1.2	Describe locality-specific regulations and laws.	1.75
4.1.3	Identify UAS-specific CRM and emergency procedures.	1.50
4.1.4	Describe ethical issues in surveillance and privacy.	1.50
4.1.5	Describe remote identification (RID) requirements and compliance strategies.	1.63
4.1.6	Describe UAS pilot eligibility (i.e., licensure).	1.75
Performance Standard 4.2: UAS Maintenance and Mission Plans		
4.2.1	Describe basic maintenance and troubleshooting for UAS.	1.44
4.2.2	Describe aspects of planning drone missions: mapping, inspection, and delivery.	1.75