



EQUIPMENT LIST: WHAT TO BRING & WHAT CAN BE RENTED OR PURCHASED FROM HMI

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

Please keep in mind the following:

- 1) The Leading Edge is only 16-20 days long and the High Peaks Adventure is only 15 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"/>	1-2	Shorts
<input checked="" type="checkbox"/>	2	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	High Peaks Adventure only: Swimsuit (for rafting trip)
<input checked="" type="checkbox"/>	Opt	High Peaks Adventure only: 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, and bring this list with you to help with gear issue. 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"/> \$26	-	1	Backpack (Internal frame, 6-7000 cubic inches, min. 5000ci)
<input type="checkbox"/>	-	<input type="checkbox"/> \$1	2	Heavy Duty Large Trash Bags (trash compactor type)
<input type="checkbox"/>	<input type="checkbox"/> \$1.20	-	1-2	Small Stuff Sack (to help you organize items in your pack)
<input type="checkbox"/>	<input type="checkbox"/> \$2	-	Opt	Large Stuff Sack (to help you organize items in your pack)
<u>Sleeping</u>				
<input type="checkbox"/>	<input type="checkbox"/> \$20	-	1	Sleeping Bag (synthetic, rated to 0-20 degrees F)
<input type="checkbox"/>	<input type="checkbox"/> \$3.60	-	1	Sleeping Bag Compression stuff sack
<input type="checkbox"/>	<input type="checkbox"/> \$4.80	-	1	Day Pack (lightweight, compressible day pack to use around camp and on peak ascents)
<input type="checkbox"/>	<input type="checkbox"/> \$3.60	-	1	Full Length Foam Pad (or Thermarest type air mattress)
<input type="checkbox"/>	<input type="checkbox"/> \$1.60	-	1	Full Length Foam Pad Stuff Sack
<u>Feet (toes to ankles)</u>				
<input type="checkbox"/>	-	<input type="checkbox"/> \$12.50	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"/> \$30	1	Gaiters (that cover the tops of your boots up to your knees)
<u>Wicking / Base Layers</u>				
<input checked="" type="checkbox"/>	-	-	1	Shorts
<input type="checkbox"/>	-	<input type="checkbox"/> \$17	1	"T" Shirt (synthetic)



Bring your own	Rent from HMI	Purchase from HMI	# Needed	Item
<u>Lower Body Insulating Layers (ankles to waist)</u>				
<input type="checkbox"/>	-	<input type="checkbox"/> \$21	1	Mid Weight Long Underwear (synthetic or wool)
<input type="checkbox"/>	-	<input type="checkbox"/> \$37	1 or	Expedition Weight Long Underwear (synthetic or wool)
<input type="checkbox"/>	<input type="checkbox"/> \$4.80	-	1	Heavy Fleece Pants
<u>Upper Body Insulating Layers (waist to shoulders)</u>				
<input type="checkbox"/>	-	<input type="checkbox"/> \$21	1	Mid Weight Long Sleeve (synthetic or wool)
<input type="checkbox"/>		<input type="checkbox"/> \$37	1 or	Expedition Weight Long Sleeve
<input type="checkbox"/>	<input type="checkbox"/> \$4		1	Heavy Fleece or Wool Jacket
<input type="checkbox"/>	<input type="checkbox"/> \$28	-	1	Super Layer (Synthetic, Heavy Puffy Jacket (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"/> \$4	-	1	Wind Pants
<input type="checkbox"/>	<input type="checkbox"/> \$24	-	1	Rain Pants
<u>Head (shoulders to top)</u>				
<input type="checkbox"/>	<input type="checkbox"/> \$2	<input type="checkbox"/> \$27	1	Fleece or wool Hat (covers your ears)
<input type="checkbox"/>	-	<input type="checkbox"/> \$19.50	1	Sun Hat or Ball Cap (has visor, blocks the sun)
<input type="checkbox"/>	-	<input type="checkbox"/> \$35	1	Sunglasses w/ Retainer and Protective Case
<u>Hands (wrist to tips)</u>				
<input type="checkbox"/>	-	<input type="checkbox"/> \$8.10	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"/> \$5.65	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"/> \$4	<input type="checkbox"/> \$10	1	Headlamp (lightweight and durable)
<input type="checkbox"/>	-	<input type="checkbox"/> \$5.50	1	Extra battery sets for headlamp
<input checked="" type="checkbox"/>	-	-	1	Watch w/ Alarm



Bring your own	Rent from HMI	Purchase from HMI	# Needed	Item
<input type="checkbox"/>	-	<input type="checkbox"/> \$2.10	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"/> \$1.90	1	Lighters (1 -2)
<input type="checkbox"/>	-	<input type="checkbox"/> \$2.10	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
<input type="checkbox"/>	-	<input type="checkbox"/> \$4.80	1	Bug Dope (deet)
<input type="checkbox"/>	-	<input type="checkbox"/> \$2.50	1	Hand sanitizer (travel size)
				<u>Miscellaneous Optional Personal Items</u>
<input type="checkbox"/>	-	-	Opt	Camera w/ extra rolls of film and batteries
<input type="checkbox"/>	-	-	Opt	Camelbak type water bladder (must have water bottle in addition)
<input type="checkbox"/>	-	-	Opt	Air Mattress Patch Kit (for Thermarest)
<input type="checkbox"/>	-	<input type="checkbox"/> \$0.50	Opt	Zip Lock Bags (to protect cameras, books & toiletries)
<input type="checkbox"/>	-	-	Opt	Pocket Knife (one per tarp group)
<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!)

- Stereo, boom box, or external walkman speakers (Cabins do not have AC electricity for appliances.)
- 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.**
- 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.



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 inner layer should be something thin and light such as a T-shirt or long underwear made of wool or a synthetic fabric such as polypropylene or Capilene®. These fabrics are effective at wicking moisture away from the skin. Cotton T-shirts are cool when hiking but cold when wet. If you perspire heavily as you hike, it will be to your benefit to have a dry layer to put on when you stop.

Examples of first base layers: Patagonia Capilene® 2, Smartwool Midweight NTS®, Marmot Midweight®, Arc'teryx Rho AR®

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

Examples of second base layers: Patagonia R2® or R4®, Marmot Reactor®, Arc'teryx Delta SV®, North Face Denali Jacket®

- 3) Over the two base 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 not appropriate in this category.

Examples of heavy insulation layer: Patagonia DAS Parka®

- 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.



Boot Fitting Information

Your hiking boots may be the most important piece of equipment you will buy. Work boots (e.g. Timberlands) are not good substitutes for hiking boots. Hiking boots are not available for rent from HMI.

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 in the Rocky Mountains. **When in doubt, follow our instructions, not that of the clerk in the store.**)

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 **2 pairs of heavy wool socks** (not a liner sock and heavy sock, although 2 pairs of Smartwool (or similar) socks will be fine). This is very important because we hike in a variety of environments and weather conditions, including over snow. You will want the extra cushioning and warmth that two pairs of wool socks provide. In addition, on extended backpacking trips, feet tend to swell slightly, so larger boots provide more flexibility.

We recommend the following boot manufacturers: Asolo, Merrell, Scarpa, Salomon, Technica and Vasque. If you find different boots of comparable quality and construction, they may be fine. Please call if you have 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.
- 3) Boots should fit comfortably with two pairs of heavy wool socks. Many people prefer two pairs of wool socks because it is warmer, provides more cushioning, and reduces the chance of blisters. Please do not let the salesperson talk you into a different sock arrangement. In our experience, many students who have had foot problems bought boots that were fitted with one pair of wool socks and a very thin liner sock.
- 4) Start with a boot that is 1½ sizes larger than your normal shoe size. Again, it is much better to have boots that are a little too big, than boots that are too small.
- 5) 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 too sloppy. Your toes should have enough room to wiggle.
- 6) Once you have found a pair of boots that feel comfortable walking around the store, test them for a proper fit. You do not want your toes to jam the front of your boot when walking downhill. To test this in a store, 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.
- 7) You should be able to slide your fingers between your heel and the back of the boot.
- 8) 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.
- 9) Remember, going big is better.... As they are broken in, leather boots will actually shrink over the years.
- 10) 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. If you have foot problems or concerns, see a podiatrist to be accurately diagnosed and properly treated. If you do have or use off the shelf 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.

New Boots

Once you have a new pair of boots, there are a few things you should do. First, waterproof them by putting several coats of SnoSeal[®] or Nikwax[®] on them. Then please take time to break in your new boots by walking or hiking in them before coming to HMI (see the fitness training plan).



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 Roving[®] Pants, REI Sahara Convertible[®] Pants, 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. Courses that start in mid-June will experience slightly cooler temperatures than courses that start in mid-July. 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

If you are purchasing a pack, you will want to get an internal frame backpack. 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. Many companies size their packs by your height. It is better to measure your torso (shoulders to just above your hips) for best results. For example, most people who are 5'10" use a medium sized frame.

Your backpack should have a minimum capacity of **5000 cubic inches**, including two large side pockets for accessories. It should also have a top pocket. For internal frame packs, you will need to use a compression stuff sack for your sleeping bag. The shoulder straps and hip belt should be well padded.

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. Remember, you can synch 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.) Really, try to purchase the **BIGGEST** pack you can find that will fit your torso.

Be aware that all the big-name companies carry a line of packs designed specifically 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. We know that it may be difficult to find a 6000 cubic inch backpack that fits someone who is only 5 feet tall. If you are a small person, choose the biggest pack that fits you. In the end, fit is much more important and it is fine to choose a smaller pack.

Shop for packs that have minimal straps and zippers. As for sizing, be aware that your waist size may differ from your frame size. When determining your waist size, measure the narrowest part of the waist. Be sure to discuss sizing your pack with a salesperson. He/she should be able to help you find the right fit, taking both your waist and frame size into consideration.

Examples of backpacks: Osprey Xenon[®] 85, Osprey Argon[®] 85, Gregory Whitney[®] 95, Gregory Deva[®] 85, Montbell Expedition[®], 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 DAY-PACKS

A lightweight day-pack will be used in the field and should be approximately 20-30 cubic liters and weigh no more than 1.5 pounds. If you choose to buy a day-pack the following are excellent options: Integral Designs Silcoat[®]; REI Flash[®] 18, GoLite Ion[®], and Vaude[®] Rock Ultralight 25, or Black Diamond Hollowpoint[®]. **Remember, you can also rent a day-pack from HMI.**

If you have any questions, please feel free to email us at hmi@hminet.org or call us at 719-486-8200. Ask for Justin at ext. 111.