

Course Description

Outdoor Educator Semester

Features of this Course:

- Backcountry skiing, hiking, climbing, and canoeing expeditions, which emphasize teaching and management of backpacking, technical climbing, whitewater canoeing, and winter camping skills
- Average pack weight: 50-55 lbs
- Minimum Age: 21
- Opportunities for canyoneering, rock climbing, backcountry skiing, whitewater canoeing and natural history
- On and off trail hiking
- Trip duration: 89 days
- 12 - 15 students/ 2 or 4 instructors (depending on section skill type)
- Approximately 15 days of classroom time including a Wilderness First Responder (WFR) and Level 1 Recreational Avalanche

The Expedition

Imagine attending a semester where the end goal is to build your skills, competence, and self-awareness so you can confidently work as a professional in the outdoor education field. This Outdoor Educator Semester is designed for those with prior experience in the outdoor education industry and for those who aspire to enter the outdoor education profession. The four wilderness sections—Winter, River (canoe), Canyon, and Climbing—combined with a Recreational Level 1 Avalanche certification, a Wilderness First Responder (WFR) certification, and a Leave No Trace Masters certification will develop your skills, as well as add to your value to outdoor programs throughout the world. Additional administrative classes, taught while in town, on topics such as risk management, managing challenging students, group management, expedition planning, and harassment prevention will increase your awareness of the more subtle challenges associated with outdoor education. While this semester focuses on technical skill development, often much of things you will learn are intangible, and unexpected. Often students learn as much about themselves as they do about living, traveling, and teaching in an outdoor environment. You will meet people, push yourself and have fun while doing it.

The NOLS Outdoor Educator Semester in the Rockies will take you from the high peaks of Wyoming to the red canyons of Utah. You may find yourself jamming your hands and feet into granite cracks, learning how to manage a top-rope climbing site, scouting an unfamiliar rapid or carving sweet turns down untracked powder. You'll work hard at traveling through knee-deep snow, or keeping yourself and others warm and well fed in a mountain storm, while working to improve or maintain the critical relationships with expedition mates. You'll also spend time climbing a challenging crag, identifying plants and wildlife, climbing a peak, sleeping out under the stars, watching the rain from under an overhang, and reading by candlelight in a cozy snow shelter. On this semester, you'll lead and be lead by your peers—developing and refining the teaching and leadership skills needed to prepare you for professional positions.

In the field, you will be responsible for teaching many of the basic and advanced classes, for example wilderness living skills, natural history, environmental ethics, expedition behavior, and communication/evaluation skills. You'll be challenged to experiment with different teaching styles while polishing your skills, judgment, leadership, and supervisory abilities. Peer and staff feedback on teaching techniques and class content are essential parts of the learning process.

Additionally, risk management in wilderness situations is a critical element of outdoor leadership. Your instructors will teach most of the risk management-related classes, for example river crossings, emergency procedures, or rock and snow climbing. Throughout the semester, you will practice and thoroughly discuss hazard evaluation, accident prevention, group management, and evacuation procedures.

Wilderness First Responder

One of the main components of this semester program is wilderness risk management. For your first section, you will spend ten days in our Wilderness First Responder course (WFR) at the NOLS Three Peaks Ranch. This 80-hour course, taught by the staff from the Wilderness Medicine Institute (WMI) of NOLS, will provide you with the tools to make critical medical and evacuation decisions in remote locations and is the standard course required for most outdoor professionals. Your time will be divided between lecture in the classroom and practical training through case studies, and scenarios designed to challenge your decision-making abilities.



Winter Section Features:

- Trip Duration: 15– 21 Days
- Avalanche Level I Recreational Certification
- 70 lb. combined Pack and Sled Weight
- Skiing Route: ~ 30 Miles
- Constructing and living in Snow Shelters
- Group Size: 12 -15 Students / 3-4 Instructors

Winter in the mountains—cloaked in a blanket of glittering snow, the world is transformed into a quiet, magical place where icicles decorate the trees, animal tracks tell a story and untracked powder snow calls you to ski. In an environment where temperatures can plummet to 30° F below zero, and three feet of snow can fall in one storm, hard work and a positive attitude are essential and make winter one of the most rewarding times to travel in the backcountry.

Your winter section begins with six days at the NOLS Three Peaks Ranch in Boulder, Wyoming. These days will consist of two days of classroom and field time for the Avalanche 1 curriculum and three days of learning and teaching the telemark turn at nearby White Pine Ski area. Evenings will include classes on managing and preventing cold injuries in the field. After six days you'll head for the Snake River, Absaroka, Gros Ventre, Wyoming or Wind River Mountains to begin the expedition. While these mountains are very different geologically, they are all known for dependable snow and excellent skiing. Heavily timbered slopes are intermixed with open glades and broad bowls; steep, expert terrain, is broken up by gentle beginner and intermediate slopes. These mountains are magical places to explore, and exhilarating areas to learn the intricacies of backcountry skiing and winter travel.

During this section, you'll learn the basics of snow camping, skiing, avalanche training and risk management. Your homes will range from elaborate snow shelters to tent flies. You'll find your snow shelters are remarkably warm and comfortable—outside the wind can rage, snow can fall, and the temperature can drop, yet inside, you'll be reading by candlelight oblivious to the blizzard beyond your snow walls.

Camp chores take up a big portion of your days. Melting snow for water, shoveling, building kitchens and shelters, packing up piles of gear and clothes, and staying warm and dry are time-consuming and critical activities. Once you become efficient, the time you free up can be spent learning about winter ecology, snow physics, cold-weather physiology, and group management, furthering your avalanche assessment skills, teaching classes, or skiing untracked powder. If weather and snow conditions permit, you may have an opportunity for a winter peak ascent.

In these mountains, avalanches are normal, and can bury unwary skiers. Predicting the likelihood of an avalanche occurring has much in common with terrain, weather and snow pack assessment; experience and practice are necessary to refine your judgment. Thus, an extensive portion of the curriculum will be spent teaching avalanche assessment and rescue techniques.

Canoe Section Features:

- Extended expedition by Canoe
- Combination Of Flat Water and Whitewater
- Average Group Size: 12-15 Students / 3 – 5 Instructors
- Trip Duration: 16 – 18 Days

The river section of your semester takes place on one or a few of the following rivers: the Green, Yampa, Dolores, White, Owyhee or San Juan. These rivers run through deeply incised canyons of multi-colored sandstone, gray limestone, or dark basalt. For days, you'll float downstream with little more than a ribbon of sky visible above your head. You may see ancient pictographs or petroglyphs on the walls or ruined pueblo buildings tucked up into overhangs. After a series of days, the canyons open up and the views become more expansive. Lush riparian vegetation gives way to sagebrush and scrub flats. You will be in a paradoxical world of water surrounded by a desert starved for moisture.

Initial instruction will focus on how to rig and load your craft and will stress river camping techniques. Simultaneously early boating skills focus on basic strokes and maneuvering, elementary river hydrology, group travel, and simple rescue techniques. Once you've mastered the fundamentals, more advanced instruction will be presented. You will learn to perform eddy turns,



peel-outs, and ferries—skills essential in allowing you to maneuver through rapids and swift water.

The rivers we run start with lots of flat water and small rapids to help you get comfortable in your boat. As you move downstream, the current picks up and the rapids become more challenging. You'll learn to scout the river and to employ the measures necessary to ensure your party's health and well being as you negotiate rough sections. Exercising leadership in these situations will challenge your communication and decision-making skills.

While on the river, you will have time to observe the natural history of the area. The contrast between the wet river corridor and the spectacularly exposed geology makes a perfect classroom for studying plants, animals and ecosystems. Rivers are a popular wilderness resource, and their use involves special management and conservation concerns. You will discuss river use, management, and wilderness ethics specific to the river environment while you travel downstream.

Canyon Section Features:

- Trip Duration: 23 – 30 Days
- Hiking Route: 70 -120 Miles
- Average Pack Weight: 50-55 lbs.
- Average Group Size: 12 Students / 2-3 Instructors

On this section, you'll backpack through the red rock canyons of the Colorado Plateau in southern Utah or northern Arizona. This area is characterized by rugged terrain and delicate beauty, with red sandstone and green junipers adding color to the arid landscape. Relics of the Anasazi culture may still be seen in the form of ruins, petroglyphs and potshards. At times, you'll travel across mesa tops with spectacular views in all directions, while at others, you'll wind your way through the labyrinthine depths of deeply incised waterways.

Once in the canyons, you'll learn and teach fundamental wilderness travel skills. Map reading and route-finding can be tricky in this convoluted country where your travel days may range from three miles of dense bushwhacking and wading to ten miles of flat mesa walking. The canyon environment is also a great opportunity to learn, refine, and teach the skills of GPS use. You'll be challenged by the difficulty of minimizing your impact in an area where the soil is fragile and the water you took for granted on the river is suddenly hard to find.

In addition to learning to live and travel in the desert environment, you'll also focus on gaining an understanding of the area's natural history and geology. Exposed landforms provide textbook illustrations of the land's geologic past and thickly vegetated riparian zones contrast with stark expanses of rock, sand and blackbush. Prehistoric Indian cultures once thrived here, and you may view the remains they have left tucked away in alcoves. Not only will you learn about the natural history of the area but you will also learn and practice many different teaching techniques and styles.

Leadership is an important component of your canyon section. You'll be given more and more responsibility for the structure of the course as your skills and expertise improve. On many canyon sections, student leadership teams are responsible for planning the day's activities and, with instructor oversight, the management and assessment of risk.

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 will include four to six students and one instructor, who will teach travel skills and leadership. As you gain proficiency, the instructor will allow you to assume 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.

The canyon section 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 six students each). Each group will then select a leader and with instructor oversight, 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 three to six days. Students



are aware of where the instructors and the other student groups are planning to travel and camp. Each Student Expedition group will carry an emergency communication device that will allow students to initiate an emergency response in the event of a serious emergency. In most cases students will have a personal locator beacon, but in some situations they will have a satellite phone, cell phone, radio or possibly another type of device. The instructors with a satellite phone, or additional 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.

Fasting is an optional part of the curriculum for the student expedition (or optional solo if applicable) on this course. If the instructors think fasting is appropriate for the conditions and student abilities the students may choose to fast during the student expedition (or optional solo). Rations will be carried to allow students to eat in the event of an emergency.

Climbing Section Features:

- Trip Duration: 20 – 26 Days
- 3 – 4 Instructors

The climbing section is a stationary camp. The curriculum includes the NOLS rock climbing progression, some rock rescue techniques, and top rope site management. You'll have the chance to develop your climbing skills on top ropes and multi-pitch climbs. In order to teach and practice a variety of climbing techniques, our climbing camps will take place in 1-3 different areas. Depending on weather and time of year, your climbing camp could be held on granite slabs of the House Range in Utah; at Split Rock, Wyoming; Larkin Dome, Wyoming; Sinks Canyon, Wyoming; Unaweep Canyon, CO; Devils Tower, Wyoming; or in the Needles/Mt. Rushmore area of South Dakota. All of these areas offer excellent rock quality and climbs that will challenge beginners and experts alike.

Climbing camps are base camps. You'll set up your tents, establish a kitchen and stay in one place for the duration of the section. You may be camped in established campgrounds, or in more pristine areas. Regardless, you should expect to encounter people on this section and you may end up driving to and from the crags each day.

Instruction will progress from the basics of movement on rock, knots, rope handling and belaying, to protection placement, anchors, rappelling and rope system management. Plan to spend a lot of time climbing. More advanced topics, such as fixed rope ascension, direct aid, and self-rescue may also be addressed.

Climbing may be done as part of a large group when top-roping or in a small group of three to four for multi-pitch routes. You will be able to progress at your own speed. Instructors emphasize a responsible, positive attitude toward climbing and the development of your own natural abilities. For these reasons, they are selected for their teaching ability, as well as for their technical expertise.

Of all the activities you will experience, climbing is the most weather dependent. We attempt to schedule courses so that climbing sections will have good weather, but due to many variables beyond our control (permits, areas, and not the least, weather itself), we cannot guarantee this. You should come prepared to spend a lot of time on the rock, but realize this does not always happen. We will do everything possible to make your time productive, but only large measures of self-motivation can help overcome the "bad weather blues."

After completing a careful progression of instruction and climbing, students are expected to set up and supervise top rope and rappel sites in front country climbing areas. Emphasis is also placed on developing lead climbing skills (as appropriate/commensurate to individual student climbing skills and abilities), setting up climbing sites, and focusing on management/risk management concerns when climbing with students.

Student Classes

Students are expected to teach during this semester. Topics will likely be decided before leaving town. Instructors will advise you on content and the NOLS Staff Library will be available for a short time at the start of your course. Most evenings, you will have additional time to prepare classes during your WFR course. Doing so will help you teach clear, concise, and relevant classes, which are effective and fun. NOLS is known for creative and effective use of impromptu teaching aids, whether they are anatomical diagrams on bodies, or "blackboards" on insolite pads or sandbars. Expect to receive feedback on your classes from both peers and instructors, which will enable you to capitalize on your strengths and identify weaknesses in your teaching.

On any NOLS course, the classes support the activities, but the activities are the heart of the course. Instructors constantly adjust plans with changing conditions, especially as "teachable moments" arise. This makes the scheduling of your classes tentative. It also means that NOLS instructors routinely plan for many different alternatives, only using the most fitting ones. It is possible that one or two prepared classes will not even be presented. We hope that you will also point out teachable moments as you experience them. Guided discovery is what experiential education is all about. Helping you to develop your skills to both model and guide others in this discovery is the foundation of this NOLS outdoor educator semester.

Daily Life

You'll be living with two or three other students in a cook group during the course. Usually the composition of the cook group changes each ration period, so you get to know and work closely with all members of your semester. These small groups help disperse our impact on the land, and enable you to master the art of backcountry cooking and living. You'll get lots of coaching from your instructors while you learn new skills. Before you know it, you'll be savoring homemade pizza or cinnamon rolls—gourmet delicacies that you made from scratch on a single-burner stove.

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 members, and a willingness to work hard will all be critical to your 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 may come back to town as you switch sections to organize and take care of gear, get oriented to new sections, receive mail, and possibly squeeze in showers and laundry! Not all courses return to town; some are "on the road" for two or three sections and have their transition days in places like Moab, Utah or Driggs, Idaho. Due to long travel distances, all courses spend several days in a school bus on the road. The final day of the semester is spent in town deissuing equipment and finishing evaluations. That evening, there will be an end-of-course banquet.

Student Independence

On all NOLS courses, students will be independent (that is, 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. Away from the field, students often have independent, unsupervised time, usually in town, before and after their course starts or between sections of semesters. Students are expected to maintain the same level of expedition behavior and adherence to NOLS drug/alcohol/tobacco policy while transitioning between sections, either on the road or while staying at the Noble Hotel, Three Peaks Ranch, or the Vernal River Base.

College Credit

You may earn up to 19 credit hours through the University of Utah for successfully completing the Outdoor Educator Semester. Please see the college credit paperwork enclosed in your enrollment packet. Although there will be many "classes" during the semester, credit is granted for the experiential nature of the learning, not for formalized class work.

Regardless of whether or not you register for credit, you should expect ongoing verbal coaching and feedback throughout the semester, with written performance summaries at the end of each section.

Weather and Other Challenges

Spring weather in the inter-mountain west is capricious. On any given day, temperatures may range from below freezing to sweltering. During the course of your semester, you'll feel the seasons change from the cold days of winter to the verdant days



of spring. You'll learn to live comfortably outside in blizzards, rainstorms, wind and sunshine. Given the altitude and latitude of the areas you will be in, cold and snowy conditions can occur any month of the year. There are times when you will be cold, wet or tired, but you will learn to manage these situations and maybe even smile while you do.

Life in the wilderness can be tough. You may be off-trail bushwhacking through thick vegetation or battling wind gusts that threaten to "turtle" you. You'll traverse steep slopes of loose rock, snow or grass and grunt up steep passes. There will be times when you'll wish you were somewhere else, but the hard work is worth it. There's nothing quite like taking your pack off at the top of a pass, feeling the wind dry the sweat off your back, and looking down at miles of new country opening up before you. It's exhilarating!

While bear encounters are unlikely in the spring, bear avoidance techniques will be integrated into hiking and river sections as needed. Precautions against bear encounters will decrease the opportunities for solitude and privacy on this course. You will protect food from bears for hiking sections. Other bear avoidance tactics include meticulously maintaining cleanliness at the cooking sites and making loud calls to warn bears of your presence.

Climbing occurs on exposed cliffs where loose rock and unexpected falls are potential dangers. Winter hazards include avalanches, cold temperatures, and demanding travel on skis. These hazards and challenges are not meant to intimidate you, but they are the reality of living and traveling in the wilderness. Identifying and managing hazards—which could be falling rock, stormy weather, animals, moving water, or steep terrain—will be a constant theme in our instruction. Throughout your course, you'll be miles from the amenities of civilization. Telephones, ambulances, and hospitals may be several days away. Managing risks and assuming responsibility for yourself and your colleagues will help make your expedition in these wild places 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.

General Course Objectives

As an overall course objective, we expect Outdoor Educator Semester graduates to be capable of responsibly leading groups of novices through educational experiences in the wilderness. Each course will be unique due to variables such as route, group dynamics, fitness levels, and environmental conditions. Working with these variables, it is our intent to accomplish the following outcomes:

Risk Assessment, Judgment and Decision Making

NOLS' goal is to prepare students to teach and practice responsible habits that promote the health and well being of self and others. We expect each student to accomplish the following:

- Demonstrate knowledge of the hazards in mountain environments and of your limitations
- Describe and consistently perform specific techniques to reduce or avoid hazards
- Describe emergency plans for groups in the outdoors in a variety of settings and circumstances
- Show the ability to provide emergency and extended medical care for a remote wilderness setting using the available resources
- Use experience and judgment to implement sound decisions and follow them through to completion
- Understand and work within NOLS risk management policies and procedures

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.

We expect each student to accomplish the following:

- Work effectively as members of a team
- Appropriately communicate ideas and concerns on individual and group levels
- Accurately identify strengths, skills and areas for growth in developing outdoor leadership styles in self and others



- Display an appropriate initiative in a teaching/leadership role with peers
- Demonstrate effective problem-solving and planning skills
- Provide effective oral and written feedback
- Display an awareness of group strengths and limitations

Outdoor Skills

Students are expected to live, travel and guide others in the outdoors within a framework of competence and care of the environment. We expect each student to accomplish the following:

- Live comfortably in a mountain environment: camping, cooking, and dressing for varied conditions
- Travel competently in mountain terrain using appropriate off-trail navigation, hazard evaluation, and river-crossing techniques
- Demonstrate a thorough understanding of elementary climbing systems including knots, belaying, and anchors
- Set up and supervise top-rope and rappel sites in front country settings
- Experience multi-pitch climbing and non-technical peak ascents
- Possess skills and knowledge of snow travel techniques
- Accurately assess skills, strengths and endurance in self and others and conservatively apply those limits to given situations

Environmental Studies

Students develop an awareness of how to apply minimum impact ideas to their lives beyond the course.

We expect each student to accomplish the following:

- Consistently practice and teach sound minimum impact living and travel skills
- Use basic observation, interpretive and teaching skills to convey an understanding, appreciation and respect for the natural world
- Facilitate the transference of wilderness ethics and practices to daily life

Wilderness Education Skills

The Outdoor Educator semester prepares students to be wilderness educators as well as wilderness leaders. We expect each student to accomplish the following:

- Demonstrate the ability to effectively teach basic outdoor living skills
- Demonstrate knowledge of environmental and risk management concerns and their influence on learning in the wilderness
- Be an exemplary model of a competent and effective wilderness educator
- Demonstrate motivation and enthusiasm in the pursuit of learning
- Be effective in the presentation and utilization of learning opportunities, adapting to the variables of the course

Reading List

NOLS outdoor educator semesters are stepping-stones for outdoor professionals who already have experience in the terrain and skills of their course. Staying well read is a given part of continuing education for any professional.

You may already be familiar with many of the titles on this list. We encourage you to have a working knowledge of one or two books on this list before beginning your course. Asterisked selections (*) are books we routinely use as references.

Your familiarity with these books can only enhance your experience on your NOLS Outdoor Educator Semester. Your preparation before the course often determines whether you are learning basic material on your course, or better yet, learning how to teach it. And most of all, we hope you enjoy these books.

Living in the Wilderness

*Harvey, Mark (1999) *The NOLS Wilderness Guide*.

Howley Ryan, Mary (2008) *NOLS Backcountry Nutrition*.

*Pearson, Claudia (2004). *The NOLS Cookery*.

Minimum Impact Camping

*Hampton, Bruce, and David Cole (2003). *Soft Paths* (3rd ed.).

Harmon, Will (1994). *Wild Country Companion*.

Hart, John (1998). *Walking Softly in the Wilderness*.

*Regional Leave No Trace “skills & ethics” booklets www.lnt.org



Climbing & Mountaineering

- **Anderson, Dave (2008). *NOLS Rock Climbing Instructor Notebook (4th ed.)*.
Chouinard, Yvon (1978). *Climbing Ice*.
Cox, Steven (2003). *Mountaineering: The Freedom of the Hills (7th ed.)*.
DaSilva, Rachel (1998). *Leading Out: Mountaineering stories of adventurous women*.
Long, John (2006). *Climbing Anchors, (2nd ed.)*.
Long, John (2003). *How To Rock Climb (4th ed.)*.
*Powers, Phil (2008). *NOLS Wilderness Mountaineering (3rd ed.)*
*Tyson, Andy (2005). *Glacier Mountaineering*.
Vause, Mikel (2002). *Rock and Roses (2nd ed.)*.

Whitewater Paddling

- American Canoe Association (2005). *ACA Instructor's Manual*.
*Gullion, Laurie (1987). *Canoeing & Kayaking- Instruction Manual*. American Canoe Association.
Jackson, Eric (1999). Whitewater paddling strokes and concepts. Stackpole.
Mason, Bill (1999). *The path of the paddle*. Firefly Books.
Ostis, Nate (2010). *NOLS River Rescue*. PA: Stackpole.
**Ostis, Nate (2006). *NOLS River Educator Notebook*.
ACA books: we generally use the ACA curriculum for whitewater instruction (with their blessings).

River Rescue

- Ostis, Nate (2010) *NOLS River Rescue Booklet* (in press)
*Ray, Slim & Les Bechdel (1997). *River Rescue (3rd ed.)*.
Walbridge, Charlie (1995). *Whitewater Rescue Manual*.

Wilderness Medicine

- Auerbach, Paul (2007). *Wilderness Medicine: Mgmt of Wilderness and Env. Medicine (5th ed.)*. (reference book)
Forgey, W (1999). *Wilderness Medicine (5th ed.)*
Giesbrecht, Gordon & James Wilkerson (2006). *Hypothermia, Frostbite and Other Cold Injuries. (2nd ed.)*.
*Houston, Charles (2005). *Going Higher: Oxygen, man and mountains (5th ed.)*
Johe, David & Warren Bowman (2002). *Outdoor Emergency Care (4th ed.)*.
*Schimelpfenig, Tod (2006). *NOLS Wilderness Medicine*.
*Schimelpfenig Tod, Padgett Justin. *Wilderness Medicine Field Guide*. 2ed Ed 2009
Setnicka, Tim (1981). *Wilderness Search and Rescue*.
Tilton, Buck (2004). *Wilderness First Responder (2nd ed.)*.
Wilkerson, James A. (2001). *Medicine for Mountaineering (5th ed.)*.

Wildland Ethics

- Brower, David (1995). *Let The Mountains Talk, Let The Rivers Run*.
Callicott, J. Baird, and Michael P. Nelson, eds. (1998). *The Great New Wilderness Debate*.
Cordell, HK, et al (2005). *The Multiple Values Of Wilderness*.
**Gookin, John & Darran Wells (2002). *NOLS Environmental Education Notebook*.
*Goodrich, Glenn (2006). *NOLS Wilderness Ethics: Valuing and Managing Wild Places*.
Hendee, John, et al. (1990). *Wilderness Management (2nd ed.)*.
Nash, Roderick (2001). *Wilderness and The American Mind (4th ed.)*.
Oelschlaeger, Max (1993). *The Idea of Wilderness*.
Waterman, Laura & Guy (1993). *Wilderness Ethics: Preserving the Spirit of Wildness*.
The Wilderness Act of 1964 www.wilderness.net/index.cfm?fuse=wnwps&sec=legisact also in Goodrich (2006).
Zaslowky, Dyan (1994). *These American Lands*.

Environmental Studies & Sustainability

- Brower, Michael (1998). *The Consumer's Guide To Effective Environmental Choices*.
Edwards, Andres (2005). *The Sustainability Revolution*.
**Gookin, John & Darran Wells (2002). *NOLS Environmental Education Notebook*.



Leopold, Aldo (1966). *Sand County Almanac*.
Light, Andrew & Holmes Ralston, III (2003). *Environmental Ethics*.
Lorbiecki, Marybeth (1996). *Aldo Leopold: A Fierce Green Fire*.
McKenzie-Mohr, Doug (1999). *Fostering sustainable behavior: an introduction to community-based social marketing*.
Miller, Char (2001). *Gifford Pinchot and the Making of Modern Environmentalism*.
Orr, David (2004). *Earth In Mind: On education, environment and the human prospect*.
Reisner, Marc (1993). *Cadillac Desert: The American West and Its Disappearing Water (2nd ed.)*.

Leadership

Bennis, Warren (1985). *Leaders*.
**Gookin, John & Shari Leach (2009). *NOLS Leadership Educator Notebook*.
Graham, John (1997). *Outdoor Leadership: Techniques, Common Sense And Self Confidence*.
Heifetz, Ronald (2002). *Leadership On The Line: Staying Alive Through The Dangers Of Leading*. Harvard Business School.
Huntford, Roland (1986). *The Last Place on Earth*.
Heider, John (1986). *The Tao of Leadership*.
Roberts, Wess and Bill Ross (1995). *Make it So: leadership lessons from Star Trek*.
Roberts, Wess (1990). *Leadership Secrets Of Attila The Hun*.
Siebert, Al (1996). *The Survivor Personality*.
Siebert, Al (2005). *The Resiliency Advantage: Master change, thrive under pressure, and bounce back from setbacks*.
Taylor, Rob (1981). *The Breach*.

Rocky Mountain History

Blevins, Winfred (1973). *Give Your Heart to the Hawks*.
DeVoto, Bernard (1947). *Across the Wide Missouri*.
Guthrie, A.B. (1947). *The Big Sky*.

Earth Sciences

Day, John (1998). *A Field Guide To The Atmosphere*.
*Link, Paul (1977). *Geology of the Wind River Range*. NOLS.
McPhee, John (1981). *Basin and Range*.
McPhee, John (1983). *In Suspect Terrain*.
*McPhee, John (1986). *Rising from the Plains*.
Renner, Jeff (2005). *Mountain Weather*.
*Rey, H.A. (1975). *The Stars*.
Woodmency, Jim (1998). *Reading Weather: where will you be when the storm hits?*

Mountain Expeditions

Allison, Stacy (1999). *Beyond the limits*.
Blum, Arlene (1998). *Annapurna: A Woman's Place*.
Craig, Robert (1980). *Storm and Sorrow in the High Pamirs*. (Out of print: see Chessler Books or Abebooks).
Davidson, Art (1999). *Minus 148 Degrees*.
Herzog, Maurice (1952). *Annapurna*. (various printings)
Hornbein, Tom (1998). *Everest: The West Ridge*.
Jones, Chris (1997). *Climbing in North America*.
Roberts, David (1986). *Moments of Doubt*.
Roper, Steve (1979). *Fifty Classic Climbs of North America*.
Waterman, Jon (1991). *Surviving Denali (2nd ed.)*.
Wilson, Ken (1981). *The Games Climbers Play*.

Flora and Fauna

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