south dakota DEPARTMENT OF EDUCATION
Learning. Leadership. Service.

Aviation Careers I

Career Cluster	STEM
Course Code	20053
Prerequisite(s)	None
Credit	.5
Program of Study and Sequence	Foundation Courses, Cluster Courses, Pathway Courses, Capstone Experiences
Student Organization	Skills USA
Coordinating Work-Based Learning	local airports, Fixed Base Operators, National Guard, Civil Air Patrol, Experimental Aircraft Association
Industry Certifications	None
Dual Credit or Dual Enrollment	TBD
Teacher Certification	STEM Cluster Endorsement; Aviation Pathway Endorsement; 7-12 Technology Education Endorsement
Resources	https://www.faa.gov/education/ https://www.faa.gov/education/educator_resources/curriculum/high_school/ https://www.osha.gov/SLTC/airline_industry/ https://youcanfly.aopa.org/high-school/high-school-curriculum https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/phak/

Course Description: This course provides students with the first step towards a Private Pilot's license or Part 107 - Drone Certification. Students will learn basic history of aviation, aircraft type/design, air density, forces of flight, propulsion, airframes, avionics/flight instruments, possible career paths within the aviation industry, and Federal Aviation Agency regulations.

Program of Study Application

Aviation is a pathway course in the aviation pathway. Students in this pathway would generally complete foundation courses and one of the STEM cluster courses prior to participating in aviation.

Career Cluster: STEM

Course: Aviation I

Course Standards

Indicator # AVC-1 1 Identify events in the history of flight		
Webb Level	*Sub-indicator*	*Integrated Content*
Level 2: Skill/Concept	AVC-1 1.1 Identify flight in the ancient world	
Level 2: Skill/Concept	AVC-1 1.2 Identify the development of flight in the early 1900s through today and beyond	
Indicator # AVC-1 2 Investigate the principles of flight		
Webb Level	*Sub-indicator*	*Integrated Content*
Level 3: Strategic Thinking	AVC-1 2.1 Investigate the basic parts and control surfaces on aircraft	
Level 3: Strategic Thinking	AVC-1 2.2 Investigate the 4 forces of flight	
Level 4: Extended Thinking	AVC-1 2.3 Investigate basic aerodynamics	
Level 3: Strategic Thinking	AVC-1 2.4 Investigate airplane stability	
Indicator # AVC-1 3 Understand the flight environment		
Webb Level	*Sub-indicator*	*Integrated Content*

Level 2: Skill/Concept	AVC-1 3.1 Comprehend air safety	
Level 2: Skill/Concept	AVC-1 3.2 Comprehend the airport layout, inclusive of safety elements	
Level 3: Strategic Thinking	AVC-1 3.3 Comprehend airspace control	
Level 2: Skill/Concept	AVC-1 3.4 Comprehend radio communications	
Indicator # AVC-1 4 Understand aircraft systems and performance		
Webb Level	*Sub-indicator*	*Integrated Content*
Level 2: Skill/Concept	AVC-1 4.1 Know the basic aircraft instruments	
Level 2: Skill/Concept	AVC-1 4.2 Know aircraft types and systems	
Level 3: Strategic Thinking	AVC-1 4.3 Predict aircraft performance	
Level 3: Strategic Thinking	AVC-1 4.4 Calculate weight and balance	
Indicator # AVC-1 5 Explore the multiple careers in aviation		
Webb Level	*Sub-indicator*	*Integrated Content*
Level 2: Skill/Concept	AVC-1 5.1 Investigate aviation career fields and occupations	