

Columbia Cascade Trail Skills College

Course Descriptions

Cascade Locks, OR

April 15-17, 2011

[100 Level Courses](#)

[200 Level Courses](#)

[300 Level Courses](#)

[400 Level Courses](#)

NOTE: Most of these classes will be offered, but not all. Classes will only be offered if the three conditions are met:

- 1.) There is a suitable teaching site
- 2.) An instructor and co-instructor are available and
- 3.) There is sufficient student interest.

100 Level

100 level courses are designed for those with little or no previous trailwork experience. They can also be useful refresher classes for experienced volunteers and an opportunity for experience volunteers to develop their leadership skills by participating in the class as an assistant instructor.

100. Intro to Trail Maintenance

This introductory sampler class is for people new to trail work who want an overview. One quarter of the class covers “how trails work,” i.e. basic trail design concepts; one quarter covers trail work safety protocols; one quarter covers hands-on brushing and hand-saw clearing; and one quarter covers hands-on drainage cleaning. This sampler class does not prepare students to work independently. Instead, students will understand a range of trail work tasks and have a good idea of what they want to do under a crew leader, or what class they want to take next.

101. Opening the Trail -- How to Brush and Scout a Trail

Intended for those new to trail work who want to learn how to cut brush and small logs to help clear a trail to proper specifications. After discussion of general safety protocols, students learn about safe and effective use of hand saws and loppers. This class also includes how to complete an early-season trail survey to identify and report major problems, especially blown down logs -- their numbers, locations, and sizes.

102. Tread and Drainage: Protecting Trails from Erosion

The effects of water and gravity constantly threaten our trails and thus we must learn how best to deflect them. This course begins with basics of hillside hydrology and how trails work when they shed water properly. Includes introduction of “trail eyes” for recognizing tread erosion patterns. Hands-on practice removing slough and berm, and effective cleaning and maintenance of existing water bars and drain dips.

103. Basic Saw Crew Training

Are you interested in helping certified sawyers to clear trails, but don't have much experience working with or around saws? Regardless if you aim to become a certified sawyer yourself, learning to be a saw crew member is an important place to start and takes know-how to do safely. This class provides field experience with crosscut saws & axes, but most of the principles are also applicable to chainsaws. Therefore, this class is the place to start, no matter what trail clearing tools you expect to use in the future. The session begins with an introduction to crosscut saws and axes of various types, and how they work. It then covers their safe and effective use, including a review of trail clearing specifications, safety equipment, the forces of tension and bind, and the practice of situational awareness. This class is an introduction; it does NOT provide saw certification, which is required for those who wish to be lead sawyers.

104. Intro to Chainsaw for Prospective Sawyers

Intended for students who have already taken Saw Crew Training (103) and are interested in an orientation specifically to chainsaws, in preparation for a chainsaw certification class. The class will not use chainsaws in the field, but it will cover things you need to know if you've never handled a chainsaw before, including how they work and why they are potentially dangerous. Also included is a review of specialized safety equipment & clothing needed, and how to start saws safely. If time allows, we will disassemble a saw to clean and sharpen it.

108. First Aid (4 hours)

Standard Red Cross First Aid class; this class provides information on prevention in addition to providing you with the basics of how to assess and respond to emergencies like bleeding, strains, sprains, dislocations, fractures, heat and cold illness, bites, stings and other sudden illness. Required every three years. Note: This is NOT a Wilderness First Aid (WFA) Certification course, those are typically 2 days and cost around \$150 for a 2 year certification. This class is free.

109. CPR (4 hours)

Cardio Pulmonary Resuscitation. A Red Cross adult CPR card will be received. Rcertification required annually.

200 Level

These courses build upon the 100 level classes and assume that the participant has taken the beginner classes or has the equivalent previous experience.

200. Basic Trail Design Where Do Trails Come From?

For curious trail workers who want to understand why so many trails are in bad shape because of poor design, and how better layout makes trails more sustainable. Introduction to different trail design standards appropriate for different kinds of trails. This class is for anybody interested in these topics but students with some trail building and maintenance experience will benefit the most. This is a lecture based class with a half-day in the field to practice measuring slope angles and identifying potential locations for re-routes.

201. Drainage Design and Drain Dips

Intended for someone who has taken 102 (Intro to Tread & Drainage) and/or has experience doing drainage work. Learn how to design and locate effective drainage structures. After a comprehensive explanation of hillside hydrology and how trails work when they shed water properly, this class shows students how to design and construct long, rolling drain dips as a way of reducing erosion on existing trails.

203. Drainage Remediation with Waterbars and Checks

Intended for someone who has taken 201 (Drainage Design & Drain Dips) and/or has considerable experience doing drainage work. Where earthen rolling drain dips are not feasible, drainage features are sometimes armored using rock or log. Learn contemporary techniques to build water bars and checks with both rock and log. The class will include a review of outdated techniques, and how to convert “old school” waterbars to a more effective design.

205. Tread Re-Construction

Review the concepts of hillside hydrology and basic trail layout. Re-excavate badly slipped and cupped tread to re-establish outslope and restore the tread to original or ideal specifications.

20X. Tool Maintenance

Learn the techniques and tricks for keeping your tools in good repair whether you are in the field or in the shop. Properly sharpened tools with sturdy handles and heads are safer, more efficient, and less expensive in the long run than tools that are ignored and neglected.

20X. Trail Signage

Learn the skills necessary to complete a signage survey, select appropriate sign locations and correctly install trail signs to Forest Service standard.

210. Crosscut Saw Bucking Certification

The Forest Service requires that each operator on every X-Cut saw is a certified sawyer. This session is for volunteers who do not have a card, but have substantial X-Cut saw experience in the field. The course includes a review of key X-Cut safety procedures and best practices for clearing trail effectively in challenging and potentially hazardous situations. The instructor will determine whether each sawyer is ready to receive certification at the A or B level. Class will be working to clear a trail. Hardhat required (will be provided if you do not have one); bring gloves, long sleeve shirt, eye protection, boots and saw if you have one.

211. Chainsaw Certification

The Forest Service requires that each operator using chain saws is a certified sawyer. Required: You must have a certification card, if you want to use power saws to clear trails. Saw safety review and certification time with instructor will be held in the field. Hardhat required (will be provided if you do not have one); bring gloves, chaps, long sleeve shirt, eye protection, boots and saw if you have one.

300 Level

300 level classes are for those interested in gaining the technical skills and leadership abilities to safely lead crews in the backcountry. Participants must have completed pre-requisite classes or have sufficient experience to demonstrate proficiency in treadwork and brushing. Volunteer leaders and assistant leaders have priority in registering for these classes.

300. Basic Rock Work

Learn fundamentals of rock construction. Includes a strong emphasis on effective and safe use of rock bars the critical tool for all rock work. We'll tackle basic rock placement techniques for walls or steps to last the ages.

304. Leadership: Managing a Crew

For students with prior trail work experience interested in leading or assisting to lead trail crews. Not a construction techniques class; this is about effective leadership. Students will have classroom and field work in the following topics: Work Day Responsibilities; Risk Assessment and Safety; Tool Safety & Tool Talks; Leadership & Team Building; Practical Experience Leading Trail Crews.

305. New Trail Construction

Building reroutes, re-alignments or entirely new trails is as fun and rewarding as it is challenging. This class is intended for experienced students. The class will cover site specific design and layout, phases of trail construction and crew management, taught in a mixture of lecture and hands-on construction.

30X. Water Crossings and Seeps

Water crossings present special challenges to the trail worker. Learn to assess the trail and select an appropriate trail structure that will help to maintain the proper hydrology of the environment while also protecting the trail from damage.

310. Cross Cut Recertification

The Forest Service requires that each operator on every X-Cut saw is a certified sawyer. Required: if you use X-Cut saws to clear trails. You must have a recertification card from a previous year to attend this class. Saw safety review and recertification time with instructor will be held in the field. Hardhat required (will be provided if you do not have one); bring gloves, long sleeve shirt, eye protection, boots and saw if you have one.

311. Chainsaw Recertification

The Forest Service requires that each operator using chain saws is a certified sawyer. Required if you want to use power saws to clear trails. You must have a recertification card from a previous year. If you are a very experienced sawyer and do not have a card you may come to the class where instructors will evaluate your skill level for A or B card. Saw safety review and recertification time with instructor will be held in the field. Hardhat required (will be provided if you do not have one); bring gloves, chaps, long sleeve shirt, eye protection, boots and saw if you have one.

319. Chainsaw Maintenance and Sharpening

Part science, part art. Keeping your saw tuned will increase safety and productivity. This class will cover the basics necessary to get the most out of your saw.

398. Special Topics: Switchback Construction

Switchbacks are a challenge to site and to build, but when done properly they are easy to negotiate and readily shed water off of the trail. In the steep country, proper switchback construction is essential.

399. Special Topics: Rock Armoring/Raised Tread Construction

Some places on the trail require armoring or raising the tread to harden or dry out tread surfaces that would otherwise be too fragile. Learn how to identify sites where such techniques are appropriate and to construct structures that will last.

400 Level

Classes at this level are designed to build leader's skill set by bringing together experienced crew leaders to learn from one another. The courses will focus on the most unique and challenging aspects of front country and backcountry trail work.

400. Advanced Leadership

Successful leaders use their skill and experience in trail work, communication, motivation, problem solving and organization to ensure volunteers are safe, have fun and get work done. This class is designed for volunteer leaders with some leadership experience who are interested in sharpening their skills by learning from their peers.