



American
Alpine Institute

The Spirit of Alpinism

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Bellingham, WA 98225

WINTER MOUNTAINEERING

Ouray, CO

EQUIPMENT CHECKLIST

It is essential that you do a careful job in selecting and preparing your equipment for this course. The weather in the mountains is a major objective hazard, even in the summer, and in the winter it can present extreme challenges to survival. We will not head into the mountains until everyone has appropriate equipment. Showing up unprepared can result in a delayed start to the trip or an altered itinerary. For your own comfort and safety, please take this list seriously and come in good physical condition. If you have any questions about choosing your gear, feel free to call the Colorado Program Coordinator and ask for advice.

The equipment you bring must function well in a wide variety of conditions. Your clothing should be warm, lightweight, dry quickly, and allow good freedom of movement. The layering principle, based on several thin layers of insulation (rather than one thick one) meets these needs well. As a general rule you should not bring more clothing than you can wear at one time. With the exception of extra socks and hand wear, avoid duplicating layers. Backcountry skiing and climbing is always a challenge. Travel light to make your experience more enjoyable.

CLIMATE: Temperatures are typically in the teens but can easily drop to -10°F to -20°F and be accompanied by high winds and blowing snow.

GEAR PREPARATION: Please take the time to carefully prepare and understand your equipment. If possible, it is best to use it in the field beforehand. Take the time to properly label and identify all personal gear items. Many items that climbers bring are almost identical. Your name on a garment tag or a piece of colored electrical tape is an easy way to label your gear; fingernail polish on hard goods is excellent. If using tape or colored markers, make sure your labeling method is durable and water resistant.

Call or Email the Equipment Shop for Advice on Gear

Please feel free to contact the AAI Equipment Shop with any general equipment questions. Your comfort and safety depend on being well equipped. Whether you get your gear from us or just get advice, we're here to help you prepare.

Call: (360) 671-1570 Email: shop@AlpineInstitute.com

Equipment Shop Website: www.Shop.AlpineInstitute.com

Please note, that the AAI Equipment shop is located in Bellingham, WA and therefore may not have the most up to date information regarding specific weather conditions in the Ouray, Colorado area. Please contact your guide with specific questions for what is needed for your course.

RENTALS: Equipment that is available for rent is designated with a “ Rent” check box. These items may be rented on the first morning of your course during your rendezvous, but *must be requested at least 24-hours before your course start date.*

Clothing and Footwear	Packing Checklist
<p>Mountaineering Boots Must be stiff, crampon compatible, mountaineering boots. These can be either single leather boots or single boots with a built in gaiter. Plastic boots will work fine, but may be uncomfortable. ★ <i>NOTE: There are many makes and models out there and not all are created equal. Please consult with our Equipment Shop if you are uncertain about the acceptability of your chosen model.</i></p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Socks Wool or synthetic socks that are over the ankle height. Focus on getting insulation from the boot and using a lighter weight sock, instead of using a heavy weight sock for warmth. Wearing a “silk-weight” liner sock beneath your hiking sock can reduce friction on the skin directly and mitigate blister development. Bringing 3-4 pairs is recommended for this course. Two pairs mainly used while climbing that can be switched out if one gets wet. As well as having a 3rd or 4th pair to sleep in and as a backup. ★ <i>Materials: Wool or synthetic are ideal</i></p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Undergarments Wool or synthetic.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Base Layer This will be your base layer and should be midweight synthetic or wool. No cotton. Long sleeves preferred.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Base Layer Pant (aka “Long Johns”) Wool or synthetic. They should fit comfortably under your soft shell pants and should be at least midweight. One pair is sufficient. ★ <i>Materials: Synthetic, wool</i></p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Active Insulation Layer Lightweight “gridded fleece” or lightweight down or synthetic insulated jacket. Hood preferred. ★ <i>Active insulation jacket weight at 40g/m² and heavier Insulation jacket at 60g/m² or 80g/m²</i> ★ <i>Example: Patagonia R1, Montbell UL Thermawrap Jacket, or similar.</i></p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Soft Shell / Windproof Jacket A soft shell is a weather resistant, breathable, and stretchy freedom of movement piece. This piece is versatile in the sense of movement. It is often called an “action layer.” It is weather resistant, meaning it can put up with light showers and wind. Also if it gets wet it dries fairly quickly. This enables you to not have to stop and put on another piece when the wind picks up or a light snow shower happens. Because it is water resistant, not waterproof, it also breathes fairly well. This enables you to move without overheating, so you don’t have to constantly stop to change out layers to regulate body temperature. They are also made of a stretchy material so there are no restrictions to your movement during activity. Put all those together and you have a pretty versatile layer, the Soft Shell. Hood preferred. ★ <i>Materials: Exolite, Matrix, Schoeller or similar.</i> ★ <i>Example: Patagonia Houdini, Arc’teryx Squamish Hoody, Mountain Equipment Squall.</i></p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy

<p>Soft Shell Pant</p> <p>Look for the same features as your soft shell jacket. This will be your outermost layer most of the time for your legs. A thigh pocket is a useful feature for storing small items. Your base layers need to fit under these pants comfortably.</p> <p>★ <i>Materials: eVent, Gore-tex, h2No, or similar</i></p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Light Insulation Jacket</p> <p>The goal for this piece is to add warmth to your internal layering system. Depending on your clothing system, and the environment you are in, you may fit this layer underneath, or over the top of your shell jacket. The weight and design of this piece will vary based on the other items of climbing that you are bringing. Generally Jackets with 60 - 100 grams of synthetic fill in the torso are adequate.</p> <p>★ <i>Materials: Primaloft, down</i></p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Down Parka</p> <p>These jackets come in many shapes, sizes and temperature ratings. If you tend to get cold easily, opt for a slightly warmer and more substantial parka. Otherwise, choose a down parka that is still fully baffled, includes a hood, and offers sufficient coverage over your waist. Must fit over all of your other layers.</p> <p>★ <i>Materials: Primaloft, down</i> ★ <i>Weight: 992 – 1560 grams</i></p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Hard Shell Jacket</p> <p>Non-insulated jacket with a waterproof and breathable membrane. Three layer construction is recommended. When sizing make sure it can fit over our other layers (minus your parka). Choose the lightest, most packable shell that will still get the job done. Avoid hanging linings and extra pockets (one chest pocket is all you need). It must have a hood that fits over your climbing helmet.</p> <p>★ <i>Materials: eVent, Gore-tex, h2No, or similar</i></p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Hard Shell Pant</p> <p>Non-insulated, waterproof and breathable membrane. Full side zips are recommended. When sizing make sure it is able to fit over a base layer and soft shell pants.</p> <p>★ <i>Materials: Gore-Tex, eVent, Drilite, H2NO, Pertex Shield</i></p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Gaiters</p> <p>Knee height. Keeps snow and ice out of your boots and socks and will also protect your pants from the sharp points on your crampons. Check the fit of the gaiter to your boot in advance to make sure the coverage is adequate. Can omit if your pants have a built-in gaiter and scuff guard.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Liner Glove</p> <p>Thin, lightweight, wool or synthetic gloves. Size to fit snug but not too tight. Generally worn alone in temperatures above 25°F (-4°C) when precipitation is not present. UPF rated liner gloves are ideal for sun protection. Bring 1-2 pairs in the event it is extra wet out.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Midweight / Belay / Leather Gloves</p> <p>The most desirable glove is one that is comfortable and dexterous, so that it can be worn all day. It should be durable enough (leather palms) to handle ropes, jumars, and ice axes. These come in different weights, so choose the thickness that works with your glove system. Bring one pair.</p> <p>★ <i>Materials: Softshell, windstopper fleece, leather or similar</i></p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Expedition / Hard Shell Gloves</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy

<p>Composed of heavy-duty waterproof shells with extremely warm liners, these modular gloves MUST have removable liners. These gloves must be dexterous enough to handle ropes, carabiners, and jumars.</p> <p>★ <i>Materials: Gore-tex, Schoeller</i></p>	
<p>Beanie/Toque Wool or synthetic. Must fit under helmet. Easily replaced with hooded layers after early season.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Lightweight Balaclava / Buff A balaclava is a warm hat that can be pulled over the head to the shoulders. It completely covers the head except for an opening for the face. It should provide excellent wind protection for the chin, ears and neck. A Buff can substitute for this.</p> <p>★ <i>Materials: Powerstretch, fleece, polypro, windpro</i></p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Sun Hat A baseball cap or visor serves well.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Sunglasses Choose a model with UVA/UVB protection. Keeper strings like “Croakies” are useful to prevent dropping your glasses while climbing. Those using contact lenses should bring a pair of prescription glasses if available.</p> <p>★ <i>NOTE: Those using contact lenses should also bring a pair of prescription glasses in the event that your contacts or solutions are lost or damaged by freezing. If you only use prescription glasses, we recommend “OTG” (over the glass) or “Frame-over” style sunglasses.</i></p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Ski Goggles For use in high winds and heavy snow. These should be lightly tinted but not so dark that the will reduce visibility in low light conditions. They should block 100% of UV light. If you wear prescription glasses, these must fit comfortably over your glasses.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<h2 style="margin: 0;">Climbing Equipment</h2>	
<p>Harness Make sure the harness has a belay loop and gear loops. When sizing make sure it can fit over your clothing layers when you have multiple layers on.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy <input type="checkbox"/> Rent*
<p>Helmet Must be UIAA rated for climbing.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy <input type="checkbox"/> Rent*
<p>Crampons Must be steel crampons with front points and compatible with your mountaineering boots. Only modern strapon, step-in, or ‘newmatic’ crampons are acceptable. Older Scottish style strap-on crampons are not adequate.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy <input type="checkbox"/> Rent*
<p>Snowshoes They should be equipped with an integral crampon and/or aggressive traction on the bottom of the snowshoes.</p> <p>★ <i>NOTE: Large profile basic models made by Tubbs, Atlas, and Sherpa do not work well and are not recommended. Models by MSR are proven and quite durable.</i></p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy <input type="checkbox"/> Rent*
<p>Ice Axe Fully Technical (T) rated axes are recommended. Adze is required.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy <input type="checkbox"/> Rent*

Use the following table as a rough guide on length. Ice axe leashes are not required and not recommended.

Climber Height	Recommended Length of Semi-Technical Axe
6 ft or shorter	50-55 cm
6 ft or taller	55-60 cm

Trekking Poles

Two are required. Even if you don't normally use trekking poles, on this expedition in particular, they are invaluable in helping with balance while carrying heavy packs on snowshoes. Adjustable poles only.

- Own
- Buy

Slings

Bring one 48 in (120 cm) pre-sewn nylon sling. Slings must be UIAA rated for climbing.

- Own
- Buy

Cordelette

Bring one 20 ft (6 m) length of 7 mm nylon cord.

- Own
- Buy

Rappel Backup

Sterling hollow block 13.5 in or 4 ft length of 6mm nylon accessory cord. Must be nylon, Dyneema has a lower melting point. This is used as a rappel backup, the Sterling hollow block is recommended for its heat resistant properties.

- Own
- Buy

Carabiners

Must be UIAA rated for climbing.

- Two large pear shaped munter-style locking carabiners.
- Two non-locking wire gate carabiners.

- Own
- Buy

Internal Frame Pack

Choose the pack that fits your body best. An external frame is not adequate. Removable hipbelt, suspension parts, and lid are ideal options. It is very important that your pack be in good working order and not prone to failures of any sort. Our packs are a hugely important item and a climber may not be able to continue due to a pack failure. Avoid bells and whistles like large, full-length zippers, separate sleeping bag compartments, etc.

★ Size: 60 – 80 L

- Own
- Buy

Camping Equipment

Packing Checklist

Tent

Lightweight 4-season tent capable of withstanding winds to about 40 mph and continuous, multi-day rain. Your shelter should weigh no more than 4 lbs per person.

★ NOTE: We normally pair up in tents so if you don't have one, you may be able to share.

- Own
- Buy
- Rent

Sleeping Bag

Down is the sleeping bag insulation of choice. Rated from 10°F (23°C) to 0°F (18°C) If you know you sleep cold take this into consideration when purchasing/selecting your bag.

★ Shell Materials: Dryloft, eVent, Epic, nylon,

★ Fill Materials: Down or synthetic

- Own
- Buy
- Rent

Sleeping Pad

- Own
- Buy

<p>Bring two. One should be a full-length inflatable pad. Your inflatable pad should be a modern, lightweight, and packable version with an R Value of at least 4. Newer pads are less bulky and take up only a tiny portion of your packs' volume. The second pad should be a half or 3/4length closed cell foam pad. Full length (72 in) is too long. Plain, inexpensive foam pads are less bulky than Ridgerests or ZRests. If you already own a full length model it can easily be cut to 3/4 in length. Please bring a patch kit for inflatable pads.</p>	
<p>Compression Stuff Sack Used to shrink your sleeping bag into the smallest size possible. ★ <i>Materials: SilNylon, eVent, or similar</i></p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Headlamp A high output LED model. Bring fresh batteries and one set of extra batteries. Flashlights are not acceptable.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<h2 style="margin: 0;">Cooking Equipment and Food</h2>	
<p>Stove Liquid fuel or canister stoves are acceptable. White gas or gas canister. 22 oz of white gas or two 8oz canisters per person are usually sufficient. Fuel is available to purchase at the rendezvous for your course. ★ <i>NOTE: We will likely pair up on stoves at the Rendezvous to save weight.</i></p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Fuel White gas or gas canister. 22 oz of white gas or two 8 oz canisters are usually sufficient. ★ <i>NOTE: Fuel is available to purchase at the rendezvous for your course</i></p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Fuel Bottle For use with liquid fuel stoves. Leak-proof bottles designed for your specific stove such as Sigg or MSR are best.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Pot One 1 1/2 - 2 quart pot is enough for one person. Two people sharing a stove might want to bring two pots if their meals are significantly different. ★ <i>Materials: Titanium, aluminum</i></p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Eating Utensils</p> <ul style="list-style-type: none"> ● Spoon: Bigger is better. Lexan is lighter, but metals spoons are more durable. Consider bringing a spare if you go with Lexan. ● Thermal mug: 16-20oz with a lid. A 16oz wide mouth Nalgene is a favorite amongst our guides. ● Bowl: A lightweight Tupperware-type bowl is recommended. Avoid metal bowls, they are expensive, prone to tipping over, and make your food get cold very fast (or burn your hands when you are eating soup). 	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Lighter Bring two.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Hydration 2 liters of water capacity minimum, plus one thermos. Should be wide mouth Nalgene type. Narrow mouth bottles are freeze easily and should not be used. Hydration packs are not recommended, once they freeze they stay frozen for the duration of the trip.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Food</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy

AAI does not supply food on this program. Select meals that are relatively easy to prepare but also appetizing. For the days bring plenty of quick, high – energy lunch food. We have included [meal planning guidelines](#) in your program packet.

★ NOTE: Please call our office for additional guidance in the food planning and packing process. Keep in mind that you are required to keep all of your food and toiletry items in a bear can.

Other Personal Equipment

Packing Checklist

Wristwatch

A model with an alarm that will wake you up is preferable. It doesn't need to be anything fancy.

- Own
 Buy

Sunscreen

With Sun Protection Factor (SPF) 30 or higher. A couple of 1oz tubes are adequate and work better than one large one. For the fair skinned, the higher the SPF, the better. (Dermatone produces an effective 1" diameter stick as well as a translucent zinc oxide lotion.) Sunscreen is prone to freezing in the cold and smaller containers fit well into pockets for warming.

- Own
 Buy

Lip Protection

Bring 1 container/applicator with the highest SPF available.

- Own
 Buy

Garbage Bags

Bring one large bag to line your backpack and one to pack out garbage. Trash compactor bag, if available, are more durable.

- Own
 Buy

Personal Medical Kit

For sunburn, blisters, headaches, and minor cuts and scrapes. Please include duct tape, moleskin, bandages, and prescription at a minimum.

- Own
 Buy

Repair Kit

At a minimum this kit should include:

- A stove repair kit (designed for your stove)
- Thermarest repair kit (for Thermarest pad users)
- 10-20 feet of lightweight nylon cord
- A small sewing kit
- Duct tape (wrapped on water bottles or trekking poles)
- An extra waist buckle for your pack

- Own
 Buy

Personal Toiletries

Bring a toothbrush, toothpaste, floss, hand sanitizer, personal supply of toilet paper, etc.

- Own
 Buy

Pee Bottle (And Pee Funnel For Females)

1-quart size minimum. Nalgene 48oz wide mouth collapsible canteen is a guide favorite. Plastic bottles from the store such as Gatorade bottles also work well. If you choose to bring one of these, use it carefully and make sure the capacity is adequate. Label your pee bottle well. Women must also bring a [pee funnel](#).

- Own
 Buy

Other Optional Items

The items listed below are not required, although many are nice "luxury" items that can make your trip more enjoyable. Remember that a few ounces here and there add up to extra pounds on your back and knees during your expedition.

Packing Checklist

<p>Avalanche Beacon If you choose to bring a beacon, it MUST be a modern, 3 antenna, single frequency (457kHz) beacon. Three antenna digital beacons are preferred. If your beacon is older than 5 years, you should consider retiring it or returning it to the manufacturer to have it tested for function and frequency drift. 2 antenna beacons are obsolete.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Water Bottle Parkas These are insulating jackets for your water bottles, one for each bottle. Must cover the entire bottle, including the lid. ★ Examples: 40 Below</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Hand / Foot Warmers Recommended for people that are susceptible to cold hands and toes. These should be small, disposable type products.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Camera Digital cameras can work fine in cold conditions as long as you keep them inside of your coat and don't expose them to cold temperatures for long periods of time. Make sure you bring any needed chargers or extra batteries. Smartphone cameras have come a long way and are also becoming a convenient standard.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Entertainment Books, games, journals, cards, etc. are great for rest days and stormy days in the tent. Music players like mini-disc and MP3 players are popular because the device and media are small and relatively lightweight. Models with a hard drive (e.g. Ipod) do not work at altitude. Bring a car adapter for any electronic devices to charge on our solar panel.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Ear Plugs Defense against snoring and high winds in the area.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Foot Powder A very small bottle will allow you to treat your feet daily, keep them dryer, extend the life of your socks, and help you avoid blisters/rashes from chronic wet feet.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy

Additional Details:

The Equipment Shop at the American Alpine Institute provides clothing and equipment for purchase, rental gear, and advice. Shop staff members are great climbers themselves and deeply involved in evaluating and testing gear. They are considered by many outdoor gear manufacturers to be the most expert in the country. They thoroughly understand the needs of climbers who will be rock climbing, ice climbing, mountaineering, or exploring the world on international expeditions.

Please consider our staff members part of your resource team in preparing for your trip. AAI Equipment Specialists are on hand to consult with you on specific gear needs, to answer questions on the latest equipment and innovations, and to make recommendations on best choices of clothing and equipment. They can assure that you are equipped with the best possible gear for your climbs. If you have any difficulty determining whether some particular items of clothing or equipment you already own will serve you well on a particular trip, they can help you answer that question.

Guides Choice International Field Testing

The Equipment Shop at the American Alpine Institute also administers AAI's prestigious [Guide's Choice Award](#). Equipment and clothing that have been awarded the Guides Choice designation have proven to be the top item in their product category. The awards are made on the basis of excellence in design, performance, and durability demonstrated in rigorous international field tests carried out by the professional guides of the Institute.

Call or Email the Equipment Shop for Advice or Gear

Please feel free to contact us and let us help you get ready for your climbing trip. Your comfort and safety depend on being well equipped. Whether you get your gear from us or just get advice, we're here to help you prepare.

Call: (360) 671-1570

Email: shop@AlpineInstitute.com

Equipment Shop Website: www.Shop.AlpineInstitute.com