

NCOAE EQUIPMENT LIST – 84-Day Fall Semester-Outdoor Educator North Carolina



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.

If you prefer to purchase all of your gear that's fine too, but if you're not sure you'll ever use that \$300 internal frame pack or sleeping bag again, use ours instead! 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 \$125 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 set of "in-town clothes" for your return flight after the trip!

Items listed below with an asterisk (*) are available from NCOAE for rent.

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

Packs and Bags				
EQUIPMENT	RENTAL PRICE	QUANTITY	COMMENTS	Check List
Internal Frame Backpack*	\$30.00 Weekly	1	Internal frame backpack with a volume of 75 to 85 liters is ideal (4,600-5,200 cubic inches).	
Plastic trash compactor bags	Must Bring	2-3	3mm or thicker, durable, sturdy. These can be found in most grocery stores.	
Footwear				
EQUIPMENT	RENTAL PRICE	QUANTITY	COMMENTS	Check List
Mid-Weight Hiking Boot	Must bring	1 pair	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 rag type, or thick polypropylene. No wool-cotton blends.	
Camp Shoes	Must bring	1 pair	The ground around camp is often wet, soggy tundra. Examples: Holey's Coastal Boot, Cross Bistro—no vent holes.	
Gaiter	Optional	1 pair	Full gaiters provide good leg protection while bushwhacking. Low gaiters are also acceptable.	

Upper Body Clothing

You need at least **three insulating layers**, a wind-proof layer, a rain layer, and a t-shirt. Make sure your layers fit comfortably over each other. If you get cold easily, we suggest that you take four insulating layers, or three layers plus a vest.

EQUIPMENT	RENTAL PRICE	QUANTITY	COMMENTS	Check List
Base Layer (Long Underwear Top)	Must bring	1-2	Mid- or expedition-weight synthetic or performance wool is best. (Examples: Mountain Hardwear Extend, Patagonia Capilene, Ibex wool, Icebreaker wool)	
Fleece Jacket or Shirt	Must bring	1	Light- to mid-weight fleece jacket that fits over your base layers. (Example: Mountain Hardwear Microchill)	
Fleece or Synthetic-fill Insulated Vest	Optional	1	A vest can supplement other upper layers, which is good for folks who get cold easily. (Examples: Patagonia Synchilla Vest, Mountain Hardwear Mountain Tech Vest) Fleece Jacket	
Insulated Jacket	Must Bring	1	A warm, synthetic-fill jacket that fits over your base layers. (Examples: Mountain Hardwear Compressor, Patagonia Nano Puff Hoody)	
T-Shirt	Must Bring	2	We strongly recommend a lightweight wool or polyester top (not cotton). We have t-shirts for sale with the NCOAE logo.	
Wind Shirt	Must Bring	1	Nylon wind shell, roomy enough to fit comfortably over your base layers. Excellent protection in dense bushes and from bugs, or for use as “cooking shirt.”	
Rain Jacket*	\$10.00 weekly	1	Your rain jacket should be roomy enough to fit comfortably over all upper-body layers. Ponchos are NOT ACCEPTABLE.	

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	RENTAL PRICE	QUANTITY	COMMENTS	Check List
Base Layer (Long Underwear) Bottoms	Must bring	2 pairs	Mid- or expedition-weight synthetic or performance wool is best. (Examples: Mountain Hardwear Extend, Patagonia Capilene, Ibex wool, Icebreaker wool)	
Insulated Pants	Optional, but highly recommended	1 pair	Fleece or synthetic-filled pants are usually only needed on early-season courses when the weather is especially cold. (Examples: Sherpa Jaaro Microfleece Pants, Mountain Hardwear Compressor Pants)	
Rain Pants*	\$10.00 weekly	1 pair	These need to fit comfortably over your hiking pants.	
Nylon Hiking Pants	Must bring	2 pair	Nylon hiking pants are recommended for protection from bugs and dense vegetation. We rent durable nylon shell pants.	
Wind Pants	Must Bring	1 pair	Nylon wind shell, roomy enough to fit comfortably over your base layers. Excellent protection in dense bushes and from bugs, or for use as “cooking pants.”	
Nylon Shorts	Optional	1 pair	Nice for warm days. Pockets are nice to have.	
Miscellaneous Clothing				
EQUIPMENT	RENTAL PRICE	QUANTITY	COMMENTS	Check List
Sun Hat or Baseball Cap	Must Bring	1	Should be wide-brimmed to protect from sun.	
Fleece or Wool Cap	Must Bring	1-2	Any fleece hat that will fully cover your ears. A wool ski hat is fine.	
Glove Liners	Must Bring	1 pair	Lightweight polypropylene gloves may be layered with heavier gloves for warmth or worn alone for sun protection.	
Fleece or Wool Gloves	Must Bring	1 pair	Durable gloves made from fleece, rag-wool or mid-weight polypropylene.	
Underwear/Bras	Must Bring	2-4 pairs of underwear; 2-4 Bras	Undergarments made from merino wool or polypropylene wick moisture away from your skin and are highly recommended.	
Waterproof over-mitten shells	Optional	1 pair	Waterproof shells to keep hands dry	
Buff	Optional	1	Used to keep your head, neck, and ears warm – replaces a scarf or light cap	
Sleeping Gear				
EQUIPMENT	RENTAL PRICE	QUANTITY	COMMENTS	Check List
Sleeping Bag	\$35.00 weekly	1	We stock synthetic-filled sleeping bags with a temperature rating of 20 degrees F or colder. Down and feather bags are not recommended – once wet, they won’t keep you warm.	

Sleeping Pad*	\$5.00 weekly	1	Closed-cell foam pads (Example: Therm-a-rest Ridgerest or Z Lite). We do not rent or recommend self-inflating pads.	
Sleeping Bag Stuff Sack*	\$2.00 weekly	1	Makes your sleeping bag smaller for packing (Examples: Outdoor Research Ultralight)	
Miscellaneous Items				
EQUIPMENT	RENTAL PRICE	QUANTITY	COMMENTS	Check List
Bandana	Must bring	1-2	For multiple uses.	
Eating Gear	Must bring	1 Bowl 1 Spoon 1 Mug	Tupperware or Nalgene style bowl, 16-30 ounce capacity, with a lid. Plastic or metal spoon or spork. Plastic or metal spoon or spork.	
Insect Repellent	Must bring	1-2	Small, 2-3-ounce DEET pump-spray bottle – NO AEROSOLS.	
Lip Balm	Must bring	1	Stick or cream with UV sun protection.	
Prescription Glasses and Contact Lenses	Must bring	n/a	If you wear prescription glasses or lenses, bring a spare set. Even if you wear contact lenses daily, plan to carry a pair of glasses into the field.	
Eyeglasses Retainers	Must Bring	1	Good brands are Chums and Croakies.	
Sunscreen	Must bring	2-4	Small, 2-3-ounce tubes or pump-spray bottle – NO AEROSOLS. A sun protection factor of 30 or greater is necessary. A physical sun block such as zinc oxide is strongly recommended for people who burn easily.	
Sunglasses, Wrap-around	Must bring	1 pair	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. (Examples: Julbo, Native).	
Toiletry Articles	Must bring	n/a	NOTHING SCENTED – bees are attracted to scented items. Toothbrush, toothpaste, moisturizer, prescription medications, tampons. Sample sizes of 2-3 ounce are preferable.	
Watch	Must bring	1	Bring a waterproof watch with an alarm, even if you do not normally wear one.	
Water Bottle or Water Bladder	Must bring	2	Wide-mouth quart- or liter-size. A lightweight bladder system also works well. Examples: Platypus SoftBottle and Nalgene.	
Trekking Poles	Must bring	1-2	Single or double telescoping poles are best.	
Optional Items				
EQUIPMENT	RENTAL PRICE	QUANTITY	COMMENTS	Check List
Camera	Optional	1	Small, durable, waterproof camera with plenty of extra batteries and memory cards.	
Book	Optional	1	A small book for pleasure reading.	
Vitamins	Optional	1	Some folks prefer to supplement their diet.	
Knife	Optional	1	A small pocketknife or multi-tool.	

Compass	Optional	1	We provide two compasses per hiking group.	
Small Stuff Sacks	Optional	1-2	Used to organize items in your pack. Lightweight dry sacks are convenient (Example: eVent Sil DrySack).	
Optional Items				
EQUIPMENT	RENTAL PRICE	QUANTITY	COMMENTS	Check List
Buff	Optional	1	Synthetic polyester fabric tube. Use it as a headband, neck gaiter, balaclava, cap, face mask, wristband, or scrunchy.	
Notebook and Pen or Pencil	Optional	1 of each	A small spiral notebook is fine. Avoid hardcover. We provide a field journal and pencil for your course.	
Towel	Optional	n/a	A pack towel that is compressible, lightweight, quick-drying, antimicrobial, and made of a microfiber or microfiber blend might be of use after rafting if participants are wet and want to dry off.	
Headlamp	MUST BRING	1	Should be lightweight.	
Lighter	Optional	1	Bic style lighters. Do not bring a Zippo.	
Camp Pillow	Optional	1	Should be made out of a synthetic material and compressible.	

Shared Group Equipment – NCOAE Will Supply		
Expedition members share both the use of and the responsibility for the group gear that NCOAE issues. NCOAE charges only for group equipment that is lost or damaged.		
Tents	Compass	Trowel or Shovel
Stoves, Fuel Bottles & Fuel	Maps	Ground Tarps
Bear Spray	GPS	Repair Kits
Cooking Gear & Spice Kit	Reference Books	Soap, Hand Sanitizer, Toilet Paper
Solo Tarps and Group Tarp	Bear Canisters	Course Food & Water Treatment
First Aid: Our instructors carry adequate first aid kits. There is no need to bring you own.		
Possible additional gear for Alaska trips: Ice axe, avalanche probe, avalanche shovel, crampons, climbing rope and carabiners, altimeter		

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 will travel mostly off trail, you may be walking through cold streams, and your feet will get wet. You could be in rain or snow for days. You will cross creeks. **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.
- A Gore-Tex liner is fine, but unnecessary. Your foot will get wet when the river comes in over the top of your boot. A Gore-Tex liner will slow drying time once the boot is wet.
- A comfortable fit with your preferred hiking socks. Boots that are too small are a common cause of blisters. Please see the Boot Fitting Guide in your enrollment packet for instructions on how to properly fit boots.

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.

Mid-weight hiking boots:

Asolo: TPS Series, Power Lite Series, Matrix Series, Radiant Series, Energy Series, FSN Series

Lowa: Terek GTX, Tibet Pro GTX

Garmont: Dakota, Synchro Gore-Tex

La Sportiva: Thunder II GTX, Garnet GTX, Omega GTX

Scarpa: Himavan GTX, Mangali GTX, Bhutan GTX, Kailash GTX, Terra GTX

Vasque: Wasatch GTX, Summit GTX, Sundowner GTX, Clarion GTX, Taku GTX, Talus UltraDry

Oboz: Wind River, Sawtooth Mid