

# NCOAE Equipment List

## Backpacking & Rock Climbing

### 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. **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.**

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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 65 to 85 liters is ideal (3,900-5,200 cubic inches).	<input type="checkbox"/>
Plastic trash compactor bag	NCOAE provides	1-2	3mm or thicker, durable, sturdy. Found in grocery stores.	<input type="checkbox"/>
Waterproof Stuff Sacks / Gallon Ziplocs	Must Bring	1-4	Used to organize items in your pack. Lightweight drysacks are convenient (example: eVent Sil DrySack).	<input type="checkbox"/>
Day Pack	Must Bring	1	Small backpack or messenger bag for use on trips into town or when day hiking.	<input type="checkbox"/>
Zip Duffle	Must Bring	1	Used to organize and store items while at camp. (Example: Outdoor Products 12x24 Deluxe Duffle).	<input type="checkbox"/>
Footwear				
EQUIPMENT	REQUIREMENT	QUANTITY	COMMENTS	CHECK LIST
Sturdy Hiking Boots	Must Bring	1 pair	Must be at least mid-weight. Recommend leather, waterproof boots. Please read the Boot Selection Guide at the end of this list.	<input type="checkbox"/>
Hiking Socks	Must Bring	3-4 pairs	Must be 75%–100% wool, merino wool, heavy rag type, or thick polypropylene. <b>No cotton or wool-cotton blends.</b>	<input type="checkbox"/>
Camp Shoes	Must Bring	1 pair	Closed-toed shoes are a must to protect your feet and are more comfortable for wearing in camp.	<input type="checkbox"/>
River Shoes / Sandals	Must Bring	1 pair	<b>Recommend closed-toed</b> for protection from rocks, sharp objects, or in case you happen to fall out in the water. (Example: Keens). You bring “open-toe” sandals if you’d prefer. (Example: Chacos)	<input type="checkbox"/>
Flip Flops	Optional	1	For showering.	<input type="checkbox"/>
Gaiters	Optional	1 pair	Low gaiters are acceptable.	<input type="checkbox"/>
Upper Body Clothing				
<p>You need at least <b>three insulating layers</b> (base layer, mid-weight insulation layer, &amp; puffy jacket), 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.</p>				
EQUIPMENT	REQUIREMENT	QUANTITY	COMMENTS	CHECK LIST
Base Layer - Long Underwear Top	Must Bring	1-2	Light or expedition-weight synthetic or performance wool is best. (Examples: Patagonia Capilene, Icebreaker wool)	<input type="checkbox"/>
Fleece Jacket or Shirt	Must Bring	1	Light to mid-weight fleece jacket that fits over your base layers. (Example: Mountain Hardwear Microchill)	<input type="checkbox"/>
Long-Sleeved Shirt / Expedition Weight Pullover	Must Bring	1	Must be synthetic. (Examples: Patagonia R1 Hoodie, Mountain Hardwear Expedition-Weight zip-tee)	<input type="checkbox"/>
T-Shirt	Must Bring	2 - 4	Lightweight synthetic or wool shirts recommended.	<input type="checkbox"/>
Fleece or Synthetic-fill Insulated Vest	Optional	1	A vest can supplement other upper layers, which is good for folks who get cold easily. (Example: Patagonia Synchronia Vest)	<input type="checkbox"/>

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<b>Insulated Jacket</b>	Must Bring	1	A warm, lightweight, synthetic-fill “puffy” jacket that fits over your base layers & under your ski jacket. (Example: Patagonia Nano Puff Hoody)	<input type="checkbox"/>
<b>Rain Jacket*</b>	Must Bring, or Rent \$15.00	1	Jacket should be roomy enough to fit comfortably over all upper-body layers. For rainy or stormy days in the backcountry. <b>Ponchos are NOT ACCEPTABLE.</b>	<input type="checkbox"/>

#### 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	REQUIREMENT	QUANTITY	COMMENTS	CHECK LIST
<b>Base Layer (Long Underwear) Bottoms</b>	Must Bring	2 pairs	Mid- or expedition-weight synthetic or performance wool is best. (Examples: Mountain Hardwear Extend, Patagonia Capilene, Ibex wool, Icebreaker wool)	<input type="checkbox"/>
<b>Rain Pants*</b>	Must Bring, or Rent \$15.00	1 pair	These need to fit comfortably over your hiking pants.	<input type="checkbox"/>
<b>Hiking Pants</b>	Must Bring	2 pair	Nylon or other synthetic hiking pants are recommended for protection from bugs and dense vegetation.	<input type="checkbox"/>
<b>Shorts</b>	Optional	1 pair	Synthetic recommended, nice for warm days.	<input type="checkbox"/>

#### Miscellaneous Clothing

EQUIPMENT	REQUIREMENT	QUANTITY	COMMENTS	CHECK LIST
<b>Sun Hat or Baseball Cap</b>	Must Bring	1	Should be wide-brimmed to protect from sun.	<input type="checkbox"/>
<b>Winter Hat</b>	Must Bring	1	Fleece or wool hat that will fully cover your ears.	<input type="checkbox"/>
<b>Bathing Suit</b>	Must Bring	1		<input type="checkbox"/>
<b>Buff, Balaclava, or Neck Gaiter</b>	Optional	1	Used to keep your head, neck, and ears warm or protect from the wind and sun – can replace a light cap	<input type="checkbox"/>
<b>Bandana</b>	Must Bring	1	For multiple uses.	<input type="checkbox"/>
<b>Glove Liners or Lightweight Gloves/Mittens</b>	Must Bring	1 pair	Lightweight wool or synthetic gloves may be layered with heavier gloves for cool mornings or worn alone for sun protection.	<input type="checkbox"/>
<b>Underwear/Bras</b>	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.	<input type="checkbox"/>
<b>In Town Clothes</b>	Must Bring	1-2 pairs	Comfortable, casual set of clothes for in town & for your flight home at the end of your course.	<input type="checkbox"/>

#### Sleeping Gear

EQUIPMENT	REQUIREMENT	QUANTITY	COMMENTS	CHECK LIST
<b>Mummy Style Sleeping Bag w/Stuff Sack*</b>	Must Bring, or Rent - \$40.00	1	Temperature rating of 20 degrees F or colder. Synthetic, not down. Compression stuff sack recommended.	<input type="checkbox"/>
<b>Sleeping Bag Liner</b>	Optional	1	To keep you warmer on cold nights. Recommended if you get cold easily at night. Wool or synthetic recommended.	<input type="checkbox"/>
<b>Sleeping Pad*</b>	Must Bring, or Rent - \$10.00	1	Closed-cell foam or self-inflating pads. (Example: Therm-a-rest Ridgerest or Z Lite).	<input type="checkbox"/>

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Miscellaneous Gear				
EQUIPMENT	REQUIREMENT	QUANTITY	COMMENTS	CHECK LIST
Required or Prescription Medication (if applicable)	Must Bring	1 Set	<b>Bring enough to last the entire trip.</b> All medications must be in the original bottle with instructions for administration, and your name on it. Please pack all prescribed medicine.	<input type="checkbox"/>
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 for pre & post course only).	<input type="checkbox"/>
Watch w/ Alarm	Must Bring	1	Must be waterproof (Example: Timex Expedition)	<input type="checkbox"/>
Headlamp	Must Bring	1	Durable and lightweight.	<input type="checkbox"/>
Extra batteries	Must Bring	1-2 sets	Bring 1-2 spare sets for headlamp	<input type="checkbox"/>
Pocket Knife	Optional	1	One small pocket knife is sufficient.	<input type="checkbox"/>
Water bottle or bladder – 32 oz or 48 oz	Must Bring	2	Heavy, durable plastic. Wide-mouth and must be at least 32 oz. A lightweight bladder system also works well. (In addition to 1 durable water bottle). Examples: Platypus SoftBottle and Nalgene.	<input type="checkbox"/>
Hydration System	Optional	1	Can be used to replace one durable waterbottle. CamelBak or Platypus are popular.	<input type="checkbox"/>
Insulated mug	Must Bring	1	Durable plastic for hot drinks.	<input type="checkbox"/>
Plastic Bowl	Must Bring	1	Tupperware or Nalgene style, 16-30 oz capacity, with lid.	<input type="checkbox"/>
Spoon or Spork	Must Bring	1	Plastic or metal utensils	<input type="checkbox"/>
Towel	Must Bring	1	A pack towel that is compressible, lightweight, quick-drying, made of a microfiber or microfiber blend. For use after sweating or after getting in water.	<input type="checkbox"/>
Insect Repellent & Sunscreen	Must Bring	1	Small, travel sized bottles – NO AEROSOLS. Sunscreen must be SPF 30 or greater.	<input type="checkbox"/>
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. (Examples: Julbo, Native).	<input type="checkbox"/>
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.	<input type="checkbox"/>
Eyeglasses Strap	Optional	1	Good brands are Chums and Croakies.	<input type="checkbox"/>
Trekking Poles	Optional	1-2		<input type="checkbox"/>
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.	<input type="checkbox"/>
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.	<input type="checkbox"/>
Binoculars	Optional	1	Small, travel sized.	<input type="checkbox"/>

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<b>Book</b>	Optional	1	A small, lightweight book for reading.	<input type="checkbox"/>
<b>Small Card Game or Cards</b>	Optional	1	For down time.	<input type="checkbox"/>
<b>Fishing Gear</b>	Optional	1 set	If you want to bring your own gear, you're welcome to. Note, however, that fishing opportunities are limited and route dependent.	<input type="checkbox"/>
<b>Ear Plugs</b>	Optional	1-2 pairs	To block out loud sleepers	<input type="checkbox"/>
<b>Notebook w/ Pen or Pencil</b>	Optional	1	A notebook for journaling or drawing.	<input type="checkbox"/>
<b>Camp Pillow</b>	Optional	1	Should be small, made out of a synthetic material and compressible.	<input type="checkbox"/>

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