

Colorado Outdoor Recreational Leadership Course Scope and Sequence

Course Name	Mountaineering Leadership		Course Details	Level 4 course in the Outdoor Recreational Leadership Pathway. Prerequisite: Mountain Orientation	
			Course = 0.50 Carnegie Unit Credit		
Course Description	This course will develop the knowledge, ability and leadership skills necessary to instruct and safely lead a group on a mountaineering experience.				
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% of a semester instructional time. 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					
Unit Number, Title and Brief Description	CTE or Academic Standard Alignment	Competency / Performance Indicator	Outcome / Measurement	CTSO Integration	
Unit 1: Mountain Travel	Terrain Analysis	Demonstration safe and efficient mountain travel Demonstrate good judgment relating to mountain travel.			
	Map Reading				
	Compass Usage				
	Distance vs. Time and Energy				
	Self Arrest				
Unit 2: Rationing	Calories Required	Demonstrate knowledge of rationing.			
	Menu Planning				
	Food Packaging				
Unit 3: Weather	Cloud formation	Demonstrate knowledge of mountain weather.			
	Wind Direction				
Unit 4: Equipment	Pack	Demonstrate knowledge of the types, applications, and care of mountaineering equipment.			
	Sleeping Bag				
	Boots				

	Stove Clothing Tents Technical Gear (e.g. ice axe, anchors ropes, pickets, flukes, and ice screws)			
Unit 5: Leadership and group handling skills		Demonstrate the fundamentals of outdoor leadership and group management skills as they related to mountaineering.		
Unit 6: Using experiences gained through mountain travel to develop judgment relating to outdoor leadership		Demonstrate the fundamentals of outdoor leadership and group management skills as they related to mountaineering.		
Unit 7: Technical	Steep snow climbing (J. Lines, Prusik ascents/descents, sliding middle person) Crevasse Rescue (2-pulley system, 2 with a C pulley system, self extractions, aided extractions) Glacier Travel (use of wands, crevasse avoidance, rope systems)	Demonstrate crevasse rescue techniques. Demonstrate glacier travel techniques Demonstrates steep snow climbing techniques.		
Unit 8: Interpersonal Skills	Mountaineering Leadership (leadership skill and practice for technically based activities) Group Handling (group handling and safety procedures) Communication Skills (judgment development)	Demonstrate basic leadership skills Demonstrates basic good communication Demonstrates leadership considerations and techniques for mountaineering activities. Demonstrates knowledge of group dynamics for mountaineering activities.		

Unit 9: Teaching Methodologies (Traditional & experiential)	LessonPlan organization	Demonstration of basic technical mountaineering skills.	
	Leadership styles and techniques	Demonstrate land navigation techniques for mountaineering	
	Group Dynamics	Demonstrate methodologies appropriate for teacher various mountaineering skills.	
	Mountaineering equipment	Demonstration developing lesson plans for teaching presentations.	
	Safety hazards and considerations	Demonstration safety requirements for mountaineering activities.	
	Insurance and Liability	Demonstrate knowledge of insurance and liability requirements for mountaineering activities.	
	Guide Certifications	Demonstrates knowledge of mountaineering guide certification requirements and ethics.	
	Ethics and professional responsibility	Demonstrate knowledge of natural history of specific alpine environments	
	Interpretive Techniques	Demonstrates knowledge of resource managing agencies and the permit process.	
	Management agencies	Demonstrates leave no trace/minimal impact approaches for the alpine environment.	
	Permitting Process	Demonstrates and ability to plan logistical components of mountaineering.	
	Land Navigation	Demonstrates knowledge of the importance of physical conditioning requirements for mountaineering activities.	
	Leave No Trace/Minimum Impact		
	Logistical Considerations		
	Physical Conditioning		

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)

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.
 - Students develop leadership and group management skills through mountaineering expeditions, technical rescue scenarios, instructional activities, and group decision-making experiences that require effective communication, collaboration, and leadership.
- Prepared Graduate 2: Deliver effective oral presentations for varied audiences and varied purposes.
 - Students develop and demonstrate instructional methodologies, leadership techniques, interpretive skills, and lesson plan presentations designed to teach mountaineering skills and facilitate outdoor learning experiences.

Standard 2: Reading for All Purposes

- Prepared Graduate 4: Read a wide range of informational texts to build knowledge and to better understand the human experience.
 - Students interpret maps, weather information, equipment specifications, safety procedures, rescue systems, leadership theories, land management regulations, permitting requirements, and environmental ethics to develop competency in mountaineering leadership.
- 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.
 - Students develop and apply specialized vocabulary related to mountaineering, navigation, weather, technical rescue systems, leadership, risk management, land management, environmental ethics, and instructional methodologies.

Standard 3: Writing and Composition

- Prepared Graduate 7: Craft informational/explanatory texts using techniques specific to the genre.
 - Students develop lesson plans, logistical plans, instructional materials, and teaching presentations that communicate mountaineering techniques, safety procedures, and leadership concepts effectively.
- Prepared Graduate 9: Demonstrate mastery of their own writing process with clear, coherent, and error-free polished products.
 - Students create organized lesson plans, instructional materials, logistical plans, and educational presentations that demonstrate effective written communication and professional planning practices.

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.
 - Students analyze terrain, weather patterns, equipment options, nutritional needs, leadership approaches, rescue systems, environmental conditions, land management requirements, and logistical considerations to make informed decisions related to mountaineering leadership and expedition planning.

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