

NCOAE Equipment List

Ecuador – 14-day

Andes Backpacking

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.

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. Remember you will be carrying everything you bring with you on your trip – PLUS some of the food and some of the group gear. 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!

You can save money too using the gear provided by NCOAE and by purchasing many items from the athletic clothing, sporting goods, and camping sections at your local discount store, such as Target. Athletic clothing is usually synthetic and works well for camping.

- 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 cotton sleeping bag to the garage and rent or purchase a lightweight, synthetic 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 expeditions
- All participants who wish to rent gear must 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. All rental gear is \$25 per item.
- Please do not pack jeans or jean shorts. If you have a choice, please pack non-cotton clothing. Mesh or synthetic clothing dries quickest and therefore is the best option while backpacking.
- Remember to bring one or two sets of "in-town clothes" for your return flight / drive after the trip!
- Items listed below with an asterisk (*) may be available, in limited quantities, for student rental, on an as needed basis.

**Comments, questions, concerns... Call NCOAE Headquarters Monday through Friday
between the hours of 8:30am-4:30pm 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 - \$25.00	1	Internal frame backpack, with a volume of 65 to 85 liters is ideal (3,900-5,200 cubic inches).	<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 for use on day hikes or trips into town	<input type="checkbox"/>
Zip Duffie	Must Bring	1	Used to organize and store items while at camp. (Example: Outdoor Products 12x24 Deluxe Duffie).	<input type="checkbox"/>
Dry Bag	Optional – NCOAE provides	1	Used to organize and store clothing while on the river. (Example: Sealline Dry Bag, 20-40 liters).	<input type="checkbox"/>
Footwear				
EQUIPMENT	REQUIREMENT	QUANTITY	COMMENTS	CHECK LIST
Mid-Weight Hiking Boot	Must Bring	1 pair	Must be at least mid-weight. Please read the Boot Selection Guide at the end of this list.	<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	Recommend closed-toed 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"/>
Hiking Socks	Must Bring	4-6 pairs	Must be 75%–100% wool, merino wool, heavy rag type, or thick polypropylene. No cotton or wool-cotton blends.	<input type="checkbox"/>
Upper Body Clothing				
You need at least three insulating layers (base layer, mid-weight insulation layer, & 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.				
EQUIPMENT	REQUIREMENT	QUANTITY	COMMENTS	CHECK LIST
Base Layer - Long Underwear Top	Must Bring	2	Light or expedition-weight synthetic or performance wool is best. (Examples: Patagonia Capilene, Icebreaker wool)	<input type="checkbox"/>
Fleece Jacket or Hoodie	Must Bring	1	Light to mid-weight synthetic jacket that fits over your base layers.	<input type="checkbox"/>

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Long-Sleeved Shirt	Must Bring	1	Must be synthetic.	<input type="checkbox"/>
T-Shirt	Must Bring	4-Mar	Lightweight synthetic or wool shirts recommended.	<input type="checkbox"/>
Insulated Jacket / Puffy	Must Bring	1	A warm, synthetic-fill “puffy” jacket that fits over your base layers & under your ski jacket. (Example: Patagonia Nano Puff Hoody)	<input type="checkbox"/>
Rain Jacket*	Must Bring, or Rent - \$25.00	1	Jacket should be roomy enough to fit comfortably over all upper-body layers. For rainy or stormy days in the backcountry. Ponchos are NOT ACCEPTABLE.	<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
Base Layer - Long Underwear Bottoms	Must Bring	2 pairs	Mid- or expedition-weight synthetic or performance wool is best. (Examples: Patagonia Capilene, Icebreaker wool).	<input type="checkbox"/>
Rain Pants*	Must Bring, or Rent - \$25.00	1 pair	These need to fit comfortably over your hiking pants.	<input type="checkbox"/>
Hiking Pants	Must Bring	2 pair	Nylon or other synthetic hiking pants are recommended for protection from bugs and dense vegetation.	<input type="checkbox"/>
Nylon Shorts	Must Bring	1 pair	Nice for warm days. Pockets are nice to have.	<input type="checkbox"/>

Miscellaneous Clothing

EQUIPMENT	REQUIREMENT	QUANTITY	COMMENTS	CHECK LIST
Sun Hat or Baseball Cap	Must Bring	1	Should be wide-brimmed to protect from sun.	<input type="checkbox"/>
Winter Hat	Must Bring	1	Lightweight fleece or wool hat that will fully cover your ears.	<input type="checkbox"/>
Bathing Suit	Must Bring	1	Necessary for paddling parts of the adventure when possible.	<input type="checkbox"/>
Buff, Balaclava, or Neck Gaiter	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"/>
Bandana	Must Bring	1	For multiple uses.	<input type="checkbox"/>
Lightweight Gloves	Must Bring	1-2 pair	Lightweight wool or synthetic gloves may be layered with heavier gloves for warmth or worn alone for sun protection.	<input type="checkbox"/>
Underwear/Bras	Must Bring	5-10 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"/>
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.	<input type="checkbox"/>

Sleeping Gear

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EQUIPMENT	REQUIREMENT	QUANTITY	COMMENTS	CHECK LIST
Mummy Style Sleeping Bag w/Stuff Sack*	Must Bring, or Rent - \$25.00	1	Temperature rating of 20 degrees F or colder. Synthetic, not down recommended. Compression stuff sack recommended.	<input type="checkbox"/>
Sleeping Bag Liner	Optional	1	To keep you warmer on cold nights. Recommended if you get cold easily at night. Wool or synthetic recommended.	<input type="checkbox"/>
Sleeping Pad*	Must Bring, or Rent - \$25.00	1	Closed-cell foam or self-inflating pads. (Example: Therm-a-rest Ridgerest or Z Lite).	<input type="checkbox"/>
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.	<input type="checkbox"/>
Toiletries (small, travel sized only)	Must Bring	1 Set	Toothbrush, Toothpaste, Lip Balm w/ SPF, Feminine Hygiene products. Shampoo, Conditioner, & Soap, Washcloth/Loofah, & Facewash for in-town days.	<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"/>
Water bottle, 32 oz	Must Bring	2	Heavy, durable plastic. Wide-mouth and must be at least 32 oz.	<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"/>
Camp 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	Must Bring	1	Durable with UV protection.	<input type="checkbox"/>
Prescription Glasses / 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	2-Jan		<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				

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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 tablets into the backcountry, even for camera use.	<input type="checkbox"/>
Binoculars	Optional	1	Small, travel sized.	<input type="checkbox"/>
Book	Optional	1	A small, lightweight book for reading.	<input type="checkbox"/>
Small Card Game / Cards	Optional	1	For down time.	<input type="checkbox"/>
Camp Pillow	Optional	1	Should be small, made out of a synthetic material and compressible.	<input type="checkbox"/>

NCOAE Will Supply

Students share both the use of and the responsibility for the group gear that NCOAE dispenses.

Tents	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 Bags	Soap, Hand Sanitizer & Hygiene Wipes	Solo Tarps
PFD's	Helmets	Paddling Gear & Safety Equipment

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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.

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