

When it comes to outdoor equipment, there's no need to go all out and buy every piece of fancy gear just to cram in into your new, state of the art backpack. You will be carrying everything you bring with you on your expedition – PLUS some of the food and some of the group gear. Whether you purchase or rent, foremost in your mind should be weight. Each item adds up to what will eventually be strapped to your back. So do the research, read the labels and consider what you can do without. If you don't need something, don't bring it!

The National Center for Outdoor & Adventure Education (NCOAE) equipment list of required and optional gear will help you decide what to bring and what not to bring on your NCOAE adventure. You can save money too by renting some of the equipment for your course from NCOAE.

- If you have questions about gear you already own, send us an e-mail or call and we will assess its suitability for the environment where it will be used. We might suggest that you return your grandfather's heavy canvas war-era tent to the garage and rent or purchase a lightweight version instead. Any gear you bring must meet NCOAE's standards.
- If you prefer to purchase all of your gear that's fine too, but if you're not sure you'll ever use that \$400 internal frame backpack or sleeping bag again, we may have one available to rent! Of course you don't have to rent equipment from us, but our gear is tailor-made to fit our excursions.
- All program participants will pay a \$250 deposit on gear to cover possible loss or damage. If all gear is
 returned in the condition in which you received it, the full deposit will be applied to any rental charges,
 and the remainder returned to you so inspect the gear closely before and after renting. Damaged or
 lost group gear expenses are divided among all participants. Damaged or lost rental gear is charged to
 the renter.
- Remember to bring one or two sets of "in-town clothes" for days in town during the course & your return flight after the trip!
- Items listed below with an asterisk (*) may be available from NCOAE for rent.

Comments, questions, concerns... Call NCOAE Headquarters Monday through Friday between the hours of 8:30 am – 4:30 pm EST at (910) 399-8090.



	Packs and Bags			
EQUIPMENT	REQUIREMENT	QUANTITY	COMMENTS	CHECK LIST
Internal Frame Backpack*	Must Bring, or Rent \$65.00	1	Internal frame backpack, with a volume of 75 to 85 liters is required (4,600-5,200 cubic inches).	
Waterproof Stuff Sacks / Gallon Zipplocs	Must Bring	1-4	Used to organize items in your pack. Lightweight drysacks are convenient (Example: eVent Sil DrySack).	
Day Pack	Must Bring	1	Small backpack for use on day hikes or trips into town.	
Zip Duffle	Must Bring	1	Used to organize and store items while at base camp. (Example: Outdoor Products 12x24 Deluxe Duffle).	
Footwear				
EQUIPMENT	REQUIREMENT	QUANTITY	COMMENTS	CHECK LIST
Sturdy Hiking Boots	Must Bring	1 pair	Must be at waterproof. Recommend leather boots. Please read the Boot Selection Guide at the end of this list.	
Hiking Socks	Must Bring	3-4 pairs	Must be 75%–100% wool, merino wool, heavy ragg type, or thick polypropylene. No wool-cotton blends.	
Camp Shoes	Must Bring	1 pair	The ground around camp is often wet, soggy tundra. No vent holes. (Example: Holeys Coastal Boot, Crocs Bistro).	
Gaiters	Optional	1 pair	Half or Full gaiters provide good leg protection while	
Upper Body Clothing You need at least three insu	lating layers (base	layer, mid-v	bushwhacking. Low gaiters are also acceptable. veight insulation layer, & puffy jacket), a wind-proof layer, a	rain layer,
Upper Body Clothing You need at least three insu and a t-shirt. Make sure you layers, or three layers plus a	lating layers (base r layers fit comfort vest.	layer, mid-v	veight insulation layer, & puffy jacket), a wind-proof layer, a ich other. If you get cold easily, we suggest that you take fou	rain layer, ir insulating
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Upper Body Clothing You need at least three insu and a t-shirt. Make sure your layers, or three layers plus a EQUIPMENT Base Layer - Long Underwear Top Fleece Jacket or Shirt Long-Sleeved Shirt / Expedition Weight Pullover Fleece or Synthetic-fill	lating layers (base r layers fit comfort vest. REQUIREMENT Must Bring Must Bring Must Bring	a layer, mid-v cably over ea QUANTITY 1-2 1	veight insulation layer, & puffy jacket), a wind-proof layer, a ich other. If you get cold easily, we suggest that you take fou COMMENTS Light or expedition-weight synthetic or performance wool is best. (Example: Patagonia Capilene, Icebreaker wool) Light to mid-weight fleece jacket that fits over your base layers. (Example: Mountain Hardwear Microchill) Must be synthetic. (Example: Patagonia R1 Hoodie) A vest can supplement other upper layers, which is good	rain layer, ar insulating CHECK LIST
Upper Body Clothing You need at least three insu and a t-shirt. Make sure you layers, or three layers plus a EQUIPMENT Base Layer - Long Underwear Top Fleece Jacket or Shirt Long-Sleeved Shirt / Expedition Weight Pullover Fleece or Synthetic-fill Insulated Vest	lating layers (base r layers fit comfort vest. REQUIREMENT Must Bring Must Bring Must Bring Optional	a layer, mid-v cably over ea QUANTITY 1-2 1 1	veight insulation layer, & puffy jacket), a wind-proof layer, a ich other. If you get cold easily, we suggest that you take fou COMMENTS Light or expedition-weight synthetic or performance wool is best. (Example: Patagonia Capilene, Icebreaker wool) Light to mid-weight fleece jacket that fits over your base layers. (Example: Mountain Hardwear Microchill) Must be synthetic. (Example: Patagonia R1 Hoodie) A vest can supplement other upper layers, which is good for folks who get cold easily.	rain layer, ar insulating CHECK LIST
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Lower Body Clothing

You need **two to three lower-body insulating layers** that fit comfortably over each other and underneath your wind or rain pants. Example combination: Mid-weight long underwear + fleece pants.

EQUIPMENT	IENT REQUIREMENT QUANTITY COMMENTS		CHECK LIST	
		QUANTITY		
Base Layer - Long Underwear Bottoms	Must Bring	2 pairs	Mid- or expedition-weight synthetic or performance wool is best. (Examples: Patagonia Capilene, Icebreaker wool).	
Insulated or Fleece Pants	Must Bring	1 pair	Fleece or synthetic-filled pants are needed when the weather is especially cold.	
Rain Pants*	Must Bring, or Rent \$15.00	1 pair	These need to fit comfortably over your hiking pants.	
Hiking Pants	Must Bring	2 pair	Nylon or other synthetic hiking pants are recommended for protection from bugs and dense vegetation.	
Wind Pants	Must Bring	1 pair	Nylon wind shell, roomy enough to fit comfortably over your base layers. For protection from brush, bugs, or for use as "cooking pants."	
Shorts	Optional	1 pair	Nylon or other synthetic shorts for warm days.	
Miscellaneous Clothing				
EQUIPMENT	REQUIREMENT	QUANTITY	COMMENTS	CHECK LIST
Sun Hat or Baseball Cap	Must Bring	1	Should be wide-brimmed to protect from sun.	
Winter Hat	Must Bring	2	Fleece or wool hat that will fully cover your ears.	
Glove Liners	Must Bring	1-2 pair	Lightweight wool or synthetic gloves, that may be layered with heavier gloves for warmth or worn alone.	
Waterproof Gloves or Mittens	Must Bring	2 pair	Must be WATERPROOF. Wool or synthetic gloves or mittens for cold weather conditions.	
Gloves or Mitten Shells	Optional	1 pair	Waterproof shells that fit over your gloves or mittens.	
Bandana	Must Bring	1	For multiple uses.	
Buff, Balaclava, or Neck Gaiter	Optional, but recommended	1	Used to keep your head, neck, and ears warm or protect from the wind and sun – can replace a light cap	
Underwear/Bras	Must Bring	2-4 pairs of underwear; 2 Bras	Undergarments made from merino wool or synthetic to wick moisture are highly recommended. Cotton briefs for women are acceptable. Will wash in the field as needed.	
In Town Clothes	Must Bring	1-2 pairs	Comfortable, casual set of clothes for in town & for your flight home at the end of your course.	
Sleeping Gear				
EQUIPMENT	REQUIREMENT	QUANTITY	COMMENTS	CHECK LIST
Mummy Style Sleeping Bag w/Stuff Sack*	Must Bring, or Rent - \$40.00	1	Temperature rating of 0 degrees F or colder. Synthetic, not down is recommended due to Alaska's extremely wet environment. Compression stuff sack recommended.	
Sleeping Pad*	Must Bring, or Rent - \$10.00	1	Closed-cell foam or self-inflating pads. (Example: Therm-a-rest Ridgerest or Z Lite).	
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Miscellaneous Gear				
EQUIPMENT	REQUIREMENT	QUANTITY	COMMENTS	CHECK LIST
Required or Prescription Medication (if applicable)	Must Bring	1 Set	Bring enough to last the entire trip. All medications must be in the original bottle with instructions for administration, and your name on it. Please pack all prescribed medicine.	
Toiletries (2 – 3 oz travel sized only)	Must Bring	1 Set	Toothbrush, Toothpaste, Lip Balm w/Sunscreen (SPF 15 or higher), Moisturizer, Feminine Hygiene products. (Shampoo, Conditioner, Soap, & Deodorant for pre & post course only). NOTHING SCENTED in the backcountry, bears are attracted to scented items.	
Insect Repellent & Sunscreen	Must Bring	1	Small, travel sized bottles – NO AEROSOLS. Sunscreen must be SPF 30 or greater.	
Watch w/ Alarm	Must Bring	1	Must be waterproof (Example: Timex Expedition).	
Headlamp	Must Bring	1	Durable and lightweight.	
Extra batteries	Must Bring	1-2 sets	Bring 1-2 spare sets for headlamp	
Pocket Knife	Optional	1	One small pocket knife is sufficient.	
Trekking Poles	Must Bring	2	Single or double telescoping poles are best.	
Water bottle – 32 oz	Must Bring	1-2	Heavy, durable plastic. Wide-mouth and must be at least 32 oz. A lightweight bladder system can replace 1 durable water bottle. (Example: Platypus SoftBottle and Nalgene).	
Hydration System	Optional	1	Can be used instead of 1 durable waterbottle. CamelBak or Platypus are popular.	
Insulated mug	Must Bring	1	Durable plastic for hot drinks.	
Plastic Bowl	Must Bring	1	Tupperware or Nalgene style, 16-30 oz capacity, with lid.	
Spoon or Spork	Must Bring	1	Plastic or metal utensils	
Sunglasses, Wrap-around style	Must Bring	1	Durable with 100% UV protection. If you wear prescription lenses, bring your own prescription sunglasses. You will want to block the sun from the sides.	
Prescription Glasses and Contact Lenses	Must Bring	Multiple	If you wear prescription glasses or contact lenses, bring a spare set. Even if you wear contacts daily, plan to carry a pair of glasses.	
Eyeglasses Strap	Optional	1	Good brands are Chums and Croakies.	
Sit pad or Camp chair	Optional	1	Portable seat for increased insulation when sitting on ground. Crazy Creek, sleeping pad adaptor, or make from cut foam.	
Optional Items				
EQUIPMENT	REQUIREMENT	QUANTITY	COMMENTS	CHECK LIST
Camera	Optional	1	Small, waterproof & shockproof camera. Bring extra battery and memory card. You are not permitted to bring cell phones or tables into the backcountry, even for camera use.	



Mosquito Head Net	Optional	1	Mosquitos & blackflies can swarm heavily in summer months.	
Binoculars	Optional	1	Small, travel sized.	
Book	Optional	1	A small, lightweight book for reading.	
Small Card Game or Cards	Optional	1	For down time.	
Fishing Gear	Optional	1 set	If you want to bring your own gear, you're welcome to. Note, however, that fishing opportunities are very limited and route dependent, and you must obtain a license.	
Ear Plugs	Optional	1-2 pairs	To block out loud sleepers	
Notebook w/ Pen or Pencil	Optional	1	A notebook for journaling or drawing.	
Camp Pillow	Optional	1	Should be small, made out of a synthetic material and compressible.	

NCOAE Will Supply					
Students share both the use of and the responsibility for the group gear that NCOAE dispenses.					
Tents & Ground Tarps	Group Tarp	Toilet Paper & Trowel			
Stoves, Fuel Bottles & Fuel	Maps & Reference Books/Materials	Compass & Whistle			
Cooking Gear	Course Food & Spice Kit	Water Treatment			
First Aid Kit	Repair Kit	Group Sunscreen & Bug Spray			
Bear Canisters or Bear Fence	Soap, Hand Sanitizer & Hygiene Wipes	Solo Tarps			
Satellite Phone or InReach Device	Helmets	Climbing Gear & Safety Equipment			
First Aid Kit	Repair Kit	Glacier Travel Gear & Safety Equipment			



Boot Selection Guide

NCOAE has been outfitting people with boots for many years, and our priorities have remained the same: we want you to have footwear that provides adequate protection for your feet and ankles, that is durable enough to withstand weeks of wet, rugged wear and that provides reasonable comfort. Many boots available on the market do not meet these criteria.

When considering footwear, remember that your course may travel off trail. You may be walking through cold streams, and your feet could get wet. You could be in rain or snow for days. The type of footwear that you need will depend on how heavy your pack is and how strong your ankles and feet are.

Here are some features to look for in and hiking boots:

- A sole that provides good traction like Vibram or other lugged sole.
- Some form of nylon shank to provide foot support and protection.
- Ankle support
- Durable uppers that will withstand hiking among sharp boulders and dense vegetation.
- Boots must be waterproof. A Gore-Tex liner is recommended, but not required.
- A comfortable fit with your preferred hiking socks. Boots that are too small are a common cause of blisters.

Sizing boots properly is important. Hiking should fit snug everywhere, tight nowhere and offer room to wiggle your toes. Here are some tips:

- **Try on boots at the end of the day and with the socks you plan to wear.** Your feet normally swell a bit during the day's activities and will be at their largest then. This helps you avoid buying boots that are too small.
- Fit issues to look out for: You don't want to feel odd bumps, seams, pinching in the forefoot, or toes hitting the end of the boot when it's on an incline. If the boots are laced firmly and you still feel space above the top of your foot, then the volume of the boot is wrong.
- Spend some time in the boots. Take a walk through the store, walk up and down stairs, and find an inclined surface to walk on.
- When shopping online, consider a brand you've worn before. Most companies tend to use a consistent foot model over time, so the fit is likely to be similar.
- Be sure to break your boots in before your first trip. Too many sore-footed hikers overlook this important step.

The following list of acceptable footwear is not exhaustive. It is to be used as a guide to the general type of footwear acceptable for your course. It is fine to substitute a similar boot or shoe for one of the types listed here. If you are considering a lighter boot or shoe, you will have to be committed to trimming your pack weight to below 40 lbs. which takes prior commitment to weighing each ounce of your personal gear. Expect to be carrying around 30-45 percent of your own body weight on your back. You will be carrying almost 25 pounds of group gear, so factor that in to your total pack weight.

Sturdy, Waterproof Hiking bBoots:

Lowa: Cevedale Pro GTX, Tibet Pro GTX Garmont: Rambler GTX, Tower Trek GTX La Sportiva: Garnet GTX, Omega GTX Scarpa: Kinesis GTX, Zodiac GTX, Bhutan GTX, Terra GTX Vasque: Summit GTX, Saga GTX