



Equipment List: What to bring & what can be rented / purchased from HMI

(This information is for your reference, no need to return it to HMI)

Please put your name on your belongings, as everyone will be bringing similar equipment!

Please keep in mind the following:

- 1) The High Peaks Adventure is only 14 days long. Please minimize the amount of stuff you bring; one large duffel should easily hold all your belongings! Remember the HMI motto: "Simple in means, rich in ends."
- 2) The emphasis at the High Mountain Institute is on comfortable, practical, appropriate clothing that demonstrates respect for our various learning environments (wilderness, classroom, etc.).
- 3) The average temperature range in Leadville during the summer is from about 35° F at night to 70° F during the day.

What to bring for On-Campus & Travel Days:

| Bring your own | # Needed | Item |
|-------------------------------------|----------|---|
| <input checked="" type="checkbox"/> | 2 | Shorts |
| <input checked="" type="checkbox"/> | 2-3 | Short-sleeve shirts |
| <input checked="" type="checkbox"/> | 1 | Jeans or other long pants |
| <input checked="" type="checkbox"/> | 1 | Sweatshirt or sweater |
| <input checked="" type="checkbox"/> | 1 | Comfortable walking shoes, sneakers or sandals |
| <input checked="" type="checkbox"/> | 1 | Bottom twin sheet (regular) (For use in cabin) |
| <input checked="" type="checkbox"/> | 1 | Pillow & pillowcase (For use in cabin) |
| <input checked="" type="checkbox"/> | 1 | Towel & washcloth |
| <input checked="" type="checkbox"/> | 1 | Duffel bag / suitcase, large (For storage of items at HMI) |
| <input checked="" type="checkbox"/> | 1 | Toiletries (toothbrush and small tube of toothpaste, brush or comb, shampoo & conditioner, skin lotion, tampons, etc.) |
| <input checked="" type="checkbox"/> | Opt | Stationary, envelopes & stamps |
| <input checked="" type="checkbox"/> | 1 | Swimsuit (for rafting trip) |
| <input checked="" type="checkbox"/> | Opt | Biking shorts and/or gloves (helmets and bikes will be provided) |





What to bring for the Wilderness Expedition:

What you MUST bring with you: HMI has lots of rental equipment. For all items below, we have indicated whether you must bring your own, or whether the item may be rented or purchased at HMI. Every item in **bold must** be brought with you; it cannot be obtained at HMI.

Equipment Rental & Purchase at HMI: Where indicated, items can be purchased or rented at HMI. Approximate prices are indicated. Please note that prices are subject to change. Rental fees and purchases are added to your student account. If you go over the amount in your student account, we will invoice you after your course; if you don't spend this much, we will issue you a refund.

Fill in the checkboxes as you go for your reference. If there is a " - " mark in a box, this indicates that the item cannot be rented or purchased, respectively.

Important note: Remember that it is important that you can wear all of your layers at the same time. If you cannot wear them at the same time, your clothing will be too tight and constrict blood flow, and therefore not keep you warm. Your sizes may need to be progressively larger in size to accommodate this.

| Bring your own | Rent from HMI | Purchase from HMI | # Needed | Item |
|-------------------------------------|-------------------------------|---------------------------------|------------|---|
| <u>Storage</u> | | | | |
| <input type="checkbox"/> | <input type="checkbox"/> \$24 | - | 1 | Backpack (Internal frame, 6-7000 cubic inches, min. 5000ci) |
| <input type="checkbox"/> | <input type="checkbox"/> \$8 | - | 1 | Day Pack (Standard school backpacks are too bulky to use here) |
| <input type="checkbox"/> | - | <input type="checkbox"/> \$0.50 | 2 | Heavy Duty Large Trash Bags (trash compactor type) |
| <input type="checkbox"/> | <input type="checkbox"/> Free | - | 1-2 | Small Stuff Sack (to help you organize items in your pack) |
| <input type="checkbox"/> | <input type="checkbox"/> Free | - | <i>Opt</i> | Large Stuff Sack (to help you organize items in your pack) |
| <u>Sleeping</u> | | | | |
| <input type="checkbox"/> | <input type="checkbox"/> \$24 | - | 1 | Sleeping Bag (synthetic, rated to 0-20 degrees F) |
| <input type="checkbox"/> | <input type="checkbox"/> Free | - | 1 | Sleeping Bag Compression stuff sack |
| <input type="checkbox"/> | <input type="checkbox"/> \$5 | - | 1 | Full Length Foam Pad (or Thermarest type air mattress) |
| <u>Feet (toes to ankles)</u> | | | | |
| <input type="checkbox"/> | - | <input type="checkbox"/> \$12 | 4 | Wool/ Synthetic Socks (no cotton) |
| <input checked="" type="checkbox"/> | - | - | 1 | Camp Shoes (old, lightweight running, tennis or sneakers. To wear around camp. No sandals) |
| <input checked="" type="checkbox"/> | - | - | 1 | Hiking Boots (see boot fitting information below) |
| <input type="checkbox"/> | <input type="checkbox"/> \$10 | <input type="checkbox"/> \$40 | 1 | Gaiters (that cover the tops of your boots up to your knees) |





| Bring your own | Rent from HMI | Purchase from HMI | #Needed | Item |
|--|------------------------------------|----------------------------------|---------|--|
| <u>Wicking Base Layers</u> | | | | |
| <input checked="" type="checkbox"/> | - | - | 1 | Shorts |
| <input type="checkbox"/> | - | <input type="checkbox"/> \$20 | 1 | "T" Shirt (synthetic) |
| <u>Lower Body Insulating Layers (ankles to waist)</u> | | | | |
| <input type="checkbox"/> | - | <input type="checkbox"/> \$40 | 1 | Mid Weight or Expedition Weight Long Underwear (synthetic or wool) |
| <input type="checkbox"/> | <input type="checkbox"/> \$24 | - | 1 | Heavy Fleece Pants or Puffy Pants |
| <u>Upper Body Insulating Layers (waist to shoulders)</u> | | | | |
| <input type="checkbox"/> | - | <input type="checkbox"/> \$45 | 1 | Mid Weight or Expedition Weight Long Sleeve (synthetic or wool) |
| <input checked="" type="checkbox"/> | - | - | 1 | Fleece pullover or jacket, or heavy wool sweater |
| <input type="checkbox"/> | <input type="checkbox"/> \$18-\$28 | - | 1 | Puffy Jacket (Synthetic (no down)) |
| <u>Wind and Rain Layers</u> | | | | |
| <input type="checkbox"/> | <input type="checkbox"/> \$20 | - | 1 | Hooded Rain Jacket |
| <input type="checkbox"/> | <input type="checkbox"/> \$6 | - | 1 | Wind Pants / Hiking Pants |
| <input type="checkbox"/> | <input type="checkbox"/> \$16 | - | 1 | Rain Pants |
| <u>Head (shoulders to top)</u> | | | | |
| <input type="checkbox"/> | - | <input type="checkbox"/> \$27 | 1 | Fleece or wool Hat (covers your ears) |
| <input type="checkbox"/> | - | <input type="checkbox"/> \$15 | 1 | Sun Hat or Ball Cap (has visor, blocks the sun) |
| <input type="checkbox"/> | - | <input type="checkbox"/> \$26 | 1 | Sunglasses w/ Retainer and Protective Case |
| <u>Hands (wrist to tips)</u> | | | | |
| <input type="checkbox"/> | - | <input type="checkbox"/> \$30 | 1 | Wool or Synthetic Gloves |
| <u>Miscellaneous Important Personal Items</u> | | | | |
| <input type="checkbox"/> | - | <input type="checkbox"/> \$12.50 | 2 | Water Bottle (1 liter, Nalgene-type) |
| <input type="checkbox"/> | - | <input type="checkbox"/> \$10 | 1 | Hot drink mug (Small HMI nalgene works great) |
| <input type="checkbox"/> | - | <input type="checkbox"/> \$6.50 | 1 | Bowl (plastic, Tupperware with lid is ideal) |
| <input type="checkbox"/> | - | <input type="checkbox"/> \$0.50 | 1 | Spoon (plastic) |
| <input type="checkbox"/> | - | <input type="checkbox"/> \$27 | 1 | Headlamp (lightweight and durable) |
| <input type="checkbox"/> | - | <input type="checkbox"/> \$2.50 | 1 | Extra battery sets for headlamp |
| <input type="checkbox"/> | - | <input type="checkbox"/> \$35 | 1 | Watch w/ Alarm |





| Bring your own | Rent from HMI | Purchase from HMI | # Needed | Item |
|-------------------------------------|---------------|---------------------------------|----------|---|
| <input type="checkbox"/> | - | <input type="checkbox"/> \$2 | 1 | Lip Balm (spf 15 or greater) |
| <input type="checkbox"/> | - | <input type="checkbox"/> \$6.50 | 1 | Sunscreen (spf 15 or greater) |
| <input type="checkbox"/> | - | <input type="checkbox"/> \$1 | 1 | Lighters (1 -2) |
| <input type="checkbox"/> | - | <input type="checkbox"/> \$2.50 | 2 | Bandanas (1 - 2) |
| <input checked="" type="checkbox"/> | - | - | 3 | Underwear (Cotton is better than nylon, sports bras are good for women) |
| <input checked="" type="checkbox"/> | - | - | 1 | Toiletries, travel size (toothbrush, floss, skin lotion, tampons & comb or hair brush) |
| <input type="checkbox"/> | - | <input type="checkbox"/> \$5-10 | 1 | Notebook/ Pen/ Pencil |
| | | | | <u>Miscellaneous Optional Personal Items</u> |
| <input type="checkbox"/> | - | - | Opt | Camera w/ extra battery |
| <input type="checkbox"/> | - | - | Opt | Camelbak type water bladder (must have water bottle in addition) |
| <input type="checkbox"/> | - | <input type="checkbox"/> \$0.50 | Opt | Zip Lock Bags (to protect camera, books & toiletries) |
| <input type="checkbox"/> | - | - | Opt | Contacts w/ Extra Solution |
| <input type="checkbox"/> | - | - | Opt | Extra Glasses |
| <input type="checkbox"/> | - | - | Opt | Crazy Creek type chair |

THINGS **Not** TO BRING (THIS MEANS PLEASE DO NOT BRING THEM!)

- Any Computer equipment
- DVD's, videos
- Cell phones may be brought for travel days. **We will collect these upon arrival and store them securely during the course.** This includes smart phones, so please do not plan on using your smart phone as your camera or music player.
- iPod or MP3 players may be brought for travel days and for use at night in the cabins. However, we ask that students do not use them during the day on campus or take them with them into the backcountry. **Please do not** bring iPod Touches, Kindle Fires and other similar items that connect to the internet, store movies, video games, and allow for texting functions.





The Art of Layering

Having the proper clothing on an expedition is the key to your comfort, whether this is clothing you bring from home or rent/purchase from HMI. By using the "layering" principle, you will be comfortable in a wide variety of conditions. The secret to this approach is to wear just the right amount of insulation to match your workload. Insulation comes from trapped air in the fabric fibers and between each layer. The recommended fabrics will keep their loft when wet and, therefore, keep you warm. **Cotton will not keep you warm.** Please note, we have listed some brand name examples of the different layers to help explain what we mean. **Please do not feel compelled to buy the exact examples listed below, especially if you already own a perfectly acceptable substitute.** The following is the best system for your layering technique:

- 1) The base layer should be thin and light such as a short-sleeved T-shirt and shorts. Cotton is cool when hiking but cold when wet. Instead, choose base layers made of wool or synthetic fabrics such as polypropylene or Capilene®. These fabrics are effective at wicking moisture away from the skin. For shorts, we recommend athletic shorts made of synthetic fabrics.
- 2) Over your T-shirt and shorts, the next layer should be mid-weight or expedition-weight long underwear made of wool or a synthetic fabric such as polypropylene or Capilene®.

Examples of first insulating layers (tops & bottoms): Patagonia Capilene® 2, Smartwool Midweight NTS®, Marmot Midweight®, Arc'teryx Rho AR®

- 3) The next layer is the insulation layer for warmth on the higher peaks and ridges and for lower temperatures. Sweaters, pullovers, tights and pants made of polar fleece, polypropylene, Capilene® or wool are the most effective insulators.

Examples of second insulating layers (tops): Patagonia R2®, Patagonia Nano®, Marmot Reactor®, North Face Denali Jacket®

Examples of second insulating layers (bottoms): fleece pants, Patagonia Micro Puff Pants®

- 4) Over the two insulating layers can go your final layer of insulation: a heavy puffy jacket. This additional layer provides extra warmth on cold mornings and nights in camp. The puffy jacket should have synthetic fill. Lightweight synthetic fill jackets are appropriate in this category when paired with an additional insulating layer such as a lightweight fleece, fleece vest, or expedition weight long underwear.

Examples of heavy insulation layer: Patagonia DAS Parka®, Black Diamond Stane Belay Parka or Patagonia Nano® (with an additional insulating layer)

- 4) The outer layer protects the other layers and yourself from the wind and rain. This layer includes windpants, and/or rain gear. A synthetic shell of coated nylon or Gore-tex works well. Gore-tex is expensive but highly wind and waterproof while still being somewhat breathable. It is highly recommended.

Please note: Puffy jackets and puffy pants are available for rent from HMI. If you do not already own them (or comparable layers), we encourage you to consider renting them since they are likely not things you will use a lot at home.



Shopping Tips

Consistent with the idea of "simple in means, rich in ends," we encourage students not to spend a lot of money on new equipment. One could easily spend thousands of dollars, shopping blindly for all of the equipment, so consider borrowing gear from friends and family and hunt for sales online.

In addition to the above suggestions, there are plenty of retail stores & web sites that offer good deals. There are many good stores out there. Try local shops that carry brand names such as Black Diamond®, Mont-Bell®, Patagonia®, and North Face® etc. We also recommend considering some of the following national stores:

Backcountry.com

www.backcountry.com

We've partnered with Backcountry.com to provide a great resource for equipment purchasing and questions. **HMI students receive 15% off MSRP** (some exclusions apply).

In order to receive the discount, or if you have any gear related questions, please contact Ben Rabinowitz at the below email or phone number and mention you are enrolled in an HMI program.

Ben Rabinowitz

Customer Account Manager

brabinowitz@backcountry.com

801-746-7564

Black Diamond

www.blackdiamondequipment.com

They offer mail-order service and many outdoor stores sell their products. Their clothing and equipment are very well designed. ***Black Diamond has been very generous to HMI, so please support them as much as you can.***

Patagonia

www.patagonia.com

Their clothing is well made and widely available.

REI

www.rei.com

You can find REI stores around the country, or use their mail order services. They have a wide selection of reliable clothing and equipment and have an excellent return/exchange policy.

EMS

www.ems.com

There are many EMS stores around the country, especially on the east coast.

Sierra Trading Post

www.sierratradingpost.com

They offer discounts on factory seconds, closeouts, and overstocked items from many companies. This is a great catalog to double check before paying more elsewhere.

Please pay careful attention to our description of each item you will need, and be sure to follow our guidelines when considering a substitute. If you are confused or unsure, give us a call at 719-486-8200. Ask for Justin at x111, or email Justin with links to specific items you have questions about at jtalbot@hminet.org. Remember, the sales staff people are usually educated by sales reps from the equipment manufacturers. Our descriptions are informed by the significant field experience of the HMI faculty working with students on backcountry expeditions to the places we actually go.



Boot Fitting Information

Your hiking boots may be the most important piece of equipment you will buy. You can avoid many foot problems (blisters, cold feet, etc.) by purchasing properly fitted boots. Please take extra time and care when buying your boots. Our information on boot fitting is relatively universal. If you end up with a salesperson that does not understand these instructions, switch to someone else. (Often times, salespeople do not understand the kind of terrain and weather you will encounter during the Semester. **When in doubt, follow our instructions, not that of the clerk in the store. Remember that he/she has probably never been an HMI student.**)

WHAT TO BUY

You should purchase a sturdy, off-trail, **backpacking** boot, not a mountaineering boot. They should be a medium to heavyweight, ankle-high boot that provides good support for off-trail hiking. Please fit your boots for **1 pair of heavy socks** or a liner sock and medium socks. You are likely to end up wear just wearing just a medium weight pair of socks but you may want the extra cushioning and warmth that a heavy pair of wool socks provides. In addition, on extended backpacking trips, feet tend to swell slightly, so larger boots provide more flexibility.

We recommend the following boots: Asolo TPS 520 GV[®] (shown at right), Merrell Perimeter Gore-Tex[®], Asolo Power Matic 200, Vasque St Elias GTX, Lowa Mauria GTX

If you find different boots of comparable quality, they may be fine. Please call if you have any questions.

TIPS FOR FITTING YOUR BOOTS:

- 1) Shop for boots in the afternoon because your feet swell during the day.
- 2) Boots that are too small will cause more problems than boots that are too large. Start with a boot that is one size larger than your normal shoe size.
- 3) Boots should fit comfortably with one pair of heavy wool socks or a pair of liner socks and a medium weight pair of hiking socks. Please do not let the salesperson talk you into wearing only a thinner pair of socks. In our experience, many students who have had foot problems bought boots that were fitted with one pair of thinner socks.
- 4) Most likely, the boot that fits you best will feel a little large and look huge. When you walk around the store, your heel should lift up slightly, but not be sloppy. Your toes should have enough room to wiggle.
- 5) Once you have found a pair of boots that feel comfortable walking around the store, test them for a proper fit. Lace the boots (snug but not tight) and then kick your foot against the wall. Your toes should just nudge the front of the boot on the 3rd kick. If your toes hit on the 1st or 2nd kick, the boots are too small. (You do not want your toes to jam into the front of your boot when walking downhill.)
- 6) Finding the proper fit takes time. Please be patient. It is worth it to try on lots of different boots because different brands and models fit differently. Their internal shapes vary. Also, do not forget to try a size larger.
- 7) **Remember, sizing bigger is better.** As they are broken in, leather boots will actually shrink over the years.
- 8) Be aware that replacement insoles such as Super Feet[®] can change the way a boot fits by raising the height of your heel in the boot. It is best to try on boots with the insoles you plan on using. If you have foot problems or concerns, see a podiatrist to be accurately diagnosed and properly treated. If you do use orthotics or insoles such as Super Feet[®], please bring the original insoles to your boots with you to HMI.

WHAT NOT TO BUY

Please do not buy lightweight hiking boots. Remember, you want a backpacking boot that is made to support you while carrying a heavy backpack. You may be hiking off trail through terrain such as loose gravel, snow, scree, mud, streams, and tall, wet grass for 7 days in a row.

NEW BOOTS

Once you have new boots, there are a few things you should waterproof them by putting several coats of SnoSeal[®] or Nikwax[®] on them (unless they are Gore-tex) and break in your new boots by walking or hiking in them before coming to HMI.



Additional information on Rain Gear, Wind Pants & Sleeping Bags

Remember the following items are also available for rent from HMI.

Please pay careful attention to our description of each item you will need, and be sure to follow our guidelines when considering a substitute. If you are confused or unsure, give us a call at 719-486-8200. Feel free to call us directly from a store, and we'll talk with you and/or the sales clerk. Ask for Justin at ext. 111. If you are renting these items from HMI, you do not need to read about the item.

RAIN GEAR

You must bring a hooded rain jacket and rain pants. Both of these items must be waterproof. Rain layers should fit over all of your other layers, so you will likely need these in a size larger than you normally wear. Be sure the jacket comes below your waist and has a good hood. For rain pants, it is very nice to be able to put them on over your boots, so look for a pair with a zippered cuff.

When buying raingear, be careful. The outdoor clothing industry has varying ideas of what is waterproof. Some of the very lightweight nylon jackets will not keep the rain out. In addition, ponchos are not acceptable. Look for rain gear that is made of coated nylon or Gore-Tex[®]. Gore-Tex[®] is expensive but highly wind and waterproof while still being somewhat breathable. Whatever you buy, it must be waterproof.

WIND/HIKING PANTS

Wind/hiking pants are lightweight, breathable, nylon pants including soft shell hiking pants. They do not need to be waterproof. They should be large enough to wear over all of your layers. Zippered legs are especially nice for putting them on and off over hiking boots.

Examples of wind/hiking pants: Patagonia Guide Pants, REI Sahara Convertible[®] Pants (shown at right), REI Acme[®] Pants, Marmot DriClime[®], Arc'teryx Gamma LT[®] Pants

SLEEPING BAGS

We recommend synthetic filled sleeping bags (e.g. Quallofil[®], Hollofil[®], Polarguard HV[®] etc). We do not recommend down sleeping bags. If they get wet, they can take days in the field to dry. For this reason, **we will not allow students to use down sleeping bags in the field** and we will require them to rent one of our synthetic bags. You will want a sleeping bag that is rated to 0-20° F, depending upon how "cold" of a person you are. The overall weight of your sleeping bag should be about 4 to 4 ½ pounds. If it is much heavier than that, it may not compress well in a stuff sack. It is essential that you choose a sleeping bag that has a hood to go around your head. The hood makes a big difference in keeping you warm at night.

You will be using your sleeping bag in the summer but temperatures can still get below freezing at night in the mountains.



Pack Purchasing & Fitting

Remember packs are also available for rent from HMI.

EXPEDITION BACKPACKS

You will want to purchase an internal frame backpack. Your backpack should have a minimum capacity of **5000 cubic inches**. It should also have a top pocket (often called the “brain”). The shoulder straps and hip belt should be well padded. Look for a pack that has minimal straps, zippers, and side pockets. These simply add unnecessary weight. We have plenty of high quality Osprey packs for rent, consider renting from HMI particularly if you are shorter than 5’5” (it is hard to find large packs with small frame sizes). HMI has packs that will fit people that are 4’10” and taller.

Regardless of what brand you purchase, please be sure the salesperson takes time to fit your backpack properly to your back. Frame size is important and will affect your comfort when you are carrying a full pack. Many companies size their packs by your height. This can work, but it is best to measure your torso length (shoulders to just above your hips). If you are a smaller person, a large pack may be too big for your frame. Purchase the biggest pack that ALSO fits your torso. As a reference, someone who is 5’10” usually uses a medium size frame. Be aware also that your waist size may differ from your frame size. When determining your waist size, measure the narrowest part of the waist (generally around where the belly button is). The waist belt does not go directly around this part of the waist, but will slide down to balance on the hip bones. It is necessary to find a pack that fits both your torso and your waist comfortably.

There are also packs specifically designed for women. These packs are shorter in the torso, wider in the hips, and narrower in the shoulders. For smaller women in particular, it is worth trying these packs. Again, if you are a small person, choose the biggest pack that fits you. In the end, fit is much more important than capacity, and it is fine to choose a smaller pack.

That said, don’t be afraid to go big on space. It does not mean that you will carry more. It means that you will have a much easier time packing your pack, especially with cold hands. Remember, you can cinch down a pack to make it smaller, but you cannot make it bigger. (Strapping additional gear to the outside of your pack is not a good option.)

Examples of backpacks: Osprey Aether® 85, Osprey Xinith® 105, Gregory Baltoro® 85, Gregory Deva® 85 (shown at right), Osprey Xena® 85, Arc’teryx Bora® 95



There are many other good packs out there; however, keep in mind that you should not have to spend more than \$350-\$450 on a quality pack and sub-\$300 options exist. **Remember, you can also rent a pack from HMI.**

LIGHTWEIGHT DAYPACKS

A lightweight daypack will be used both around campus and in the field. It should be approximately 1200 to 1800 cubic inches (20-30 liters). School backpacks are usually too bulky to use as a lightweight daypack on expeditions because they are difficult to pack in your larger backpack. If the pack has an internal frame it must be removeable.

Examples of daypacks: GoLite Ion®, Integral Designs Silcoat® Backpack, Mountain Hardwear Scrambler, REI Flash® 18 Pack, Vaude Rock Ultralight® 25 (shown at right),



Remember, you can also rent a daypack from HMI