



# Alpine Institute

## Ice Climbing Equipment Checklist

The primary goal of any alpine climber should be to carry as little as necessary. What is left out of a backpack is often just as important as what is placed inside. Conditions in the mountains vary dramatically from season-to-season. This can make the process of selecting equipment for an alpine climb difficult. On the one hand, a climber wants to be light. But on the other hand, a climber wants to have everything they need if there is a storm or other emergency.

This list was designed for the “worst case scenario,” a trip with significant inclement weather. In serious conditions it’s not uncommon for a climber to need every piece of clothing and equipment on this list. However, if a program does not encounter significant weather, there may be items here that are not used. As you prepare for your trip, it’s important to plan for the worst and hope for the best.

On the first day of your program, an AAI guide will work with you to refine your mountain kit to ensure that you bring exactly what’s needed given the forecast. It is acceptable to bring too much clothing or equipment to your initial meeting. And it is acceptable to bring things that you have questions about. Extra equipment can always be left behind in the cars.

**Ouray, CO & Rocky Mountain National Park, CO:** Temperatures and weather conditions in Colorado in the winter typically range from the teens to below zero. Along with cold temperatures, you might experience snow storms, wind, or even freezing rain/hail.

**Lee Vining, CA:** Temperatures and weather conditions in the Sierra in the winter are similar to Colorado winter conditions. The 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.

Please check the forecast several days before your course to ensure you are properly prepared. You can view the weather here:

[NOAA Weather Forecast for Estes Park, CO](#)

[NOAA Weather Forecast for Ouray, CO](#)

[NOAA Weather Forecast for Bishop/Lone Pine Area, CA](#)

**PROVIDED EQUIPMENT:** Climbing rope, anchors, solid waste bags.

**RENTALS:** Equipment available for rent through the AAI Equipment Shop is designated with a “Rent” check box. These items can be rented on the first day of your course.

You can call or email the Equipment Shop for advice on gear

[shop@alpineinstitute.com](mailto:shop@alpineinstitute.com)

360-671-1570

# CLOTHING

## Beanie/Toque

Wool or synthetic. Must fit under a helmet.

Buy  
 Own

## Sun Hat (Optional)

Ideally fits under a helmet. Ball caps with a button on top are not recommended. Visors or athletic hats are more comfortable, vent better, and are easier to clean and dry out.

Buy  
 Own

## Buff/Neck Gaiter

Look for one that is UPF-rated. Lighter colors are better for warm conditions and darker for colder conditions.

Buy  
 Own

## Glacier Glasses

Look for a pair that fits well and has side shields. The lenses should not let more than 12% of light through. Photochromic are more expensive, but usable in a wider range of light.

*Examples: Julbo Spectron, Julbo Reactiv Performance, Julbo Reactiv High Mountain*

*NOTE: Those using contacts should also bring a pair of prescription glasses in the event that your contacts or solution are lost or damaged. If you only use glasses, get a pair of over-the-glasses glacier glasses.*

Buy  
 Own

## Headlamp

Bring extra batteries / charger for rechargeable battery style. Ideal range is 200-350 lumens.

*Examples: Petzl Swift RL, Petzl Actik*

Buy  
 Own

## Liner Gloves

Thin, lightweight, wool or synthetic gloves. Size to fit snug but not too tight. Phone-compatible fingertips and palm texture are nice to have. These could be worn alone in temps greater than 25°F when it is dry. UPF rated are ideal.

*Examples: OR Vigor Sensor, The North Face Etip Grip*

Buy  
 Own

## Midweight Softshell Glove

These gloves are used for belaying, tying knots, rope management, etc., so dexterity and durability are key. Provide slightly more insulation than a liner glove and are generally used in temps of 15°F to 30°F while actively using your hands. Comfortable but snug fit. Durable leather or synthetic palm. Water-resistant is recommended because they will dry faster.

*Examples: Mountain Equipment Super Alpine, Rab Vapour-rise*

Buy  
 Own

## Hard Shell Glove

Waterproof and insulated. If the glove lacks insulation, size it to fit a liner glove inside. Mainly used in wet conditions, cold temps, or when not moving.

*Examples: Black Diamond Renegade, OR Highcamp.*

Buy  
 Own

## Sports Bra

Wool or synthetic. Comfort is key. Avoid bras with adjusters and clasps, as they could get compressed by your pack straps. Racerbacks are a popular option.

Buy  
 Own

## Base Layer

This will be your main layer, should be midweight synthetic or wool, no cotton. Long sleeves preferred.

*Examples: Patagonia Capilene Cool Daily Hoody, Outdoor Research Echo, Rab Pulse*

Buy  
 Own

## CLOTHING CONTINUED

### Active Insulation Layer

Lightweight “gridded fleece” or lightweight synthetic insulated jacket. Hood preferred.

*Examples: Patagonia R1, Patagonia Nano Air, Arc’Teryx Proton LT*

Buy  
 Own

### Soft Shell Jacket or Windproof Jacket

A soft shell jacket is considered an “action layer.” Its materials are designed to stretch and breathe while also maintaining wind and water resistance. This allows the user to leave this jacket on for a wide range of temps and conditions throughout the day without the hassle of constantly changing layers.

Windproof jackets are lightweight and packable but lack the breathability and stretchy nature of the soft shell. Windproof jackets are ideal for blocking wind and light precipitation during low-output activities.

*Example Softshells: Black Diamond Alpine Start Hoody, Rab Borealis, Mountain Equipment Squall, Patagonia Houdini Air*

*Example Windproof: Patagonia Houdini, Arc’Teryx Squamish Hoody*

Buy  
 Own

### Insulation Jacket / Puffy Jacket

Down or synthetic. This piece is worn in cold conditions or when not moving. Hood preferred. If choosing down, water-resistant down treatment is preferred to help prevent matting and loss of insulating ability if the jacket gets wet.

*Examples: Arc’Teryx Nuclei FL, Patagonia DAS Light, Arc’Teryx Cerium, Rab Alpine Series*

Buy  
 Own

### Down Parka

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.

Buy  
 Own

### Hardshell Jacket (Waterproof Rain Jacket)

Non-insulated jacket with a waterproof and breathable membrane. Three-layer construction is recommended. It must have a hood, ideally helmet-compatible.

*Materials: Gore-Tex, eVent, Drilite, H2NO, Pertex Shield.*

*Examples: Patagonia Torrentshell, Arc’Teryx Alpha AR, Mountain Equipment Lhotse*

Buy  
 Own

### Undergarments

Wool or synthetic.

Buy  
 Own

### Base Layer Pants (aka “Long Johns”)

Wool or synthetic. They should fit comfortably under your soft shell pants and should be at least midweight.

*Examples: Patagonia Capilene midweight or thermal weight (Thermal is warmer)*

Buy  
 Own

### Soft Shell Pants

Thin, weather-resistant, breathable, and stretchy. You will wear these a majority of the time.

*Examples: Patagonia Altvia, Mountain Equipment Ibex, Arc’Teryx Gamma FL*

Buy  
 Own

### Hard Shell Pant (Waterproof)

Non-insulated, waterproof, and breathable membrane. Full side zips are recommended for easy access. Make sure these fit over your other layers.

*Example: Patagonia Torrentshell, Arc’Teryx Beta Pant*

Buy  
 Own

## CLOTHING CONTINUED

<b>Socks</b> Wool or synthetic socks that are at least mid-calf height. Modern boots are designed to insulate your feet, so a thicker sock is not recommended as these tend to lead to blisters and moisture retention. Using a lighter sock allows for a more accurate boot fit. <i>Examples: Darn Tough Coolmax Lightweight</i>	<input type="checkbox"/> Buy <input type="checkbox"/> Own
<b>Approach Shoes (Optional)</b> Used by many for approaches to and from the climbing areas. <i>Example Approach: La Sportiva TX4, TX2, Scarpa Rapid</i>	<input type="checkbox"/> Buy <input type="checkbox"/> Own
<b>Mountaineering Boots</b> Must be stiff (full-shank or equivalent), crampon compatible, mountaineering boots. Double boots recommended for ice climbing and winter mountaineering courses. <i>Example Double Boot: Scarpa Phantom 6000, La Sportiva G2SM</i>	<input type="checkbox"/> Buy <input type="checkbox"/> Own
<b>Gaiters</b> Knee or calf height. Keep snow and ice out of your boots and socks. Also help protect pants from crampon holes regardless of the season. <i>Examples: OR Crocodile</i>	<input type="checkbox"/> Buy <input type="checkbox"/> Own

## CLIMBING

<b>Technical Ice Tools</b> Models by Black Diamond, Grivel, Petzl/Charlet, Omega, DMM, and other mainstream manufacturers are acceptable. Tools that are designed to be used with a leash should have a functioning leash system in place. <i>Example: Petzl Nomic Ice Tool, Cassin X-Dream Ice Tool, Black Diamond Reactor Ice Tool</i>	<input type="checkbox"/> Buy <input type="checkbox"/> Own <input type="checkbox"/> Rent
<b>Harness</b> Make sure the harness has a belay loop and gear loops. When sizing, it should fit over your all your layers. A more robust, padded harness is ideal for this program. <i>Example: Petzl Adjama, Arc'Teryx AR-395a</i>	<input type="checkbox"/> Buy <input type="checkbox"/> Own <input type="checkbox"/> Rent
<b>Helmet</b> Must be UIAA-rated for climbing. Be aware that foam, break-away style helmets like the ones listed below are susceptible to damage if being loaded in a checked bag. <i>Examples: Petzl Meteor, Black Diamond Vision</i>	<input type="checkbox"/> Buy <input type="checkbox"/> Own <input type="checkbox"/> Rent
<b>Crampons</b> Must be steel crampons with front points and compatible with your mountaineering boots. <i>Example: Petzl Vasak, Petzl Sarken</i>	<input type="checkbox"/> Buy <input type="checkbox"/> Own <input type="checkbox"/> Rent
<b>Belay Device</b> Bring an auto-blocking device that accepts two ropes. <i>Example: Black Diamond ATC guide, Petzl Reverso</i>	<input type="checkbox"/> Buy <input type="checkbox"/> Own
<b>Slings</b> Bring one 48in (120cm) and one 24in (60cm) pre-sewn sling. Must be UIAA rated for climbing. <i>Example: Mammut Contact, Black Diamond Nylon Runner</i>	<input type="checkbox"/> Buy <input type="checkbox"/> Own

## CLIMBING CONTINUED

### Carabiners

Must be UIAA rated for climbing. Available for sale in our equipment shop.

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

*Example : Petzl Attache, Camp Photon Wire*

Buy  
 Own

### Rappel Backup

The Sterling Hollow Block or Beal Jammy are recommended for their heat resistant properties. A 4ft length of 6mm nylon accessory cord will also suffice.

Buy  
 Own

### Trekking / Ski Poles (Optional)

Two poles recommended. Poles help with balance while hiking with a heavy backpack. Poles should have snow baskets.

*Example: Black Diamond Expedition 3*

Buy  
 Own

### Large Backpack

60-65L is recommended. Mountaineering specific packs are recommended and it should have the ability to carry weight well (45+ lbs).

*Example: Black Diamond Mission 75, Mountain Hardware AMG 75, Arc'Teryx Bora 75*

Buy  
 Own

## CAMPING (OPTIONAL)

### Tent

Double wall 4-season tent is recommended, This tent should be capable of withstanding winds up to 40 mph and continuous, multi-day rain or snow. If there are any questions please consult our Equipment Shop to see if your tent is okay to use.

*Example: Hilleberg Unna, Black Diamond Eldorado*

Buy  
 Own  
 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.

*Example: Mountain Equipment Fireflash (5), Rab Mythic Ultra 180 (32)*

Buy  
 Own

### Compression Stuff Sack

For your sleeping bag. If it is a down bag, a waterproof compression sack is recommended

Buy  
 Own

### Sleeping Pad

Bring two; one inflatable and one closed cell foam. The foam pad helps insulate from the snow and serves as a backup to the inflatable pad.

*Example: ThermaRest XTherm*

Buy  
 Own

### Stove and Fuel

Liquid fuel or canister stove.

*Example: Soto Windmaster, MSR Windburner*

Buy  
 Own

### Pots

Bring one pot. Bigger pots (1.5 - 2L) are better for melting snow.

Buy  
 Own

### Utensils

Spoon or spork. Long-handled are nice.

Buy  
 Own



## CAMPING CONTINUED

### Bowl

Bring a plastic bowl or mug, preferably with insulation.

- Buy  
 Own

### Lighters

Bring two.

- Buy  
 Own

### Hydration

3L capacity is recommended, though some people need more.

For Camelbak style hydration bladders, bring a drinking tube insulator, as the tube can freeze up. Be aware that Camelbak style bladders require constant vigilance in order to avoid freezing. Be prepared to have to pull your bladder out of your pack to drink, as hoses freeze. For Nalgene style water bottles, bring a water bottle parka to insulate your bottle.

- Buy  
 Own

### Water Purification

Water purification of some form is required. The popular tabs that our guides use, Aquatabs, are a great option. Pills that take an hour or less to purify are recommended. Steripens are an acceptable alternative to purification tablets. It is strongly encouraged to use the brand Aquatabs, as they work the fastest and have the least amount of flavor once administered.

*Example: Aquatabs, SteriPen, Katadyn BeFree, Platypus Quickdraw*

- Buy  
 Own

### Food

You are responsible for your own food for the duration of the course. You should arrive on the first morning of your course with enough food for your program length.

- Buy  
 Own

## OTHER ESSENTIALS

### Toothbrush and Toothpaste

Travel size recommended.

- Buy  
 Own

### Hand Sanitizer and/or Wet Wipes

Required. Used after going to the bathroom and before eating. Wet wipes can be used for the "mountain shower".

- Buy  
 Own

### Alarm Clock

You will be responsible for waking up at certain times throughout the program. Be sure if you use your phone as an alarm that you have enough backup battery to accommodate for this. If you plan to use a watch, be sure your alarm is loud enough to work for you.

- Buy  
 Own

### Toilet Paper

The provided solid waste bags have a small amount of toilet paper with them, but most people do not find this to be adequate. Estimate how much you'll need for a program of this length and place that in a plastic zip lock bag. An extra zip lock bag can be helpful for pack-out of used paper.

- Buy  
 Own

### Pee Cloth (optional)

A reusable, antimicrobial pee cloth. Used in place of toilet paper or wet wipes for cleanup.

*Example: Kula Cloth*

- Buy  
 Own

## OTHER ESSENTIAL CONTINUED

### Urination Device (Optional)

Pee funnels such as the GoGirl or Freshette. Used in conjunction with a pee bottle or while on a rope team. Can help mitigate the need to squat.

*Example: Freshette*

Buy  
 Own

### Menstrual Cup (Optional)

There are many things to consider about backcountry menstruation, click on the [link](#) for more information.

*Examples: Diva cup, Saalt, Lunette*

Buy  
 Own

### Sunscreen

At least an SPF of 30+, zinc-based is preferred. Small travel-size tubes are recommended so you can put them in a close-by pocket for easy access.

*Examples: ZBlok 45, 2oz containers are a nice size.*

Buy  
 Own

### Lip Balm

Make sure it is SPF Rated.

*Example: Blistex Gold Five Star Protection SPF 30*

Buy  
 Own

### Personal First Aid Kit

- Band-aids
- Blister Treatment
- Prescription Drugs
- Ibuprofen, etc
- If you wear contacts, make sure you have spares if you can't see without them

Buy  
 Own

### Repair Kit

- Inflatable sleeping pad patch kit
- Duct tape (Gorilla Tape tends to be the best brand for the mountains).
- Zip ties
- 6-10ft of 3mm accessory cord
- 2 trash bags that are big enough to line the inside of your pack with

Buy  
 Own

## OTHER OPTIONAL ITEMS

### Gaia Navigation App

Optional smartphone app.

Buy  
 Own

### Map and Compass

Map should be of your program area. Compass must have declination adjustment

Buy  
 Own

### Assisted Braking Device

If you have a Petzl GriGri or similar assisted braking device, bring it with you for front-country climbing.

*Example: Petzl GriGri, Edelrid Megajul, Black Diamond ATC Pilot*

Buy  
 Own

### Altimeter Watch

If you have one then bring it. Nice tool to have in the backcountry, especially for navigation.

Buy  
 Own

## OTHER OPTIONAL ITEMS CONTINUED

### Entertainment

Books, games, cards, music player, kindle, etc.

Buy

Own

### Portable Charging Device

Phone charger, battery pack, or solar panel.

Buy

Own

### Car Charger

Nice to have for the end of the day if your phone dies or gets low while out climbing.

Buy

Own

### Camera

Phone cameras or small point-and-shoot cameras are preferred. SLR cameras are not recommended due to their size and bulk.

Buy

Own

### Comfortable Clothing and Footwear

Breathable footwear and some comfortable cotton clothing can be nice to change into after you get back to the car.

Buy

Own