

COURSE SKI MOUNTAINEERING EQUIPMENT LIST



Welcome to AMS! Knowing the right equipment for an expedition into the Alaska Range is a big part of what you will learn on your course. All the equipment requirements may seem daunting. This list is written to simplify and help you decide what gear to bring. When you arrive, your instructors go through all the equipment you brought for the course and help you decide what to bring and what to leave behind. You'll then go into AMS Outfitting to rent or purchase remaining items. This list is comprehensive. The actual equipment needed will vary depending on conditions and instructor judgement.

Some things to consider: Use the gear you already have. Bring your favorite outdoor clothing items and bring extras; your instructors will help you decide what will work best. You can leave anything extra in storage at AMS. We suggest you rent key items like backpack or sleeping bag from us rather than purchase new. Our rental gear is high quality and is chosen specifically for the use it receives. After your course, you may choose to purchase some of the items and deduct the rental fee from the price. Renting lets you try out equipment and make informed decisions on your next adventure.

PERSONAL EQUIPMENT KEY

\$	For purchase at AMS
RNT	For rent at AMS
NC	Available at no charge
N/A	Not available at AMS, but may be available in Talkeetna

Rental prices are noted on the Personal Gear Checklist. Everything AMS rents, except for boots, is available for sale at the AMS Mountain Shop; all AMS students receive a 10% discount.

Please label your personal gear with your name or an identifying mark/piece of colored tape.

FOOTWEAR

Camp Socks: 2 pairs (\$) Wool or synthetic expedition-weight socks: Big thick socks for hanging out in camp and sleeping in. AMS sells Farm to Feet socks.

Ski Socks: 2 pairs (\$) Wool or synthetic 14" medium-weight socks: AMS sells Farm to Feet socks.

Backcountry Ski boots, 1 pair (\$): Alpine Touring (AT) or Randonee Ski boots. We recommend wider Scarpa ski boots for comfort such as Gia for women and Maetrale for men.

Camp booties, 1 pair (RNT): Down or synthetic insulated camp booties with foam foot bed for use around camp and while sleeping. AMS rents 40-Below synthetic and sells Western Mountaineering down booties.

UPPER-BODY CLOTHING

You will need four insulation layers plus a shell jacket.

(Women) Lightweight sports bra, 1 (\$) : 100% quick-drying synthetic material. AMS sells Patagonia Sport Tops.

Base layer/lightweight, 1 (\$) : Lightweight polypropylene, capilene, or wool top. AMS sells a variety of Patagonia base layers.

Base layer/midweight, 1 (\$) : Medium-weight polypropylene, capilene, or wool top. This should layer over your lightweight top. AMS sells a variety of Patagonia base layers.

Insulation layer, 1 (RNT/\$) : Heavyweight top that fits over the first two layers easily. AMS rents Patagonia fleece sweaters and sells Patagonia R2 Jacket or Patagonia Hooded Micro Puff Jacket.

Hard shell jacket, 1 (RNT/\$) : Waterproof/breathable hard shell and roomy enough to fit over insulation layers. AMS rents and sells Patagonia hard- and soft-shell jackets.

Insulated synthetic parka 1 (RNT/\$) : Large, roomy down or synthetic parka with hood. This should fit comfortably over all other layers. AMS rents and sells Patagonia Das Parka.

LOWER-BODY CLOTHING

You will need two insulation layers plus shell pants.

Base layer underwear, 2-3 pairs (\$): Capilene or silk underwear, no cotton. AMS sells Patagonia Active Briefs.

Base layer/lightweight, 1 (\$): One light- or midweight pair of capilene or wool. AMS sells Patagonia base layers.

Soft shell pants, 1 (\$): An optional outer layer. Many people find these more comfortable to wear in favorable conditions. AMS sells Patagonia and Black Diamond soft shell pants.

Shell pants, 1 (RNT/\$): Waterproof/breathable fabric. Roomy enough to fit over layers and underneath your insulated overpants. Full- or partial-length side zippers to fit over plastic boots. AMS rents and sells Patagonia Rain Shadow Pants and sells Patagonia Stretch Ascent Pants.

Insulated overpants, 1 (RNT/\$): Synthetic-filled shell overpants with full side zips. Fleece pants are okay. AMS rents and sells Mountain Hardwear Compressor Pant.

HEAD/FACE/EYES

Sun Hat, 1 (\$): A baseball cap or similar with good coverage. AMS Sells tech-fabric and cotton baseball hats and visors and Patagonia sun hats.

Bandana/buff, 1 (\$): Primarily used to keep the sun off your neck and face while traveling, it also adds some warmth in cold conditions. AMS sells Patagonia Sun Masks.

Warm hat, 1-2 (\$): A fleece or wool winter hat. AMS sells a variety from Patagonia, Mountain Hardwear, and Black Diamond.

Glacier glasses, 1 pair (\$): Should block 100% UV and should have a VLT (Visual Light Transmission) rating of 4–12%, meaning they have dark lenses. If you wear prescription lenses, bring your own prescription sunglasses or dark lens ski goggles to fit over your glasses. AMS sells Julbo sunglasses.

Sunglasses case, 1 (\$): Storage protection for glacier glasses.

Ski Goggles, 1 pair (\$): Good quality, double lens, 100% UV protection. Ski goggles provide warmth and visibility in blowing snow. AMS sells Julbo and Bolle.

HANDS

Medium-weight liner gloves, 1-2 (\$): These gloves are great for traveling on the glacier and for tent time after. AMS sells Black Diamond liner gloves.

Insulated ski gloves, 1 (\$): When conditions get colder and we are working in the snow, ski gloves are essential. AMS sells a variety of Black Diamond ski gloves.

Insulated mittens, 1 (RNT/\$): These are essential for the colder earlier season trips. AMS sells Mountain Hardwear Absolute Zero Mitts

SLEEPING EQUIPMENT

Sleeping bag, 1 (RNT): Rated to -20°F with approximately 4-5 pounds of synthetic insulation. Should have a hood and collar that can be drawn close to your neck. Roomy enough to include you, two water bottles, and your liner boots. AMS rents: Western Mountaineering Bison and Puma sleeping bags for this course type.

Sleeping bag compression stuff sack, 1 (RNT): Compresses sleeping bag in order to fit in pack.

Full-length inflatable sleeping pad, 1 (\$): AMS sells Thermarest inflatable pads.

Full-length closed-cell foam pad, 1 (RNT/\$): AMS rents and sells Ridgerest closed-cell foam pads. The inflatable and closed-cell pads are used in combination for your sleeping system.

BACKPACK / STORAGE

Internal frame pack, 1 (RNT/\$): The main compartment should be approximately 4,300 cubic inches (70 liters). It should have attachment points for skis. AMS rents Mountain Hardwear and Gregory packs.

Small stuff sack, 2 (RNT/\$): For organizing personal gear and clothing.

Lunch stuff sack, 2 (RNT): Storage for all your lunch food for the entire trip.

Tent stuff sack, 1 (RNT/\$): Lightweight, 16"x 24" for storing extra clothing in your tent.

Garbage bags, 3 (\$): Large trash bags for lining the inside of sleeping bag, clothing stuff sacks, and for caching gear.

Sled duffel, 1 (NC): A large, lightweight duffel bag with full zipper, approximately 40" long and 16" in diameter. AMS provides a custom-made duffel that is designed specifically for our sleds.

SUN PROTECTION

Lip balm, 1 (\$): Should have sun protection rating. AMS sells several varieties.

Sunscreen, 1 2-oz. tube or equivalent (\$): SPF 20 or greater. Zinc oxide is recommended for people with a history of sunburn. AMS sells several varieties.

TOILETRIES

Toilet paper, 1 roll, single-ply (\$): Put in a Ziploc bag.

Hand disinfectant, 1 (\$): Travel-size bottle of alcohol-based hand cleaner; goes in the Ziploc with the TP.

Handi Wipes, 6-12 (\$): Individually wrapped, travel-sized wipes are easily thawed in your pocket.

Travel sized toothpaste, 1 (\$): AMS sells common brands of small tubes.

Travel toothbrush, 1 (\$): AMS sells a 2-piece toothbrush, where the handle becomes the cover.

(Women) Sanitary supplies (\$): Bring a supply of tampons or your preferred backcountry method.

Pee bottle, 1 (\$): We use pee bottles in conjunction with a Clean Mountain Can for solid waste. AMS sells a variety.

CLIMBING EQUIPMENT

Crampons, 1 pair (NC): Fully adjustable 12-point crampons, must fit securely and not be prone to rolling or popping off when side-hilling. AMS rents Black Diamond Contact Strap crampons.

Crampon case, 1 (NC): Storage for crampons to keep them from harming other equipment.

Ice axe, 1 (RNT/\$): 55-70 cm long general mountaineering ice axe suitable for self-arrest and snow climbing. AMS rents and sells Black Diamond axes.

Seat harness, 1 (RNT/\$): Drop-leg loop style that fits snugly around your waist. AMS rents and sells Black Diamond Alpine Bod.

Ascender w/sling, 1 (NC/\$): Mechanical climbing ascender with handle grip. Sling should be long enough to attach to waist with arm extended. AMS provides and sells Petzl Ascension.

Carabiners, 10 (RNT/\$): Oval or D-shaped, regular gate or wire gate. Rated for 5,000 pounds (18kN). AMS sells Black Diamond OvalWire and Oval Carabiner.

Locking Pear carabiners, 2 Locking D carabiners, 1 (RNT/\$): Full-size screw gate carabiner rated for 5,000 lbs (18kN). AMS sells BD RockLock and VaporLock Screwgate Locking carabiners.

Glacier rig (NC/\$) consisting of 6 mm perlon cord and 1-inch tubular webbing. AMS provides pre-cut, color-coded webbing and perlon for crevasse rescue. All participants have the same system for ease of safety checks. Items include: chest harness, safety prusik, hauling prusik, foot prusik, sled haul, and pack leash. You have the option to purchase or borrow this for your course. AMS provides and sells Sterling.

SKI EQUIPMENT

Alpine touring or AT skis, 1 (N/A): Lightweight AT skis with 90 mm waist or larger. AMS recommends Black Diamond Helio 105.

Climbing skins, 1 (\$): Climbing skins should be cut to fit ski base with metal edges visible. AMS sells G3 expedition skins.

AT Bindings, 1 (N/A): Pin style is recommended over frame style. Bindings should have brakes or leashes and come with ski crampons. AMS recommends Dynafit Radical ST 2.0.

Ski poles, 1 pair (RNT/\$): Ski Poles need wrist loops and snow baskets. Adjustable is fine, but not required.

Ski strap, 1 (RNT/\$): Used to secure skis. AMS provides and sells Voile ski straps.

Avalanche shovel, 1 (NC): Metal blade, telescoping. AMS provides and sells Voile telescoping avalanche shovels.

Avalanche transceiver, 1 (NC): Transmits and receives on 457 kHz. Bring a set of new batteries. AMS provides and sells Tracker II beacons.

Avalanche probe, 1 (NC): AMS provides and sells Black Diamond 320cm guide probes.

Air Bags, 1 (N/A): While not required, certainly bring your Air Bag if you own one. Your instructors will bring one for demonstration.

Ski Helmet, 1 (RNT): A ski helmet is recommended, but not required. AMS rents Black Diamond Vapor helmets.

Compass, 1 (NC/\$): Basic baseplate map compass with declination scale.

EATING & DRINKING

Mug/Cup, 1 (\$): LDPE or insulated mug with top. 12-20 oz. AMS sells 20-oz AMS insulated mug with cap and Fairshare.

Bowl with lid, 1 (\$): Sturdy in cold temps. It should have a lid to keeps things clean and allows spoon to be stored inside during travel. AMS sells Fairshare and lidded HDPE containers.

Spoon, 1 (\$): Spoons work well as the sole utensil. AMS provides and sells Lexan spoons.

Water bottles, 2 (\$): All water is derived from melting snow. Wide-mouth, single-quart is the easiest to fill and drink out of. Everyone needs a minimum of 2 quarts/liters of drinking water available during the day. We do NOT recommend metal water bottles; BPA-free options are recommended. AMS sells AMS HDPE Nalgene water bottles.

Water bottle insulators, 2 (RNT/\$): Insulated covers for your water bottles. These effectively turn a water bottle into a lightweight thermos. Water bottles without insulators can freeze while traveling, even within packs. AMS rents and sells Granite Gear insulators.

MISCELLANEOUS

Pocket knife, 1 (\$): For food prep, small repairs, or cutting tape/moleskin. AMS sells multi-tools.

Watch, 1 (\$): With an alarm. Altimeter feature is a bonus. AMS sells (inexpensive) watches with an alarm, such as the water-resistant Casio Classic.

Lighter, 1 (\$): For lighting kitchen stoves. AMS sells BIC.

Earplugs, 1 pair (\$): For windy nights or a snoring tent partner. AMS sells basic soft rubber earplugs.

Headlamp, 1 (\$): Small headlamp for in camp. AMS sells Petzl headlamps.

Notebook and pencil, 1 each (\$) AMS sells Rite-in-the-Rain notebooks and mechanical pencils.

MEDICAL

The course carries a drug kit, but since instructors are not authorized to administer medications beyond emergency situations, we ask that you bring medications you regularly use, and the following:

Ibuprofen, 20 tablets (N/A)

Acetaminophen (Tylenol), 20 tablets (N/A)

Blister kit, 1 (\$): When stretched out on a rope team all day it's best to have your own blister care. Your instructors will also be carrying supplies.

OPTIONAL ITEMS

Trail food, 1 lb/0.5 kg (N/A): Your favorite specific snacks or energy bars. AMS provides all course food, including a variety of trail mixes, candy bars, crackers, cheese, and salami.

Coffee: Instant coffee packets such as Starbucks Via are great for coffee drinkers. AMS provides teas, hot chocolate, and instant cold drink mixes. AMS sells Starbucks Via.

Camera, 1 (\$): Photographers should leave their SLRs and take their point-and-shoots. The camera should fit in a chest pocket and have a slim case, or none at all. Bring three sets of batteries, four if you shoot video. Bring two memory cards in case one malfunctions.

Nose guard, 1 (\$): Recommended to reduce sun exposure, attaches to glacier glasses. AMS sells Beak-o.

(Women) Pee funnel, 1 (\$): A redirection urinary device that can be useful during stormy weather. Practice before field use. AMS sells Go-Girl and Freshette.

Half-length pad, 1 (RNT): Half-length foam pad or Crazy Creek chair used as a seat in your snow kitchen.

GROUP EQUIPMENT—AMS PROVIDES

AMS provides all group equipment needed for courses to achieve their activity goals.

CAMPING EQUIPMENT

4-season tent: Mountain Hardwear Trango tents rigged with snow anchors. 2 people per 3-person tent, or 3 people per 4-person tent.

Kitchen shelter: 1. Each tent group has their own kitchen shelter. Black Diamond Mega-Light kitchen shelter with extendable pole. This tent, which has no floor, is also used as a lightweight bivvy shelter.

Classroom/meeting shelter: 1. Hilleberg 4-person tent fly.

Fuel: 8-10 oz per person per day. AMS uses Coleman white gas.

Snow shovels: 1 per person. AMS provides Voile Tele-Pro snow shovels.

Snow saw: 2 per tent. AMS has designed and produced the ultimate snow saw for cutting many blocks.

Clean Mountain Can (CMC): 1-2. AMS supports the cleanest approach to backcountry travel. Solid human waste is flown out of the mountains.

CMC bag: 1-2. Custom made bag to transport CMCs.

Stoves: 3 per kitchen. MSR Whisperlight International stoves with stove screens and stove boards. 2 stoves together for melting snow and a third stove for cooking. AMS designs stove boards for cooking on snow to be light and easily packed.

Emergency stove: 1. MSR Reactor isobutane stove.

Cooking pots: 2 per kitchen. Large capacity/6–8 quart for melting snow and smaller/4–6 quart for cooking.

Deep-dish frying pan: 1. Anyone who has done a NOLS course will appreciate the value of the Fry-Bake. Those who are unfamiliar have a treat in store!

Utensils: 3 per kitchen. Kitchen spoon, metal spatula, heavy-duty pot grips.

Pot pads: 2 per kitchen. Thin wooden pot pads for insulating the bottom of pots from contact with snow.

Scrubby: 1 per kitchen. MSR Alpine Dish Scraper.

Dish soap: 1 per kitchen. Mild, biodegradable dish soap.

Sump screen: 1 per kitchen. Screens gray water for food particles to minimize environmental impact in the kitchen.

Dipper cups: 2 per kitchen. Used for transferring water and hot soup.

Pot bag: 1 per kitchen. Custom made bags to carry pot/pan setup.

Kitchen bag: 1 per kitchen. Custom-made bag to bomb-proof kitchen at night or when not in camp.

Snow bag: 1 per kitchen. Custom-made tall, high-volume stuff sack for containing snow used for making water.

Food rations: 2 lbs (1 kg) per person per day. Your instructors will pack all the breakfast and dinner food prior to the course starting date. We take into account anyone who has expressed dietary needs and pack accordingly. Participants pack their own lunches, hot and cold drinks at AMS on the starting date; AMS provides a wide variety of trail foods, teas, cold drink mixes and cocoa, with AMS staff guidance, this packing method allows the highest amount of personal preference.

TRAVEL EQUIPMENT

Sleds: 1 per person. AMS uses custom-made Siglin UHMW pulks that are lightweight, streamlined, and track well.

Wands: 70 per course. AMS uses 3-foot, no-dye bamboo garden stakes with personalized flagging for route-finding.

Maps: 1 set per tent group. AMS uses CalTopo for mapping software and a large format laser printer with 11" x 17" waterproof paper to print maps for all areas of operation.

Compass: 1 per map set. Simple compass with base plate for orienting map and shooting a bearing.

GPS: 1. GPS is used in conjunction with map and compass for tracking and navigating with waypoints.

Snow study: 1. Instructors bring a snow study kit to complement the avalanche curriculum.

REPAIR KITS

Stove repair: 1. An assortment of parts for MSR Whisperlight stoves, including a complete pump and fuel bottle.

General repair: 1. Materials and tools to fix tents, snowshoes, crampons, boots, and packs.

Spare sunglasses: 1.

CLIMBING EQUIPMENT

Glacier travel ropes: 1 per group of 4. Sterling Ropes 10mm Safety Pro 60-m semi-static ropes.

Snow protection: 1 per person. 3- and 4-ft MSR snow pickets and flukes.

Ice protection: 6-8. Black Diamond Express ice screws, 19 and 22 cm with v-threaders.

Ice tools: 2-6 pairs. Black Diamond technical ice-climbing tools.

Runners and quickdraws: 10. Sewn webbing and flexible links for anchor building.

ATC: 1 per person. Black Diamond friction device used for belaying.

SAFETY

Ground to air radio: 1 VHF radio to communicate to planes flying overhead.

FRS radios: 1 per instructor. Walkie-talkies for use in situations where the group splits up.

Satellite phone: 1 Iridium with extra battery and solar panel.

Medication kit: 1 per instructor. All AMS instructors are certified in Wilderness First Responder. Their training and AMS's Medical Protocols allow us to bring a standard backcountry medications kit that includes: Acetaminophen, Albuterol, Aspirin, Benadryl, Cavit, Colace, Epinephrine, Ibuprofen, Keflex, Pepcid, Zofran.

First aid kit: 1 per instructor. Contents are dictated by AMS Medical Protocols and include: Band-Aids, bandages and gauze, irrigation syringe, antiseptic prep pads, ace wrap, athletic tape, trauma shears, Sam Splint, moleskin, mole foam, hydrocortisone, antibiotic cream, safety pins, tweezers, thermometer, CPR mask, airway, and latex gloves.

Emergency rations: 7 days. While unlikely, it is possible that weather could prevent flying on the scheduled pickup date. Each expedition has a pre-packed 7-day backup supply of food and fuel. Also in the package: toilet paper, tampons, and playing cards.