

## Colorado Outdoor Recreational Leadership Course Scope and Sequence

Course Name	Bike Tech II		Course Details	Level 2 course in the Outdoor Recreational Leadership Pathway. This course fits into the bike tech/mountain biking strand.  Prerequisite: Bike Tech I			
			Course = 0.50 Carnegie Unit Credit				
Course Description							
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 <a href="https://www.cde.state.co.us/standardsandinstruction/essentialskills">https://www.cde.state.co.us/standardsandinstruction/essentialskills</a>							
Unit Number, Title and Brief Description	CTE or Academic Standard Alignment		Competency / Performance Indicator		Outcome / Measurement		CTSO Integration
Unit 1: Intro to Level II - Overview & Expectations	1.1 Course Introduction, expectations and course objectives						
	1.2 Students research and report on careers related to bicycle						
	1.3 Work- based learning: formulating individual learning plans.						
Unit 2: Review of Level I	2.1 Safety - workplace, employee, and customer						
	2.2 Shop terminology, tools and their application						
	2.3 Administration of procedures using work documents/order						
	2.4 Hands on bicycle assembly						
	2.5 Retail business basics						

<b>Unit 3: Retail business management</b>	3.1 Business planning	<ul style="list-style-type: none"> <li>A. Seasonal business plan/overview</li> <li>B. Mark up &amp; margin</li> <li>C. Financials - profit/loss and balance sheet</li> <li>D. Overhead and business operations</li> </ul>		
	3.2 Management	<ul style="list-style-type: none"> <li>A. Employee relationships</li> <li>B. OSHA, risk management in the industry</li> </ul>		
	3.3 Customer Service	<ul style="list-style-type: none"> <li>A. Professionalism</li> <li>B. Ethics in business</li> </ul>		
	3.4 Daily operations	<ul style="list-style-type: none"> <li>A. Front of the store</li> <li>B. Inventory and replenishment</li> <li>C. service department</li> </ul>		
	3.5 Inventory	<ul style="list-style-type: none"> <li>A. Stock levels</li> <li>B. Inventory and open to buy</li> <li>C. Product cycles and availability</li> </ul>		
	3.6 Ordering - receiving	<ul style="list-style-type: none"> <li>A. Systems</li> <li>B. analysis</li> </ul>		
	3.7 Merchandising of products and services	<ul style="list-style-type: none"> <li>A. Product placement in the store</li> <li>B. Service execution</li> </ul>		
	3.8 Marketing	<ul style="list-style-type: none"> <li>A. Customer Interaction</li> <li>B. Social Media</li> <li>C. Web Presence</li> <li>D. Event Organization and execution</li> </ul>		
	3.9 Liability - Safety			
	3.10 Work Readiness Skills	<ul style="list-style-type: none"> <li>A. Hands on practice of job interviews</li> <li>B. Personal public profile</li> </ul>		
<b>Unit 4: POS Systems (Point of Sale)</b>	4.1 Why POS systems are valuable to business and analysis			
	4.2 Computer skills	<ul style="list-style-type: none"> <li>A. Work with all parts of the system</li> <li>B. Proficiency in enter customer, a sale, a repair-tag</li> </ul>		

	<p>4.3 Inventory class room - beginning - middle- end year</p> <p>4.4 Entering orders - receiving orders - warranty process</p> <p>4.5 Analytics: Customers, sales, repairs, inventory</p> <p>4.6 Customer outreach through POS system</p>			
<b>Unit 5: Service writing and service department procedures</b>	<p>5.1 Service departments efficiency's</p> <p>5.2 Service department set up and systems</p> <p>5.3 Service writing</p>			
<b>Unit 6: Wheels</b>	<p>6.1 Demonstrate skills necessary to remove and replace both front &amp; rear wheels</p> <p>6.2 Develop an understanding of principles of spokes in wheel construction/terminology</p> <p>6.3 Demonstrate an understanding of spoke adjustment, truing and tension</p> <p>6.4 Demonstrate ability to lace, tension &amp; true a 3 cross wheel</p> <p>6.5 Demonstrate ability to identify &amp; remove/replace various tires and tubes</p> <p>6.6 Identify the differences in hub design/function</p>			

	6.7 Demonstrate front and rear hub strip down, service, reassembly on convention & cartridge bearing hubs			
<b>Unit 7: Brake Systems</b>	<p>7.1 Identify braking systems</p> <p>7.2 Identification of different types of brake levers</p> <p>7.3 Display an understanding of brake cable and hose systems.</p> <p>7.4 Demonstrate adjusting brakes to safety standards</p> <p>7.5 Adjust all controls to proper level of sensitivity</p> <p>7.6 Hydraulic brake safety: PPE, identifying fluids, dealing with hazards correctly</p> <p>7.7 Theory of hydraulic brakes</p> <p>7.8 Hands on servicing of hydraulic breaks.</p>			
<b>Unit 8: Gear systems</b>	<p>8.1 Theory of gears</p> <p>8.2 Identifying parts of the gear system on a conventional MTB- vocabulary</p> <p>8.3 Hands on skill - fitting a gear cable, fitting gear housing, adjusting limit screws, indexing gears for both the front and rear derailleurs</p>			
<b>Unit 9: Suspension Systems</b>	<p>9.1 Theory &amp; identification of types of linkage systems</p> <p>9.2 Skill test - rider set up</p>			

	<p>9.3 Forks: theory, identification, performance comparisons</p> <p>9.4 Additional sub-modules for servicing will be depend on access to teaching materials/demo bikes/demo forks/tools/consumables</p> <p>9.5 Skill test: suspension fork servicing.</p>			
<b>Unit 10: Steering and rider interface</b>	<p>10.1 Identification of headset parts: thread less, threaded</p> <p>10.2 Identification of different headset sizes</p> <p>10.3 Skill test: installation and adjustment of various headset types</p> <p>10.4 Demonstrate knowledge of various types of stems, handlebars, saddles, seatposts - compatibility &amp; installation</p> <p>10.5 Skill test: installing handlebar ribbon</p> <p>10.6 Skill test: dropper style seatposts - installation &amp; set up</p> <p>10.7 Skill test: Bike fitting &amp; ergonomics/comfort</p>			
<b>Unit 11: E-bike Advanced Maintenance</b>				
<b>Unit 12: Engineering and product design</b>				
<b>Unit 12: Work-based learnign</b>	<p>12.1 Complete a WBL participation agreement - training, agreement/training plan</p>			

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