



## Mountain Biking Community Development 10 Board/Authority Approved Course

North Okanagan Shuswap	School District 83
Developed By: Chris Stromgren	Date Developed: May 2019
School Name: JL Jackson Secondary School	Principal's Name: Mr. Rob Cadden
Superintendent Approval Date:	Superintendent Signature:
Board/Authority Approval Date:	Board/Authority Chair Signature:
Course: Mountain Biking Development	Grade Level of Course: 10
Number of Course Credits: 4	Number of Hours of Instruction: 120

**Board/Authority Prerequisite(s):** None

### **Special Training, Facilities, or Equipment Required:**

- Training: Professional Mountain Biking Instructor's Association Level 1 Instructor Course (or higher), Occupational First Aid Level 1 (or higher), or a wilderness first aid equivalent.
- Facilities: classroom, outdoor areas (ex. Sports field or gravel parking), trail access, weight training facility/gym
- Equipment: a performance mountain bike in good repair, a modern helmet without visible damage, gloves, and back pack (with required tools and repair gear).

### **Course Synopsis:**

In the past decade there has been a growing regional, provincial and national interest in recreation, competition and tourism related to mountain biking. This course seeks to develop recreational, competitive and career opportunities in the sport of mountain biking. Province-wide there has been, and continues to be, several post-secondary programs structured directly around mountain biking tourism and sustainable practices in mountain biking as a valid career path (ex. Capilano University Mountain Bike Program). Included in the proposed course programming are skill development, first-aid, grant application writing and implementation, bike mechanics, sustainable trail design, construction and maintenance, physical conditioning and leadership and guiding skills. This program will serve as an introduction to the

huge variety of career opportunities within the field of adventure tourism. This course would cover all elements and facets of learning about, and participating in, the sport and career of mountain biking.

## **Goals and Rationale:**

### **Goals:**

- To learn about community collaboration and the sustainable planning and development of mountain biking
- To advocate for the health and fitness of others connects us to our community
- To learn about and mitigating the risks of mountain biking through best practices, risk management and mitigation in real world urban and wilderness scenarios.
- To develop foundational mountain biking skills and appreciation for the life-long benefits of the sport
- To develop leadership skills through community and industry collaboration and through group guiding
- To increase mechanical knowledge in order to promote safety, enjoyment and employment
- To increase technology to mitigate risks and promote mountain bike tourism in our region

### **Rationale:**

British Columbia is a world renowned destination for mountain biking tourism. Salmon Arm has a very well established mountain biking community. Through the Larch Hills Nordic skiing program many young, competitive athletes 'cross-over' to mountain biking as their three season sport of choice following the ski season. Building upon this success is the Salmon Arm Secondary Mountain Bike Team which began 13 years ago and has since won the BC School Sports Provincial Championship five times. At the team try outs in April 2019 there were 47 athletes vying for a position on the team. Shuswap Middle School and South Canoe Elementary School both have mountain bike teams and/or clubs. Salmon Arm Secondary school hosted a Thompson/Okanagan zone league race in April 2019 that attracted 96 competitors. All in all, mountain biking is well established and growing quickly in our region. The present expansion of the South Canoe Trails facility by the City of Salmon Arm is set to triple available parking, add a pump track, jump park, skills park, outdoor classroom and picnic facilities. The Rubberhead trail network east of Canoe recently received official Recreation Site status from Sites and Trail B.C. and resultant facility improvements.

Given the established popularity and continued growth of mountain biking in our community it seems the timing is right to offer students opportunities to pursue competitive, recreational and career options in this sport. A course such as this will provide students with the opportunity to learn about this sport and industry in a safe and informative, innovative and experiential environment. Primary amongst these opportunities is the ability for this course to offer a series of collaborative projects with groups in our community such as the Shuswap Trail Alliance, the Shuswap Cycling Club, local businesses, the Larch Hills Nordic Society, as well as outreach programs including leadership opportunities for students in the course to visit schools in the district to teach what they are learning. The learning pertaining to the physical fitness and skill development side of mountain biking will provide students with in depth knowledge around the elements of cardiovascular, strength and endurance training regimes of this life-long sport. This course will set students up for success in mountain

biking in a safe and controlled environment by teaching the foundational skills of mountain biking combined with detailed lessons on wilderness safety and basic trailside first aid, evacuation, mechanics and repair.

Mountain biking is increasingly seen as a viable economic tourism initiative for tourism lead communities such as ours. This creates the potential for job opportunities for youth in our region. The nature of technology as it pertains to mountain bike tourism will also be explored using some newly developed and highly regarded applications that are changing the nature of mountain bike tourism by increasing safety and improving the quality of information available to riders.

### **Aboriginal Worldviews and Perspectives:**

#### **Declaration of First Peoples Principles of Learning:**

- Mountain Biking and guiding supports the development of self in support of connecting with others through shared experiences.
- Learning is embedded in memory, history and shared story.
- Leading and coaching groups involves learning from mentors and those in the leadership role.
- Leadership can be shared and is unique to each person, situation, and experience.

#### **Declaration of Aboriginal Worldviews and Perspectives:**

- Recognizing the importance of visitor experience and views and incorporating that knowledge into our own world views.
- Recognizing the importance and connectedness of natural systems and how we may interact in a sustainable fashion.
- Group explorations are deeply connected to building relationships both with those involved and community.
- Community involvement/engagement
- Experiential Learning
- Local focus
- Learner centered

### **Assessment and Evaluation:**

#### **Formative Assessment:**

- Self-reflection/self-assessment
- Journaling for fitness tracking, community collaboration and personal responsibility
- First aid practical and theoretical components
- Regular logs for bike repair and maintenance
- Regular journal logs for trail reports and subsequent maintenance

**BIG IDEAS****Community and Planning**

Collaboration with user groups and needs provides quality development of sustainable resources

**Safety and First Aid**

Understanding safe practices and risk management is greatly complimented by First Aid training

**Mountain Biking Skills**

Foundational skill development increases ability and enjoyment of sport, fitness and opportunity

**Leadership**

Development of leadership skills is ongoing

**Mechanics and Repair**

Increasing mechanical knowledge and ability promotes a deeper understanding and accessibility

**Learning Standards**

Curricular Competencies	Content
<p><i>Students are expected to do the following:</i></p> <p>Community and Sustainable Planning:</p> <ul style="list-style-type: none"> <li>Identify possible areas of development/maintenance/repair in collaboration with the Shuswap Cycling Club (SCC) &amp; the Shuswap Trail Alliance (STA) development plans</li> <li>Explore the area in question and hang flagging outlining the proposed trail/repair/maintenance project</li> <li>Identify key elements requiring funding</li> <li>Identify the individual elements and budgets needed for the specific proposal and grant request</li> <li>Create and write the Grant Proposal/Request</li> <li>Outline the multiple user groups that will benefit from the proposed improvements</li> <li>Outline and itemize costs of implementation and scheduled maintenance/repair needed to ensure sustainable enjoyment and use of proposed improvements</li> <li>Identify user groups and develop maintenance plans with all user groups and their respective interests</li> <li>Seek sustainable development opportunities that increase access for multiple user groups</li> <li>Promote healthy activities that increase access and reduce impact on the environment</li> </ul> <p>Safety, First Aid and Remote Evacuation:</p> <ul style="list-style-type: none"> <li>Demonstrate knowledge of Standard First Aid protocols and wilderness first-aid evacuation</li> <li>Construct a personal first-aid kit</li> <li>Identify the value of items in their personal first-aid kit</li> <li>Demonstrate an awareness of outdoor safety situations</li> <li>Use to technology to help mitigate risks and to act in emergency situations</li> </ul>	<p><i>Students are expected to know the following:</i></p> <p>Community and Sustainable Planning:</p> <ul style="list-style-type: none"> <li>Processes of consultation with community stakeholders</li> <li>Environmentally sustainable trail building practices</li> <li>Material and equipment costs and related permitting fees for trail design and construction</li> <li>Community and stakeholder consultation processes</li> <li>Scheduling and implementation of plans</li> </ul> <p>Safety, First Aid and Remote Evacuation:</p> <ul style="list-style-type: none"> <li>Standard First Aid</li> <li>Remote evacuation procedures and protocols</li> <li>The unique nature of sport in a wilderness setting</li> <li>Risk management best practices</li> <li>Mountain biking responsibility code</li> </ul>

#### Environmental Sustainability and Trail Maintenance:

- Identify areas suitable for development and maintenance
- Understand sustainable trail development
- Manage and minimize erosion and environmental impact
- Manage drainage
- Understand soil compaction and the significance of using appropriate construction techniques for the area of development
- Design and build quality and lasting features including but not limited to: bench cut, berms, and bridges

#### Riding Skill Development:

- Develop proper body position over a variety of terrain
- Understand balance and be able to shift balance points to increase traction and stability
- Understand fundamentals and advanced cornering techniques
- Increase pedaling efficiency and power
- Trail scanning techniques
- Proper use of shifting and gearing mechanisms
- Assess and mitigate risk through a collection of skills to increase ability and enjoyment of riding

#### Physical Conditioning:

- Develop a basic understanding of human anatomy and physiology
- Participate in exercises that build endurance, strength, balance, and flexibility pertaining to the sport of mountain biking
- Build conditioning to enhance performance and reduce/rehabilitate injury
- Tracking fitness activity regularly using electronic and or paper based journals

#### Basic Bicycle Mechanics and Repairs:

- Identify tire and tubes that need repairing
- Determine the cause(s) of the flat or damage
- Repair tubes/ tires using the proper tools
- Describe the steps required to true a wheel and the equipment/tools required
- Name the components of the different types of brake systems

#### Environmental Sustainability and Trail Maintenance:

- The various interest and user groups implicated in a given riding area
- Principles of sustainable trail building techniques such as: drainage and erosion control and protection of sensitive habitats
- Corridor clearance and sight line considerations for safe best practices
- Appropriate technological applications to aid in sustainability and management such as recording GPS waypoints for mapping

#### Riding Skill Development:

- Body position and balance
- Operation of controls
- Terrain awareness
- Direction control
- Pressure control
- Timing and coordination

#### Physical Conditioning:

- The nature of the cardiovascular system
- Skeletal and muscular anatomy
- Principles of endurance training, strength training and flexibility
- Aspects of balance related to mountain biking
- F.I.T.T. principle
- SAID principle

#### Basic Bicycle Mechanics and Repair:

- The dynamic and static components of a mountain bike including:
  - Rims, hubs, spokes
  - Frame, fork and rear shock
  - Braking components

<ul style="list-style-type: none"> <li>• Identify a bike with an unsafe braking system</li> <li>• Describe the proper steps of the brake adjustment process</li> <li>• Identify the parts of a headset</li> <li>• Adjust/maintain and repair a headset</li> <li>• Identify the parts of front and rear derailleurs</li> <li>• Make adjustments to front and rear derailleurs to ensure smooth and accurate shifting</li> </ul> <p>Leadership Skills:</p> <ul style="list-style-type: none"> <li>• Prepare an outline detailing the proposed ride</li> <li>• Assess risks and possible areas of concern during proposed rides</li> <li>• Prepare expectations of conduct for the proposed ride</li> <li>• Outline possible first aid interventions and supplies needed for the student led ride</li> <li>• School and community outreach</li> <li>• Plan, prepare and lead an ability based group mountain bike ride</li> </ul>	<ul style="list-style-type: none"> <li>○ Cockpit control components</li> <li>○ Adjustable height seat post</li> <li>○ Drivetrain components</li> <li>• How to use the basic tools in their trailside tool kit</li> <li>• How to use an advanced full tool kit for extensive 'off the trail' repairs and maintenance</li> </ul> <p>Leadership skills:</p> <ul style="list-style-type: none"> <li>• Pre-trip planning and preparation for leading a group ride</li> <li>• How to plan and lead an appropriate, ability-based group ride</li> <li>• How to encourage others in the community to participate in mountain biking safely through school and community outreach</li> </ul>
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## Curricular Competencies – Elaborations

Grant writing, proposals, maintenance plans:

- 1) How can we identify projects/trails that are in need of maintenance?
- 2) What constitutes a sound management plan?
- 3) What is the importance of creating and following a management plan?
- 4) How do we ensure monies are being allocated to the correct project elements?
- 5) What elements should be contained within a sound development plan?
- 6) How can we ensure multiple user groups have their specific needs addressed in a newly constructed or restored trail network?
- 7) How does trail material dictate the types of trails constructed?

Safety

- 1) Why is safety/first aid training essential for those guiding groups in an outdoor setting.
- 2) Why is a complete and restocked first aid kit needed?
- 3) Why is awareness key in the mitigation of risk?
- 4) Why is specific importance placed on safety protocol?
- 5) What is the significance of planning for all scenarios that may present during an activity?

Skill development

- 1) Why is proper body position so important to develop over a variety of terrain?
- 2) How does shifting balance affect traction and stability?
- 3) What are the fundamentals of advanced cornering techniques?
- 4) How can cadence affect pedaling efficiency and power?
- 5) How does trail scanning mitigate risk?

Strength, balance and flexibility

- 1) Why is importance placed on flexibility, strength and balance during any activity?
- 2) Why is understanding anatomy key to ensuring decreased instances of injury?
- 3) How can conditioning affect our ability to recover from injury or activity?
- 4) Why is flexibility so important in the reduction of injury?
- 5) How does improving core strength affect riding ability?

Bike fitment, set-up, mechanics, technology and repair

- 1) What are the various tire related mechanical failures that may occur on a bike?
- 2) What tools and steps would be required when truing a wheel?
- 3) What are the part and function of a braking system?
- 4) How can brake setup affect ride quality of any bike?
- 5) How does the rear derailleur operate?
- 6) What settings are easily adjusted when out on the trail?

## Big Ideas – Elaborations

**Community and Planning:** Collaboration with user groups and needs provides quality development of sustainable resources

**Sample Questions to support inquiry with students:**

- 1) How do proper practices ensure the most possible opportunity for the most user groups when developing trail networks?
- 2) What key elements must be considered to ensure effective management plans?
- 3) What is the purpose of consulting, and working in concert with, established groups and ministries?

**Safety and First Aid:** Understanding safe practices and risk management is greatly complimented by First Aid training

**Sample Questions to support inquiry with students:**

- 1) How can a guide maximize his or her effectiveness to provide a safe and secure experience with a group?
- 2) What is the importance of proper safety training and equipment during any guided experience?
- 3) What is the importance of planning when organizing a group activity?

**Mountain Biking Skills:** Foundational skill development increases ability and enjoyment of sport, fitness and opportunity

**Sample Questions to support inquiry with students:**

- 1) How does body position affect stability?
- 2) What skills can be combined to create strong cornering mechanics?
- 3) How is center of mass related to stability in steep terrain?

**Leadership:** Development of leadership skills is ongoing

**Sample Questions to support inquiry with students:**

- 1) What qualities should a leader possess to ensure a safe experience in the outdoors?
- 2) How does risk management ensure a safer experience in a group setting?
- 3) What is the importance of regular stops and checks while participating in a group activity in the outdoors?

**Mechanics and Repair:** Increasing mechanical knowledge and ability promotes a deeper understanding and accessibility

**Sample Questions to support inquiry with students:**

- 1) What is the purpose of regular maintenance and repair?
- 2) How does the state of repair of your bike affect your riding experience?



## Summative Assessment:

### Recommended Instructional Components:

## Organizational Structure: Unit Descriptions

Unit	Title	Time
Unit 1	Grant Writing: Students will work in partnerships researching possible trail creation and development opportunities. Grant proposals, and funding requests designed to create and maintain trail-riding opportunities within the Salmon Arm area. Grants will be created by student partnerships and submitted to the appropriate organizations. Proposals will be evaluated on: detail contained within the proposal and the attention to the multiple needs and user groups that enjoy the trail networks. The Shuswap Cycling Club (SCC) and the Shuswap Trail Alliance (STA) have offered a partnership that will join the efforts of the students within the program with the needs and agreements of the community.	15 hours
Unit 2	Safety, First Aid and remote evacuation training: Students will receive basic first aid training specific to wilderness environments. This will be directed toward shock management, injury treatment and extraction to further care. Assessment will be connected to successful completion of the First aid unit. This unit will run before any riding takes place to ensure all members have adequate skills to assist in the event of injury. Students will receive Standard First Aid certificate upon completion of this unit.	15 hours
Unit 3	Environmental Sustainability/ Trail Building and Maintenance/Technology: Students will participate in the process of creating and maintaining trails in the local riding areas. Students will be taught the methods of proper sustainable trail construction. This includes: construction techniques, drainage, compaction, corner construction, and bridge building. Students will be a part of the development and maintenance program of the SCC & STA. Every year Salmon Arm has more frequent mountain bike tourist visits. Therefore, the tremendous value of proper trail development and maintenance is easily seen from both the perspective of recreational users and by the community in terms of revenue generation of tourist dollars. Students will be evaluated on all aspects of the building and maintenance projects: quality of build, maintenance plans, future development possibilities.	16 hours
Unit 4	Riding Skill Development: This course seeks to increase both skills and confidence pertaining to riding mountain bikes. Contained within the skill set of mountain biking are: Body position, balance, cornering, proper braking techniques, pedaling efficiency and a multitude of additional skills and knowledge. The instructor will provide weekly seminars on riding skills and these will be supplemented by seminars and clinics provided by local Pro riders. Skills will be evaluated and revisited, with the intention of consistently increasing ability, confidence, and mastery of specific skill sets.	42 hours
Unit 5	Physical Conditioning: Students will participate in cardiovascular endurance, strength, balance and flexibility training with the intention of maximizing performance and mitigating and reducing possible injuries. Evaluation and assessment will measure improvements in performance and charting of student goals throughout the term.	12 hours
Unit 6	Mechanics: Students will have weekly bike repair seminars. Repairs include: replacement of parts, general maintenance, and proper setups. Additional to the weekly repair seminars, local mechanics have offered to volunteer their time to teach specific modules pertaining to the specific components that require frequent maintenance. Students will be assessed on their mechanical proficiencies and trouble-shooting abilities.	15 hours

Unit 7	Leadership Skills and Technology: Students will be required to plan and lead a group ride. The group ride will include: route selection, route finding, use of trail application technology for location and emergency planning, risk assessment, expectations of conduct, and possible first aid interventions. Students will be assessed on the completeness of their plan, leadership skills, and successful completion of student led ride.	5 hours
	Total Hours	120 Hours

### Recommended Assessment Components:

#### Unit 1: Grant proposal writing

Learning Outcome	Extending 5	Proficient 4	Developing 3	Emerging 2	Not Evident 1
Identify possible areas of development/ maintenance/ repair in collaboration with Shuswap Cycling Club (SCC) and the Shuswap Trail Alliance (STA) development plans	Clearly identified area follows SCC & STA development plan.	Identified area of development plan within the scope of the SCC & STA plan	Identified area of development but project falls somewhat outside of the SCC & STA development plan	Identified area of development needs significant revision to meet the scope of the SCC & STA plan	Does not meet the requirements of the SCC & STA development plan. Project redesign or relocation required
Invested Interests (II) respective requirements (e.g. Government ministries, First Nations) and collaboration	Acknowledges and adheres to requirements laid out by the IIs. Identifies drainage, habitat and impacts with no revision necessary	Adheres to most of the requirements outlined by MOE, minor adjustments needed to accurately address drainage, habitat and impacts	Adjustments need to be made to several areas of concern outlined by MOE guidelines and recommendations	Significant adjustments need to be made to meet the areas of concern outlined by MOE	Does not meet the requirements outlined by MOE. Project redrafting required
Meets recreational opportunities of multiple user groups	Considers multi-user group needs and recreational opportunities in a balanced fashion	Considers multi-user groups with bias towards one group	Considers multi-user groups with significant bias towards one group	Considers more than one user group but revisions needed to include additional groups	Does not acknowledge the needs of any other group seeking recreation in the outlined area of development

<b>Build plan and project costs</b>	Detailed outline of every element of the building/project costs	Outlines the key areas of projects costs. Minor revision.	Outlines most of the project costs. Revisions needed	Outlines some of the project costs. Revisions and reconsiderations needed	Does not address the specific costs adequately. Significant redrafting needed
<b>Outline of scheduled maintenance plan</b>	Clearly Expresses maintenance schedule	Outlines maintenance schedule	Outlines maintenance schedule but with some gaps	Identifies some elements of maintenance	Does not successfully identify areas of maintenance

## Unit 2: Basic first aid, remote evacuation, risk assessment

<b>Learning Outcome</b>	<b>Extending 5</b>	<b>Proficient 4</b>	<b>Developing 3</b>	<b>Emerging 2</b>	<b>Not Evident 1</b>
<b>Basic First Aid Theory</b>	Passes theoretical exam with 100%	Passes theoretical exam with +90%	Passes theoretical exam with +80%	Passes theoretical exam with +70%	Does not meet minimal theoretical passing grade. Repeat
<b>Basic First Aid Practical</b>	Passes theoretical exam with 100%	Passes theoretical exam with +90%	Passes theoretical exam with +80%	Passes theoretical exam with +70%	Does not meet minimal practical passing grade. Repeat
<b>Risk Assessment</b>	Identifies every risk present in the situation. Clearly outlines appropriate risk management	Identifies most potential hazards with appropriate risk management	Identifies most key risks. Risk management may be insufficient or inappropriate	Identifies some potential hazards. Risk management may be insufficient or inappropriate	Does not sufficiently identify key hazards. Risk management is inadequate
<b>First Aid Kit</b>	Kit contains every necessary item as well as unforeseen needs. Always carried and maintained	Kit contains every necessary item. Always carried and maintained.	Kit contains most necessary items. Always carried and maintained	Kit may be missing minor items or items are not identified adequately. Always carried	Kit may be missing major items or forgotten when out in the field.

### Unit 3: Rider skill development

Learning Outcome	Extending 5	Proficient 4	Developing 3	Emerging 2	Not Evident 1
<b>Develop proper body position over a variety of terrain types</b>	Always displays proper body position over all terrain types	Displays proper body position over most terrain types	Displays proper body position most of the time over some terrain types	Sometimes displays proper body position over terrain types	Does not yet demonstrate proper body position
<b>Understand balance points integral to maintaining stability.</b>	Demonstrates understanding of balance points and is able to fluidly shift fore and aft and side to side increase and maintain stability	Understands balance points and shifts between them to maintain stability	Understands balance points in most situations, but balance may become unstable in some situations	Sometimes understands balance points. Balance becomes unstable during basic shifts between balance points	Does not yet understand balances points and is often unstable.
<b>Cornering stability</b>	Can corner at high speeds with mastery of cornering dynamics.	Can corner at speed with fluidity.	Can corner with confidence and control.	Can corner but control is lacking or unbalanced.	Does not yet demonstrate control during cornering.
<b>Rules of conduct for bicycles/ cycling responsibility code and safety</b>	Always demonstrates adherence to the cycling code of conduct and is considerate of all users.	Closely adheres to cycling responsibility code.	Displays knowledge of cycling responsibility code with minor breaks in etiquette.	Understands most areas of the cycling responsibility code. Minor breaks in etiquette.	Does not yet understand the responsibility code. May cause unsafe situations or major breaks in etiquette.

#### Unit 4: Trail Building Techniques

Learning Outcome	Extending 5	Proficient 4	Developing 3	Emerging 2	Not Evident 1
<b>Understanding Soil sorting and compaction</b>	Finding zones for development with appropriate soil types for building throughout the entire building area	Finding zones with appropriate soils in most of the building areas.	Finding zones with some appropriate soils. Soils may need to be carried or moved for building plans	Finding areas that require significant effort needed to relocate appropriate soils	Selected areas unsuitable for building or those requiring unreasonable efforts to relocate soils
<b>Understanding types of construction and when and where they are appropriately used</b>	Always correctly identifies correct building practices and able to identify key build types including: bench cut, corner berms, bridging, rock work	Correctly identifies correct building practices and able to identify key build types including: bench cut, corner berms, bridging, rock work	Sometimes identifies correct building practices and able to identify key build types including: bench cut, corner berms, bridging, rock work	Needs support to identify correct building practices and able to identify key build types including: bench cut, corner berms, bridging, rock work	Does not understand and or cannot demonstrate correct building practices and unable to identify key build types including: bench cut, corner berms, bridging, rock work
<b>Habitat and impact assessment</b>	Always identifies appropriate impact mitigation. Identifies manages and adapts planning to avoid sensitive habitat and species.	Identifies appropriate impact mitigation. Identifies manages and adapts planning to avoid sensitive habitat and species.	Identifies appropriate impact mitigation most of the time. Identifies manages and adapts planning to avoid sensitive habitat and species most of the time.	Sometimes identifies appropriate impact mitigation. Identifying shifts in planning and practice to avoid sensitive habitat and species needs support.	Does not adequately identify appropriate impact mitigation. Does not adequately manage and adapt planning to avoid sensitive habitat and species.



**Unit 6: Mechanics**

Modularized checklist. Students will demonstrate mastery in the following repair modules.

Module	Demonstrated mastery: Use check or X to mark each attempted module. When module is passed as indicated by the check proceed to the next repair module.
Identify tire and tubes that need repairing	
Determine the cause(s) of the flat of damage	
Repair tubes/ tires using the proper tools	
Describe and demonstrate the steps required to true a wheel and the equipment/tools required	
Name the components of the different types of brake systems	
Identify a bike with an unsafe braking system	
Describe and demonstrate the proper steps of the brake adjustment process	
Identify the parts of a headset	
Adjust/maintain and repair a headset	
Identify the parts of front and rear derailleurs	
Describe and demonstrate steps required to adjust, maintain and service and adjustable height seat post.	
Make adjustments to front and rear derailleurs to ensure smooth and accurate shifting	

## Unit 7: Leadership

Students will be required to plan and lead a group ride. The group ride will include: route selection, route finding, risk assessment, expectations of conduct, and possible first aid interventions. Students will be assessed on the completeness of their plan, leadership skills, and successful completion of student led ride.

<b>Learning Outcome</b>	<b>Extending 5</b>	<b>Proficient 4</b>	<b>Developing 3</b>	<b>Emerging 2</b>	<b>Not Evident 1</b>
<b>Preparation of a detailed itinerary of the group ride</b>	Selected ride is of ideal length and ability level for the group, reasonable timeline, highly organized	Selected ride is of appropriate length and ability level for the group, reasonable timeline, well organized	Selected ride is of appropriate length and ability level for the group, reasonable timeline, organized. Some revision needed	Selected ride is may be slightly inappropriate in length and ability level for the group, somewhat unreasonable timeline, lacks sound organization. Extensive revision needed	Selected ride is inappropriate in length and ability level for the group, unreasonable timeline, lacks sound organization. Redrafting needed
<b>Risk Assessment and expectations of conduct and first aid protocols</b>	Clearly outlines risks and acceptable conduct in every element of the planned ride. First aid interventions and duties are clearly defined in a detailed fashion	Outlines risks and acceptable conduct in most elements of the planned ride. First aid interventions and duties are defined	Outlines risks and acceptable conduct in some elements of the planned ride. First aid interventions and duties are loosely defined. Revision needed	Outlines risks and acceptable conduct in few elements of the planned ride. First aid interventions and duties are not clearly defined. Extensive revision needed.	Does not adequately outline risks and acceptable conduct in most elements of the planned ride. First aid interventions and duties are not defined. Redrafting required