American Alpine Institute

AVALANCHE LEVEL 1 EQUIPMENT LIST

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. Temperatures are typically in the teens or twenties but can easily drop to -10 to -20 F and can be accompanied by high winds and blowing snow. These conditions, in combination with the greatly varied activity levels inherent to backcountry travel, can easily lead to problems of hypothermia or frostbite. For your own safety and that of the group, please take this list seriously and come in good condition. If you have any questions about choosing your gear, feel free to call the office or equipment shop at 360 671-1570 and ask for advice.

While equipping yourself for winter backcountry travel you should pay equal attention to the need to have adequate protection from the elements as well as the necessity of traveling light. As a general rule you should not bring more clothing than you can wear at one time. Backcountry travel is always a challenge. Traveling lightly and efficiently with regard to gear can help reduce the effort and complication involved.

In this program AAI supplies snow saws and shovels. If you already own snow shelter building tools, please bring them, as it is generally best to become accustomed to using your own equipment.

CLOTHING

The clothing you choose 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. Layer accordingly.

Boots: Ski, Snowboard, or Snowshoe

Telemark Boots: You can bring 3-pin leather boots or plastic boots. Telemark boots should be heavy-duty single or double boots. They should have relatively stiff soles for better downhill control, be warm, and be well waterproofed. Make sure they're warm enough!

Randonee Boots: Randonee ski boots must be designed for alpine touring. 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. We do not recommend the use of plastic mountaineering boots with randonee bindings for two reasons; first, downhill

performance is greatly reduced when using mountaineering boots, and second, the increased flexibility of climbing boots significantly reduces the effectiveness of binding release mechanisms, increasing the risk of injury.
Snowboard Boots: To be paired with snowshoes for the ascents.
Snowshoe Boots: Make sure they are warm, waterproof, and comfortable to walk in!

Supergaiters - If you plan to use leather telemark boots we highly recommend supergaiters. Models that use a rubber rand such as Black Diamond/Scarpa or Wild Country are preferable. Supergaiters should be fit, attached, and tested well in advance of your trip. Getting them on your boots is a rather involved process and if they come off while on the mountain it will be extremely difficult to get them back on. Look for models that have some insulation, particularly on the lower boot rather than just heavy fabric. Models like the Wildline, La Sportiva Eiger insulated, and Climb High Buzzard work well.

Gaiters - Some method of keeping snow out of your boots must be employed. Gaiters, ski pants, and other methods for accomplishing this are fine.

Socks - Wool or synthetic (no cotton). Bring two complete changes. Skiers frequently wear a thin liner sock, and one pair of medium to thick socks depending on boot fit.

Long Underwear - Tops and bottoms, polypropylene or similar synthetic.

2nd Layer (Bottom): Schoeller or nylon fabrics preferred. This will be your action layer for your legs and the layer that you will spend the most time in. This layer should be light, comfortable, durable, quick drying, and provide some protection from wind and water. Black Diamond Alpine Pants, Arcteryx Gamma pants, and Mammut Champ pants are good examples of this layer.

3rd Layer (Top): This will be your action layer and the layer that you spend the most time in. Schoeller or nylon fabrics preferred. Seek out soft jackets that are light, comfortable, durable, quick drying, and provide some protection from wind and water. Lightly insulated is ok but not required. Arcteryx, Moonstone, Marmot, Mammut, and many other companies make soft shell jackets that work well for this layer.

Shell Layer (Upper): This will be your outermost layer and it needs to be waterproof, breathable, and durable. Two or three-ply Gore-tex or other waterproof breathable materials are required. Your parka needs to have a hood and should be sized to fit over your clothes. Lightweight and compressible layers are ideal but don't sacrifice too much weight for durability. Models like the Arcteryx Beta and Gamma jackets, Marmot Alpinist and Precip, and Patagonia Stretch Armstrong are top of the line.

Shell Layer (Lower): Full side zips recommended for easy on and off over boots. Make sure they fit over all of your layers when fully dressed. Pants or bibs are acceptable and each has their advantages and disadvantages. Materials should be Gore-tex or other similar waterproof and breathable fabrics. Examples include Marmot Cirrus and Minima

pants, Arcteryx Alpha SV bibs and Beta AR Pants, Patagonia Stretch Element and Microburst pants work well.

Insulated Jacket - Lightweight down or synthetic in addition to the warm jacket described above. Some good examples of insulating materials are Primaloft, Polarguard 3D or any down jacket/parka. This is different than your outer most waterproof shell jacket.

Liner Gloves - Polypropylene or similar synthetic.

Gloves: Gloves for mountaineering and skiing should be waterproof, dexterous, durable, and appropriately insulated for the temperatures expected while in the mountains. Leather palms are preferred and increase the durability of the glove. Most of your time will be spent in either your poly-pro gloves or these, heavier gloves. There are many modular systems for gloves out there that allow liners to be inter-changed. Models like the Black Diamond Ice and Verglas glove, Patagonia Stretch-Element and Work gloves, and models by Outdoor Research are recommended.

Warm Hat - Synthetic is less itchy than wool.

Lightweight Balaclava - Highly recommended. Thin polypropylene or other synthetic works well.

BACKCOUNTRY/ SKIING GEAR

Skis, Split board, Snowboard and Snowshoes, or Snowshoes – Any of these types of snow locomotion are acceptable, though snowshoes are less desirable because they are not as efficient. Telemark skis must be equipped with full metal edges. Skis with a backcountry flex (softer) are preferable to skis designed for hard packed lift serviced skiing. If you use a cable binding, bring a spare cable. Alpine touring skis should use bindings that allow for forward as well as lateral release. **All skis must be equipped with either runaway straps or ski brakes.**

Ski or Split-Board Skins - Black Diamond Ascension skins work well. Make sure the glue is tacky and that the skins are the correct width and length for your skis/board.

Ski Poles - Adjustable poles are recommended. Avalanche probe poles are also a good idea whenever traveling in the wintry backcountry, but probe poles are not a substitute for the avalanche probe.

Avalanche Transceiver - If you have a transceiver, please call AAI to confirm that you have a compatible frequency. You can rent this item from AAI.

Shovel - Any backcountry shovel, lexan or metal will do. Good models are made by Voile, BCA, and others. You can rent this item from AAI.

Avalanche Probe - Required even if bringing probe poles. You can rent these from us.

Day Pack - Your pack should fit well, move as you do, and not be a major hindrance when downhill skiing. Packs with 2500-4000 cubic inches of capacity will work. Models with the ability to carry a shovel and your floatation with readily available access are ideal.

Small Foam Pad - Optional. Can be useful for sitting or kneeling on during field instruction. Your pack can also be used to serve this purpose.

Thermos or Bottle Insulator - Also optional. Sometimes a hot drink is nice during a break in the action or as the cold creeps in.

Hydration: 2 liters of water capacity are the minimum. Hydration packs or bladders like the Camelback or Platypus with appropriate accessories are recommended. Water bottles like the 1 quart Nalgene type work well. Other plastic bottles, similar in nature can also work.
**Special care will have to be taken to avoid freezing your drink. There are several types of insulators, and having one of these is a good idea.

Multi-Tool - Leatherman or Swiss army knives are useful. Make sure to bring any specialized tools that might be required to fix things like bindings in the field.

MISCELLANEOUS

Glacier Glasses - With side shields.

Ski Goggles - Useful when conditions are very windy.

Head Lamp - With extra batteries and bulb.

Sunscreen - With a protection factor of at least 16.

Lip Protection - With a protection factor of at least 16.

Snacks and Water - A lunch and snacks for each field day.

Personal Medical Kit - For minor cuts, blisters, scrapes, etc.

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

Camera - (optional) A small lightweight range finder camera that can easily be kept in a handy outside pocket is recommended. Bring plenty of film.