CareerClusters™ PATHWAYS TO COLLEGE & CAREER READINESS
Transportation, Distribution & Logistics

Learning that works for Colorado CTE®

Colorado CTE Course – Scope and Sequence

Course Name	**Aviation Fundamentals/Private Pilot Ground School (MSU AES 1100 or Colorado Community College Course AVT101) This is a concurrent enrollment course with MSU Denver or one of the Colorado Community Colleges/Technical Schools.**		**Course Details** **Course = 0.50 Carnegie Unit Credit**	**Credit = 0.5 CTE Credential: CTE Transportation (Additional instructor qualifications are determined by MSU Denver or the designated Colorado community college.)**	
Course Description	This course presents the fundamentals of aviation for the beginning student which includes a study of the airplane and its components, aerodynamics, basic aircraft systems, the airport environment, air-traffic control procedures, Federal Aviation Regulations, the basic elements of air navigation including radio navigation, and a review of aviation weather. It prepares the student for the Federal Aviation Administration (FAA) Private Pilot Knowledge examination.				
Note:	This is a suggested scope and sequence for the course content. The content will work with any textbook or instructional resource. If locally adapted, make sure all essential knowledge and skills are covered.				
SCED Identification #		Schedule calculation based on 60 calendar days of a 90-day semester. Scope and sequence allows for additional time for guest speakers, student presentations, field trips, remediation, or other content topics.			
All courses taught in an approved CTE program must include Essential Skills embedded into the course content. The Essential Skills Framework for this course can be found at **https://www.cde.state.co.us/standardsandinstruction/essentialskills**					
Instructional Unit Topic	Suggested Length of Instruction	CTE or Academic Standard Alignment	Competency / Performance Indicator	Outcome / Measurement	CTSO Integration
A. Discovering Aviation **a. Pilot Training** **b. Aviation Opportunities** **c. Introduction to Human Factors** **B. Airplane Systems** **a. Airplanes**			Demonstrate mastery by passing the FAA Knowledge Exam for Private Pilot Airplane, Single Engine, and Land with a minimum score of 70% in the areas of: A) Airplane Systems B) Aerodynamic Principles		

b. The Powerplant and Related Systems c. Flight Instruments C. Aerodynamic Principles a. Four Forces of Flight b. Stability c. Aerodynamics of Maneuvering Flight D. The Flight Environment a. Safety of Flight b. Airports c. Aeronautical Charts d. Airspace E. Communication and Flight Information a. Radar and ATC Services b. Radio Procedures c. Sources of Flight Information F. Meteorology for Pilots a. Basic Weather Theory			C) The Flight Environment D) Communications and Flight Information E) Meteorology for Pilots F) Interpreting Weather Data G) Airplane Performance H) Navigation I) Human Factors Principles J) Cross Country Flight K) Federal Aviation Regulations		

b. Weather Patterns c. Weather Hazards G. Interpreting Weather Data a. The Forecasting Process b. Printed Reports and Forecasts c. Graphic Weather Products d. Sources of Weather Information H. Airplane Performance a. Predicting Performance b. Weight and Balance c. Flight Computers I. Navigation a. Pilotage and Dead Reckoning b. VOR Navigation c. ADF Navigation d. Advanced Navigation J. X Applying Human Factors Principles					

K. Aviation Physiology L. Aeronautical Decision Making M. Flying Cross-Country a. The Flight Planning Process b. The Flight N. Federal Aviation Regulations a. 14 CFR Part 1 Definitions and Abbreviations b. 14 CFR Part 61 Certification: Pilots, Flight Instructors and Ground Instructors c. 14 CFR Part 91 General Operating and Flight Rules d. NTSB 830 Aircraft Accident and Incident Reporting					
