



# Alpine Institute

## Ski/Board Baker Ascent Equipment Checklist

Conditions in the mountains vary dramatically from season to season, and sometimes even throughout the same day. This can make the process of preparing equipment for a winter backcountry trip difficult. On the one hand, a recreationalist wants to be light. But on the other hand, also wants to have everything he or she needs if there is a storm.

This list was designed for the “worst case scenario,” a day out with significant inclement weather. In serious conditions, it’s not uncommon for someone 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. Keep in mind that if you run particularly warm or cold it would be a good idea to adjust your layers accordingly. As you prepare for your course, it’s important to plan for the worst and hope for the best.

Please be sure to check the forecast several days before your course to ensure that you are properly prepared.

[NOAA Mt. Baker-Snoqualmie National Forest Weekly Forecast](#)

**RENTALS:** Equipment that is available for rent through the AAI Equipment Shop is designated with a “Rent” check box. These items may be rented on the first morning of your course during your rendezvous. Please call the shop if you have unusual sizing issues (either large or small), as those items are limited, additionally, our stock of skis and splitboards is also limited, so call ahead to reserve.

**Call or Email the Equipment Shop for Advice on Gear**

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

360-671-1570

Please feel free to contact us to help you get ready for your course. 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.

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

[NOAA Mt. Baker-Snoqualmie National Forest Weekly Forecast](#)

# CLOTHING

## Beanie/Toque

Wool or synthetic. Must fit under a helmet. Easily replaced with hooded layers after the early season.

Buy  
 Own

## Sun Hat

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

THESE ARE MANDATORY. 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

## Ski Goggles

For use in high winds and heavy snow and skiing downhill. These should be lightly tinted but not so dark that they 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.

Photochromic (variable tint) lenses are highly recommended.

*Example: Julbo brand goggles with the airflow feature are nice to have.*

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

## 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.*

*NOTE: April-May courses are often much colder and may require more heavily insulated gloves like the Black Diamond Guide.*

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

## Socks

Wool or synthetic socks that are over the ankle height. If you are skiing then socks that are just below the knee, or go above the edge of your ski boot are recommended. Having two to three pairs on hand is recommended in case a pair gets wet.

Buy  
 Own

## Undergarments

Wool or synthetic. Long, compression-style undergarments can help reduce inner thigh chafing.

Buy  
 Own

# CLOTHING CONTINUED

## Base Layer

A lightweight, wool or synthetic sun hoody is ideal. UPF 30+ sun protection is best. UPF clothing works better than sunscreen.

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

- Buy  
 Own

## Active Insulation Layer

Lightweight “gridded fleece” or lightweight synthetic insulated jacket. Hood preferred. Active insulation weight - 40g/m<sup>2</sup>. Heavier insulation weight - 60-80g/m<sup>2</sup>

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

- Buy  
 Own

## Soft Shell 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, and 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.

*Materials: Exolite, Matrix, Schoeller or similar.*

*Example: Patagonia Houdini, Arc’teryx Squamish Hoody, Mountain Equipment Squall.*

- Buy  
 Own

## Insulation Jacket

AKA the “puffy”. 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, Patagonia Down Sweater, Arc’teryx Cerium, Rab Alpine Series*

- 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. When sizing, make sure it can fit over other layers. Ski jackets are discouraged because they are usually not waterproof and have heavy insulation.

*Look for Gore-Tex, eVent, Drilite, H2NO, Pertex Sheild.*

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

- Buy  
 Own  
 Rent

## 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. Must fit over all of your other layers. This parka is ideal for courses where evening and night time temps get very low, this will increase your comfort level considerably after a long day when you are spending time around camp the last few evenings. It is optional depending on your comfort level in the cold, and conditions for the week.

*Materials: Primaloft, down*

*Weight: 992 – 1560 grams*

## CLOTHING CONTINUED

### Base Layer Pants (aka "Long Johns")

Wool or synthetic.

- Buy  
 Own

### Soft Shell Pant

Thin, weather-resistant, breathable, and stretchy. This layer is helpful if the weather is nice enough and dry enough, where having a more breathable layer than a hard shell might be more comfortable, typically late winter/early spring.

*Materials: Exolite, Matrix, Schoeller*

- Buy  
 Own

### Hard Shell Pant or Ski/snowboard pant

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. Having a front pocket that is Avalanche Beacon compatible can be helpful.

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

- Buy  
 Own

### Note About Pants

**If you are wearing ski/snowboard pants, then that layer should suffice, consider adding a base layer for additional warmth. However, if you do not have ski specific pants, then you will want to stick to the base layer, soft shell layer and hard shell layer combination. Please feel free to reach out to the AAI Equipment shop with any further questions.**

## SKIING/SPLITBOARD & AVALANCHE GEAR

### Skis

Skis with a backcountry flex (softer) are preferable to skis designed for hard packed lift serviced skiing. You may choose to bring either telemark skis or alpine touring skis. Telemark skis must be equipped with full metal edges. If you use a cable binding, bring a spare cable. Equip your skis with runaway straps. Alpine touring skis should use bindings that allow for forward and lateral release.

- Buy  
 Own  
 Rent

### Ski Boots

We strongly encourage the use of randonee (AKA AT or alpine touring) equipment. If you are an experienced telemark skier, modern telemark gear will also be accepted. Make sure your boots fit you snug enough for downhill performance, but are comfortable enough to keep your toes warm. The hinge should be flexible enough to allow for comfortable walking, even for long distances. They must be equipped with a deep rubber lugged sole.

- Buy  
 Own  
 Rent

### Ski Crampons

Most useful for March courses. These come in a variety of widths, be sure yours are wide enough to fit over your skis.

- Buy  
 Own

### Skins

For PNW, skins with more traction are recommended over skins with more glide.

**NOTE: These can only be rented if you are renting the skis or board as well.**

- Buy  
 Own  
 Rent\*

## SKI/BOARD/AVY CONTINUED

### Splitboard

Make sure to pick a board that goes with your weight, riding style, and terrain that you want to be on. For powder, softer rocker boards are recommended, whereas for more freeride style you will want a stiffer, cambered board. For women, companies are making more women specific splitboards with smaller sizes, narrower widths, and softer flexes. It is also recommended to get the same type of boot and bindings as your board. If you are getting a stiff board, then you will want stiffer bindings and stiffer boots as well. Binding systems where you can lock down the heel is a bonus.

Make sure to size your board, bindings, and boots together correctly. For example, if you have large feet, make sure that your boots and bindings aren't too big for your board. You don't want your boots hanging too far off the edge of your board (Nomore than an inch) or you will get toe/heel drag. It is also stance dependent, if your feet are angled more, there is more room for a bigger boot.

*NOTE- If you are bringing your own board, splitboard specific binding systems are recommended. But if you own regular snowboard bindings, there are kits to convert those for splitboard travel, in case you don't want to spend the money. These must be purchased separately before you arrive. Conversion kits are no longer available at our Equipment Shop.*

- Buy  
 Own  
 Rent

### Splitboard Boots

Splitboard touring-specific boots are recommended. They are tailored for touring and also have the added benefit of stiffer models. They also tend to have stiff, more mountaineering boot-like soles which makes it nicer for kicking steps and climbing.

#### **Splitboard boots must be crampon compatible.**

*Examples: ThirtyTwo Jones TM-2 Snowboard Boot and the Nitro Incline TLS*

- Buy  
 Own

### Poles

Adjustable trekking poles with a full size basket are recommended. Ski/Probe poles are not a substitute for the avalanche probe. It can be helpful for touring to have ski poles that have a hooking capability at the top of the handle. Collapsible/foldable poles fit into your pack better when riding down.

- Buy  
 Own  
 Rent

### Splitboard Crampons

These are unique for your bindings and your board width, so they need to be acquired before the start of your program.

- Buy  
 Own

### Helmet

A ski or snowboard specific helmet is necessary for this course. Preferably a helmet with Multi-directional Impact Protection System (MIPS). Ensuring that your helmet fits properly is critical for safety and comfort.

- Buy  
 Own

### Avalanche Probe

230cm minimum. If you are in the Cascades with an especially deep snowpack then a 320cm probe is recommended. Required even if bringing 'probe poles'. Carbon fiber is lighter and suffers less deflection than aluminum models. Look for a model that has graduated depth markings for use during snow pit studies.

- Buy  
 Own  
 Rent



## SKI/BOARD/AVY CONTINUED

### Avalanche Beacon

Your beacon MUST be a modern, 3 antenna, single frequency (457kHz) beacon. 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.

- Buy  
 Own  
 Rent

### Shovel

We require metal (aluminum) shovels. Newer models are lighter, stronger, more packable, and more ergonomic than older ones. Avalanche shovels now have a UIAA rating, so keep that in mind when shopping. Additionally we recommend a mid-sized blade that can fit in your pack. Smaller blades don't move enough snow, and larger blades move too much snow where efficiency is lost. A shovel that has a hoe-mode and snow profile friendly blades are also a bonus.

- Buy  
 Own  
 Rent

### Hydration

2 - 3 liters of water capacity minimum. Two or three water bottles, usually one-liter wide mouth Nalgene type, are required. Narrow mouth bottles are not functional and should not be used. Other similar plastic bottles (e.g. Gatorade) can work also. Hydration packs are not recommended, once they freeze they stay frozen for the duration of the course.

- Buy  
 Own

### 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*

- Buy  
 Own

## CLIMBING EQUIPMENT

### Headlamp

Bring extra batteries, or if it has a rechargeable battery, make sure and bring a charger. 200-350 Lumens is an ideal range.

- Buy  
 Own

### Climbing/Glacier 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. A harness with leg loop buckles can make getting in and out of your harness with your skis or splitboard much easier.

- Buy  
 Own  
 Rent

### Carabiners

Must be UIAA rated for climbing.

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

- Buy  
 Own

### Crampons

Must be steel crampons with front points. Only modern strapon, step-in, or 'new matic' crampons are acceptable, as long as it fits and is compatible with your mountaineering, ski mountaineering or splitboard boot.

- Buy  
 Own  
 Rent

### Prusiks

6mm nylon cord in 3 lengths; 13 ft, 6 ft, 5 ft. Available at AAI the morning of the course. We recommend getting 3 different colors for easy identification.

- Buy  
 Own

### Slings

Bring one 120cm and one 60cm pre-sewn nylon sling. Slings must be UIAA rated for climbing.

- Buy  
 Own

## CLIMBING CONTINUED

### Ice Axe

A straight shaft ice axe like the Petzl Glacier or Black Diamond Raven Pro is recommended. Adze is required. Please contact our Equipment Shop if you have any questions. Use the following table as a rough guide on length. Ice axe leashes are not required and not recommended.

Personal Height	Recommended Length of Axe
5'8" or shorter	50-55cm
5'9" - 6"	55-60cm
6'1" and up	60-65cm

- Buy  
 Own  
 Rent

### Internal Frame Pack

60L or more. Mountaineering specific packs, instead of backpacking packs, are a good way to shave weight. Should also have the ability to carry weight well (45 lbs+).

- Buy  
 Own  
 Rent

### Day Pack/Ski Pack

25L to 35L is an ideal size. Whatever you need to use for a full day out. For a Ski specific pack, your pack should fit well, move with you, and not be a major hindrance when downhill skiing. Choose a model with ice axe loops and straps to carry your skis easily. Some models feature additional avalanche features such as an "Avalung" or airbags.

- Buy  
 Own

## CAMPING EQUIPMENT

### Food

You are responsible for all food throughout the duration of your course! See the meal planning link.

- Buy  
 Own

### Tent

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

- Buy  
 Own  
 Rent

### Sleeping Bag

Synthetic or Down. If you bring a synthetic bag bring one on the lower end of the temperature range since synthetic bags tend not to be as warm as down. If choosing Down, water-resistant Down treatment is preferred to help prevent matting and loss of insulating ability if the sleeping bag gets wet. If you know you sleep cold take this into consideration when purchasing/selecting your bag. You may want to also consider purchasing and carrying a lightweight sleeping bag liner for additional warmth.

Rating: 10°F ( 23°C) to 0°F (18°C)

- Buy  
 Own  
 Rent

### Compression Stuff Sack

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

- Buy  
 Own

# CAMPING CONTINUED

## Sleeping Pad

Bring 2. 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 3/4 length closed cell foam pad. Full length (72") is too long. Plain, inexpensive foam pads are less bulky than Ridgerests or Z Rests. If you already own a full length model it can easily be cut to 3/4 length.

- Buy
- Own
- Rent

## Stove and Fuel

Liquid fuel or canister stove. Fuel is available at our Equipment Shop on the morning of the course.

*NOTE: Many people choose to share stoves, fuel, and tents to decrease weight. However, some people prefer to camp in their own tents and use their own stoves. This can be determined on the morning of the first day of your program.*

*Examples: Soto Windmaster, MSR Windburner*

- Buy
- Own
- Rent

## Pots

Bring 1 pot.

- Early Season: Bring a bigger pot for melting snow, 1.5L to 2L
- Mid/Late Season: 0.5L to 1L

*NOTE: If you have a complete stove system like the Jetboil or MSR Reactor and plan on eating out of your integrated pot, then you do not need to bring another pot.*

- Buy
- Own

## Utensils

Don't forget the official "most forgotten item" - The spoon or spork. Long-handled spoons make stirring hot liquids safer and metal ones tend not to break as easily in cold temps.

- Buy
- Own

## Bowl

- Early Season: Bring a plastic bowl or mug, preferably with insulation
- Mid/Late Season: Bring a plastic bowl, insulation not necessary

*NOTE: If you have a Jetboil or MSR Reactor type stove and plan on eating out of your integrated pot, then you don't need to bring a bowl. The same applies if you plan on using commercially packaged dehydrated or freeze-dried meals.*

- Buy
- Own

## Lighters

Bring 2. You will have the opportunity to buy them the morning of the course.

- Buy
- Own

## Water Purification

Water purification of some form is required. The popular tabs that our guides use, Aquatabs, are available at the Equipment Shop on the morning of the course. 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.

*NOTE: Pumps can be damaged by silt in the glacial water and can easily freeze at night and crack. However, many of our guides are finding success using some of the integrated pump/bladders like the BeFree and Quickdraw*

*Examples: Aquatabs, Steripen, Katadyn BeFree, Platypus Quickdraw*

- 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. While your guide can sometimes be your alarm, there are often situations where tents are far apart. 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. If you plan to use wet wipes, be wary of scented or exfoliating types as these can be an irritant for some people.

Buy  
 Own

## Pee Cloth (Optional)

A reusable, antimicrobial pee cloth, used in the place of toilet paper or wet wipes.

*Example: Kula Cloth*

Buy  
 Own

## 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

## Multi-tool

Any multi-tool similar to a Leatherman is great. *Make sure to bring any specialized tools that might be required to fix bindings or snowshoes in the field.*

Buy  
 Own

## Ski Straps

Required for keeping your skis attached to you so that your skiing doesn't turn into a walking trip, this can be added to your repair kit.

Buy  
 Own

## ESSENTIALS CONTINUED

### 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 (can be wrapped around a trekking pole or water bottle. 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

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

### Gaia Navigation App

Optional smartphone app. Please have the Mt. Baker (all aspects) maps downloaded prior to the start of your course.

Buy  
 Own

### Map and Compass

Map should be of Mt. Baker Area (Preferably Green Trails Maps #13SX). The compass must have a declination adjustment.

*NOTE: These items are available together in a bundle or sold separately at the Equipment Shop and can be purchased the morning of your course.*

Buy  
 Own

### Hand / Foot Warmers

Recommended for people that are susceptible to cold hands and toes. These should be small, disposable type products.

Buy  
 Own

### 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.

Buy  
 Own

### Small Foam Pad

Can be useful for sitting or kneeling during field instruction. Your pack can also serve this purpose.

Buy  
 Own

### Altimeter Watch

If you have one then bring it. It is a great tool to have in the backcountry, especially for navigation.

Buy  
 Own

## OTHER ITEMS CONTINUED

### Pee Bottle

Used at night or when the weather is poor so you don't have to get out of your tent. A 32oz or larger capacity is strongly recommended. Many guides use a bladder instead of a bottle to increase capacity.

*Example: Hydrapak Seeker 2L, Collapsible 48oz Nalgene*

- Buy  
 Own

### Entertainment

Books, games, cards, music player, kindle, etc. For evenings or rainy days in the tent.

- Buy  
 Own

### Portable Charging Device

Phone charger, battery pack, or solar panel. You are responsible for your alarm clock each morning. If you are going to use your phone, be sure you have enough power to accommodate this.

*NOTE: Solar panels should only be used to charge battery packs. Battery packs should be used to charge devices. Inappropriate use of a solar charger could lead to the depletion of a device's power.*

- Buy  
 Own

### Ear Plugs

For defense against snoring and high winds.

- 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

### Car Charger

Consider bringing an extra battery pack as well. Having a lot of people using the car charger cables is difficult.

- Buy  
 Own