

Course Description

Yukon Backpacking & Canoeing

Features Of This Course:

- Hiking and canoeing through a remote and vast ecosystem
- 18 – 20 hours of continuous daylight
- Arctic mountain, boreal forest and wilderness river travel
- Opportunity for a student expedition
- Minimum Age: 16
- Class I, II moving water and some lake canoeing
- 200 – 400 kilometers of paddling
- Typically dry climate with potential for prolonged periods of wet cold weather
- Bear camping and travel techniques
- Focus on expedition skills, leadership and teamwork
- Grizzly, black bear, moose, sheep, and wolf populations
- 60 - 100 km of off-trail hiking
- Average group size: 15 students / 3 instructors

The Expedition

This summer expedition is out for the entire 30 days, using canoes on lakes and mild rivers to access magnificent hiking. You will carry the entire month's supplies in tandem canoes, and likely not see other wilderness travelers outside your group. You will float and paddle down rivers and lakes, taking in the breathtaking Yukon scenery. As you partake in traveling in canoes, the mountains nearby will offer ridges to climb. You will store your paddling gear nearby and use your backpacking gear to climb up to splendid tundra hiking. With your backpacks you will explore the Yukon's high country in hiking loops of perhaps one week in length, after which you will descend to meet up with your boats and resume paddling. Over the course of the month you will probably do two hiking loops, each time returning to your canoes to keep moving down river.

Watching for northern wildlife will all be a big part of your adventure in this truly wild place. The Yukon tundra comes to life for a brief but intense summer of almost continuous daylight. It will be a marvelous time to seek out wildlife viewing opportunities at any time of the day or night.

These rivers twist through an incredible wilderness and offer the opportunity of great flat and moving water to work on paddling technique. The river will give you time to reflect and appreciate your surroundings. You will work hard on this expedition and your rewards will be great. You will learn the skills you need to backpack and paddle through remote wilderness on your own.

Learning begins with the basics—bear country camping, cooking, map reading, stove use, Leave No Trace techniques, and sanitation—skills that are the foundation for backcountry travel. The expedition format emphasizes hands-on learning and immediate application of new skills. While canoeing, you will learn basic paddle strokes, organized river travel and river reading skills. You will also have opportunities to be the “lead boat” choosing travel paths through slow to moderate moving river water. This course is focused on basic river expedition travel and not a technical whitewater course. While hiking, you will have opportunities to learn and practice route finding, river crossings, plant and track identification, and leadership.

A primary goal of the expedition is to have students develop the skills necessary to be self-sufficient in remote backcountry areas. Leadership and judgment will be stressed as the course progresses. As students become comfortable with map and compass, route finding, and leadership, there will be opportunities for the course to split into small student-led hiking groups. Hiking days vary from easy to strenuous and will be broken up with an occasional layover day that allows time for classes, baking, repairs, reflection and exploratory day hikes.

The river's size and flow dictate the progress and focus of the river travel. Basic paddling skills will be taught immediately. You will move towards fine-tuned boat handling while continuing themes of map reading, first aid, expedition behavior, teamwork, leadership, local natural history, fly and spin fishing, human history, geology, weather and environmental issues.



During the expedition you will live with two or three other students in a “cook group.” These small groups help disperse the impact on the land and enable you to master the art of backcountry cooking and living. Expect to change cook groups several times.

Group dynamics and leadership are an integral part of our curriculum. You’ll learn how to live and work closely with your course mates while you travel through the mountains. Tolerance for adversity and uncertainty, respect for other group members, and a willingness to work hard are critical to success. As your group gains leadership skills and experience working together, you can expect your instructors to give you more responsibility for leading yourself and your peers. You should expect ongoing verbal coaching and input throughout the expedition, with written performance summaries at course end. This feedback takes place whether or not one is receiving college credit.

Student Independence

On all NOLS courses students will be independent (unaccompanied by instructors) at various times. This will include time in and around camp such as while cooking or performing camp chores. Instructors may allow students to travel away from camp. Students often have independent unsupervised time, usually in town, before and after their course starts.

Independent Student Group Travel

An emphasis of this course is the development of skills that permit you to be self-sufficient in remote backcountry areas. Our teaching progression for accomplishing this is carefully planned and executed. Initially travel groups, usually of four to six students, will include an instructor who will teach travel skills and leadership. Gradually, as you gain proficiency, the instructor will allow you to take on more responsibility and make more of the decisions. When you have demonstrated the necessary competency to the instructors, you may travel in student-led groups without instructors for a day at a time as you hike or paddle from camp to camp. We call this daily independent student travel and it is an effective educational tool. It allows you to practice travel skills and leadership and gives you responsibility for the outcome while still having indirect supervision by instructors and the benefit of the NOLS support systems.

This course may culminate in a Student Expedition. After successful practice with daily independent student travel and if your instructors think your group is ready, the instructors will help you divide into student expedition groups (usually four to eight students each). With instructor oversight, each group will then select a leader and carefully plan and execute a multi day independent student-led expedition. This part of the course builds on the skills you've learned and practiced and allows you to travel without instructors for up to five days. Students are aware of where the instructors and the other student groups are planning to travel and camp. The instructors with emergency communication capability may be up to 24 hours away from the students. Our students often say the student expedition was the highlight of their course.

* This is grizzly bear country. Thus, student expedition groups are typically a minimum of four.

Weather, Remoteness and Other Challenges

It is important to emphasize the nature of this wilderness experience. The following descriptions are intended to have you mentally and physically prepared to get the most out of your course.

Backpacking and canoeing in the Yukon Territory is physically and mentally demanding. The Yukon is a very remote region with large distances from medical facilities once in the field. While the Yukon Territory of Canada is fully functional with all the emergency services available to most North American centres, even in ideal conditions, an evacuation would take several hours. Add the likely element of poor weather, outside help might be several days away. Your expedition must be prepared to deal with almost any event self-sufficiently.

While average humidity and precipitation in this area are moderate, the weather can change quickly from hot sunshine to rain, sleet and hail, and from dead calm to fierce winds. In a wet year it could be rainy and cold every day. It is not uncommon for a hiking group to be soaked to the skin while bushwhacking! Light snow is always a possibility.

This is bear country (grizzly and black) and all travel and camping practices emphasize bear risk management and awareness. Some examples include making noise while traveling and never leaving food in tents. One basic bear country practice is to never leave camp on one's own. Students should not expect to have much time alone on this course.



Bushwhacking—forcing one's way bodily through thick brush—can occupy entire days and can be one of the most challenging aspects of the course. As water levels and rivers are dynamic, days may be spent paddling dozens of kilometers over many hours or taking the entire day to “portage” a kilometer around a “log jam.” Rewards of a NOLS course are proportionate to the challenge – If you are mentally prepared for this challenge and welcome it, you will receive more from your course.

There are plenty of insects in northern Canada, and we'll deal with them in good expeditionary style. Mosquitoes, black flies and no-see-ums are at their worst through early July, as they maximize their activity in the short summer.

Group Dynamics

For two weeks you'll be living and working in a small community of diverse individuals (be that age, outdoor experience, occupation, or other standard measures of diversity). Whether it's pushing through dwarf birch feet from one another, or camped in a confined campsite, living and working quarters are tight, necessitating the utmost in cooperation, patience and tolerance. Please consider the ramifications of this prior to committing to the expedition, and recognize that the success of the expedition as a whole is entirely dependent on the ability of its members to support one another in trying circumstances.

Some of the course routes may involve exploration into new areas. Consequently, a willingness to change plans and the desire to be challenged are both paramount.

Medical Issues

Please be aware that chronic knee or ankle ailments have been a source of problems in the past. If you have a history of such problems, please contact us to discuss it. It is important that the admissions office is advised of any updates to your medical records.

Medications

It is important that you have a current diphtheria-tetanus immunization. We need to know if you have had an adverse reaction to Erythromycin, Vicodin, Keflex, Ibuprofen, or Aspirin. If you plan to take any medication during the course, please be sure you are aware of possible side effects and discuss it with your expedition leaders.

Personal Electronics and Communication Devices

A key element to a NOLS education is time spent in wilderness. The benefits of this include being closer to nature, time away from society and civilization, and being in an environment where natural forces predominate and students have the opportunity to develop good judgment and practice self-reliance. For this reason, students are not permitted to take personal music players (iPods, MP3 players, CD players, etc.), cell phones, satellite phones or other communication devices, including satellite/GPS trackers on NOLS courses. Instructors will be carrying satellite phones which are used solely to handle any emergencies that may arise.

Fitness Recommendations

Past students and instructors agree that arriving physically fit and with an open mind will enhance your experience and ability to do well on the course. Almost continual sunlight provides for long, busy days. Your fitness goals should focus on being able to sustain a moderate level of exertion for hours on end rather than “quick sprint” fitness. A healthy fitness level also reduces the chance of injury.

Focus on a well-rounded routine that emphasizes stamina, flexibility and strength. Finally, don't ignore the need for balance; this will serve you well in the mountains and rivers where the ability to quickly find your center of balance as you move from one step to the next will enable you to dance, rather than stumble your way through. Play with it. Good luck, and have fun!

General Fitness Guidelines

Phil Watts, exercise physiologist at Northern Michigan University, conducted a research project in conjunction with several NOLS mountaineering courses in the North Cascades. The results of this study, in consideration of established principles of physical conditioning, have enabled development of the following general guidelines which should be helpful in evaluating and improving your physical condition if necessary.

Aerobic (or endurance) capacity is a major factor in mountain and river travel and most course activities. An individual should have an aerobic capacity which would enable him/her to **run 5-6 miles (8-10kms) in 40-55 minutes** or less three times a week.



If you recognize a need for additional aerobic conditioning, begin at least 8-10 weeks prior to the start of the expedition and adhere to the following **F.I.T.T.** principle:

- **Frequency**
 - Exercise 3-5 times per week.
- **Intensity**
 - Exercise at about 60-80% of maximum effort. Use the “talk test;” if you are breathing so hard that you can’t converse with a partner, you’re working too hard - slow down a little.
- **Time**
 - Exercise sessions should involve an expenditure of about 300-600 calories per session. That’s approximately the equivalent of:
 - 3-6 miles of jogging;
 - 10-25 miles of bicycling over rolling terrain;
 - 20-60 minutes of other aerobic activities such as cross-country skiing, swimming, etc.
- **Type** - The activity selected should be “total-body” - involving the large muscle groups - and should be rhythmical and continuous; it should not be conducted in spurts like sprints and many team sports. Most efficient gains will result from using training activities that are “specific” - that is, like the activity for which you are training. Since Backpacking is primarily a lower body activity, running and cycling are perhaps of more benefit than swimming, for example. For the river, going out paddling or exercising on a rowing machine might be beneficial. Progress gradually to avoid over-stress and injuries. Work on Time (duration) first, and then begin to increase Intensity.

Flexibility (range of motion) exercise is also important and should involve stretching for all muscle groups. Select a number of stretches for all areas of the body. Stretch “easy” - don’t bounce or over stretch. Maintain each stretch for 10-20 seconds and don’t hold your breath or strain. You should feel tension not pain. Stretching should be done before and after each exercise session.

Developing adequate upper body muscular fitness for your expedition is beneficial and relatively simple. Select a number of basic exercises for the upper body and abdominal areas such as push-ups, pull-ups, rope climbing, sit-ups, etc. Perform as many repetitions of each exercise as you can, resting between each exercise, then repeat. Do this basic workout three times per week or on alternate days. If you prefer working out with weights, follow the directions for the equipment you will be using or consult a reputable physical fitness text. Use strength training to supplement your aerobic program, not as a substitute for it.

While everyone has a certain amount of energy stored in the body as fat, excess body fat will increase the work intensity of all wilderness activities promoting early fatigue. Assessment of relative body fat usually requires one of several laboratory procedures and may not be available to many individuals. If you think you are significantly overweight, consult your physician about this well in advance of your course. Crash dieting would be a poor method of losing weight before your course. A good program of aerobic exercise, as described above and improved nutritional habits will usually suffice. We recommend any smokers quit immediately.

Identifying and managing backcountry hazards—falling rock, rapids and strainers, weather, animals, moving water and steep terrain—will be a constant theme in our instruction. Managing risks and assuming responsibility for yourself and your colleagues will help make your expedition in these wild and beautiful mountains healthy and fun.

This course will not teach roped climbing nor ice-axe use. Courses often have the opportunity to learn spin and fly-fishing on quality equipment. The amount of fishing will depend on the route and participant interest. A fishing license is required this can be obtained at the start of your course.



A constant theme in our instruction is identifying and managing the hazards of remote wilderness land and river travel. Your NOLS instructors will teach the skills and share the knowledge you need to handle these situations. Even so, a good attitude and consistent assumption of responsibility is critical for ensuring the safety and success of the entire group. Students who get the most out of a course are invariably those who arrive open to new ways of learning, enjoy working with others, and are committed to being positive, responsible members of the expedition.

The challenges of the Yukon are equaled by the intensity of being in a remote wilderness, the beauty of the tundra in bloom, and the triumph of working together as a group to overcome obstacles. The Yukon is "the Land of Magic and Mystery."

Course Objectives

Each course is unique due to variables such as route, group dynamics, fitness levels and environmental conditions. Working with these variables, it is our intent to see each student accomplish the following:

Risk Management and Judgment

NOLS teaches wilderness users to practice responsible habits that promote the health and well being of self and others. Objectives include the ability to:

- Demonstrate knowledge of the hazards in a mountain environment, e.g., rockfall, weather, river crossings, grizzly bears
- Consistently perform appropriate techniques to reduce or avoid mountain hazards
- Be able to perform basic first aid skills to support a patient until help arrives
- Demonstrate the ability to develop a contingency plan for a group in the outdoors
- Display sound judgment and an awareness of group and self -limits
- Demonstrate an understanding of features and hazards of the river environment, e.g., hydraulics, strainers, shallow water, submerged rocks, etc.; be able to "read" Class I, II river features
- Demonstrate an understanding of river safety/rescue techniques
- Consistently perform appropriate techniques to reduce or avoid river hazards; perform rescue techniques
- Display an awareness of cold water and river-related injuries and their prevention
- Paddle competently/effectively/responsibly as a member of a group on the river

Leadership and Expedition Behavior

Students are exposed to the theory and practice of outdoor leadership, teamwork and expedition behavior. At NOLS, expedition behavior involves commitment to the group, a positive attitude and cooperation to achieve goals. Objectives include the ability to:

- Work effectively as a member of a team; initiate participation in group tasks and camp work
- Actively participate in the decision-making process; develop decision-making and planning skills including the ability to follow decisions through to completion
- Take responsibility for the health and well being of self and others
- Demonstrate sound expedition behavior, including commitment to group decisions and a positive attitude
- Show initiative in leadership/teaching roles with peers; employ leadership styles appropriate to the situation; support others in the leadership role
- Accurately identify personal strengths, skills and areas for growth in developing leadership styles
- Display an awareness of group strengths and limitations
- Take responsibility for learning through personal goals
- Appropriately and effectively communicate ideas and concerns on individual and group levels; demonstrate the desire and ability to problem-solve
- Assist in planning and participate in a student-led, multi-day Student Expedition

Outdoor Skills

At NOLS, our students learn to live and travel in the wilderness within a framework of personal health and care for the environment. Objectives include the ability to:

- Dress appropriately for a variety of conditions; be punctual and organized
- Cook nutritious meals using a camp stove or fire
- Demonstrate appropriate campsite selection and shelter set-up
- Travel efficiently in mountainous terrain using map and/or compass
- Utilize off-trail navigation and route-finding techniques to mitigate hazards
- Experience basic spin and fly fishing techniques (if fishing is an option in the course area)
- Effectively use an ice ax for snow travel and self-arrest (if ice ax work is called for in the course area)



Canoeing Skills

At NOLS, our students learn to live and travel in the wilderness within a framework of personal health and care for the environment. Objectives include the ability to:

- Understand the design, use, outfitting and care of canoes and related equipment
- Demonstrate effective canoe paddling techniques on flat and Class I and II water
- Demonstrate appropriate techniques for lining and portaging canoes
- Demonstrate basic rescue skills: self rescue, throw lines, canoe-flip recovery, and swimmer rescue
- Demonstrate the ability to organize and securely load a canoe for extended river travel

Environmental Studies

At NOLS, environmental studies encompasses natural sciences, ecological principles, environmental ethics, Leave No Trace camping, land management and cultural issues. Each student is expected to:

- Show an understanding, appreciation, and respect for the natural world; know characteristic flora and fauna of the Yukon; understand significant ecological principles
- Develop a sense of place and relationship to the land, recognition of the inherent value in wilderness and sense of responsibility to protect the environment
- Consistently perform sound Leave No Trace living and travel skills; be able to extrapolate knowledge to new environments
- Demonstrate a knowledge of public land management and discuss means to be involved in issues of interest in the North and elsewhere
- Demonstrate awareness and understanding of the Yukon's current and historic local cultures

Upon graduation from this 30- day course, students should expect to have the skills to:

- Responsibly and comfortably lead their friends/family on a short backpacking trip in similar terrain, or a longer expedition in an area supported by a trail network
- Plan and execute a short multi-day canoe trip on water of similar or less difficulty

Suggested Books and Websites

Lopez, Barry. *Arctic Dreams*. New York, NY: Scribner's, 1986.

Wright, Allen. *Prelude to Bonanza: The discovery and exploration of the Yukon*. Whitehorse, YT: Arctic Star Printing, 1980.

McClellan, Catherine. *Part of the Land, Part of the Water*. Vancouver, British Columbia: Douglas & McIntyre Ltd, 1987. ISBN #0-88894-553-1

Pielou, E.C. *A Naturalist's Guide to the Arctic*. Chicago, IL: University of Chicago Press, 1994.

<http://www.canoe.ca/che-mun/home.html> (canoe resource)

<http://www.emr.gov.yk.ca/oilandgas/info/mapsdata.html> (oil/gas)

<http://www.mnh.si.edu/arctic/index.html> (Smithsonian Institute Arctic Studies Center)

<http://www.cyfn.ca/> (council for Yukon First Nations)

<http://www.cnie.org/NAE/arctic.html> (Native Americans and the arctic)

http://arctic.unep.net/index.cfm?issue=arctic_all (the UNEP arctic page)

<http://www.mb.ec.gc.ca/nature/index.en.html> (Environment Canada page)

<http://www.cnf.ca/links.html> (Nature Canada)

<http://www.canoemuseum.net/> (all about canoes)

<http://www.emr.gov.yk.ca/> (Yukon gov. website)

<http://taiga.net> (northern Canada natural history)

