

# Course Description

## North Cascades Mountaineering

### - 23 and Over -

#### Features Of This Course:

- 14 days spent mostly above timberline on two iconic Pacific Northwest peaks, Mount Baker and Mount Shuksan
- Exposure to glacier travel and crevasse rescue
- Snow and ice mountaineering skills development
- Elevations up to 10,778' (3285m)
- Average group size: 10 students / 2 instructors
- Minimum Age: 23
- Average Age: 32

#### The Expedition

Mount Baker, 10,778 feet, and Mount Shuksan, 9,131 feet serve as the site of this course. Mount Baker has had many names over the centuries. Before the arrival of Europeans it was known as Koma Kulshan, meaning "Great White Watcher." The modern name did not come until 1792 when Joseph Baker, third-lieutenant to English Captain George Vancouver on the British ship Discovery, spotted the mountain from the Strait of Juan de Fuca. Mt. Baker is the northernmost volcano in the U.S. portion of the Cascade Range, lying a mere 15 miles south of the Canadian border. It is perpetually snow-capped and has forty-four square miles of ice spread out amongst its twelve glaciers, making it one of the most extensive snow/ice mountaineering training grounds in the North Cascades. For comparison, Mount Rainier has just thirty-five square miles of ice.

Baker's summit - called Grant Peak - is actually a 1,300 foot- deep mound of ice, which hides a massive volcanic crater. Directly to the south is a smaller and younger crater, which is currently a center of periodic steam eruptions. Sherman Crater is only partially ice-filled and the rim's pinnacle - known as Sherman Peak - reaches an elevation of approximately 10,160 feet creating somewhat of a false summit.

Mount Shuksan lies immediately east of Baker. Also heavily glaciated, this mountain derives its name from the native Lummi word seqsen, said to mean 'high peak.' Shuksan is also heavily glaciated with options for more technical travel.

For two weeks, you will travel and climb on these mountains surrounded by stunning views. You'll work hard moving over the steep terrain with all your gear on your back, but the scenery will be reward enough. You will also learn the skills you need to climb in the mountains long after the end of your course.

Your development as a mountaineer will begin with the basics. Learning to live well and to care for yourself, your fellow expedition members, your equipment and the environment in a variety of conditions are the foundation for advanced mountaineering and the focus of our core curriculum. You'll only spend a short day or two traveling through old growth forests with astounding diversity of plant and animal life, on your way to the toe of the glaciers. Early on you'll master camping, cooking and basic travel skills. En route, your group might be challenged to negotiate slopes of loose scree and dense vegetation. Once you reach the glaciers, you'll move into the climbing curriculum beginning with knots, rope handling, rope-team travel, self-arrest and belaying. You'll spend time practicing these skills and learning to live and travel responsibly in glaciated terrain.

As your experience builds and you move into more technically demanding terrain, you'll be exposed to more advanced skills such as crevasse rescue, route finding on a glacier, and the use of 4<sup>th</sup> and potentially even 5<sup>th</sup> class rope systems for protection during more exposed travel. There will be days set aside for classes and skill practice when we will not move camp, and you may get a chance for summit attempts. However, you should be aware that a number of factors often preclude successful summit attempts. Your course will take advantage of every opportunity to prepare you for future expeditions in glaciated ranges, and the primary focus of this course is the development of skills and judgment, not "peak bagging".



An appreciation and understanding of the alpine world is also valuable, so expect an introduction to mountain ecosystems, glaciology, and meteorology. Topics less tangible but no less important, such as outdoor leadership and "expedition behavior" (working openly and cooperatively with others) will be discussed and practiced throughout the course.

Throughout the expedition you will live with two or three other students in a "cook group." These small groups help disperse our impact on the land and enable you to master the art of backcountry cooking and living.

**Typical Route / Schedule** (*Always subject to change due to weather, seasonal conditions and snowpack, etc.*)

Day 1 – Pick up from Mount Vernon motel at 7 am. Course orientation, check and issue gear, pack food, drive to roadhead and camp.

Day 2 – A full day hike to camp in the Boulder Creek drainage.

Days 3 – Hike to a base camp near the Boulder glacier; install base camp.

Days 4-6 – Glacial day hikes, skill development and activities conducted from the Boulder glacier area.

Days 6-9 – Technical glacier travel with the option to travel across the Squak, Talum, Boulder, and Park glaciers to Artist Point.

Day 10 - Receive a re-supply of food and fuel at Artist's Point; then continue hiking to Lake Ann on Shuksan Arm

Days 11-15- Carry up and over Mt Shuksan via the Fischer Chimneys route; base camp high on the mountain and pursue various mountaineering objectives (potential activities might include a summit attempt on Mt Shuksan, ice climbing, or learning crevasse rescue techniques)

Day 16 – Hike to road head for 1pm pick up. Drive to NOLS base (2.5 hours) and de-issue group equipment, shower, eat dinner.

Day 17 – De-issue personal rental items. Meet with course coordinator to discuss course, graduation, and lunch. Return to Mount Vernon around 3pm.

### **Student Independence**

On all NOLS courses students will be independent (that is, unaccompanied by instructors) at various times. This includes 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.

### **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 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 type of independent group travel is more commonly done while students are not on glaciers. Because much of the time on this course will be spent traversing glaciers, independent travel time will be limited.

Due to the technical nature of the travel and the short length of the course, multi-day Student Expeditions, when students travel for multiple days without instructors, is not a part of this course.

### **Weather And Other Challenges**

Mountain weather is fickle. On any given day, temperatures may range from below freezing to T-shirt conditions. Courses may experience snow, rain, or long stretches of sun and blue skies. The presence of El Nino or La Nina conditions across the Pacific Ocean can be cause for large swings in weather patterns in the Pacific Northwest.

Mountaineering in the Pacific Northwest, while it can be tough, remains a great learning ground for future mountaineering of all types. You will negotiate glaciers, crevasses and icefalls and walk on loose, shifting boulders. Much of the traveling is on steep terrain requiring precise movement. Often you'll be off-trail bushwhacking through thick forests or scrambling in boulder fields. Summer season courses sometimes spend much of their time camping and traveling on snow. You will traverse steep slopes of snow, loose rock or grass, and grunt up high mountain passes, at times gaining 4,000 - 5,000 feet in a day. The heavy packs and steep terrain can be hard on your knees and feet if you are not used to this type of travel. You'll be miles from



the amenities of civilization. Telephones, ambulances, and hospitals may be several days away.

Identifying and managing mountain hazards—falling rock, weather, moving water and steep terrain (risks that could result in injury or death)—will be a constant theme in our instruction. Camping may involve dealing with swarms of mosquitoes or hanging your food to keep it away from bears or other animals. Managing risks and assuming responsibility for yourself and your colleagues will help make your expedition in these wild and beautiful mountains healthy and fun.

### **Personal Electronics**

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. NOLS does not permit students to use personal cell or satellite phones or other communication devices including personal tracking devices (e.g. SPOT), while in the field. Additionally, students are not permitted to take personal music players (iPods, MP3 players, CD players, etc). Instructors will be carrying sufficient communication equipment (usually a satellite phone) to handle any emergencies that may arise.

### **Physical Challenge**

You can expect that your group will encompass a wide range of physical abilities and comfort limits. While many of our students are both mentally and physically challenged on their course, some find that they were not as challenged as they had expected or hoped they would be. You will get so much more out of your course if you can dedicate energy to things other than just making it to camp in good style on a moderate hiking day.

Assess your fitness level well in advance of your course and review the fitness recommendations in your enrollment packet to design an appropriate fitness goal and plan for yourself.

You will have long, busy days on your expedition; your fitness goals should focus on your ability to sustain a moderate level of exertion for hours on end rather than “quick sprints.”

Focus on a well-rounded routine that emphasizes stamina, endurance, flexibility and strength. Finally, don't ignore the need for balance; this will serve you well in moraine and boulder fields where the ability to quickly find your center of gravity 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!

### **Medical Issues**

Please be aware that chronic knee or ankle ailments have been a source of problems on this course in the past. If you have a history of such problems, please contact us for a consultation. It is also important that the NOLS admission office be advised of any updates to your medical records.

**Medications:** Please be certain that you have a current diphtheria-tetanus immunization. Also, we need to know if you have had an adverse reaction to Erythromycin, Vicodin, Keflex, Ibuprofen, or Aspirin. If you plan to take any medications during the course, please be sure that they are listed on your health form, that you are aware of possible side effects, and that you discuss them with your expedition leaders.

### **Course Objectives**

Each course is unique due to variables such as route, group dynamics, fitness levels and environmental conditions. Within the given parameters, we intend to accomplish the following objectives in five areas:

#### **Risk Management, Judgment and Decision-making**

NOLS teaches wilderness visitors to practice responsible habits that promote the health and well being of self and others. Each student is expected to:

- Demonstrate knowledge of the hazards in a mountain environment
- Consistently perform specific techniques taught on the course to reduce or avoid hazards
- Describe an emergency plan for a group in the outdoors
- Demonstrate the ability to perform basic emergency procedures to support a patient until help arrives
- Use experience and judgment to implement sound decisions and follow them through to completion
- Display sound judgment and an awareness of group and self limits



## **Leadership**

Students are exposed to the theory and practice of outdoor leadership, teamwork, and expedition behavior. At NOLS, expedition behavior involves commitment to the group, acceptance of others, and cooperation to achieve goals. Each student is expected to:

- Work effectively as a member of a team, displaying a positive attitude despite hardship
- Effectively communicate ideas and concerns on an individual and group level
- Accurately identify personal strengths and areas for growth in developing outdoor leadership
- Take responsibility for learning through setting and attaining personal goals
- Take initiative in teaching and leadership roles with peers
- Respond to problem situations using decision-making and planning skills
- Provide effective oral and written feedback

## **Outdoor Skills**

NOLS students learn to live and travel in mountains within a framework of personal health and care of the environment. Each student is expected to:

- Live comfortably in a mountain environment, learn to camp, cook, and dress for a variety of conditions
- Travel competently in mountainous terrain using map and compass skills, off-trail navigation, hazard evaluation, and route-finding techniques
- Accurately assess skills, strengths and endurance in self and others and conservatively apply those limits to given situations

## **Mountaineering Skills**

While advanced skill emphasis will vary, students can expect to be exposed to a complete foundation of basic glacier mountaineering skills and will be expected to:

- Correctly tie fundamental climbing knots and display efficient rope-handling techniques.
- Demonstrate appropriate crampon and ice-ax techniques for snow, ice and mixed terrain.
- Display appropriate belay skills in a variety of mountaineering systems (rope-team, running belay, etc)
- Competently build simple snow and ice anchors.
- Recognize a safe route through crevassed terrain and where avalanches are a hazard.

## **Environmental Studies**

An integral part of every NOLS course is to raise students' awareness of their impact on the natural world. Each student is expected to:

- Consistently perform minimum-impact living and travel skills by following Leave No Trace principles
- Display basic natural history observational and interpretive skills and use them to demonstrate an understanding of and respect for the course environment
- Discuss the history and potential solutions relevant to pertinent environmental issues
- Demonstrate basic knowledge of and respect for local cultures
- Reflect on the transference of wilderness ethics and practices into daily personal and professional life

