

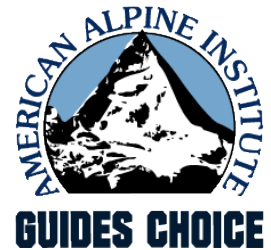
## **The Equipment Shop at the American Alpine Institute**

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 a 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. And if you have any difficulty determining if 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. All of the products at the Equipment Shop and on its website, [guideschoice.com](http://guideschoice.com) have been field-tested or have been vetted and are in the process of being field-tested.



### **Call or E-mail the Equipment Shop for Advice or Gear**

Please feel free to contact us and to let us help you get ready for your climbing trip. Our staff members are experts in the field, and the items of gear that we rent and sell are the best made in terms of design, performance, and durability. 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:** [info@guideschoice.com](mailto:info@guideschoice.com)

**Equipment Shop Website:** [www.guideschoice.com](http://www.guideschoice.com)

# Backcountry Skiing Equipment List

This equipment list has been developed specifically for the conditions experienced in the Cascade Mountains during the winter season. The equipment you bring must function well in a wide variety of conditions. Temperatures and weather conditions in the Cascades often change from minute to minute. A common weather prediction states, "If you can't see the mountains it's raining, and if you can see them it's going to rain." But when the sun comes out, it's glorious, and occasionally quite warm, even in the winter. Rain can fall at any time of year, but snow reigns supreme from November to April. Nighttime low temperatures often drop to well below freezing while daytime highs range anywhere from 0°F to 40°F. Mountain breezes, snowfall, and blowing snow are not uncommon and should be taken into consideration when planning your clothing system.

The clothing you choose for this course should be warm, lightweight, fast drying, and allow good freedom of movement. Synthetics such as polypropylene, pile or fleece, are lighter than wool and also dry much faster. For backcountry skiing, the layering system, based on several thin insulating layers (rather than one thick one) and a Gore-Tex shell, performs well. Your clothing should reflect the nature of this program. There will be periods of intense physical activity while touring, and periods of standing around with very little movement during the field instruction.

Please take the time to carefully prepare and understand your equipment and clothing. If possible, it is best to use it in the field, perhaps on a skiing trip. Those skiing or snowboarding should possess intermediate to advanced skills in their preferred travel method.

At AAI we take equipment and its selection seriously. Our Equipment Services department is expertly staffed by climbers, skiers, and guides. Additionally, we only carry products in our store that have been thoroughly field tested and approved by our guides. This intensive process ensures that all equipment that you purchase from AAI is best suited to your course and future mountain adventures. Please contact us at 360-671-1570 for advice regarding equipment for your course. *If you need to rent equipment from us (transceivers, probes, shovels, snowshoes, poles, etc), please call us no later than the day before your course starts to make reservations.*

## **Clothing System**

**Base Layer Top:** This will be your base layer and should be "lightweight" or "silk weight" synthetic or wool. Cotton is **not allowed**.  
*Weight:* 5 - 8 oz / 140 - 225 grams *Materials:* Synthetic, wool.

Own Buy

**Base Layer Bottom:** Look for the same features as your Base Layer Top.  
*Weight:* 5 - 8 oz / 140 - 225 grams *Materials:* Synthetic, wool.

Own Buy

**Undergarments:** Most skiers wear undergarments underneath their base layer.  
*Materials:* Synthetic, wool

Own Buy

**2<sup>nd</sup> Layer Top:** A lightweight fleece or wind shirt. A chest pocket is a helpful feature of this multi-use layer.  
*Weight:* 13 - 16oz / 368-454 grams  
*Materials:* Nylon, micro weave fabrics, fleece, wind stopper

Own Buy

**Soft Shell Jacket:** A thin, light, stretchy, breathable but wind and snow-resistant layer that is comfortable to wear is ideal. This will be your 'action layer' and the outer layer that you spend the most time in. Hoods are optional but highly recommended. Size your jacket to be trim-fitting, but large enough to fit over your base and second layers.  
*Weight:* 18 - 26 oz / 510 - 737 grams  
*Materials:* Schoeller, Powerstretch, Powerdry, or similar

Own Buy

**Soft Shell Pants:** This will be your outermost layer most of the time for your legs. Look for the same features as your softshell jacket. A thigh pocket is a useful feature for storing small items.  
*Weight:* 16 - 30oz / 450 - 850 grams  
*Materials:* Schoeller, Powerstretch, Powerdry, or similar

Own Buy

**Shell Jacket:** This layer needs to be lightweight, waterproof, and breathable. Your shell should be sized to comfortably fit over your other base and mid-layers (minus your insulating layer). Choose the lightest, most packable shell that will still get the job done. You may be using your jacket every day (in warm, wet weather) or perhaps only during an occasional storm. Avoid extra pockets (one or two chest pockets is all you need), 3-layer Gore-Tex, and hanging linings. Your jacket should have a hood.  
*Weight:* 8 - 20oz / 227 - 566 grams  
*Materials:* eVent, Gore-tex, h2No, or similar

Own Buy

**Shell Pants:** Made of a waterproof/breathable material, your lightweight shell bottoms should have full or hip-length side zips. This garment should be extremely lightweight and packable. A zipper fly is a nice optional luxury.  
*Weight:* 8 - 16oz / 227 - 453 grams  
*Materials:* eVent, Gore-tex, h2No, or similar

Own Buy

**Light Insulating Top:** 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 your shell gear (e.g. fleece sweaters) or over your shell gear (lightweight insulated jackets). If choosing fleece, pick modern fleece garments with waffle-grid patterns and avoid “windproof fleece” – it is not breathable enough. The weight and design of this piece will vary based on the other items of climbing that you are bringing.

*Weight:* 10 - 20oz / 283 – 566 grams

*Materials:* fleece, Primaloft, down

Own Buy

**Mid-weight Insulation Jacket:** Consisting of a baffled parka and optional hood, these come in many shapes, sizes and temperature ratings. If you tend to get cold easily, opt for a slightly warmer and more substantial parka.

*Weight:* 20 - 40oz / 566 – 1133 grams

*Fill Materials:* Primaloft, down

*Shell Materials:* nylon, epic, eVent

Own Buy

**Fleece Gloves/Glove Liners:** You wear these for much of your time on the trip. They need to be dexterous and comfortable, but not necessarily very insulating.

*Materials:* fleece, Powerstretch, or similar

Own Buy

**Mid-weight Fleece/Schoeller/Leather Gloves:** The most desirable glove is one that is comfortable and dexterous, so that it can be worn all day. It should feature leather palms to withstand ski edges and snow saws. These come in different weights, so choose a medium thickness for your trip.

*Weight:* 4 – 8 oz / 110 – 200 grams

*Materials:* softshell, windstopper fleece, leather, or similar

Own Buy

**Shell Gloves:** A waterproof modular shell sized to fit over your liner gloves, these will be worn during any cold/stormy weather and need to be dexterous enough to manipulate ski poles, buckles, and transceivers. The highest priority with these gloves is to keep your hands and liner gloves dry.

*Weight:* 6 – 10 oz / 170 - 280 grams

*Shell Materials:* Gore-tex, Schoeller 3x, or similar

Own Buy

**Beanie Hat/Toque:** A thick warm hat is crucial for keeping warm.

*Weight:* 2 - 4oz / 56 – 112 grams

*Materials:* fleece, wool, windstopper, or similar

Own Buy

**Socks:** Bring one pair per field day. Most skiers prefer to wear a very thin liner sock underneath a thicker sock. Adjust your sock system ahead of time to perfect your boot fit.

*Materials:* wool, synthetic

Own Buy

## **Skiing & Avalanche Equipment**

*Note: We allow skis, splitboards, or snowshoes for this course. Any of these types of snow locomotion are acceptable, though snowshoes are less desirable because they are not as efficient.*

**Snowshoes:** They should be equipped with an integral crampon (most snowshoes already have an integral crampon). MSR snowshoes are proven and quite durable.

Own Buy Rent

**Snowshoe Boots:** Make sure they are warm, waterproof, and comfortable to walk in!

Own Buy

**Ski Boots:** We strongly encourage the use of randonee (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 in your splitboard.

Own Buy Rent

**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 Skins:** Black Diamond skins work well. Make sure the glue is tacky and that the skins are the correct width and length for the skis you will be using.

Own Buy Rent

**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

**Ski 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.

*Size Range: 40 - 45 liters / 2500 - 3000 cu in*

Own Buy

**Avalanche Transceiver:** Your beacon MUST be a modern, 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.

Own Buy Rent

**Shovel** – We require metal (aluminum) shovels. Newer models are lighter, stronger, more packable, and more ergonomic than older ones.

Own Buy Rent

**Avalanche Probe:** 230cm minimum. 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.

Own Buy Rent

**Ski Runaway Straps:** Required for keeping your skis attached to you so that your skiing doesn't turn into a walking trip.

Own Buy

### **Other Essentials**

**Personal Medical Kit:** For sunburn, blisters, cuts, scrapes, etc. Please include duct tape, moleskin, bandaids, blister care supplies, and prescriptions at a minimum.

Own Buy

**Snacks and Water:** Bring a lunch and snacks for each field day.

Buy

**Sunscreen:** With a Sun Protection Factor (SPF) of at least 30. For the fair-skinned, the higher the SPF the better. Stick applicators allow you to apply without exposing fingers. Dermatone produces an effective 1" diameter stick as well as a translucent zinc oxide lotion. One 1 oz. tube is adequate. Several small containers are better than one large one.

Own Buy

**Lip Protection:** Bring 2 containers/applicators with the highest SPF available. Zinc oxide also works well (available in pharmacies) as do some models of "chapstick" that have SPF15 or higher.

Own Buy

**Glacier Glasses:** Choose a model with 100% UVA/UVB protection and side shields.

Own Buy

**Ski Goggles:** For use in high winds and heavy snow. These should be dark and block 100% of UV light. If you wear prescription glasses, these must fit comfortably over your glasses. Good venting is crucial.

Own Buy

**Hydration:** 2 liters of water capacity minimum. Two solid 32oz water bottles, like a one-quart Nalgene, are required. Hydration bladders with appropriate accessories may freeze, but can make hydrating easier. A small thermos is an excellent idea.

Own Buy

**Headlamp:** High output LED models are preferred over older halogen models. Bring one set of extra batteries. Flashlights are not acceptable.

Own Buy

**Repair Kit:** Your repair kit should include duct tape (can be wrapped on water bottles or ski poles), Glop Stopper for your skins, and the appropriate spare binding or snowshoe parts.

Own Buy

**Multitool:** Any multitool 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.

Own Buy

## **Optional Equipment**

The items listed below are not required, although many are nice “luxury” items that can make your tour more enjoyable.

**Camera:** We recommend small point-and-shoot cameras that can easily be carried in an outside pocket or small case outside your pack. If you can’t comfortably and safely carry your camera outside your pack, even in bad weather, you’ll miss the best photo opportunities.

Own Buy

**Note:** *No battery powered, auto-focus cameras perform well in the cold. Protecting the camera in a warm pocket will make the batteries last much longer.*

**Water Bottle Parkas:** These insulating jackets are for your water bottles to help prevent freezing. Bring one for each bottle.

Own Buy

**Buff:** “Buffs” are a multifunctional neck gaiter that can substitute for a lightweight balaclava.

*Materials:* synthetic

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

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

Own Buy

**Lightweight Balaclava:** 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.

*Materials:* Powerstretch, fleece, polypro, windpro

Own Buy

**Hand/Foot Warmers:** Recommended for people that are susceptible to cold hands and toes. These should be small, disposable type products like the ones made by “Grabber Mycoal”.

Own Buy

**Gaiters** – Depending on the fit of your pants to the boot, gaiters may be necessary to keep snow out.

*Weight:* 4 – 12 oz / 110 – 340 grams

*Materials:* Schoeller, nylon, Cordura

Own Buy Rent