

Colorado CTE Course – Scope and Sequence

Course Name	Avionics for Pilots/Instrument Fundamentals/Instrument Pilot Ground School (MSU AES 2120 or Colorado Community College Course AVT111) This is a concurrent enrollment course with MSU Denver or one of the Colorado Community Colleges/Technical Schools.		Course Details	Credit = 0.5 CTE Credential: CTE Transportation (Additional instructor qualifications are determined by MSU Denver or the designated Colorado community college.)	
			Course = 0.50 Carnegie Unit Credit		
Course Description	In this course, the student studies aeronautics, regulations, meteorology, and instrument procedures in preparation for the FAA instrument 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
TOPICAL OUTLINE: I. STAGE I A. Training opportunities, Advanced human factors, Aviation physiology B. Flight Instrument Systems C. Attitude Instrument Flying			Demonstrate mastery in the areas of Preflight preparation and procedures, Air traffic control clearances and procedures, Flight by reference to instruments, Navigation aids, Instrument approach procedures, Emergency operations, and Post flight procedures, by passing the FAA		

D. Instrument Navigation E. Airports, Airspace and Flight Information F. Air Traffic Control System G. ATC Clearances H. Stage I Exam II. Stage II A. Departure Charts and procedures B. En-route and Area Charts and Procedures C. Holding Procedures D. Arrival Charts and Procedures E. Approach Charts and Procedures F. VOR and NDB Approaches and Procedures G. ILS Approaches and Procedures H. GPS and RNAV Approaches and Procedures I. Stage II Exam			Instrument Rating Knowledge Exam with a minimum score of 70%.		
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Academic Standards Alignment

Colorado CTE courses are required to integrate academic and essential skills into course content. The following academic standards have been identified as aligned to this course and should be integrated throughout instruction.

[CO CTE Academic Standards Resources](#) (Rubrics, integration strategies, etc) [CDE Colorado Academic Standards Online](#) (Online standards lookup tool)

Reading, Writing, & Communicating

Standard 1: Oral Expression and Listening

- **Prepared Graduate 1:** Collaborate effectively as group members or leaders who listen actively and respectfully; pose thoughtful questions, acknowledge the ideas of others; and contribute ideas to further the group's attainment of an objective.
- **Prepared Graduate 2:** Deliver effective oral presentations for varied audiences and varied purposes.

Standard 2: Reading for All Purposes

- **Prepared Graduate 3:** Read a wide range of literary texts to build knowledge and to better understand the human experience.
- **Prepared Graduate 4:** Read a wide range of informational texts to build knowledge and to better understand the human experience.
- **Prepared Graduate 5:** Understand how language functions in different contexts, command a variety of word-learning strategies to assist comprehension, and make effective choices for meaning or style when writing and speaking.

Standard 3: Writing and Composition

- **Prepared Graduate 6:** Craft arguments using techniques specific to the genre.
- **Prepared Graduate 7:** Craft informational/explanatory texts using techniques specific to the genre.
- **Prepared Graduate 8:** Craft narratives using techniques specific to the genre.
- **Prepared Graduate 9:** Demonstrate mastery of their own writing process with clear, coherent, and error-free polished products.

Standard 4: Research Inquiry and Design

- **Prepared Graduate 10:** Gather information from a variety of sources; analyze and evaluate its quality and relevance; and use it ethically to answer complex questions.

Note: Mathematics and Science standards will be added in the future. Visit the [Colorado Academic Standards](#) page for the most current version.