

Avalanche & Alpine Rescue

Course Equipment 2022

Please make sure you have all the proper equipment for the Alpine rescue course. If you need to borrow equipment for the course, you can send me an email and let me know what you need, and I can help you find it.

All items in red are required items for your field day. Please let me know if you have any questions or concerns about the list of equipment needed.

Clothing System

Avoid using cotton fabrics in the layering system. When cotton is wet, it loses its insulation properties and takes a long time to dry out.

Base layer (Top & Bottoms):

Use Capilene, silk, wool, or polypropylene. This is your wicking layer that pulls sweat away from your body. Base layers typically come in lightweight, midweight and heavyweights. No cotton.

Insulation (Top & Bottoms): Breathable & wind/water resistant layer

Fleece, wool or synthetic fill sweaters & jackets. Wear this layer above your base layer. This is the layer that keeps you warm. Most adventures will have several different insulation layers: 1) A breathable layer for when you are exercising & moving. The breathability will help dissipate heat, so you sweat less. 2). A wind & waterproof resistant layer, for when you are inactive, and want to hold in your body's heat.

Waterproof Shell (Top & Bottoms):

The stormproof jacket should be windproof & waterproof. Breathable fabric jackets (Gore-tex) with armpit vents work best. Recommend purchasing non-insulated shells so you can use the jacket in warmer conditions. These technical shells are sold in various weights with minimal to multiple features depending on your needs & activity.

Belay parka (heavyweight insulation layer):

A down or synthetic down parka style super warm jacket that fits over all your top layers. This jacket can be donned in cold conditions when you stop your activity (eating, resting, belaying). This parka can also serve as an emergency jacket in survival situations or for extra insulation when sleeping, or to insulate a hypothermic patient. Make sure your jacket will fit over all your other layers, including your helmet. * If you don't have a belay parka, bring an extra midweight layer that you can wear.

Winter Hat/Helmet

Bring an insulated wool or synthetic hat that covers your ears for cold, windy environments. Have a second hat or hood on an insulation or base layer that you can

wear under helmets. Helmets are required for courses that have downhill riding or climbing.

* Helmets are not required for avalanche rescue course

Gloves

MANDATORY 2 PAIRS OF GLOVES: 1). A lighter pair of gloves for warmer conditions when you need increasing dexterity to tie knots, start fires & perform other tasks. 2). A second pair of larger warmer gloves or mitts for colder conditions and as an emergency back-up.

Socks

Wool or synthetic hiking, skiing, or backpacking socks. Lightweight to heavyweight depending on season and boot selection. Recommend carrying 2nd pair for emergencies.

Gaiters

Gaiters help keep snow & dirt out of your boots. Some hiking & ski pants come with gaiters built into them.

Sunglasses

UVA & UVB protection for fair weather when not wearing goggles.

Goggles

Essential for wind, sun & snow protection for your eyes. Also, serve as an emergency backup to prevent snow blindness if you lose your sunglasses.

Buff

Bring a synthetic buff to protect face from wind and blowing snow.

Equipment

Recommend carrying equipment in waterproof stuff sacks in modular components (first aid kit, survival kit, sleeping module, electronics, repair kit)

Snow and Avalanche Equipment

Ski Pack (day pack)

A daypack to carry your food, water & extra clothing. For day trips I recommend a pack that is 30-45 liters. A separate compartment for avalanche gear is recommended. Avalanche airbags recommended if you have them. Also, consider a pack that will carry your skis/slit board when climbing steep slopes.

Snow Travel Gear

Alpine Touring, Telemark, or Split board recommended. Otherwise, snowshoes, but these are not recommended. Ski poles are recommended for all snow travel methods.

Skins

1 pair of mohair or synthetic climbing skins that fit your skis or splitboard. Must have skins; climbing wax won't work.

Ski Poles

Ski poles are recommended for all snow travel methods.

Avalanche Transceiver

Bring a digital (not analog) avalanche transceiver that is no more than 5 years old. Modern transceivers should all have 3 antennae and a signal suppression button for multi-burials. In addition, transceivers need to have carrying system to be strapped on to torso.

Avalanche Shovel

Have a collapsible avalanche shovel that stores inside your ski pack. Metal shovel shafts are lightweight and extremely durable. Avoid plastic and lexicon as they won't penetrate consolidated snow like a metal shovel, and they are prone to breaking. Some avalanche shovels have snow saws, wood saws, or back-up avalanche probe poles inside the shaft.

Probe poles

Collapsible avalanche probe poles. Minimum length of 220cm (280 cm recommended) for recreational backcountry users. 320cm recommended for professional rescuers. Probes should have a mechanical locking cable or handle, not a twisting lock or knotted rope that goes in a notch. Ski pole probes are for back up use only and should not be used as primary probe poles.

Avalanche Snow Saw

For excavating snowpits.

Inclinometer

To determine slope angles in the field.

Avalanche Snow Study Kit

For analyzing and recording snowpit tests. Weatherproof notebook, mechanical pencil, ruler, snow crystal card, 2 thermometers, magnifying glass, ECT cord

Technical Equipment

Advise Brian if you need to borrow or use any items highlighted in red for the course.

Helmet

A UIAA approved rock, ice or mountaineering helmet. CMC has a limited number of helmets for students to borrow. *Cannot have cracks or damage.*

Backpack (day pack)

A daypack to carry your food, water & extra clothing. For day trips I recommend a 30-45 liter pack.

Harness

An UIAA approved rock, ice, or mountaineering harness. CMC has a limited number of harnesses for students to borrow. *Must be less than 5 years old and pass instructor inspection.*

Carabiners

8-12 Locking carabiners with a minimum breaking strength of 22kN. CMC has this if you don't have your own.

Belay Device

ATC style belay device to rappel and belay 1 person loads. UIAA approved. CMC has this if you don't have your own.

1" Tubular Webbing

15' of 1" Tubular webbing with a minimum breaking strength of 17.8 kN. UIAA approved. *Must be less than 5 years old and pass instructor inspection.* CMC has this if you don't have your own.

Cordelette

10 meters of 8mm cordelette with a minimum breaking strength of 16kN. UIAA approved. *Must be less than 5 years old and pass instructor inspection.* CMC has this if you don't have your own.

Personal prusiks

2 personal prusiks to use as an autoblock (rappel safety) and to ascend ropes. 5-6mm. UIAA approved. *Must be less than 5 years old and pass instructor inspection.* CMC has this if you don't have your own.

Glacier ice axe

Mountaineering ice axe with a leash. CMC has these if you don't have your own...

Essential Items:

Water bottles

2 wide-mouth style containers. Durable plastic or metal is recommended. *Avoid hydration bladders if you may experience freezing temperatures during your outing.*

Lunch

Pack a lunch that you can eat in the field. You will have 30 minutes for lunch. You cannot leave the field for lunch.

Sunscreen

Sunscreen & lip protection are essential at high altitudes. Recommend SPF of 30+ (sweatproof).

Pocket knife or multi-tool

Good for repairs, lunch, etc.

First Aid Kit

Personal medications, gloves & CPR mask, bleeding control, splinting supplies.

Headlamp

Primary headlamp for nighttime travel and emergency signaling. Smaller, lightweight, compact secondary light in a survival kit.

Electronics

Phone, extra battery pack, batteries for non-rechargeable devices, power cords.

Map & Compass

For general navigation to back up your GPS or smart phone app.

Survival Kit

More essential items like a fire starter, cordage, water purification, whistle, signal mirror, & saw.

Repair kit

Designed specifically for your mode of travel (ski, snowboard, snowmobile)

Emergency Food

In addition to carrying planned meals for your day trip, carry supplemental emergency rations for an unexpected night out. Carry a combination of carbohydrates, proteins, and fats. Carbs metabolize quickly into energy. Proteins and fats will provide you with long-lasting energy. Recommended emergency rations: trail bars, nuts, dried fruit, jerky, peanut butter, canned fish, dehydrated prepared meals.

Stove & Fuel

Mostly for emergencies. It gives you the ability to boil water for heat & water purification, the ability to melt snow into water & to cook hot meals, tea, and hot cocoa for calories.

Group Equipment

Emergency Communication*

At least 1 member per group should carry a satellite text messenger, satellite phone, or PLB. *Each instructor will carry a satellite text messenger and radio.* Some backcountry users will carry small handheld radios to enhance communication while in the field.

Emergency Sled*

At least 1 member per group should carry an evacuation sled or be able to improvise a rescue sled out of a tarp and cordage. *Each instructor will carry an emergency sled.*

Emergency Bivy Kit or Shelter

Camp pad, vapor barrier, emergency sleeping bag & bivy bag. Bothy bag or tarp for overhead shelter. Minimum 1 per group of 6. *Each instructor will carry an emergency shelter.*

I hope this supply list helps prepare you for the course and also provide an example of what guides and SAR technicians carry with them.