

Summer Mountaineering Leader

Lesson Plans and Instructor Schedule

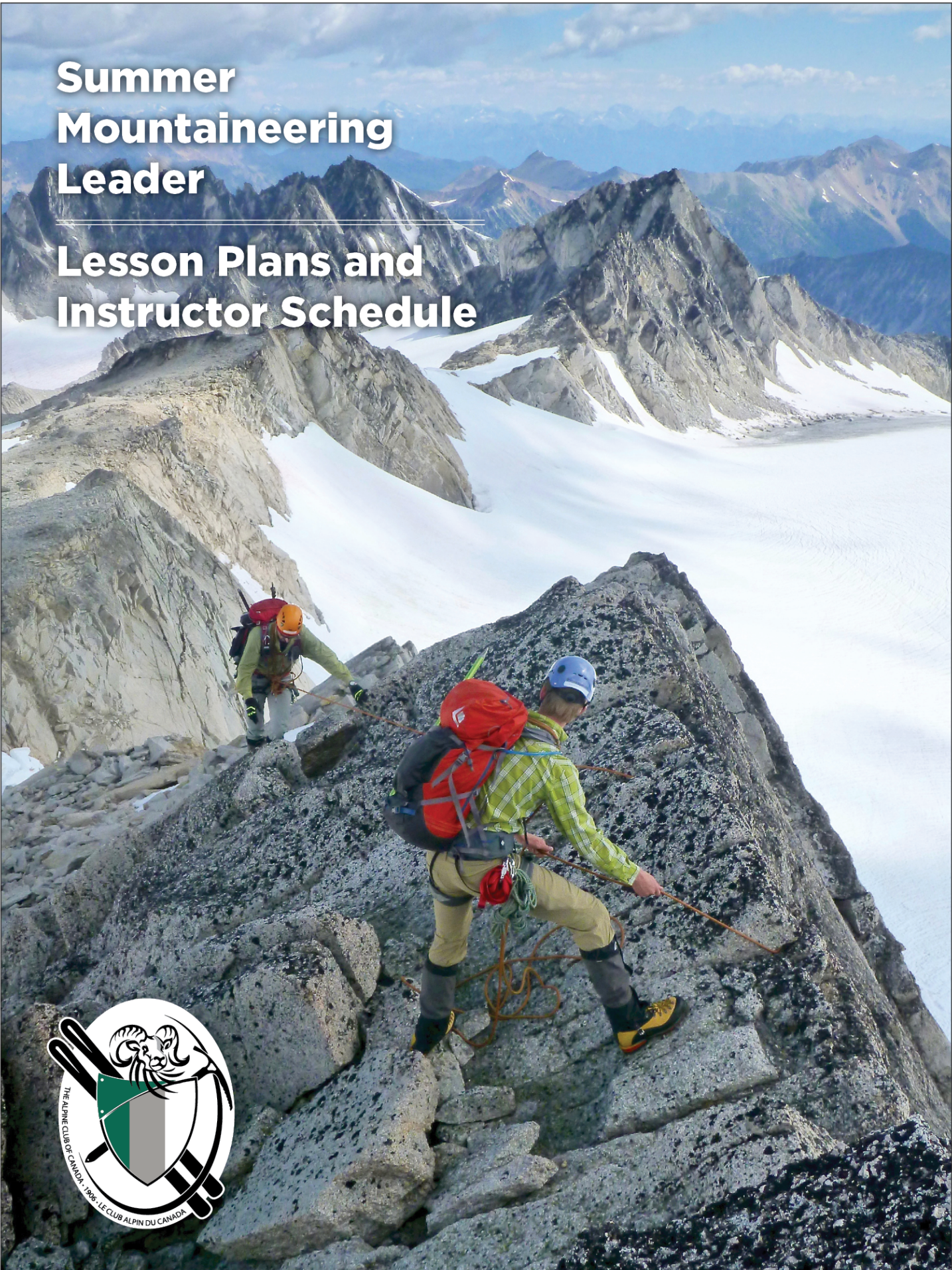


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Instructor Schedule

The Summer Mountaineering Leader Training Program has been assembled based upon the following schedule: The first two days are spent in the classroom (with applied exercises) to set a baseline of common knowledge. The next eight days are spent in the field. These days can be combined into a single trip but are best divided into two four-day trips. The first four days are focused on the application of rock skills. The second four days are focused on the application of snow and ice skills. Local section needs and training objectives may result in a different schedule or all or parts of this being taught as needed, but the materials and lesson descriptions here will provide a good idea of reasonable times for efficient delivery of training for various leader competencies.

NOTE: Avalanche (LP 22) could be combined with other modules as terrain/time/situation allows (See lesson plan, a full day if stand-alone)

First Two Days - Classroom

Day 1 – Design and Preparation

A full classroom day broken into morning, afternoon and evening topics (approx. 10 hrs. total)

Morning: (3 hrs.) plus breaks

- Designing a Summer Mountaineering Outing
 - Greetings and Course Introduction (LP 1)
 - Pre-Trip Planning Overview (LP 2)
 - Trip plan for Mountain Terrain (LP 3)

Afternoon: (2 hrs. 30 min.) plus breaks

- Preparing Participants for a Summer Mountaineering Outing
 - Risk communication with Participants (pre-trip) (LP 4)
 - Clothing and Equipment (LP 5)
 - Weather Gathering Information (LP 6)

Evening: (2 hrs.) plus breaks

- Delivery of Summer Mountaineering Outing
 - Group Management (LP 7)
 - Risk Management (LP 8)

Day 2 – Wilderness Ethics and Navigation

A full classroom day broken into morning and afternoon topics (5.7 hrs. plus lunch and breaks – approx. 8 hrs. total)

Morning: (3 hrs.) plus breaks

- Wilderness Ethics and Ecology (LP 9)
 - Principles of Low Impact Travel
 - Wildlife Issues
 - Interpretive Skills

Afternoon: (3 hrs.) plus breaks

- Navigation (LP 10)
 - Topographic Maps
 - Compass
 - Altimeter
 - GPS
 - Whiteout Navigation

Day 3 – Camping and Emergency Response

A full field day and overnight camp (8 hours)

- Expedition Techniques (LP 11)
 - Group Management
 - Plan logistics
 - Adaptation to environmental stresses
- Emergency Response (LP 12)
 - Performing First Aid
 - Emergency Communications
 - Group Management in Emergency Situations
- Water Crossings in Summer (LP 13)
 - Principles of water crossing
 - Hazard management
 - Water crossing techniques
- Camping Skills
 - Types of Shelters
 - Site Selection & Preparation
 - Meal Preparation for a Summer Environment
 - Fires

Day 4 – Rock Skills

A full field day and overnight camp (8 hours)

- Rope Management Techniques (LP 15)
 - Knots
 - Anchors
 - Belaying
 - Rappelling
 - Lowering
 - Movement skills – single pitch

Day 5 – Rock Rescue

A full field day and overnight camp (8 hours)

- Rock rescue (LP 16)
 - Secure fallen climber
 - Raises
 - Lowers
 - Ascending
-

Day 6 – Rock

A full field day (8 hours)

- Multi Pitch Rock Climbing (LP 17)
 - Route-finding
 - Movement skills
 - Coaching and instructing
 - Multi-pitch

Day 7 - Glacier

A full field day and overnight camp (8 hours)

- Glacier Travel (LP 18)
 - Glaciology
 - Roping up
 - Travel techniques
 - Crevasse rescue

Day 8 - Snow

A full field day and overnight camp (8 hours)

- Snow Climbing (LP 19)
 - Route-finding
 - Movement skills
 - Coaching and instructing
 - Multi-pitch
- *NOTE: Ideal if avalanche terrain module for Day 11 is combined here*

Day 9 - Ice

A full field day and overnight camp (8 hours)

- Ice Climbing (LP 20)
 - Route-finding
 - Movement skills
 - Coaching and instructing
 - Multi-pitch

Day 10 – Short-roping

A full field day (8 hours)

- Short-roping (LP 21)
 - Principles of short-roping
 - Terrain assessment
 - Limitations of short-roping
 - Roping up
-

Day 11 – Summer Avalanche Terrain

This could be combined with other modules as terrain/time/situation allows.

(See lesson plan, a full day if stand-alone)

- Avalanche (LP 22)
 - Plan for summer travel in avalanche terrain
 - Group management strategies
 - Equipment selection

Day	Lesson Name/Description	LP#	Chapter	Location	Goals	Objectives	DACUM	Method	Time (min)
1 AM	Greeting & Course Intro	1	Ch. 1 Ch. 3	Classroom	<ul style="list-style-type: none"> Welcome Emergency & Local contact numbers Course Agenda /Schedule Competencies and Assessment Waivers and ACC waiver delivery process 	<ul style="list-style-type: none"> Model course start Provide overview of course competencies Allow students to get to know each other Administer waivers according to ACC policies Gather relevant participant information (i.e. medical forms, waivers etc.) 	A3, E2	Visual media Lecture Group interaction	30
1 AM	Pre-Trip Planning Overview	2	Ch. 1 Ch. 2 Ch. 3	Classroom	<ul style="list-style-type: none"> Introduce and model the planning and decision making process Model the completion of a Trip Plan 	<ul style="list-style-type: none"> Establish trip objectives and participant requirements Describe local rules and regulations Screen trip participants Determine group size and leader/participant ratios Plan trip logistics Plan meals 	A1, A2, A3, A5, D4, F1, T2, F3	Lecture Visual media Group interaction Group exercise	75
1 AM	Trip plan for Mountain Terrain	3	Ch. 1	Classroom	<ul style="list-style-type: none"> Plan a route 	<ul style="list-style-type: none"> Select routes and alternatives (considering altitude) Use climbing grades as a tool to assist in planning trips Develop a contingency plan 	A4, A8	Lecture Visual media Group interaction	75

Day	Lesson Name/Description	LP#	Chapter	Location	Goals	Objectives	DACUM	Method	Time (min)
1 PM	Risk communication with Participants (pre-trip)	4	Ch. 1 Ch. 2	Classroom	<ul style="list-style-type: none"> Effectively communicate pertinent trip details to the trip participants Gather relevant participant information Complete a pre-trip risk assessment Assess hazards prior to departure 	<ul style="list-style-type: none"> Communicate trip details to participants Seek feedback from participants Communicate with participants to determine their risk propensity Ensure group members have appropriate avalanche equipment if necessary Ensure group members have appropriate avalanche training if necessary 	A6, A7, C1, A2, I1, I2	Lecture Visual media Group interaction	60
1 PM	Clothing and Equipment	5	Ch. 1 Ch. 2	Classroom	<ul style="list-style-type: none"> Manage clothing and equipment 	<ul style="list-style-type: none"> Coach participants on outdoor clothing & layering for summer Coach participants on equipment 	E6, F3	Lecture Visual media Group interaction	30
1 PM	Weather Gathering Information	6	Ch. 2 Ch. 15	Classroom	<ul style="list-style-type: none"> Introduce basic weather concepts that are relevant to summer backcountry travel Review how weather affects alpine terrain (and hazard) Integrate weather forecasts into the planning process 	<ul style="list-style-type: none"> Explain the basic concepts of weather Describe basic weather patterns Identify and interpret weather forecast information Monitor the weather Check the weather forecast to assess summer avalanche danger 	B1, B2, I3	Lecture Visual Media Group Interaction Group Exercises	60

Day	Lesson Name/Description	LP#	Chapter	Location	Goals	Objectives	DACUM	Method	Time (min)
1 EV	Group Management	7	Ch. 3	Classroom	<ul style="list-style-type: none"> Describe the principles of group management 	<ul style="list-style-type: none"> Account for group dynamics in managing a mountaineering group Describe several strategies to resolve simple conflicts 	D6, D7	Lecture Visual media Group interaction	60
1 EV	Risk Management	8	Ch. 1 Ch. 3 Ch. 15	Classroom	<ul style="list-style-type: none"> Describe the principles of risk management 	<ul style="list-style-type: none"> Identify factors that compromise group safety in order to enable mitigating action Recognize personal limitations in summer travel Describe strategies to maintain situational awareness Create an evacuation plan Identify wildlife hazards to enable mitigating action Identify wilderness objective hazards to enable mitigating action Time summer trips to reduce summer avalanche exposure Describe when to use personal protective equipment 	D2, E1, E3, E4, E5, E7, F4, I4	Lecture Visual media Group interaction	60

Day	Lesson Name/Description	LP#	Chapter	Location	Goals	Objectives	DACUM	Method	Time (min)
2 AM	Wilderness Ethics and Ecology	9	Ch. 4	Classroom	<ul style="list-style-type: none"> Describe low impact travel, camping and waste management techniques 	<ul style="list-style-type: none"> Discuss access and ethics issues Describe low impact backcountry travel and camping practices Use basic interpretive skills to enhance the knowledge of ecology and history Describe local wildlife issues to participants 	C1, C2, C3, C4, C5	Lecture Visual Media Group Interaction	180
2 PM	Navigation	10	Ch. 5	Classroom	<ul style="list-style-type: none"> Demonstrate advanced navigation skills 	<ul style="list-style-type: none"> Apply knowledge of terrain to facilitate route-finding Use topographic maps Interpret map features to terrain, and terrain to map features Use a compass Account for magnetic declination Resect positions Use an altimeter to aid in navigation Use a GPS for navigation Navigate in a whiteout Prepare a route card Use wands to aid in summer whiteout navigation 	G1, G2, G3, G4, G5, G6, G7	Lecture Visual Media Group Interaction Classroom Tabletop Exercises	180

Day	Lesson Name/Description	LP#	Chapter	Location	Goals	Objectives	DACUM	Method	Time (min)
3 AM	Expedition Techniques	11	Ch. 7	Classroom	<ul style="list-style-type: none"> Apply summer expedition techniques and skills Describe the process of adaptation to environmental stresses 	<ul style="list-style-type: none"> Prepare and use a sled for hauling on extended trips Plan logistics for extended trips Describe basic physiological changes at altitude Monitor the group for symptoms of altitude-related illness Recognize and treat altitude related illness 	V1, V2, V3, V4, W5, D8	Lecture Demonstration Group interaction	60
3 AM	Emergency Response	12	Ch. 8	Field	<ul style="list-style-type: none"> Effectively respond to emergencies in a summer mountaineering setting 	<ul style="list-style-type: none"> Apply basic summer survival skills Perform advanced wilderness first aid Plan for emergency communications Use emergency communications devices 	W1, W2, W3, W4	Lecture Demonstration Group interaction	120
3 AM	Water Crossings in Summer	13	Ch. 14	Field	<ul style="list-style-type: none"> Safely cross rivers and lakes in summer 	<ul style="list-style-type: none"> Assess water hazard management Demonstrate water crossing techniques 	U1	Lecture Demonstration Group interaction	60

Day	Lesson Name/Description	LP#	Chapter	Location	Goals	Objectives	DACUM	Method	Time (min)
3 PM	Camping Skills	14	Ch. 6	Field	<ul style="list-style-type: none"> • Demonstrate the principles of camping and shelter construction 	<ul style="list-style-type: none"> • Prepare a tent or camping site • Describe the principles of low impact site selection above and below tree line • Demonstrate meal preparation • Collect water • Demonstrate the principles of sleeping systems • Demonstrate fire lighting skills • Demonstrate the principles of emergency shelters • Demonstrate the principles of kitchen design 	C2, T1, T3, T4	Lecture Demonstration Group interaction	240

Day	Lesson Name/Description	LP#	Chapter	Location	Goals	Objectives	DACUM	Method	Time (min)
4 AM PM	Rope Management Techniques	15	Ch. 9	Field	<ul style="list-style-type: none"> Demonstrate rope handling skills 	<ul style="list-style-type: none"> Tie climbing knots Construct basic anchors for climbing & rappelling Descend a rope by rappelling (including dealing with stuck ropes) Lower a climber Communicate by using clear climbing commands Ascend a fixed rope 	N1, N2, N3, N4, N5, N7	Lecture Demonstration Group interaction	480
Day	Lesson Name/Description	LP#	Chapter	Location	Goals	Objectives	DACUM	Method	Time (min)
5 AM PM	Rock Rescue	16	Ch. 9 Ch. 11	Field	<ul style="list-style-type: none"> Perform advanced rock rescue 	<ul style="list-style-type: none"> Tie off a belay to secure a fallen climber Raise a climber using a simple pulley system Lower a fallen climber in control Ascend a fixed rope 	Q1, Q2, Q3, Q4	Lecture Demonstration Group interaction	480

Day	Lesson Name/Description	LP#	Chapter	Location	Goals	Objectives	DACUM	Method	Time (min)
6 AM PM	Multi-pitch Rock Climbing	17	Ch. 3 Ch. 9 Ch. 11 Ch. 12	Field	<ul style="list-style-type: none"> Demonstrate climbing and belay techniques 	<ul style="list-style-type: none"> Demonstrate fluid movement skills on rock terrain Apply knowledge of mountain terrain to aid in route-finding on rock Rope up for multi-pitch climbing Belay a lead climber in summer Place rock protection while leading Locate a safe belay station site Set up anchors for multi-pitch climbing on rock Belay a second directly off an anchor Use fixed point anchor belays Coach & motivate participants Use running belays Use strategies to maintain situational awareness Supervise & monitor participants (lead & sweep) Pace a group Manage transitions Carry out basic equipment maintenance and repair 	K1, K2, K3, O1, O2, O3, O4, R1, R2, R4, R6, E5, D1, D3, D5, F2	Demonstration Group interaction	480

Day	Lesson Name/Description	LP#	Chapter	Location	Goals	Objectives	DACUM	Method	Time (min)
7 AM PM	Glacier Travel	18	Ch. 3 Ch. 9 Ch. 10 Ch. 12	Field	<ul style="list-style-type: none"> Apply glacier travel skills and techniques 	<ul style="list-style-type: none"> Rope up for glacier travel Apply knowledge of mountain terrain to aid in route-finding on glacier Negotiate crevassed terrain Perform basic and advanced crevasse rescue Ascend a rope Carry out basic equipment maintenance and repair 	P1, P2, P3, P4, N6, F2	Demonstration Group interaction	480

Day	Lesson Name/Description	LP#	Chapter	Location	Goals	Objectives	DACUM	Method	Time (min)
8 AM PM	Snow Climbing	19	Ch. 3 Ch. 12 Ch. 15	Field	<ul style="list-style-type: none"> Demonstrate fluid mountain travel skills on snow 	<ul style="list-style-type: none"> Apply knowledge of snow terrain to aid in route-finding on snow Demonstrate kicking box steps and cross-over steps on snow Demonstrate glissading on snow Demonstrate self-arrest technique on snow in four basic attitudes Demonstrate use of crampons on snow Place snow protection while leading Set up anchors for multi-pitch climbing on snow Coach & motivate participants Use strategies to maintain situational awareness Supervise & monitor participants (lead & sweep) Pace a group Manage transitions Carry out basic equipment maintenance and repair 	L1, L2, L3, L4, L5, R5, R6, K3, E5, D1, D3, D5, F2	Demonstration Group interaction	480

Day	Lesson Name/Description	LP#	Chapter	Location	Goals	Objectives	DACUM	Method	Time (min)
9 AM PM	Ice Climbing	20	Ch. 3 Ch. 12	Field	<ul style="list-style-type: none"> Demonstrate fluid mountain travel skills on ice 	<ul style="list-style-type: none"> Apply knowledge of mountain terrain to route-finding on ice Ascend ice slopes using ice axe and crampons Demonstrate fluid movement skills on ice terrain Place ice protection while leading Set up anchors for multi-pitch climbing on ice Coach & motivate participants Use several strategies to maintain situational awareness Supervise & monitor participants (lead & sweep) Pace a group Manage transitions Carry out basic equipment maintenance and repair 	M1, M2, M3, R3, R6, K3, E5, D1, D3, D5, F2	Demonstration Group interaction	480

Day	Lesson Name/Description	LP#	Chapter	Location	Goals	Objectives	DACUM	Method	Time (min)
10 AM PM	Short-roping	21	Ch. 3 Ch. 13	Field	<ul style="list-style-type: none"> Apply short-roping techniques 	<ul style="list-style-type: none"> Describe the dangers and limitations of short roping Rope up for short-roping Apply knowledge of mountain terrain to aid in route-finding for short-roping on rock, snow and ice Negotiate simple terrain while moving together short roped Belay a second using terrain belays Belay a second using body braces and belays Use terrain as running belays during short roping Use several strategies to maintain situational awareness Supervise & monitor participants (lead & sweep) Pace a group Manage transitions Coach & motivate participants 	S1, S2, S3, S4, S5, S6, K1, K3, L1, M1, E5, D1, D3, D5	Demonstration Group interaction	480

Day	Lesson Name/Description	LP#	Chapter	Location	Goals	Objectives	DACUM	Method	Time (min)
11 AM PM	Avalanche	22	Ch. 15	Field	<ul style="list-style-type: none"> • Manage a group in avalanche terrain 	<ul style="list-style-type: none"> • Evaluate avalanche terrain • Observe avalanche activity • Monitor snow conditions to aid in decision making in avalanche terrain • Monitor weather to aid in decision making in avalanche terrain • Use strategies to maintain situational awareness in avalanche terrain 	B1, B2, E4, F4, I1, I2, I3, I4, J1, J2, J3, J4	Demonstration Group interaction	480

Lesson Plan 1: Greeting & Course Introduction

Learning Domain – Cognitive

(Classroom)

<p>Greeting & Course Introduction: 30 minutes</p> <p>Bridge-in: 1 minute</p> <p><i>Welcome – introduce self, instructor team</i></p>
<p>Objective: 2 minutes</p> <ul style="list-style-type: none"> • By the end of the lesson, participants will: • Collect a list of emergency and local contact numbers. • Review the course agenda and schedule. • Review the core competencies and assessment procedure. • Complete an ACC waivers delivery process. <p>Pre-test: 4 minutes</p> <p><i>Quick check in of entry points for participants – levels of expertise</i></p>

Participatory learning: 22 minutes

Timing	Component	Actions of the instructor	Actions of the participant	Resources
7 min	Course agenda	<i>Model course start. Introduce instructor(s) and highlight their background(s) and experience. Review the course agenda and structure.</i>	<i>Watch, listen and ask questions.</i>	
5 min	Competencies	<i>Provide overview of course competencies</i>	<i>Watch, listen and ask questions.</i>	Visual media Lecture
5 min	Meet and greet	<i>Allow students to get to know each other.</i>	<i>In pairs – interview and present your partner to the group.</i>	Group interaction
5 min	Waivers	<i>Administer waivers according to ACC policies.</i>	<i>Read and sign waiver.</i>	Waivers, pens

Summary/Closure: 1 minute

[Link to LP 2 Pre-trip Planning Overview](#)

Lesson Plan 2: Pre-Trip Planning

Backcountry Winter Hazards & Travel Considerations

(Classroom)

Pre-Trip Planning Overview: 75 minutes

Bridge-in: 1 minute

Shipton – planning on the back of an envelope

Objective: 2 minutes

By the end of the lesson, participants will:

- Develop a trip plan that includes trip logistics and meals.
- Integrate weather forecasts into the planning process.
- Complete a pre-trip risk assessment.
- Model the completion of a Trip Plan.
- Prepare clothing and equipment appropriate for the trip.

Pre-test: 2 minutes

Who has planned a summer mountaineering trip?

Participatory learning: 70 minutes

Timing	Component	Actions of the instructor	Actions of the participant	Resources
25 min	Develop a trip plan	<i>Introduce and model the planning and decision-making process.</i>	<i>Establish trip objectives. Plan trip logistics.</i>	Group interaction
10 min	Develop a meal plan	<i>Introduce and model the planning and decision-making process.</i>	<i>Plan meals. Check for allergies.</i>	Group interaction
5 min	Integrate weather forecasts	<i>Demonstrate weather resources.</i>	<i>Watch and listen.</i>	Visual media Internet connection
15 min	Complete a pre-trip risk assessment	<i>Describe local rules and regulations. Screen trip participants & select ratios.</i>	<i>Watch and listen.</i>	
15 min	Prepare clothing and equipment	<i>Demonstrate clothing and equipment.</i>	<i>Watch and listen.</i>	Examples of clothing and equipment

Summary/Closure 5 minutes

Review required clothing and equipment

Final check of completed trip plan

Lesson Plan 3: Trip Plan for Mountain Terrain

Learning Domain – Cognitive

(Classroom)

<p>Trip Plan for Mountain Terrain: 75 minutes</p> <p>Bridge-in: 1 minute</p> <p><i>Tell a story that relates to the importance of terrain selection</i></p>
<p>Objective: 1 minute</p> <p>By the end of the lesson, participants will:</p> <ul style="list-style-type: none"> • Select routes and alternatives (considering altitude). • Use climbing grades as a tool to assist in planning trips. <p>Pre-test: 5 minutes</p> <p><i>What tools do you use to analyze terrain?</i></p>

Participatory learning: 65 minutes

Timing	Component	Actions of the instructor	Actions of the participant	Resources
20 min	Route selection	<i>Describe key components of route selection.</i>	<i>Watch, listen and ask questions.</i>	Projector
15 min	Plan a rock route	<i>Give an example. Coach participants.</i>	<i>Plan the route.</i>	Guide books Maps Internet resources
15 min	Plan a snow and ice route	<i>Give an example. Coach participants.</i>	<i>Plan the route.</i>	Guide books Maps Internet resources
15 min	Plan a glacier traverse	<i>Give an example. Coach participants.</i>	<i>Plan the route.</i>	Guide books Maps Internet resources

Summary/Closure: 3 minutes

Review key elements of terrain selection.

Lesson Plan 4: Risk Communication with Participants (pre-trip)

Learning Domain – Cognitive

(Classroom)

Risk Communication with Participants (pre-trip): 60 minutes

Bridge-in: 2 minutes

Tell a story that relates to the importance of terrain selection

Objective: 3 minutes

By the end of the lesson, participants will:

- Select routes and alternatives (considering altitude).
- Use climbing grades as a tool to assist in planning trips.

Pre-test: 5 minutes

What tools do you use to analyze terrain?

Participatory learning: 50 minutes

Timing	Component	Actions of the instructor	Actions of the participant	Resources
10 min	Risk communication	<i>Describe importance of information sharing.</i>	<i>Watch, listen and ask questions.</i>	Lecture Visual media
20 min	Trip details	<i>Effectively communicate pertinent trip details to the trip participants.</i>	<i>Watch, listen and ask questions.</i>	Group interaction
20 min	Participant information	<i>Gather relevant participant information.</i>	<i>Watch, listen and ask questions.</i>	Group interaction

Summary/Closure: 2 minutes

Review trip details.

Stress the importance of communication if anything changes

Lesson Plan 5: Clothing and Equipment

Learning Domain – Cognitive

(Classroom)

<p>Clothing and Equipment: 30 minutes</p> <p>Bridge-in: 1 minute</p> <p><i>There is no bad weather, only poorly equipped climbers</i></p>
<p>Objective: 1 minute</p> <p>By the end of the lesson, participants will:</p> <ul style="list-style-type: none"> • Prepare clothing and equipment appropriate for the trip. <p>Pre-test: 5 minutes</p> <p><i>What do you have / prefer for clothing and equipment?</i></p>

Participatory learning: 20 minutes

Timing	Component	Actions of the instructor	Actions of the participant	Resources
5 min	Layering	<i>Demonstrate layering principle.</i>	<i>Watch, listen and ask questions.</i>	Clothing
5 min	Layering	<i>Coach participants on outdoor clothing & layering for summer.</i>		
5 min	Equipment	<i>Demonstrate equipment.</i>	<i>Watch, listen and ask questions.</i>	Equipment
5 min	Equipment	<i>Coach participants on equipment selection.</i>		

Summary/Closure: 3 minutes

Review clothing and equipment list

Lesson Plan 6: Weather Gathering Information

Learning Domain – Cognitive

(Classroom)

<p>Weather Gathering Information: 60 minutes</p> <p>Bridge-in: 1 minute</p> <p><i>You cannot change the weather, so you need to learn to adapt as the weather changes.</i></p>
<p>Objective: 2 minutes</p> <p>By the end of the lesson, participants will:</p> <ul style="list-style-type: none"> • Explain the basic concepts of weather. • Describe basic weather patterns in Western Canada. • Identify and interpret weather forecast information. • Integrate weather forecasts into the planning process. • Interpret the implication of the weather forecast on summer avalanche danger. • Analyze how weather affects alpine terrain (and hazard). <p>Pre-test: 1 minute</p> <p><i>How do you get your weather information?</i></p>

Participatory learning: 55 minutes

Timing	Component	Actions of the instructor	Actions of the participant	Resources
30 min	Basic weather forecasting	<p>Describe</p> <ul style="list-style-type: none"> • Atmospheric pressure • Cloud formations • Warm and cold fronts • Lifting mechanisms • Jet stream • 500 mb charts 	<i>Watch, listen and ask questions.</i>	Lecture Visual media
25 min	Current weather	<p><i>Demonstrate online resources.</i></p> <p><i>Evaluate current conditions and the impact on terrain.</i></p>	<i>Watch, listen and ask questions.</i>	Lecture Visual media

Summary/Closure: 1 minute

Review key concepts and basic weather patterns.

Lesson Plan 7: Group Management

Learning Domain – Cognitive

(Classroom)

<p>Lesson Title: Group Management: 60 minutes</p> <p>Bridge-in: 1 minute</p> <p><i>Have you ever been angry at, disappointed or let down, by a group member?</i></p>
<p>Objective: 2 minutes</p> <p>By the end of the lesson, participants will:</p> <ul style="list-style-type: none"> Describe the principles of group management. Describe several strategies to resolve simple conflicts. Account for group dynamics in managing a mountaineering group. <p>Pre-test: 2 minutes</p> <p><i>How do you deal with a diversity of needs and expectations within a group?</i></p>

Participatory learning: 50 minutes

Timing	Component	Actions of the instructor	Actions of the participant	Resources
20 min	Leadership Styles	<p><i>Discuss various leadership styles.</i></p> <p><i>Discuss and describe situational leadership.</i></p>	<p><i>Watch, listen and ask questions.</i></p>	<p>Lecture</p> <p>Visual media</p>
15 min	Group Dynamics	<p><i>Account for group dynamics in managing a mountaineering group.</i></p>	<p><i>Discuss previous group situations.</i></p>	<p>Flipchart</p>
15 min	Conflict Resolution	<p><i>Facilitate a discussion of sources of conflict.</i></p> <p><i>Describe several strategies to resolve simple conflict.</i></p>	<p><i>Discuss of sources of conflict.</i></p> <p><i>Discuss resolution strategies.</i></p>	<p>Flipchart</p>

Summary/Closure: 5 minutes

Emphasize the need for open and honest communication to manage group dynamics.

Lesson Plan 8: Risk Management

Learning Domain – Cognitive

(Classroom)

<p>Risk Management: 60 minutes</p> <p>Bridge-in: 1 minute</p> <p><i>Do you always know when you are at risk?</i></p>
<p>Objective: 5 minutes</p> <p>By the end of the lesson, participants will:</p> <ul style="list-style-type: none"> • Identify factors that compromise group safety in order to enable mitigating action. • Identify wildlife hazards to enable mitigating action. • Time summer trips to reduce summer avalanche exposure. • Describe when to use personal protective equipment. • Recognize personal limitations in summer travel. • Describe strategies to maintain situational awareness (SA). • Create an evacuation plan. <p>Pre-test: 5 minutes</p> <p><i>Who has dealt with an emergency evacuation? What were the factors that led to the emergency?</i></p>

Participatory learning: 45 minutes

Timing	Component	Actions of the instructor	Actions of the participant	Resources
15 min	Hazard identification	<i>Facilitate hazard analysis.</i>	<i>Identify factors: wildlife, terrain, snow and ice conditions, weather.</i>	Flipchart
15 min	Human Factors	<i>Describe situational awareness.</i>	<i>List methods of maintaining situational awareness.</i> <i>Recognize personal limitations.</i>	Flipchart
15 min	Evacuation	<i>Facilitate an evacuation plan.</i>	<i>Create an evacuation plan.</i>	Flipchart

Summary/Closure: 4 minutes

Reinforce the need for constant vigilance through a high level of situational awareness.

Lesson Plan 9: Wilderness Ethics and Ecology

Learning Domain – Cognitive

(Classroom)

<p>Wilderness Ethics and Ecology: 180 minutes</p> <p>Bridge-in: 1 minute</p> <p><i>Are wilderness ethics important?</i></p>	180 minutes
<p>Objective: 2 minutes</p> <p>By the end of the lesson, participants will:</p> <ul style="list-style-type: none"> • Describe low impact travel, camping and waste management techniques. • Discuss access and ethics issues. • Describe low impact backcountry travel and camping practices. • Use basic interpretive skills to enhance the knowledge of ecology and history. • Describe local wildlife issues. <p>Pre-test: 5 minutes</p> <p><i>What is your favourite plant and animal? Why?</i></p>	

Participatory learning: 167 minutes

Timing	Component	Actions of the instructor	Actions of the participant	Resources
30 min	Access and ethics issues	<i>Facilitate discussion.</i>	<i>Discuss current issues.</i>	
60 min	Low impact practices	<i>Facilitate discussion.</i>	<i>List and describe low impact practices.</i>	Flipchart
60 min	Interpretive skills	<i>Describe basic interpretive skills.</i>	<i>Watch, listen and ask questions.</i>	Lecture Visual media
17 min	Wildlife issues	<i>Facilitate discussion.</i>	<i>Discuss current issues.</i>	

Summary/Closure: 5 minutes

Reinforce the concept of mountaineers as stewards of the land.

Lesson Plan 10: Navigation

Learning Domain – Cognitive

(Classroom)

Navigation: 180 minutes

Bridge-in: 1 minute

How many times have you been lost or geographically embarrassed?

Objective: 3 minutes

By the end of the lesson, participants will

- Apply knowledge of terrain to facilitate route-finding.
- Use topographic maps.
- Interpret map features to terrain, and terrain to map features.
- Use a compass.
- Account for magnetic declination.
- Resect positions.
- Use an altimeter to aid in navigation.
- Use a GPS for navigation.
- Navigate in a whiteout.
- Prepare a route card.
- Use wands to aid in summer whiteout navigation.

Pre-test: 1 minute

Assess previous experience with map and compass.

Participatory learning: 170 minutes

Timing	Component	Actions of the instructor	Actions of the participant	Resources
45 min	Maps	<p><i>Describe topo maps.</i></p> <p><i>Describe contours.</i></p> <p><i>Demonstrate how to interpret map features to terrain, and terrain to map features.</i></p>	<p><i>Watch, listen and ask questions.</i></p> <p><i>Practice grid references.</i></p> <p><i>Practice map to terrain and vice versa.</i></p>	<p>Lecture</p> <p>Visual media, terrain photos, maps</p>
45 min	Compass	<p><i>Describe compass features and uses.</i></p> <p><i>Describe magnetic declination.</i></p> <p><i>Demonstrate taking bearings from map to terrain and vice versa.</i></p> <p><i>Demonstrate resection using: 2 or 3 bearings, altimeter, physical feature.</i></p>	<p><i>Use a compass.</i></p> <p><i>Calculate magnetic declination.</i></p> <p><i>Practice taking bearings.</i></p> <p><i>Practice resections.</i></p>	<p>Visual media, compass</p>

10 min	<i>Altimeter</i>	<i>Demonstrate altimeter use.</i>	<i>Watch, listen and ask questions</i>	Altimeter
45 min	Route Card	<i>Facilitate the creation of a route card for white out navigation.</i> <i>Describe how to navigate around obstacles.</i> <i>Describe dead reckoning.</i>	<i>Create a route card.</i> <i>Use travel time estimates.</i>	Group work
10 min	Wands, GPS and altimeter	<i>Describe the integration of multiple tools.</i>	<i>Watch, listen and ask questions.</i>	Lecture Visual media
15 min	Digital tools	<i>Demonstrate Google Earth, Phone Apps.</i>	<i>Watch, listen and ask questions.</i>	Computer and smart phone

Summary/Closure: 5 minutes

Review integration of tools into a navigation system/process.

Lesson Plan 11: Expedition Techniques

Learning Domain – Cognitive

(Classroom)

<p>Expedition Techniques: 60 minutes</p> <p>Bridge-in: 1 minute</p> <p><i>Has anyone had altitude sickness?</i></p>
<p>Objective: 2 minutes</p> <p>By the end of the lesson, participants will:</p> <ul style="list-style-type: none"> • Apply summer expedition techniques and skills. • Describe the process of adaptation to environmental stresses. • Plan logistics for extended trips. <p>Pre-test: 2 minutes</p> <p><i>Who has been on a trip longer than 14 days?</i></p> <p><i>Who has been above 5000m?</i></p>

Participatory learning: 50 minutes

Timing	Component	Actions of the instructor	Actions of the participant	Resources
20 min	Summer expedition techniques	<p><i>Describe big picture logistics for extended trips.</i></p> <p><i>Describe importance of leadership and group dynamics.</i></p> <p><i>Describe conflict resolution techniques.</i></p>	<p><i>Watch, listen and ask questions.</i></p>	<p>Lecture</p> <p>Visual media</p>
15 min	Environmental stresses	<p><i>Describe basic physiological changes at altitude.</i></p> <p><i>Describe signs and symptoms of high-altitude sickness.</i></p> <p><i>Describe treatments for altitude sickness.</i></p> <p><i>Monitor the group for symptoms of altitude-related illness.</i></p>	<p><i>Recognize and treat altitude related illness.</i></p>	<p>Lecture</p> <p>Visual media</p>

15 min	Plan logistics	<p><i>Facilitate planning.</i></p> <p><i>List the key components of a medical plan.</i></p> <p><i>Describe food and fuel planning for extended trips</i></p> <p><i>Demonstrate use of sleds.</i></p>	<p><i>Plan logistics for extended trips.</i></p> <p><i>Prepare a medical plan</i></p> <p><i>Calculate food and fuel needs for an extended trip.</i></p> <p><i>Prepare and use a sled for hauling on extended trips.</i></p>	Sleds
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Summary/Closure: 5 minutes

Planning, preparation and training are the key elements in building toward a successful extended trip.

Review signs, symptoms and treatment for altitude sickness.

Lesson Plan 12: Emergency Response

Learning Domain – Psych-motor

(Field)

<p>Emergency Response: 120 minutes</p> <p>Bridge-in: 1 minute</p> <p><i>Has anyone had Who has dealt with a real accident?</i></p>
<p>Objective: 2 minutes</p> <p>By the end of the lesson, participants will:</p> <ul style="list-style-type: none"> Effectively respond to emergencies in a summer mountaineering setting <p>Pre-test: 2 minutes</p> <p><i>What level of wilderness first aid training do you have?</i></p>

Participatory learning: 110 minutes

Timing	Component	Actions of the instructor	Actions of the participant	Resources
30 min	Wilderness first aid	<i>Review advanced first aid principles.</i>	<i>Watch, listen and ask questions.</i>	Lecture Demonstration
45 min	Wilderness first aid scenarios	<i>Deliver scenarios.</i>	<i>Respond to scenarios.</i>	Group interaction
15 min	Emergency communications	<i>Demonstrate forms of emergency communications.</i> <i>Describe what you would communicate in an emergency.</i>	<i>Practice forms of emergency communications.</i>	Lecture Demonstration
20 min	Summer survival skills	<i>Demonstrate basic summer survival skills.</i>	<i>Watch, listen and ask questions.</i>	Lecture Demonstration

Summary/Closure: 5 minutes

One hopes to never need or use these skills, but they must be at a high level, so constant practise is needed.

Lesson Plan 13: Water Crossings in Summer

Learning Domain – Psych-motor

(Field)

<p>Water Crossings in Summer: 60 minutes</p> <p>Bridge-in: 1 minute</p> <p><i>How deep does a water crossing need to be, to pose a hazard?</i></p>
<p>Objective: 2 minutes</p> <p>By the end of the lesson, participants will:</p> <ul style="list-style-type: none"> • Demonstrate water crossing techniques for rivers and lakes in summer. <p>Pre-test: 2 minutes</p> <p><i>Who has crossed moving water that was knee deep? What about hip deep?</i></p>

Participatory learning: 50 minutes

Timing	Component	Actions of the instructor	Actions of the participant	Resources
10 min	Water hazard management	<i>Describe water hazards.</i>	<i>Watch, listen and ask questions.</i>	Lecture Demonstration
10 min	Water hazard management	<i>Demonstrate hazard assessment.</i>	<i>Watch, listen and ask questions.</i>	Lecture Demonstration
15 min	Water crossing techniques	<i>Demonstrate above water crossing techniques.</i>	<i>Practice above water crossing techniques.</i>	Group interaction Wet gear Poles, rope
15 min	Water crossing techniques	<i>Demonstrate in water crossing techniques.</i>	<i>Practice in water crossing techniques.</i>	Group interaction Wet gear Poles, rope

Summary/Closure: 5 minutes

Reinforce that crossing moving water is potentially hazardous and must be treated with care. Avoidance is often a preferred strategy. Walking up or down stream for an hour to a bridge may be a better option.

Lesson Plan 14: Camping Skills

Learning Domain – Psych-motor

(Field)

Camping Skills: half day – 4 hours

Bridge-in: 1 minute

Note: This session will likely be linked to a climbing objective.

Objective: 4 minutes

By the end of the lesson, participants will:

- Demonstrate the principles of Leave No Trace (LNT) camping and shelter construction

Pre-test: 5 minutes

Assess participants' camping experience.

Participatory learning: 225 minutes

Timing	Component	Actions of the instructor	Actions of the participant	Resources
10 min	Site selection	<i>Coach site selection.</i>	<i>Use LNT principles to select a site. Prepare a camping site.</i>	Backcountry campsite
60 min	Meal preparation	<i>Coach meal preparation.</i>	<i>Demonstrate the principles of kitchen design. Demonstrate meal preparation, grey water disposal and food storage.</i>	Food, stoves, fuel, pots
15 min	Water	<i>Ensure water source preservation.</i>	<i>Collect water.</i>	Water sacs and bottles
60 min	Camp preparation	<i>Coach camp set-up.</i>	<i>Demonstrate the principles of tents and sleeping systems.</i>	Tents, sleeping bags and mattresses
25 min	Fires	<i>Ensure safety.</i>	<i>Demonstrate fire lighting skills.</i>	Fire pan, fire starter
25 min	Human Waste	<i>Demonstrate latrine techniques.</i>	<i>Construct a latrine. Use Wag Bags.</i>	Wag bags
30 min	Emergency shelters	<i>Demonstrate the principles of emergency shelters.</i>	<i>Construct an emergency shelter.</i>	Guide's tarps

Summary/Closure: 5 minutes

Ensure that the camp set up, use and take down are conducted with Leave No Trace principles.

Lesson Plan 15: Rope Management Techniques

Learning Domain – Psych-motor

(Field)

<p>Rope Management Techniques: one day – 8 hours</p> <p>Bridge-in: 2 minutes</p> <p><i>Site selection – single pitch crag with the possibility of using mid-pitch anchors to practice multi-pitch scenario.</i></p>
<p>Objective: 1 minute</p> <p>By the end of the lesson, participants will:</p> <ul style="list-style-type: none"> • Demonstrate rope handling skills <ul style="list-style-type: none"> ○ Equipment, knots, anchors, communication, belaying, rappelling, lowering, ascending. <p>Pre-test: 2 minutes</p> <p><i>Assess previous experience</i></p>

Participatory learning: 470 minutes

Timing	Component	Actions of the instructor	Actions of the participant	Resources
15 min	Equipment	<i>Discuss pros and cons of soft goods: ropes, cord, slings, harness.</i>	<i>Discuss and ask questions.</i>	Rope, cord, slings, harness
15 min	Equipment	<i>Discuss pros and cons of hard goods: carabiners, belay device, helmet.</i>	<i>Discuss and ask questions.</i>	Carabiners, belay device, helmet
30 min	Knots	<i>Demonstrate knots: figure 8, double overhand bend, flat overhand, ring bend, double overhand knot, basket hitch, girth hitch, clove hitch, prusik, Italian hitch.</i>	<i>Practice knots.</i>	Practice rope – short sections
60 min	Anchors	<i>Describe principles: uni-directional, multi-directional.</i>	<i>Practice with supervision.</i>	Bolted station, trad rack
5 min	Communication	<i>Demonstrate standard communication.</i>	<i>Practice with supervision.</i>	
60 min	Belaying	<i>Demonstrate lead belaying.</i> <i>Demonstrate manual and assisted belay devices.</i> <i>Demonstrate belay tie-off.</i>	<i>Practice with supervision.</i>	Single pitch leadable climb, lead rope, rack

75 min	Belaying	<i>Demonstrate direct anchor belay.</i> <i>Demonstrate methods for lowering.</i>	<i>Practice with supervision.</i>	Clifftop anchor
60 min	Rappelling	<i>Demonstrate double rope set-up.</i> <i>Demonstrate rappel back-up.</i>	<i>Practice with supervision.</i>	Two ropes, anchor material
90 min	Rappelling	<i>Demonstrate multi-pitch rappels.</i>	<i>Practice with supervision.</i>	
60 min	Lowering	<i>Demonstrate lowering.</i>	<i>Practice with supervision.</i>	

Summary/Closure: 5 minutes

Review key skills. Check for knowledge and skill competency gaps.

Lesson Plan 16: Rock Rescue

Learning Domain – Psych-motor

(Field)

<p>Rock Rescue: one day – 8 hours</p> <p>Bridge-in: 1 minute</p> <p><i>Link with multi-pitch rock climbing and crevasse rescue.</i></p>
<p>Objective: 2 minutes</p> <p>By the end of the lesson, participants will:</p> <ul style="list-style-type: none"> • Perform advanced rock rescue <p>Pre-test: 2 minutes</p> <p><i>Assess previous experience</i></p>

Participatory learning: 470 minutes

Timing	Component	Actions of the instructor	Actions of the participant	Resources
30 min	Belay tie-off	<i>Demonstrate tie-off.</i>	<i>Practice with supervision.</i>	Rope, Guide-style belay devices
140 min	Raising systems	<i>Demonstrate 3:1 and 5:1.</i>	<i>Practice with supervision.</i>	Accessory cords, pulleys
90 min	Lowering systems	<i>Demonstrate change-over from raise to lower.</i> <i>Demonstrate change-over from lower to raise.</i>	<i>Practice with supervision.</i>	Locking pear carabiners,
90 min	Rope Ascending	<i>Demonstrate rope ascending.</i>	<i>Practice with supervision.</i>	Accessory cords
120 min	Rescue from below	<i>Demonstrate sequence.</i>	<i>Practice with supervision.</i>	

Summary/Closure: 5 minutes

Review key skills. Check for knowledge and skill competency gaps.

Lesson Plan 17: Multi-pitch Rock Climbing

Learning Domain – Psych-motor

(Field)

<p>Multi-pitch Rock Climbing: 1-2 days — 8-16 hours</p> <p>Bridge-in: 1 minute</p> <p><i>Note: This session could be expanded to two days</i></p>
<p>Objective: 2 minutes</p> <p>By the end of the lesson, participants will:</p> <ul style="list-style-type: none"> • Demonstrate multi-pitch rock climbing and belay techniques <p>Pre-test: 1 minute</p> <p><i>Assess previous experience</i></p>

Participatory learning: 8-16 hours

Timing	Component	Actions of the instructor	Actions of the participant	Resources
As required	Movement skills	<i>Ongoing assessment of skills throughout the day.</i>	<i>Demonstrate fluid movement skills on rock terrain skills. Coach & motivate other participants.</i>	Rock shoes Mountain boots
As required.	Routefinding	<i>Coach the preparation process. Coach on route.</i>	<i>Prepare a route plan. Apply knowledge of mountain terrain to aid in route-finding on rock.</i>	
As required.	Multi-pitch strategies	<i>Supervise and coach.</i>	<i>Select appropriate equipment. Rope up for multi-pitch climbing. Belay a lead climber in summer. Use running belays. Use strategies to maintain situational awareness. Supervise & monitor participants (lead & sweep). Pace a group. Carry out basic equipment maintenance and repair.</i>	Trad rack, rope
30 min	Climbing Physics	<i>List the forces with a system. Describe climbing physics. Calculate fall factors.</i>	<i>Discuss and ask questions.</i>	

As required.	Protection placement strategies	<i>Assess placements.</i>	<i>Place rock protection while leading.</i>	Trad rack
As required.	Anchor construction	<i>Demonstrate parallel and series construction. Assess and coach construction.</i>	<i>Locate a safe belay station site. Set up anchors for multi-pitch climbing on rock. Use fixed point anchor belays.</i>	Trad rack, anchor material
As required.	Station management	<i>Coach management.</i>	<i>Belay a second directly off an anchor. Manage transitions.</i>	ATC Guide style belay device

Summary/Closure (5 min)

This is a great deal of material to cover in one or two days. Continued training and assessment is likely needed.

Lesson Plan 18: Glacier Travel

Learning Domain – Psych-motor

(Field)

<p>Glacier Travel: 1 day – 8 hours</p> <p>Bridge-in: 1 minute</p> <p><i>Stress the important of planning and ongoing skills training</i></p>
<p>Objective: 2 minutes</p> <p>By the end of the lesson, participants will:</p> <ul style="list-style-type: none"> Apply glacier travel skills and techniques <p>Pre-test: 2 minutes</p> <p><i>Assess previous experience</i></p>

Participatory learning: 470 minutes

Timing	Component	Actions of the instructor	Actions of the participant	Resources
20 min	Terminology	<i>Describe glacier terminology.</i>	<i>Discuss and ask questions.</i>	Mars Bar
30 min	Rope up	<i>Coach.</i>	<i>Organize equipment.</i> <i>Divide the rope.</i>	Rope, prusiks, carabiners
120 min	Routefinding	<i>Coach.</i>	<i>Apply knowledge of mountain terrain to aid in route-finding on glacier.</i> <i>Negotiate crevassed terrain.</i>	
240 min	Crevasse rescue	<i>Demonstrate then coach.</i>	<i>Stop a fall.</i> <i>Build an anchor.</i> <i>Set up a hauling system.</i>	Rope, ice screws, pickets, prusiks, carabiners, slings
60 min	Rope ascending	<i>Demonstrate then coach.</i>	<i>Ascend a rope.</i>	Accessory cords

Summary/Closure: 5 minutes

Review key skills. Check for knowledge and skill competency gaps

Lesson Plan 19: Snow Climbing

Learning Domain – Psych-motor

(Field)

<p>Snow Climbing: 1 day – 8 hours</p> <p>Bridge-in: 1 minute</p> <p><i>Link to avalanche conditions</i></p>
<p>Objective: 2 minutes</p> <p>By the end of the lesson, participants will:</p> <ul style="list-style-type: none"> • Demonstrate fluid mountain travel skills on snow <p>Pre-test: 2 minutes</p> <p><i>Assess previous experience</i></p>

Participatory learning: 470 minutes

Timing	Component	Actions of the instructor	Actions of the participant	Resources
30 min	Equipment	<i>Discuss equipment.</i>	<i>Select appropriate equipment for snow climbing.</i> <i>Carry out basic equipment maintenance and repair.</i>	Boots, crampons, ice axe, pickets, rope, carabiners, harness, helmet
120 min	Movement skills	<i>Assess and coach.</i>	<i>Demonstrate kicking box steps and cross-over steps on snow.</i> <i>Demonstrate use of crampons on snow.</i>	
90 min	Glissading	<i>Select safe site.</i>	<i>Demonstrate glissading.</i>	
90 min	Self-arrest	<i>Select safe site.</i>	<i>Demonstrate self-arrest technique on snow in four basic attitudes.</i>	
140 min	Leading on snow	<i>Coach.</i>	<i>Place snow protection while leading.</i> <i>Set up anchors for multi-pitch climbing on snow.</i>	
Throughout the day	Routefinding	<i>Coach.</i>	<i>Apply knowledge of snow terrain to aid in route-finding on snow.</i> <i>Use strategies to maintain situational awareness.</i> <i>Pace a group.</i>	

Summary/Closure: 5 minutes

Review key skills. Check for knowledge and skill competency gaps.

Lesson Plan 20: Ice Climbing

Learning Domain – Psych-motor

(Field)

<p>Ice Climbing: 1 day – 8 hours</p> <p>Bridge-in: 1 minute</p> <p><i>Link to avalanche conditions</i></p>
<p>Objective: 2 minutes</p> <p>By the end of the lesson, participants will:</p> <ul style="list-style-type: none"> • Demonstrate fluid mountain travel skills on ice <p>Pre-test: 2 minutes</p> <p><i>Assess previous experience</i></p>

Participatory learning: 470 minutes

Timing	Component	Actions of the instructor	Actions of the participant	Resources
30 min	Equipment	<i>Discuss equipment.</i>	<i>Select appropriate equipment for alpine ice climbing.</i> <i>Carry out basic equipment maintenance and repair.</i>	Crampons, ice axe, ice hammer, ice screws, carabiners, slings, rope
120 min	Movement skills	<i>Assess and coach.</i>	<i>Ascend ice slopes using ice axe and crampons.</i> <i>Demonstrate fluid movement skills on ice terrain.</i>	
320 min	Leading on ice	<i>Assess and coach.</i>	<i>Place ice protection while leading.</i> <i>Set up anchors for multi-pitch climbing on ice.</i> <i>Pace a group.</i> <i>Manage transitions.</i>	
Throughout the day	Routefinding	<i>Coach.</i>	<i>Apply knowledge of mountain terrain to route-finding on ice.</i> <i>Use several strategies to maintain situational awareness.</i>	

Summary/Closure: 5 minutes

Review key skills. Check for knowledge and skill competency gaps.

Lesson Plan 21: Short-roping

Learning Domain – Psych-motor

(Field)

<p>Short-roping: 1 day – 8 hours</p> <p>Bridge-in: 1 minute</p> <p><i>Short-roping is dangerous when done poorly</i></p>
<p>Objective: 2 minutes</p> <p>By the end of the lesson, participants will:</p> <ul style="list-style-type: none"> • Apply short-roping techniques <p>Pre-test: 2 minutes</p> <p><i>Assess previous experience</i></p>

Participatory learning: 470 minutes

Timing	Component	Actions of the instructor	Actions of the participant	Resources
30 min	Hazard assessment	<i>Describe the dangers and limitations</i>	<i>Discuss and ask questions</i>	<i>30m rope, light rack</i>
120 min	Rope management	<i>Demonstrate rope up for short-roping</i> <i>Demonstrate a continuum of techniques</i>	<i>Practice with coaching</i>	
60 min	Terrain assessment	<i>Describe techniques for managing terrain features</i>	<i>Apply knowledge of mountain terrain to aid in route-finding.</i> <i>Negotiate simple terrain while moving together short roped.</i> <i>Use terrain as running belays during short roping.</i>	
60 min	Belays	<i>Demonstrate belay techniques</i>	<i>Belay a second using terrain belays.</i> <i>Belay a second using body braces and belays</i>	
120 min	Movement skills	<i>Coach</i>	<i>Demonstrate movement skills appropriate to the terrain.</i> <i>Pace a group.</i>	
80 min	Transitions	<i>Demonstrate</i>	<i>Manage transitions</i>	

Summary/Closure: 5 minutes

Review key skills. Check for knowledge and skill competency gaps.

Lesson Plan 22: Avalanche

Learning Domain – Psych-motor

(Field)

<p>Avalanche: 1 day – 8 hours</p> <p>Bridge-in: 1 minutes</p> <p><i>This session can be incorporated into other days or done as a stand-alone session.</i></p>
<p>Objective: 2 minutes</p> <p>By the end of the lesson, participants will:</p> <ul style="list-style-type: none"> • Manage a group in avalanche terrain <p>Pre-test: 2 minutes</p> <p><i>Assess previous experience</i></p>

Participatory learning: 470 minutes

Timing	Component	Actions of the instructor	Actions of the participant	Resources
120 min	Equipment	<i>Demonstrate transceiver, probe and shovel.</i>	<i>Use transceiver, probe and shovel.</i>	Transceiver, probe and shovel
140 min	Terrain assessment	<i>Evaluate avalanche terrain.</i>	<i>Select routes to mitigate avalanche exposure.</i>	
120 min	Snowpack assessment	<i>Describe the summer seasonal snowpack.</i> <i>Describe the avalanche problem.</i> <i>Observe avalanche activity.</i>	<i>Discuss and ask questions.</i> <i>Describe the avalanche problem.</i> <i>Observe avalanche activity.</i>	Profile kit: thermometer, ruler, loupe
30 min	Weather	<i>Monitor weather to aid in decision making.</i>	<i>Record weather observations</i>	Field book
60 min	Decision making	<i>Monitor snow conditions to aid in decision making.</i> <i>Use strategies to maintain situational awareness.</i> <i>Describe the ACC Summer AM/PM Hazard and Risk Assessment Forms.</i>	<i>Use the ACC Summer AM/PM Hazard and Risk Assessment Forms.</i>	AM/PM Hazard and Risk Assessment Forms

Summary/Closure (5 min)

Review key skills. Check for knowledge and skill competency gaps.

