



**THE
MOUNTAINEERS, TACOMA**



2021 Manual

Version 1.1 (2/23/21) Mike Murphy



Tacoma Mountaineers Alpine Scrambling Course Committee

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For a complete list of instructors, please see the Roster on the course posting

Required Text

[Mountaineering: The Freedom of the Hills](#)

Google Classroom Link:

<https://classroom.google.com/c/MjM4ODAzMDMxODAy?cjc=xjpszstv>

[Click here to view a video about the history and vision of The Mountaineers](#)

[Click here to view the Mountaineers Covid Policy](#)

	On-Line Lessons	Field Trips
March 5	Block 1: Introduction, Safety, Equipment, LNT	Conditioning Hike (due by 4/11) Coordinated by your team leader
April 17/18	Block 2: Rock Techniques, Weather, Knots	Rock 1 – 8:00 @ Spire Rock, Spanaway, No parking pass
May 1	Block 3: Avalanche Hazard Awareness, Snow Travel, Ice Axe Use	Snow 1 – 8:00 @ Crystal Mountain main lot, No parking pass
May 22/23	Block 4: Snow Camping	Final Skills – 8:00 @ Bean Creek Basin, US NW Forest Pass



Graduation

This course may be completed in one or two years. Application for graduation must be received before the class banquet of the graduation year.

There will be a sign-in sheet at all classes and field trips. Please assure that your attendance is noted on that sheet before the end of the event.

Mandatory Requirements:

- 1. Successfully complete a conditioner hike before Snow 1 Field Trip.**
- 2. Complete all on-line assignments and pass quiz.**
- 3. Attend all field trips (discuss alternatives for missed field trip with the instructors).**
- 4. Pass the final exam.**
- 5. Complete three Mountaineers led alpine scrambles (1 snow, 1 rock, 1 either). When applying for graduation, please list the climbs and dates.**
- 6. Mountaineers navigation class.**
- 7. Mountaineers approved Wilderness First Aid or equivalent.**
- 8. Any conservation event.**

What have you gotten yourself into?

It may seem a bit overwhelming as you start this course. Our advice is to take it one step at a time and enjoy where you are right now. Here is some basic information.

- Equipment may be daunting. We'll show you what you need and give you alternatives. You have time to pull your gear together.
- Approach your training as a full member of the team. Be engaged, attentive, and know that we value your opinion and experience.
- Instructors and leaders are volunteers; please be patient with us. Talk to us, give us a chance to help you if you are struggling. If you are having a problem with anyone involved in the course, please come to a leader of your choice. If we can't meet your needs locally, contact the club through the web site.
- Completion of on-line lessons and quizzes and attendance of field trips are mandatory. We have ways to help you if something gets in your way. Talk to us and we'll work with you.
- We follow the "Tell, Show, Do" training method. We depend on you to read the assigned text, listen and engage during lectures, then participate with the physical skills practice. To pass the course, you must demonstrate competence in all skills.



- Work on your fitness. Alpine scrambling is a strenuous undertaking. The field trips in this course are moderately difficult. You will have more fun and get more out of the practice if you aren't struggling with your fitness. No matter how fit you are, there is no substitute for long walks uphill so please take conditioning hikes.
- Start looking for a Wilderness First Aid (WFA- pronounced "woof-uh" by cool club members). Mountain Oriented First Aid (MOFA "moe-fuh") is a course that the club puts on and is acceptable but hard to find.



- Sign up for a Navigation (“naav”) class. You may sign up with any branch.
- You will have to donate one day of volunteer work with any organization that does trail or park maintenance. Keep an eye out for opportunities. It can be tough to get into some of these activities- they fill up fast.
- A few words about risk. Alpine scrambling is a sport of controlled risk. We face both objective hazards in the mountain environment (rocks, ice, weather, etc.). We have little control over these. What we can control are

subjective factors such as mindset, knowledge, skill, conditioning, and judgment. Those subjective factors are what mitigate risk. Every climber must consider the risks and be prepared to properly respond to stay safe.

- **The members of this club are inclusive and respectful.** What we do out there involves hard work and risk. We face these things together; every trip involves a **team** of climbers. Respect your teammates. Ask for help, give help, watch out for each other. Know and respect personal boundaries.

Mountaineers Emergency Notification Protocol

First call 911; ask to be transferred to the Emergency Services of the county (or National Park Service for Rainier, Olympics, & North Cascade) where the party is located.

Then call the club at: 206-521-6030

Leave the club number above with family and friends that may become worried about you in the field but do not yet think it is an emergency. The club will answer 24/7 and advise them on the best course of action.

Our Motto:

Safety – Mandatory

Fun – Encouraged

Summit – Optional

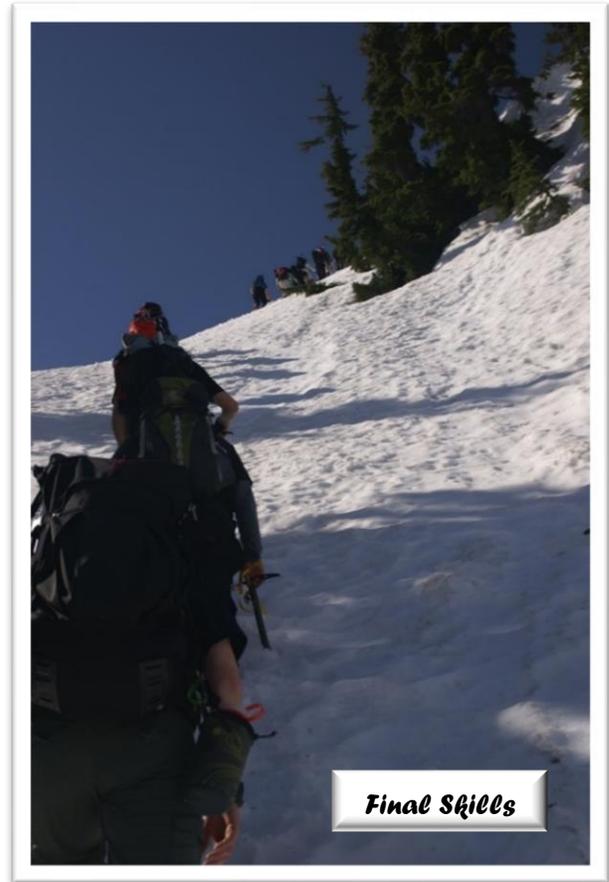
What is Scrambling with The Mountaineers?

Off trail travel over unimproved terrain, rock and/or snow.

Off trail may mean a few hundred yards over easy ground or 3 miles up a steep ridge covered in Devil's Club, downed trees, and rock bands. Read the entire trip posting before signing up. Leaders post the pace they expect to keep on the trip; only sign up if you can keep that pace. Rock and snow travel come with a technical rating (T 1-5) and a strenuous rating (S 1-5). Students should stay in T 1-3, S 1-3 to start. If you still have questions, contact the leader.

If you sign up for a trip and can't go, cancel as soon as possible. Last minute drops and no-shows are against the culture of the club.

Show up on time with all the equipment you need or may need. Decisions on what to carry are often made at the trailhead. Be ready to carry group gear if needed.



The Mountaineers do not lead guided tours. Safety is your individual responsibility. Just because there is a leader does not mean you can delegate your safety to the leader or you should not ask questions about safety. When on a scrambles trip, you are an active participant in the safety and success of your team. The most effective way to prevent mishaps is to adequately prepare for the trip. Safety should be the priority in all phases of scrambles trips including trip planning and preparation and driving to and from the trailheads. If you are unsure of your ability to meet trip requirements, ask questions. If you need help, be sure to ask for it. You know your limits better than anyone else. You are responsible for preparing and taking care of yourself to minimize risk and prevent mishaps. Bring appropriate clothing and proper equipment. While traveling, stay alert and think about potential hazards and how to get around or avoid them. If you have information and thoughts that might be of value, share them with the party, especially with the leader. You and your fellow climbers share in the responsibility for the scrambles party with which you travel.

Any member of a climb can call a stop at any time. If you feel like what you are doing is unsafe, over your head, or you just don't want to do it, speak up!



MOUNTAINEERS CLIMBING CODE

The climbing code is a standard of judgment based on many years of mountaineering experience. In risky or doubtful situations, following this climbing code increases the margin for safety and success. It is a guide both for veteran and novice alike and a key to safe and sane climbing. Follow it religiously until its precepts become second nature.

1. A climbing party of three is the minimum, unless adequate pre-arranged support is available. On glaciers, a minimum of two rope teams is recommended.
2. Rope on all exposed places and for all glacier travel. Anchor all belays.
3. Keep the party together and obey the leader or majority rules.
4. Never climb beyond your ability and knowledge.
5. Never let judgment be overruled by desire when choosing a route or turning back.
6. Always carry the necessary clothing, food, and equipment.
7. Leave the trip schedule with a responsible person.
8. Follow the precepts of sound mountaineering as set forth in textbooks of recognized merit.
9. Behave always in a manner that will reflect favorably upon mountaineering.



Conditioning Hike Standard

1. 2,500 feet of elevation gain in 2 hours is the base requirement.
This is usually done on Mt. Si in 2.5 hours (3200' gain)
2. Carry a pack containing ~20% of your weight (25 lbs. min., 40 lbs. max.). We suggest you carry water rather than gear so you can dump it and save your knees going down.
3. Must be done before Snow 1 field trip.

Knots (www.animatedknots.com)

Better to know a knot and not need it, than need a knot and not know it. -Gary Zink

While scrambling does not involve extensive rope handling, ropes and webbing are often used as an aid in getting around difficult or hazardous locations. Therefore, it is critical for scramblers to know how to tie key knots correctly and to be able to recognize correctly tied knots. The knots you need to know are:

- Overhand knot
- Girth hitch
- Water knot
- Figure 8 loop (Figure 8 on a bight)
- Rewoven Figure 8 (Figure 8 Follow Through)
- Double Fisherman's knot (Double Fisherman's Bend; Grapevine Knot)
- Prusik knot
- Klemheist

Harness: You will also learn how to set up and use a quick self-rescue system for attaching to a rope. We'd like you to try both a hasty harness and a diaper harness (<https://youtu.be/sP5ldhkgKs8> note: in this video he refers to the knot as a "tape knot"; this is a water knot and you will find how to tie it at the link above). Either harness will work but the diaper is easier to remember. You will then use a 6' piece of 5mm perlon cord to tie between your carabiner and the rope. The cord is tied into a loop using a double fisherman knot. You will tie the cord loop to the rope with a prusik or Klemheist loop.

Dressing Knots: This term refers to the practice of ensuring that the rope or webbing used to tie a knot is correctly positioned. The knot material lies cleanly and in correct position in relation to other strands in the knot. The sign of a correctly tied knot is a well-dressed knot. It also increases the likelihood that you will be able to untie the knot later. A poorly dressed knot is weaker than a properly dressed one. (Even properly dressed knots decrease rope strength up to 50% or more.)

Practice tying knots around large and small items (e.g., your waist, a tree, table leg, etc.) as well as tying knots to things (e.g. other pieces of rope or webbing, to eye-bolt openings, etc.). You will be expected to tie all these knots under the close scrutiny of your instructor! Your knots will be inspected for good dressing. PRACTICE! PRACTICE! PRACTICE!



Scrambling Clothing and Equipment - Version 5, 2/2/21

ITEM	Cond	R1	S1	Final	ITEM	Cond	R1	S1	Final
Clothing (adjust for weather)					Ten Essentials (+1)				
Shirt, base layer	X	X	X	X	Navigation	O	X	X	X
Pants, base layer	O	X	O	X	Sun protection/sunglasses	O	X	X	X
Pants, microfiber	X	X	X	X	Insulation	O	X	X	X
Shirt, insulating layer	O	O	X	X	Illumination	O	X	X	X
Pants, insulating layer	O	O	O	X	First Aid	O	X	X	X
Jacket, shell layer	X	X	X	X	Fire	O	X	X	X
Pants, shell layer	O	O	X	X	Repair kit, tools	O	X	X	X
Hat, insulating	O	O	X	X	Nutrition	O	X	X	X
Hat/scarf, sun protection	X	X	X	X	Hydration	O	X	X	X
Balaclava or face insulation	O	O	X	X	Shelter	O	X	X	X
Gloves, rock protection		X		O	Whistle	O	X	X	X
Gloves/mittens, insulating	O	O	X	X					
Gloves, extra	O	O	O	X					
Socks, liner	O	X	X	X	Group Gear (Coordinated by Leader)				
Socks, boot	X	O	X	X X	Bivy sack			X	X
Gaiters	O	O	O	O	Stove & fuel			X	X
Boots, hiking	X	O			Ground pad, insulated			X	X
Boots, mountaineering	O	X	X	X	Filter, water or tablets			X	X
Shoes, river				X	Weather radio			O	O
Jacket, well worn		O			Overnight Gear				
Basic Equipment					Tent with ground cloth				X
Pack, day	X	X	X	X	Sleeping bag				X
Pack, overnight				X	Ground pad (2 for snow)				X
Pack cover	O	O	O	O	Food				X
Ice axe			X	X	Stove & fuel				X
Helmet		X	X	X	Cooking pot, cup, utensils				X
Harness kit		X		X	Water container				X
Sit pad	O	O	O	O	Filter, water or tablets				X
Blue bag			X	X	Toiletries, medication				X
Trekking poles	O	O	O	O	Garbage bag				X
Crampons				O	Other				
Microspikes	O			O	Camera	O	O	O	O
Snowshoes					GPS	O	O	O	O
					Fitness Watch	O	O	O	O

X - Mandatory, O - Optional, empty - not needed



Field Trip: Rock 1		Team 1, 2, 3: April 17, 8:00 A.M. Team 4, 5, 6: April 18, 8:00 A.M.
Location	Spire Rock at Sprinker Recreation Center 14824 S. "C" Street, Tacoma, WA 98444 Meet in the west side of the parking lot by Spire Rock 47°07'22.3"N 122°26'33.2"W	
Skills	Introductions, knots as a group Station 1: Ten Essentials, Equipment Station 2: Arm Rappel Station 3: Basic Rock Climbing	
Clothing & Equipment	Layered clothing (we go no matter the weather) Jacket, grubby (to pad your arms while rappelling) Boots (hiking boots okay) Helmet Gloves, utility or work Webbing, prussic cord, carabineer Food & water	
Other Equipment	Bring your pack and what you have so far. You do not have to have all your gear yet. This will be an opportunity to see what others carry and to get ideas. Bring creative items and ideas to share with the class.	

Field Trip: Snow 1		Saturday, May 1, 9:00 A.M.
Location	Crystal Mountain/Bullion Basin Crystal Mountain Main Parking Lot 46.93722684047722, -121.47417614938198 Bring chains for your vehicle	
Skills	Snow Travel <ul style="list-style-type: none"> • self-belay • kick step • rest step • climbing in-balance • plunge step • glissading 	Ice Axe Arrest <ul style="list-style-type: none"> • head up, face down • head up, on back • head down, face down, • head down, on back • repeat all with pack
Clothing & Equipment	Snowshoes Layered clothing (we go no matter the weather) Outer layer that can hold up to repeated slides on the snow Boots (mountaineering or heavy water-proof hiking) Ice Axe Helmet Gloves, water resistant Food & water 10 E's	
Other Equipment	Extra gloves Gaiters Change of clothes	



Field Trip: Final Skills Weekend		May 22-23, 8:00 A.M.			
Location	Bean Basin Meet at Safeway in Cle Elum When everyone arrives, we'll caravan to the TH 804 W. First, Cle Elum, WA 98922 47°11'43.9"N 120°57'17.7"W				
Trailhead Directions	From I-90 exit 84, take State Hwy. 970 east for 7 miles to the Teanaway Road; turn left just before milepost 7; drive 13 miles from Hwy 970 to Twenty-Nine Pines Campground; at Twenty-Nine Pines Campground continue north, bearing right onto US Forest Rd. 9737 toward Beverly Creek Campground (4 miles); after about 3.5 miles, turn right at Beverly Creek Road to Trail 1391. 47°23'21.2"N 120°52'20.2"W				
Skills	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> • River crossing • Snow camping • Snow travel • Ice Axe arrests • Navigation • Glissading </td> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> • Rock Scrambling • Foot placement, hand holds, balance, use of friction • Rock fall avoidance • Objective hazards recognition • Use of hand lines </td> </tr> </table>			<ul style="list-style-type: none"> • River crossing • Snow camping • Snow travel • Ice Axe arrests • Navigation • Glissading 	<ul style="list-style-type: none"> • Rock Scrambling • Foot placement, hand holds, balance, use of friction • Rock fall avoidance • Objective hazards recognition • Use of hand lines
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Clothing & Equipment	10 E's Overnight gear Mountaineering boots Helmet Ice Axe Webbing for hasty harness, cord for Prusik, carabiner				