

## Equipment List

### Welcome Algonquin College's Outdoor Adventure Programs!

The list below is comprehensive; however, the actual equipment needed for your course will vary depending on location, season, and instructor judgment. **For this reason, we do not recommend that you go out and purchase a lot of expensive, specialized gear for your course.**

Instead, here are some thoughts to guide you as you prepare for the program:

**First, lay out everything you already own!** You will be comfortable in tried-and-true clothing and gear, most of which you probably already own.

**Second, take note of what is missing** and prioritize what you need based on the season and skills courses coming up first. For instance, if all you are missing is some warmer winter clothing, then there is no rush to purchase this right away.

**Third, your instructors will help you choose your best options** should you be unsure. Likewise, our second-year students are well versed in what works, what is required and what is affordable, so reach out to them via the Facebook groups or at the Program Readiness Orientation at Wilderness Tours.

#### Questions?

If you have any questions or would like more information regarding the items on this list, please contact Chris Melmoth, [melmotc@algonquincollege.com](mailto:melmotc@algonquincollege.com)

Layering diagram, (visit: [mec.ca](http://mec.ca) for complete explanation)



**LAYERING!**  
**Upper Body Layers**

Layer your clothing by combining various garments to optimize breathability and thermal properties to achieve optimum insulation and protection from wind, rain, and snow. Use either synthetic or wool fibers, which insulate when wet. Natural fibers like merino wool products, such as those offered by Mountain Warehouse, Icebreaker, Smart Wool and Paradox (Costco) are increasingly popular. Avoid cotton, which is poor insulation when wet. It is common to need three insulating layers.

<b>Equipment</b>	<b>Quantity Time of Year/Semester</b>	<b>Comments</b>	<b>Notes &amp; Links</b>
<b>Base layer / next to skin</b>	2-3 Fall/level 1	Light- or mid-weight long-sleeve top, wool or synthetic.	A mix of short and long sleeve is ideal.
<b>Middle Layer</b>	1-2 Fall/level 1	Mid weight pullover or zip-up top, fleece or wool, or lightly insulated garment.	Long sleeve
<b>Top layer (synthetic or down-filled jacket)</b>	1	A warm, synthetic or down “puffy” jacket that fits over your other layers and under your rain jacket.	Thermal ‘puffy’ layer. Can also be an external layer when cold weather arrives, for around camp/less activity (i.e. belaying).
<b>Wind shirt/anorak</b>	1 Fall/level 1	A lightweight, breathable, durable nylon wind shell, in either pullover or zip-up style.	Wind blocking layer, not necessarily waterproof
<b>Rain/Snow jacket</b>	1 Fall/level 1	Durable, waterproof, windproof, non-insulated jacket with hood. Coated nylon or breathable fabrics (e.g., Gore-Tex, H2No, etc.) are acceptable. It is very important that your rain jacket fit well over all your base and mid-layers.	AKA: Hardshell jacket, outer layer jacket.

## Lower Body Layers

You will need 1–2 synthetic insulating layers (usually a base layer and, in early summer, a pair of fleece pants). All must fit comfortably over each other so that worn at the same time. If you tend to get cold easily, add a middle layer of mid-weight bottoms to the base layer and fleece pants.

Equipment	Quantity Time of Year/Semester	Comments	Notes & Links
<b>Base layer (light to mid weight)</b>	1-2 Fall/level 1	Synthetic or wool bottoms. Cotton and cotton blends are not acceptable.	Against skin layer should contour “fit to body” (not baggy).
<b>Middle Lower Layer</b>	1-2 Fall/level 1	Synthetic or wool bottoms, mid-weight.	A softshell garment could be utilized here as well.
<b>Outer Lower Layer (synthetic pant).</b>	1 Fall/level 1	Multiple options: hardshell (Gore-Tex, event, etc.), waterproof, windproof	Note: this differs from a ‘softshell’-type garment (top or bottom), which typically breathes better but has lesser waterproof/windproof capabilities.
<b>Vapour barrier layer/socks (VBL)</b>	Optional Winter semester		VBLs are for deep cold conditions and block-in body heat. They also make a great wind-breaking layer on the feet.
<b>Nylon Shorts</b>	1-2 Fall/level 1	Knee length	Ideal for rafting/water activities. Also hiking, cycling, etc. in warmer conditions.
<b>Underwear/sports bras</b>	2-3 Fall/level 1	Ideally, not cotton	Briefs or boxers may be cotton, synthetic, or silk. Sports bras should be synthetic or silk.

## Head, Hands, and Feet

The first parts to get cold, wet, and exposed are the ears, nose, fingers and toes! We encourage students to have a wide variety of hats, neck warmers, gloves/mitts, and socks that vary in thickness. None of these should be made of cotton. Try to use synthetics and natural fibers, or combinations of those materials.

Equipment	Quantity Time of Year/Semester	Comments	Notes & Links
<b>Ball Cap</b>	1 Fall/level 1	Protection from the elements.	Regular ball caps are fine; however, a 'running' type cap can also be worn under a helmet to help with sun protection.
<b>Thin Beanie</b>	1 Level 1	To fit under various helmets.	
<b>Mid to heavy-weight beanie</b>	1 Late Fall	For thermal protection in cold conditions.	
<b>Thin Gloves</b>	1 Fall/level 1	For dexterity while working with ropes.	Can also be worn for cycling, canoeing, etc. in colder temperatures.
<b>Thermal Gloves/Mittens</b>	1 Level 1, late fall	For thermal protection in cold conditions. Ideally waterproof / windproof.	Ideally, your glove/mitt 'system' has a removable liner for ease of drying and use in variable conditions (layering for all parts of the body!).
<b>Hiking Boots</b>	1 pair Level 1		*See notes below, specific to hiking boots.
<b>Camp Boots</b>	1/optional	Usually insulated; however, Crocs are fine around camp *must have a heel strap!	If using insulated, synthetic insulation is ideal.
<b>Trail Shoes/Runners</b>	1 or 2 Fall/level 1	Any trail runner type shoe is great for light hikes and approaches, cycling and general mobility on courses.	Ensure that they secure well to your foot. If using in the water, ensure that they have lots of mesh for drainage purposes.
<b>Socks</b>	3-5 pairs Fall/level 1	Varying thickness, from thin/liner to heavyweight/warm.	Calf height is ideal. No cotton. Synthetic/wool ideal.
<b>Hiking <a href="#">Gaiters</a></b>	1 pair	Simple gaiter design is fine.	Calf height is ideal

Equipment	Quantity Time of Year/Semester	Comments	Notes
<b>Backpack</b>	1 ODA Level 2	Minimum 60L	This pack is used for expeditions. Ensure that the fit is good for heavy loads on your body.
<b>Day-Pack</b>	1 Fall/level 1	Minimum 25L	This bag is used for carrying daily essentials while on course (food/water/first aid/some gear).
<b>Duffle Bag</b>	1 Fall/level 1	Hockey bag/travel duffle styles are fine.	Very useful for overnights at Wilderness Tours and non-hiking courses, as one can pack and locate items easily. Large opening/zipper is great.
<b>Hiking Poles</b>	Optional but recommended ODA Level 2 (winter expedition)	Folding/collapsible or telescopic.	Helps take weight off legs/knees and helps with stability while hiking.
<b>Sleeping Bag(s)</b>	1 or 2 Fall/level 1 (3 season bag) Winter/level 2 (-20C winter bag)	Level 1 requires a basic three-season bag rated to -8C. Can use extra fleece blankets for level 1 if needed.	Winter-rated bag from -20C or warmer. Needed for level 2.
<b><u>Sleeping Pad(s)</u></b>	1 or 2 Fall/level 1	A winter rated foam pad will get you through the entire program. If you have an air pad already, that is winter rated, you will still need a backup foam pad for the Winter Expedition. The backup foam pad can be R2.5 or greater.	A closed-cell foam pad is required. If you have a winter rated air pad, then a thin foam is fine (R3 or < value). If your air pad is not winter-rated (R4.5 or >), then you need a winter-rated foam coming into level 2 for winter overnights.
<b>Tent/shelter</b>	1 or 2 person tent, tarp/bivy bag.	Our service provider has up to 10 tents for sign-out. They are 2- to 3-person tents from MEC.	Three season tents are ideal. Four season/alpine tents are overkill for this program.
<b>Head Lamp</b>	1 Fall/level 1	Any headlamp that is 200 lumens or brighter will be fine.	
<b><u>Pack liner or cover</u></b>	1 Optional	Pack cover/liner are great ways to protect gear and keep it dry.	
<b><u>Stuff Sacks</u></b>	Multiple/Variou sizes Fall/level 1	Not necessarily waterproof. Ideally, we pack our gear into smaller 'groups' of similar items.	Purchase various sizes, up to 10L. Greater than 10L is typically for your sleeping system, which should be a DRY bag.

<b>Compression Sack</b>	1 For sleep system	Purchase a compression sack that allows you to easily stuff your sleeping bag. Too tight and it will end up tearing at the seams.	Can be waterproof or you can line it with a heavy-duty garbage bag.
<b>Sleeping Bag Liner</b>	1	Consider a sleeping bag liner made of silk or synthetic material.	A liner helps with keeping the sleeping bag cleaner and free of body oils/dirt.
<b>Kitchen Kit</b>	Utensils, camp bowl, hand sanitizer, wipe cloth, bio-soap Fall/level 1	Consider a container with a snap/lock lid system for your field course lunches.	Note that steel utensils/mugs will transfer the cold very easily in the winter months. Plastic less so.
<b>Watch</b>	1 Fall/level 1	Waterproof wrist watch is ideal.	Note that overtime that a Velcro strap will lose its ability to fasten well, especially in water/dirt.
<b>Bandana/Buff</b>	1 or 2 Fall/level 1	To provide protection from the elements on your head, face and neck.	
<b>Toiletries and Towel</b>	1 Fall/level 1	<i>Must bring.</i> Toothbrush, toothpaste, skin lotion, tampons, etc...	Travel or trial sizes are enough.
<b>Personal First Aid Kit</b>	1 Fall/level 1	Small personal first aid kit to take care of non-urgent medical needs.	
<b>Medication/miscellaneous</b>	Personal medication, lip balm, sunscreen, etc. Fall/level 1	Personal medication, puffers, etc. Should be noted to course instructors on course-by-course basis.	All changes to medication must be noted to Program Coordinator.
<b>Notepad/pencil</b>	1 Fall/level 1	"Write In The Rain" waterproof notepad is ideal, as you can bring this onto the river/in the field with you.	
<b>Sunglasses</b>	1 or 2 Fall/level 1	A couple pair of non-expensive sunglasses is a good idea.	
<b>Sunglass Strap, Croakies, Chums</b>	1 Fall/level 1	Can also use solid string.	
<b>Prescription Glasses/Contact Lenses</b>	1 or 2	If you wear them, bring a spare pair of glasses or lenses. Contact-lens wearers should also bring a pair of glasses as backup.	Prescription sunglasses are also nice to have in reserve.
<b>Water Treatment</b>	Personal choice: Filter pump, tabs or liquid, gravity filter. Winter/ level 2	For overnights in backcountry setting.	Not needed in level 1 semester for ODA, but having some water tabs in your daypack is always a good idea.

<b>Multi-tool</b>	1 Fall/level 1	Three-inch (3") blade is more than enough.	This is a separate knife purchase than the required " <a href="#">River Knife</a> " which has a specific use for white water applications.
<a href="#">Compass</a>	1 Fall/level 1	Navigation compass, with base plate, magnetic deviation adjustment and sighting mirror, is ideal.	

### River Specific Equipment

<b>Northwest River Supplies Pro-Deal Package</b>	<b>Optional – see handout Fall/level 1</b>	<b>This promotion is for ODA students only. It is optional to purchase all or some gear from this pro-deal.</b>	<b>Once registered in the program and fees paid, contact Chris to access the NRS student pro-deal.</b>
<b>Dry suit</b>	1 Optional, Fall/level 1	Dry suits are simply a waterproof one-piece suit. They keep the body dry and warm, thus allowing the student to remain comfortable and focused during prolonged sessions of learning in cold water.	
<b>Wet suit</b>	1 Optional Wilderness Tours allows all students to sign-out a wetsuit to use free of charge.	Wetsuits absorb water and the person's body heat will heat up a layer of that water against the skin to help stay warm.	Some students will use a wetsuit in combination with some light fleece layers and light wind-breaking layers to help with thermal insulation.
<a href="#">River Knife</a>	1 Fall/level 1	Folding or fixed blade	Blunt side and sharp edge, with a blunt tip.
<a href="#">River Footwear</a>	1 or 2 Fall/level 1	River specific footwear is ideal for colder conditions, such as a neoprene boot. Sandals are great in warm weather.	Old running shoes work well. Ensure they can lace up tightly to your foot and are large enough to allow for thick socks for cold-water immersion.
<b>Whistle(s)</b>	3 to 5 Fall/level 1	Pea-less whistles are key to safety on and off the river. Purchase a few of them, like the FOX40 brand and install on life jacket and other backpacks/jackets.	
<b>Helmet, Throw-rope, PFD</b>	Included in College incidental fees/Safety Package		

## **Safety Equipment Package**

Listed as *the Incidental Fees* in first term.

The equipment within the incidental package becomes the property of the student.

This gear is required to learn and work in the industry, and purchased for students at wholesale cost.

The package includes:

- Whitewater rescue PFD
- Whitewater helmet
- Rock climbing harness
- Rock climbing helmet
- Throw-rope bag
- Ski/Snowboard helmet
- Wrist guards
- Sea kayak charts and waterproof chart case

***Note: Equipment damaged to the extent where it is considered unsafe, the student will be required to provide an approved replacement.***

## **Gear Provided by the Program**

- Rock Climbing equipment (not climbing shoes/slippers, which is optional to purchase or use a well-fitted running/approach-type shoe).
- Ice climbing equipment, including stiff sole mountaineering boots
- Mountain bikes, helmets and touring paniers (saddle bags)
- Raft and paddles/rescue gear
- Whitewater kayak, sea kayak, flatwater/whitewater canoes, skirts, and paddles
- Full wet suit (sign-out at Wilderness Tours)
- Alpine and Nordic (classic & skate) skis, boots, and poles
- Snowboards and boots
- Snowshoes
- Three (3) season tents
- Single burner/double burner stove & fuel
- Camping pot sets
- Tarps (group kitchen size)

*Bring any of the above gear you may already have. Please note, if any of the faculty have safety related concerns with your gear, you will be asked to use program equipment instead.*

## **Footwear**

\*Hiking Boots are an important piece of gear and a good pair of hiking boots are especially important for our hiking courses. Note that ODA only begins their hiking electives in the fall of level three; however, a quality leather hiker can be used during the Winter Expedition in level 2, when paired with a gaiter.

We recommend a medium-weight, off-trail backpacking boot as they provide good support for off-trail hiking with heavy packs, and usually require less break-in time than heavyweight mountaineering boots. A solid or stiff-soled boot is NOT ideal, as those boots are typically used for mountaineering and ice climbing.

- Constructed from full-grain, one-piece leather upper or a combination of nylon, Gore-Tex, and leather
- A sole that provides good traction, like Vibram® or other lugged sole
- 1/2- to 3/4-length shank or full poly mid-sole stiffener within the sole to provide foot support and protection
- Ankle support! Trail running shoes and below-the-ankle hiking boots are not acceptable.
- Comfortable fit with your preferred hiking socks. Boots that are too small commonly cause blisters.