

2018 Columbia Cascade Trail Skills College Course Descriptions

Cascade Locks, OR

[100 Level Courses](#)

[200 Level Courses](#)

[300 Level Courses](#)

[400 Level Courses](#)

The course list below includes a complete list of courses, each year we are able to offer a smaller subset of this list with the aim of offering the core classes at every event and a selection of special classes too.

For those interested in learning more about cross-cut or chainsaw work, the following introductory courses will be offered at TSC as they are pre-requisites for certification classes:

First Aid and CPR

103 Basic Saw Crew Training

104 Intro to Chainsaw for Prospective Sawyers

297 Chainsaw Practicum

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 experienced volunteers to develop their leadership skills by participating in the class as an assistant instructor.

Intro to Trail Maintenance—(½ Day Saturday afternoon and a full Day Sunday)

This condensed course offering combines content from 100, 101 and 102 (below) and is taught through a combination of lecture, demonstration and hands on practice. It is oriented for people who have never done trail work before, but is also suitable for experienced volunteers who would like to refresh their skills or learn more about the theory behind trail maintenance standards. Students remain in the same cohort through the weekend providing an opportunity to form a team as they assess their trail and address the variety of trail issues presented.

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.

107. Hand Tool Field Maintenance

We rely on hand tools to lop branches, dig drain dips, remove slough and berm, construct waterbars and check steps, and much more. As a result hand tools receive a great deal of wear and tear. Learn about the most common tool problems that are encountered during trail work and how to address them in the field including dull blades and loose heads. This is designed to be a 4-hour class.

First Aid and CPR

This course is for anyone with limited or no medical training who needs a course completion card in first aid, CPR and AED use to meet job, regulatory or other requirements. Upon completion of this course, students receive an American Heart Association Heartsaver First Aid CPR AED Course Completion Card that is valid for two years. During the course, an AHA Instructor conducts video-based lessons and works with students to complete their first aid, CPR and AED skills practice and testing. This class also covers the basics of how to assess and respond to emergencies and injuries such as bleeding, strains, sprains, dislocations, fractures, heat and cold illness, bites, stings and other sudden illness. (Note: This is NOT a Wilderness First Aid (WFA) Certification course, those are typically 16 hours days and cost around \$200)

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.

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. 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.

204. Cooking and Camping with the Crew

For students aiming to help pull off multi-day trips in the backcountry or frontcountry. Whether your group will be large or small, this course provides helpful tips on nutrition, food planning, and shopping, setting up a field kitchen, what to bring, and tips for cooking with trail crews. It also covers best practices for food storage and sanitation at camp. No prior experience is necessary, although familiarity with typical work parties and basic kitchen equipment will be helpful.

205. Tread Reconstruction

This course goes beyond a triage approach (203, Drainage Remediation), because reconstruction indicates a more thorough restoration of damaged tread to ideal specifications. Review hillside hydrology and how trails should work. Practice systematic slough & berm removal. Learn to reconstruct tread after gullyng, tread creep, nasty roots, and uprooted trees. (Pre-requisite: 201 and 203, or equivalent experience. This class is a pre-requisite for 305 New Tread Construction.)

206. 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.

207. Trail Decommissioning and Wildland Restoration

Learn how to put a campsite and section of trail to bed so that it returns to nature without erosion. Some call this the “Zen and the Art of Wilderness Gardening”, or “trail magic” because, if properly done, the old scars disappear, replaced by a perfectly restored landscape. Includes transplanting, seed collection, and rock placements. There are no prerequisites for this class, though students should have interest in working with plants and be willing to get dirty. Patience and a good eye for design help.

297. Chainsaw Practicum

This class is designed to allow volunteers who would like to earn a certification to use chainsaws the opportunity to work with an instructor to ensure they have the basic foundation skills necessary to enroll in a sawyer certification class.

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 prerequisite 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. 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 retaining walls to last the ages, but also spend time on an often underappreciated skill: locating suitable rocks and safely transporting them to the work site.

304. Crew Leadership: Managing Volunteers

For students with prior trail work experience interested in learning about crew dynamics, leadership and risk management. This class is suitable for leaders, aspiring leaders as well as those simply curious about how successful crews function. 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.

306. Working with Packers and Pack Stock

Multi-day projects in the backcountry may seem like an overwhelming burden because of all the food, tools, and gear needed—that is—unless we have the assistance of pack animals. Thankfully, the PCTA has many talented packer friends willing to help. This course, taught by a packer, is meant to take any intimidation out of planning a trip that's going to be pack-supported, especially for those not experienced with equine. Students will learn safety around the stock, and some horseman lingo. They will learn what essential pieces of information need to be discussed with the packer in advance. This course won't make students into packers, but, they will gain a general understanding of the key principles of packing and balancing panniers, coolers, tools, and other trail crew gear.

398: Special Topics: Working with Mechanical Advantage

Elbow grease and brute force will only get you so far, sometimes you need to work smarter and not harder. This class is an introduction to some devices use for applying mechanical advantage to lift or move a load, be it a large boulder, log, or buckets of gravel down a zip line. Starting with the rock bar to rotate and position a boulder, the class progressing through an introduction to Rope pullers, Grip Hoists and high lines.

398: *Special Topics: Hazards of the Burn Zone and Emergency Scenarios*

Restoring trails in burned area presents unique safety concerns that the average trail worker may be unfamiliar with. Unstable ground, hazard trees, rockfall and even losing the trail completely can present opportunities for incidents. This class will discuss hazard identification and best practices risk management will supervising a crew in a burn zone. In addition we'll role play some common scenarios to build up neural pathways and muscle memory for when someone on your crew is injured or lost.

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. Crew Leadership: Project Management

Determine the optimal fixes for various problems on a trail. Learn the steps for estimating time and materials, and setting up a work project. Learn about trail triage: how to prioritize and what techniques to use when total trail reconstruction to ideal specs is not an option. Understand environmental concerns and policies that may impact projects. Learn what to look for when scouting a trail and how/when to schedule work.