



American
Alpine Institute

The Spirit of Alpinism

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EXTREME SKIING

Bellingham, WA

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, 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 prior to 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 are also limited, so call ahead to reserve.

Don’t forget that AAI climbers receive a 15% discount off full-price items purchased through our gear shop!

Please be sure to take care of any rentals (if needed) prior to your course start date.

Call or E-mail the Equipment Shop for Advice on Gear

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.

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

Equipment Shop Website: Shop.AlpineInstitute.com

Clothing	Packing Checklist
<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>Sun Hat For those blue-bird winter days.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Buff/Neck Gaiter Look for one that is UPF rated. Brighter colors work better for warmer conditions and darker colors for colder conditions.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Sun Glasses These are mandatory. For use when goggles aren't needed (Skinning up or standing around). Standard sunglasses are fine, but make sure they have UVA/UVB protection.</p> <p>★ 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.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>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.</p> <p>★ Julbo brand goggles with the airflow feature are nice to have.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Liner Glove 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>Hard Shell Glove Waterproof and insulated gloves. If the glove lacks insulation then size it to fit a liner glove inside. Mainly worn in wet conditions, cold, or when not mobile.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Undergarments Wool or synthetic.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Sports Bra Wool or synthetic, comfortable, active wear.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>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 pairs on hand for the field days are also recommended incase a pair gets wet.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy

<p>Gaiters (Snowshoers only) Mid-calf to Knee height. Keeps snow and ice out of your boots and socks from snowshoeing through deep, wet snow. 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 gaiter and scuff guard.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Base Layer Top This will be your base layer and should be midweight synthetic or wool. No cotton. Should be long-sleeved.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Active Insulation Layer Lightweight “gridded fleece” or lightweight synthetic insulated jacket. Hood preferred. ☆ Active insulation jacket weight at 40g/m2 and heavier Insulation jacket at 60g/m2 or 80g/m2 ☆ Example: Patagonia R1, Montbell UL Thermawrap Jacket, or similar.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>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</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>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. ☆ Weight: 350g-450g ideal weight. ☆ Example: Arc’teryx Atom LT, Rab Xenon, or similar.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Hard Shell Jacket Non-insulated jacket with a waterproof and breathable membrane. Three layer construction is recommended. It must have a hood, ideally a helmet compatible hood. When sizing make sure it can fit over other layers. ☆ Materials: Gore-Tex, eVent, Drillite, H2NO, Pertex Shield</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Base Layer Pant (aka “Long Johns”) Wool or synthetic.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>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</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Hard Shell Pant or Ski/snowboard pant Non-insulated, waterproof and breathable membrane. Full side zips are recommended. When sizing make sure to it is able to fit over a base layer and soft</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy

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

☆ Materials: Gore-Tex, eVent, Drillite, H2NO, Pertex Shield

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 and Avalanche Equipment

Packing Checklist

We allow skis or splitboards. This is NOT the appropriate course to be using a backcountry set up for the first time.

Skis/Splitboard

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.

- Own
- Buy
- 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.

- Own
- Buy
- Rent

Snowboard boots

To be paired with snowshoes for the ascents or use on your splitboard.

- Own
- Buy

Ski Poles

Adjustable trekking poles with a full size basket are recommended. Ski/Probe poles are not a substitute for the avalanche probe.

- Own
- Buy
- Rent

Skins

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

- Own
- Buy
- 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.

- Own
- Buy

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.

- Own
- Buy

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

- Own
- Buy
- Rent

<p>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.</p>	
<p>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.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy <input type="checkbox"/> Rent
<p>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.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy <input type="checkbox"/> Rent
<p>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.</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
<h2>Climbing Equipment</h2>	<h3>Packing Checklist</h3>
<p>Headlamp Bring extra batteries, or if it has a rechargeable battery, make sure and bring a charger. 200-350 Lumens is an ideal range.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>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. ☆ Example: Mammut Zephir Altitude alpine harness</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy <input type="checkbox"/> Rent
<p>Carabiners Must be UIAA rated for climbing. - Four large pear shaped munter-style locking carabiners. - Five non-locking wire gate carabiners.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>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.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy <input type="checkbox"/> Rent

Straight Shaft Axe	
Personal Height	Recommended Length of Axe
5'8" or shorter	50-55cm
5'9"- 6'	55-60cm
6'1"-6'3"	60-65 cm
6'4" and up	65-68cm

Crampons

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

- Own
 Buy
 Rent

Prusiks

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

- Own
 Buy

Slings

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

- Own
 Buy

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+).

- Own
 Buy
 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.

- Own
 Buy

Camping Equipment

Packing Checklist

Food

You are responsible for all food throughout the duration of your course!

- Own
 Buy

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.

- Own
 Buy
 Rent

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

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

- Own
 Buy
 Rent

<p>into consideration when purchasing/selecting your bag. You may want to also consider purchasing and carrying a lightweight sleeping bag liner to for additional warmth.</p> <p>☆ Rating: 10°F (23°C) to 0°F (18°C)</p>	
<p>Sleeping Pad Bring two. One should be a full-length inflatable pad. Your inflatable pad should be a modern, lightweight, and packable version with an RValue of at least 4. Newer pads are less bulky and take up only a tiny portion of your packs' volume.</p> <p>The second pad should be a half or 3/4length closed cell foam pad. Full length (72") 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 ¾ length.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy <input type="checkbox"/> Rent
<p>Compression Stuff Sack For your sleeping bag. If it is a down bag, a waterproof compression sack is recommended.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Stove and Fuel Liquid fuel or canister stove. Fuel is available at AAI the morning of the course.</p> <p>☆ 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.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy <input type="checkbox"/> Rent
<p>Lighter You will have the opportunity to buy them the morning of the course.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Eating Utensils/Cookware</p> <ul style="list-style-type: none"> <input type="checkbox"/> Spoon/Spork: Bigger is better. Lexan is lighter, but metals spoons are more durable. <input type="checkbox"/> Thermal Mug <input type="checkbox"/> Bowl and/or cooking pot: Bring a plastic bowl or mug, preferably with insulation. <p>☆ 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 only using commercially packaged dehydrated or freeze dried meals.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Personal Toiletries</p> <ul style="list-style-type: none"> <input type="checkbox"/> Toothbrush/Toothpaste <input type="checkbox"/> Wet Wipes/hand sanitizer <input type="checkbox"/> Sunscreen (SPF 30+ Zinc based preferred) <input type="checkbox"/> Contact solution/case/glasses if applicable <input type="checkbox"/> Other personal hygiene items <input type="checkbox"/> Toilet paper/extra ziplock bag <ul style="list-style-type: none"> <input type="checkbox"/> We provide biffy bags to pack out solid waste! 	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Other Essentials</p>	<p>Packing Checklist</p>
<p>Lip Balm Make sure it is SPF rated.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Wristwatch</p>	<input type="checkbox"/> Own

<p>A model with an alarm that will wake you up is preferable. It doesn't need to be anything fancy.</p>	<input type="checkbox"/> Buy
<p>Garbage Bags Bring one large bag to line your backpack and one to pack out garbage. Trash compactor bag, if available, are more durable.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Personal First Aid Kit</p> <ul style="list-style-type: none"> <input type="checkbox"/> Band aids <input type="checkbox"/> Blister treatment <input type="checkbox"/> Prescription drugs <input type="checkbox"/> Ibuprofen etc. <input type="checkbox"/> If you wear contacts make sure and have spares if you can't see without them. 	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Repair Kit</p> <ul style="list-style-type: none"> <input type="checkbox"/> Extra snow baskets for trekking/ski poles <input type="checkbox"/> Gorilla tape (Can be wrapped around trekking poles or water bottle. Gorilla Tape tends to be the best brand for the mountains.) <input type="checkbox"/> Zip ties <input type="checkbox"/> 6-10 ft of 3mm accessory cord 	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Multi-tool Any multi-tool similar to a Leatherman is great. <u>Make sure to bring any specialized tools that might be required to fix bindings or snowshoes in the field.</u></p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>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.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Other Optional Items</p> <p>The items below 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.</p>	
<p>Gaia Navigation App Optional Smartphone App.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Map and Compass Map should be of the area you are conducting your field days. Compass must have declination adjustment. ★ NOTE: Green Trails maps work best.</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. ★ Materials: Powerstretch, fleece, polypro, windpro</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Women's Specific Items</p> <p>Female Urination Device Pee funnel such as the GoGirl or Freshette. Many female guides prefer a rigid pee funnel.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy

[Click here for more info](#)

Menstruation Collection Cup

There are many things to consider concerning backcountry menstruation.

[Click here for more info](#)

Hand / Foot Warmers

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

Own
 Buy

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.

☆ Examples: Gold Bond, Dr. Scholls

Own
 Buy

Small Foam Pad

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

Own
 Buy

Camera

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

Own
 Buy

Car Charger

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

Own
 Buy

Altimeter Watch

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

Own
 Buy