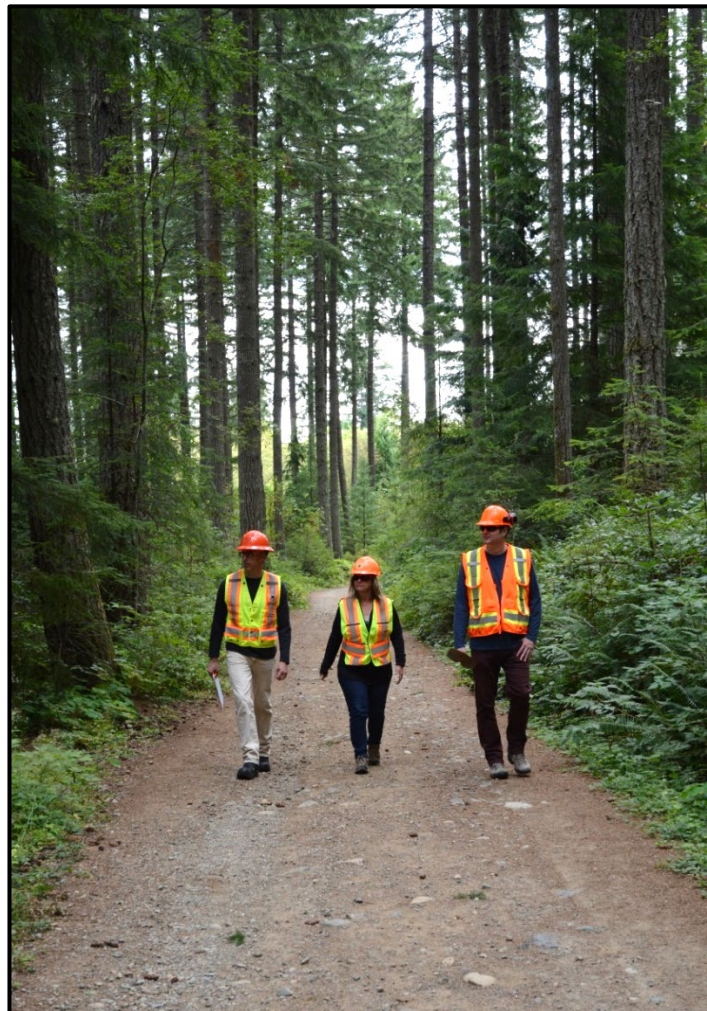


# FOREST WORKER ESSENTIALS TRAINING PROGRAM

## Program Outline / Administrator Guide

March 2024



Canada



BC Forest Safety

*Funding provided through the Canada-British Columbia  
Labour Market Development Agreement.*

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In consultation with industry subject matter experts, the BC Forest Safety Council (BCFSC) facilitated the production of this material.

Funding was provided by the Government of Canada, the Province of British Columbia, and industry in-kind contributions.

Printed copies are considered uncontrolled and may be outdated. Current versions are available from the BCFSC.

Feedback is welcomed and can be sent to: [training@bcforestsafe.org](mailto:training@bcforestsafe.org)

# Section 1

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## Program Overview

The **Forest Worker Essentials (FWE)** training program provides new forestry workers with the entry level knowledge and skills required to work safely in the forest industry in British Columbia. The program can be delivered by various Training Providers throughout the province including:

- Post Secondary and other Educational Institutions;
- First Nations organizations;
- Employers;
- Industry Associations;
- and other Training Providers that have applied to, paid the application fee, and been approved by the BC Forest Safety Council (BCFSC) to enter into a Service Agreement that is available on the BCFSC Website

## Career Pathways

The **Forest Worker Essentials** program develops the underpinning knowledge and basic skills to start working in entry level positions and gives trainees competency credit towards a broad range of forestry occupations as detailed in the Forest Worker Essentials Occupational Analysis Chart (OAC).

# Occupational Analysis Chart

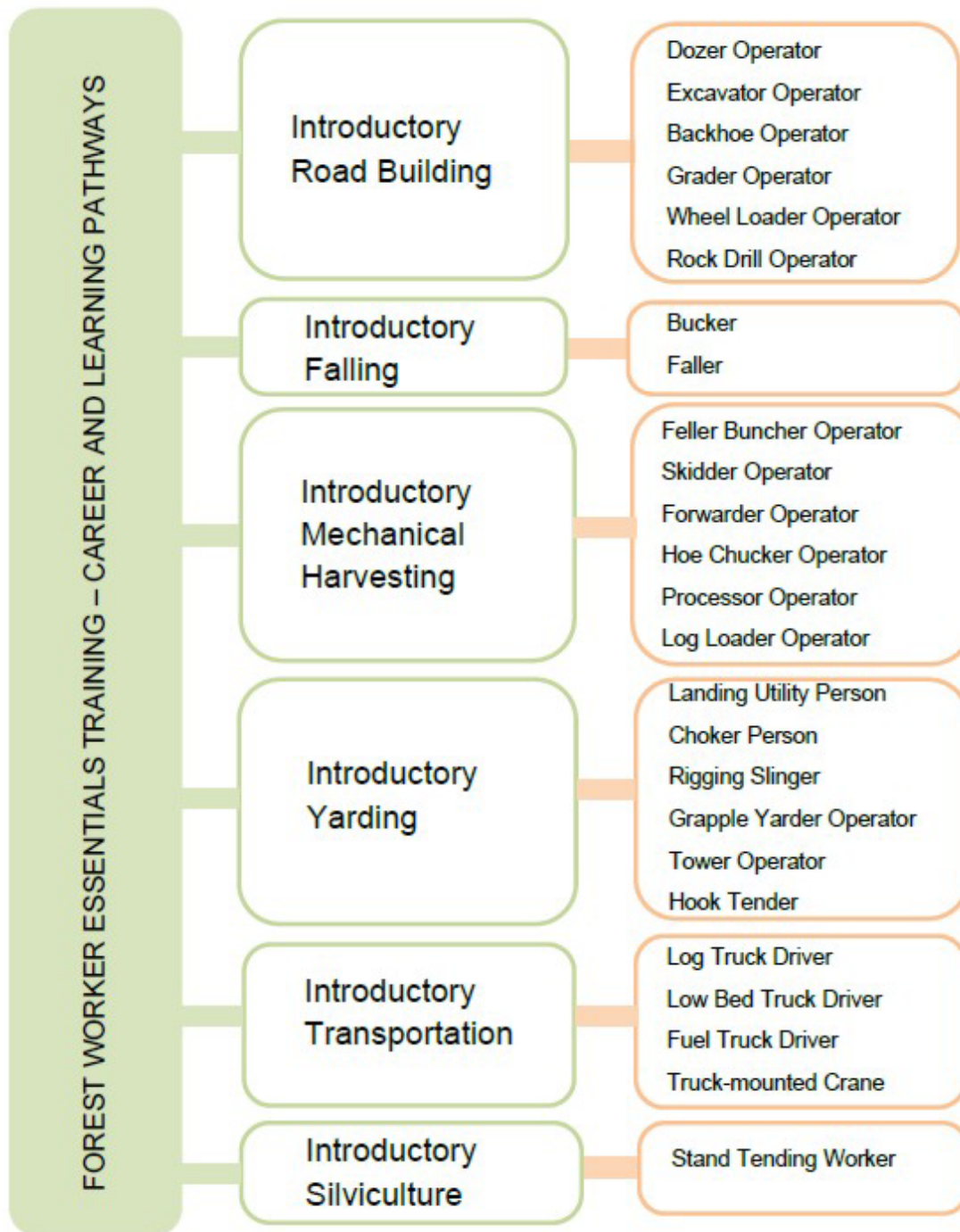
A 4-digit number refers to a unit of competency and/or course related to the subject title

C = Classroom

W = Workplace/Field

| Employable Skills Training   |  |  |  |  |   |
|--|--|--|--|--|---|
| WHMIS<br>C   | Fall Protection<br>C   | S-100<br>C   | Describe Safe Decision Making in a Forestry Workplace<br>2039 C                          | First Aid Level 1/Basic with Transportation Endorsement<br>C                 |   |
| Foundation   |  |  |  |  |   |
| Describe Essential Skills<br>C   |  |  | Describe and Apply Employability Skills<br>C   |  |   |
| General Forestry Occupational Skills                                     |  |  |  |  |   |
| Describe Forest Industry<br>1002 C                                       | Describe Personal and Worksite Safety<br>1003 C  | Communicate in the Workplace<br>1004 C                                 | Describe Workplace Documentation<br>1006 C   | Describe Emergency Preparedness<br>1007 C                                    | Describe and Apply Workplace Attributes<br>1008 C W |
| Legislation And Regulation   |  |  |  |  |   |
| Describe Regulations and Standards Related to General Forestry<br>1036 C |  |  | Introduction to Regulations and Standards Related to Mobile Forestry Equipment<br>2100 C |  |   |
| Hazards  |  |  |  |  |   |
| Describe Risk and Risk Controls<br>1039 C                                | Recognize Hazards Related to General Forestry/Introduction to Dangerous Trees<br>1005 / 2123 C W | Recognize, Evaluate and Control Hazards Related to Yarding<br>1009 C W | Recognize, Evaluate and Control Hazards Related to Falling<br>1038 C W                   | Recognize, Evaluate and Control Hazards Related to Road Building<br>1080 C W |   |
| Yarding And Mechanized Harvesting  |  |  |  |  |   |
| Describe Signals Used in Forestry<br>1068 C                              | Describe Rigging Components and Basic Rigging Practices<br>1013 C W                              | Describe Yarding and Mechanized Harvesting Equipment<br>1153 C         | Describe Mechanized Harvesting<br>1090 C   | Describe Winch Assist<br>1138 C  |   |
| Road Building  |  |  |  |  |   |
| Describe Road Building Equipment<br>1154 C                               | Describe Job Control and Engineering Basics<br>1077 C  | Describe Soils and Aggregates<br>1078 C                                | Describe Environmental Awareness, Protection and Enhancement<br>1079 C                   |  |   |
| Mechanical   |  |  |  |  |   |
| Describe Tools and Equipment for Heavy Machinery<br>1081 C               | Describe General Heavy Equipment Inspection and Maintenance Procedures<br>1082 C                 |  | Describe Heavy Equipment Mechanical Systems<br>1083 C                                    |  |   |
| Stand Tending  |  |  |  |  |   |
| Describe Stand Tending<br>1011 C   |  |  | Conduct Stand Tending Treatments<br>1012 C   |  |   |
| Other Skills   |  |  |  |  |   |
| Resource Road Driver Knowledge Unit<br>2107 C                            |  | Off-Road Vehicle Knowledge Unit<br>2125 (optional) C                   |  | Describe and Operate Chainsaw<br>1028 C W                                    |   |

## Career and Learning Pathways



### Note:

Note that trainees who are hired into entry level positions will require further on-the-job training and skills development.

Some occupations such as Faller or Log Truck Driver require additional specific training and certification.

## Training Provider Deliverables

- Minimum 6 weeks of program content materials.
- Program Standards are in place prior to delivery.
- Industry is involved in:
  - program design via either an advisory group or one-on-one conversation with the Training Provider program manager-administrator.
  - delivery via in-class guest speaker role or via collaboration on field trips.
  - participant selection during the intake interview or through participant referral.
- There is provision in the budget for instructor/administrator preparation time and training.
- Qualified instructor(s) hired to deliver minimum 6 weeks of content – see Instructor Requirements in Section 3.
- The instructor is qualified or certified to be able to deliver all the units and understands if he/she is unable to deliver content due to lack of experience, he/she will work with the Training Provider to bring in subject matter experts to cover the gap.
- Participants have been selected with input from industry.
- Program delivery monitoring plan in place and tracked.
- On successful completion of the program, a student will receive a Certificate of Completion from their Training Provider, and other certifications and documents for successfully completed training, such as First Aid, S100, and completion of BCFSC Online Training.

Questions, or suggested changes to this outline should be directed to the Manager, Training and Standards at BC Forest Safety. Phone: 1-877-741-1060

## Recommended FWE Training Program Planning Cycle

A suggested planning timeframe for the FWE training program is shown below:

| Activity   | Months prior to Program Start |   |   |   |   |   |
|--|-------------------------------|---|---|---|---|---|
|  | 6                             | 5 | 4 | 3 | 2 | 1 |
| 1. Canvas Local Industry   | →                             |   |   |   |   |   |
| 2. Training Provider Orientation & Application to be an Approved Training Provider                         |                               | → |   |   |   |   |
| 3. Instructor Recruitment  |                               | → |   |   |   |   |
| 4. Choose Start Date!  |                               |   | → |   |   |   |
| 5. Marketing   |                               |   | → |   |   |   |
| 6. Scheduling  |                               |   | → |   |   |   |
| 7. Student Recruitment   |                               |   |   | → |   |   |
| 8. Instructor BCFSC online training: FWE Program Delivery Overview (2109) Course and Trainer (2014) Course |                               |   |   |   | → |   |
| 8. Instructor Preparation time - arrange site visits, speakers, resource people, etc.                      |                               |   |   |   | → |   |
| Participant acceptance, pre-registration   |                               |   |   |   | → |   |
| 9. Complete Session Worksheet  |                               | → |   |   |   |   |
| 10. Arrange/book VIU Training Simulators if delivering 7 week program                                      |                               | → |   |   |   |   |

### 1. Canvas Local Industry

- Is there local Interest? Does local industry need people in entry level roles? What is the best timing locally? Are there special requirements of the area? What is the outlook of employment for students? Would they be guest speakers and or site visits? Will they hire program graduates?
- Ask for recommendations for instructors
- Will they help interview prospective instructors?
- Share PowerPoint with prospective industry, employers and community partners.
- Hold Industry and other Partners/Stakeholders meeting with BCFSC if needed.

### 2. Training Provider Orientation & Application to be an Approved Training Provider

- Meet with BCFSC for a program orientation. Set aside time to review the program requirements.
- Determine if additional content is desired for the region - e.g. specific occupational content that may be needed in addition to the FWE program such as simulators, or more job skills that may require additional funding.
- Secure funding.
- Apply to become an approved Training Provider and enter into a Service Agreement with BCFSC.



### **3. Instructor Recruitment**

The BCFSC and previous Training Providers that have delivered the program recommend:

- Determine instructor needs - one instructor, or many? External instructors may be required for courses like First Aid, S-100, and Chainsaw (refer to Instructor Requirements for Forestry and Chainsaw Trainers following)
- Job Posting: best source of FWE Instructors are Training Providers that have delivered the material before, BCFSC, or Industry contacts.
- Previous Training Providers that have delivered the program recommend the following pre-start administrative considerations for your instructor(s):
  - Recruit a qualified Instructor (see requirements in Section 3).
    - Interviews – use standardized questions and scoring criteria to document Instructor candidate responses.
  - Start Instructor Folder for HR forms.
  - Send job offer, Instructor manual, FWE instructor guide, tax forms, on-boarding documents.
  - Set up budget codes with Finance.

### **4. Choose Start Date!**

- Monitor funding approval timeframes, student interest and industry conditions to ensure that timing remains suitable.
- Be prepared to shift dates.
- Inform BCFSC of your start date and if your dates change.

### **5. Marketing**

Previous Training Institutions that have delivered the program recommend the following marketing efforts:

- WorkBC, High Schools, community groups, BC First Nations Forestry Council, local First Nations communities, industry associations, local employers.
- Posters in community locations (library, grocery stores, Community Futures, coffee shops, laundromats, etc.).
- Hold local info-session - invite industry partners, education and employment service providers.
- Share course outline; recommend creating PowerPoint for more in-depth information for prospective candidates (similar to Stakeholder ppt).
- Radio advertising.

### **6. Scheduling**

- Book instructor accommodation if needed.
- Book classrooms and other facilities, equipment (computers, etc.).
- Book extra instructors – orientation, OFA 1, TE, WHMIS, S100, Chainsaw, others?
- Create online registration.
- Create revised schedule if needed.
- Consider vehicle arrangements and book if appropriate.

### **7. Student Recruitment**

- Hold local info-session - invite industry partners.
- Ask industry contacts for recommendations.
- The Training Provider, and/or the Instructor and Employer representatives will conduct applicant interviews and make final determination of participants to be admitted to the program.
- Allow time for individual meet and greets - 30 minutes to 1 hour per person Interviews - arrange industry partners first then offer interview spots to prospective candidates. Share expectations of the program. Allow at least 1 hour per candidate.

- Administer candidate selection assessments.
  - Allow time for completion of assessments prior to acceptance - allow 2 hours 45 minutes for assessments - 20 minutes for review of each. Low scores on assessments provide an indication of supports that may be required for the applicant.
  - Based primarily on the results of the interviews, send acceptance letters as candidates successfully complete assessments.
- \*\* All acceptances should be sent at least 3 to 6 weeks before start date - allow time to replace last minute drop-outs.
- Have candidates officially register in program, including FIPPA documentation to access the BCFSC online system.
- Ask candidates for PPE sizes to order PPE.
- Source other equipment and supplies.
- Send student names and email addresses to BCFSC for online access a minimum of one week prior to the desired BCFSC online access date.

## 8. Instructor BCFSC Online Training & Preparation Time

- Instructor orientation and training to be completed using the BCFSC Forest Worker Essentials – Program Delivery Overview (2109) online course and Trainer (2014) online course.
- Instructor needs time to review materials before and after Instructor training.
- Instructor time - arrange site visits, guest speakers, presenters, etc. Instructors should be given adequate time to find appropriate field sites to enrich the classroom materials. For example, learning to identify regional tree species is much richer and more effective if students are in the forest practicing tree identification and getting feedback from their instructor.

## 9. Complete Session Worksheet

- To ensure appropriate planning that will support a high quality learning experience and retain the integrity of the program, BCFSC requires a FWE session worksheet to be completed prior to delivery.
- BCFSC will work with the Training Provider to complete the details required on the FWE Session Worksheet over a series of short check in meetings, starting after the Service Agreement is signed. The overall time required to complete the Session Worksheet will vary with Training Provider experience. The Training Provider should aim to have a draft version completed approximately one month prior to delivery. The final version must be submitted to BCFSC no later than one week prior to delivery.

## 10. Arrange/book VIU Training Simulators

Decide if the optional VIU Training Simulators will be used as part of your program.

Pre-arrange booking and rental 2 or 3 months in advance if offering a 7 week Forest Worker Essentials training program that includes 1 week of either or both of Vancouver Island University's (VIU) 2 heavy equipment training simulator trailers. There is moderate demand for the trailers, so advance booking is advised. The trailers are available for rent and can be transported to training sites throughout the province. It may be possible to extend the training for a more intensive skills development program, and/or arrange for training delivery in other communities or through other Training Providers in your region.

The trailer rental includes instructor salary and simulator rental operating costs (tractor and trailer), and travel costs for the instructor and tractor-trailer transportation. Based on August 2021 rates, a 1 week trip (5 days training plus 2 days travel) to Vernon [~1,000 kms], costs would be in the order of \$10,000.

Each trailer houses 4 training simulators which can be configured to house any of the 8 simulators dependent on types of equipment used in your region. The heavy equipment training simulator trailers include:

*Forestry Simulator Trailer*

- a. Komatsu Dangle Head Processor - Cuts down single trees, removes the limbs and cuts the log to specific lengths.
- b. CAT Feller Buncher - Cuts down multiple trees at one time.
- c. CAT Heel Boom Log Loader - Equipped with a grapple to load and unload logging trucks.
- d. ORYX Excavator - Digs trenches, loads trucks, etc.

*Construction Simulator Trailer*

- e. Volvo Excavator - Digs trenches, loads trucks, etc.
- f. Volvo Articulated Rock Truck / Front End Loader - This simulator can be either machine depending on which attachments are on it at the time. The Rock truck is intended to be an off highway 6 wheel drive, dump truck. The Loader is designed to load various types of trucks and work in gravel pits.
- g. CAT Dozer - Track machine, pushes large amounts of dirt and has a ripper to rip through hard ground.
- h. CAT Grader - Grades the final surface of earth works. Also equipped with a ripper.

Typically, training site requirements should consider:

- time for preparations, configuration of simulators, and set-up.
- 30 amp RV electrical plug-in or power off self contained generator.
- storage and security in a secure compound if available.
- 120 V power supply for winter heaters or summer air conditioning.
- 4 students can train at a time – schedule students so that those not running 1 of the 4 training simulators have project work to complete online BCFSC Learning Resource modules or complete other project work.

Contact Andrew Coles at VIU to determine trailer availability and further information:

Chair, Heavy Equipment Operator, Simulators and Forest Initiatives - Trades and Applied  
Technology  
Andrew Coles  
900 Fifth Street  
Nanaimo, BC V9R 5S5  
[Andrew.coles@viu.ca](mailto:Andrew.coles@viu.ca)  
Ph: 250-740-6227

## Section 2

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### Program Format

The Forest Worker Essentials (FWE) includes a minimum 6 (or optional 7) weeks entry level training program. It introduces the scope of forest industry sectors and associated occupational opportunities, along with safety certifications and workplace essential skills.

The emphasis of the 6 (or 7) weeks program is on harvesting operations (mechanical and/or cable yarding) and resource road building as appropriate to the locality in which the training is being delivered. Additionally, the FWE training program provides an overview introduction to other related forest industry sectors and career pathways.

Building on the 6 (or 7) weeks core FWE program, Training Providers and / or employers can bundle additional courses (e.g. In-person Resource Road Driving, ATV Safety and Operation, etc.) and / or explore additional forestry occupational courses available from BC Forest Safety Council in greater depth in combined longer programs in either General Occupational or Employer-specific Workplace streams. BC Forest Safety Council has additional learning resources to support extended programs which expand the knowledge base, combined with workplace orientation and work experience in various occupations and worksites.

There is some flexibility to re-arrange the schedule of topics depending on field trip and / or subject matter expert availability, weather conditions, etc. The order of lesson plan topics in week 1 and week 2 of the schedule should be maintained to provide progressive orientation to the industry and foundational prerequisites for subsequent topics. Such timing will also facilitate acquisition of Personal Protective Equipment (PPE) which is a requirement for any and all field trips.

The scope of the FWE program includes:

- Delivery via a combination of in-class, field trips, subject matter experts, guest speakers, simulators, class presentations, and field presentations.
- Minimum 6 weeks (30 days) of training delivery in the core FWE program.
- Optional 1 week for Forestry and/or Construction equipment simulator hands-on orientation and training [as part of a 7 week program].
- 15 days - industry and sector orientation, concepts, and applied knowledge through online LMS and trainer-led class sessions.
- 14 days of field sites / hands-on / practical sessions, 1 day guest speakers / panel presentations (or alternate field site[s]).

The FWE Lesson Plans include reference to the knowledge and/or skills that a participant must demonstrate as outlined in the respective Units of Competence for each module. The Assessment criteria provide a focus for key teaching and learning points for each module topic.

## Recommended Program Administration

Training Providers should plan and coordinate administrative considerations and activities related to:

- 6 (to 7) weeks Trainer(s) contract(s) for training delivery. Multiple qualified trainers may be required for specific course delivery of all elements of the program.
- 1 week Trainer contract to facilitate participant recruitment, interviewing, and selection.
- 2 weeks program preparation by someone knowledgeable of the Industry and Program (either Trainer and/or Training Provider Program Manager - Administrator) to arrange and coordinate:
  - Industry involvement in program promotions, participant interviewing and selection (as possible).
    - Program design.
    - Program promotions.
    - Participant recruitment / referral, interviewing and selection.
    - Hosting field site visits, safety briefing and site orientation.
    - Class presentations, employer panels, in-field presentations.
  - Industry field trip sites.
  - Subject Matter Experts and / or in-field presentations.
  - Forestry and/or Construction equipment training simulators.
- Daily course / topic evaluation by participants and trainer.
- Weekly review of topics covered, participant coaching and journals.
- Program / curriculum review sessions as may scheduled.
- Ongoing participant tracking on progress and follow up, as may be required,
- Referral to appropriate personal or educational supports to overcome possible barriers to participant success.

Training Providers should coordinate with their Instructors regarding:

- The composition of the Training Provider – Instructor – Employer candidate interview panel.
- Maintaining candidate recruitment records and wait list.
- Admission requirements – participants must successfully complete a screening process which includes:
  - basic assessment of reading comprehension, combined reasoning, math, along with a personal profile; and
  - an interview with a Training Provider representative, and/or instructor, and employer representative(s).
- General computer support.
- Relevant policies and procedures are understood, documented and communicated to participants such as:
  - Health and safety;
  - Attendance;
  - Internet, mobile devices cellphone use;
  - Student transportation;
  - And other relevant policies and procedures.
- It is encouraged that participants sign an agreement giving permission to be photographed for promotional and publicity purposes.
- Program assessment will be based on:
  - completion of BCFSC Learning Centre online courses.
  - completion of and participation in all program activities.
  - attendance/participation in accordance with Training Provider policy.

- Training Providers will complete a coaching plan indicating what training participants received and recommended areas to continue working on. Participants that meet all requirements will be issued a certificate of completion by the Training Provider.
- Instructor flexibility – the lesson plans and schedule are a guide only. Instructors have the flexibility to deliver the lessons as best fits in their geographic region and available resources:
  - E.g. S-100 scheduled during non-freezing conditions or in-door training facility.
  - E.g. No yarding site to visit, use online and classroom materials only.
  - E.g. No shop available, use equipment dealer or heavy duty mechanic shop, or truck.
  - E.g. Guest speakers are only available at a certain time.
- It is up to the Training Provider and instructor to ensure all units of the Lesson Plans are covered.
- Instructors may need to work with their Training Provider to obtain appropriate supports to help students improve their levels identified in B1 – Essential Skills, or to overcome other barriers that may interfere with student participation and success in the training program.
- Establishing a regular check in process between the Training Administrator and instructor to identify any student issues or supports required.

Training materials and resources are organized in a format based on the sequence of courses documented in **Recommended Learning Plans Schedule (available in the Instructor Guide)**.

## Recommended Course Delivery Administration

- The trainer will provide regular safety meetings, in class as hazards change, and in field sites (tours, outside activities, etc.) – see next section.
- The trainer will check and confirm participants' readiness for work daily.
- In the afternoon of Week 1 Day 1, the Training Provider Program Manager-Administrator and the instructor will facilitate a discussion and flipchart notes in a Learning Contract (per Learning Resource Unit 1008-1.1) about expectations and obligations for the program including:
  - safety, muster points, and PPE,
  - washrooms and facility layout,
  - comfort – stand and move around if sitting gets uncomfortable,
  - confidentiality,
  - cellphones (emergencies only, breaks, lunch),
  - internet use for course purposes only, no general surfing,
  - smoking, vaping, drugs,
  - professionalism, respectful workplace (re: bullying and harassment),
  - training schedule, breaks,
  - attendance and punctuality,
  - active participation in class and field trip activities,
  - online course work before or after class and/or field trips,
  - being prepared and fit for work each day,
  - field visit safety and behaviour commitment,
  - learner performance and assessment (participation, online quizzes and competency conversations),
  - weekly participant journal highlighting top learnings from the past week, ideas to follow-up on for action,
  - regular learner and instructor evaluations of each day's topics,
  - and how to get the most out of learning.

- Post the Learning Contract on a wall and display / refer to throughout the program.
- Advance preparation and review are suggested for Forestry Legislation and Regulations to ensure that the trainer is well prepared to reference and discuss relevant Divisions-Sections of the Workers Compensation Act and Parts-Sections of the Occupational Health and Safety Regulation. There may be an opportunity to involve WorkSafeBC staff (in-person, video conference) in presenting the morning module covering the Act and Regulation (Lesson Plan 2).
- The Learning Resource manual for the Stand Tending module does not include diagrams / photos of tree planting equipment. Provide equipment examples if available. There is a Replant.ca video included in Lesson Plan 5.
- Guest speakers can and should be used for lessons where the Instructor requires support or lacks expertise in the topic – such as considerations for forestry operations when working with First Nations communities (Lesson Plan 2).
- Workstations for each student and internet connections to access and follow trainer presentations, and complete BCFSC online Learning Resources quizzes.
- Many of the YouTube videos include advertising at the start. Before the start of class, instructors should launch the videos they intend to view for the day – run the video to the start point past the ad(s) and pause at the footage where the content you want to view begins. Keep the video window open until it is time to play it for the class. Alternately, the Training Provider can purchase an ad-free YouTube subscription.
- As part of the program completion / graduation requirements, participants need to work through and complete all of the online Learning Resource manuals covered in the Forest Worker Essentials training program.
- Participants will have an opportunity to go back and review materials and/or do further research on topics that they missed or would like to investigate further before and after class as arranged with the Training Provider. Other time will be made available as may need to be arranged or can be completed on their own time at home.
- During the latter part of Friday afternoons, participants will complete their Reflective Journals and meet with the instructor to discuss their progress and identify areas for follow-up and coaching.
- The instructor should have a camera available to take photographs of participant activities in the classroom and on field trips (with the students' and field site host's permission).
- The instructor and participants will complete a daily evaluation of the course(s) each day. A standardized evaluation form will be provided for anonymous completion by participants, which will be handed in to the instructor who will provide completed evaluations to their Training Provider's representative for tallying and summarizing participant comments and feedback.
- Ongoing communication between Training Provider administrator and the Instructor to assist in preparing a final program report that will be submitted to BCFSC

## Field Sites – Outdoor Locations, Guest Speakers - Presenters

### Pre-planning for Field Sites / Outdoor Locations

The Forest Worker Essentials program has flexibility for a number of experiential learning opportunities for participants in various forest sector operations, and associated industries and businesses. Advanced planning and scheduling will be necessary to coordinate and confirm the numerous opportunities for Field Sites and/or Guest Speakers – Presenters. The Training Provider Program Manager-Administrator and/or the Instructor will need to coordinate with prospective field site hosts to ensure that:

- A documented hazard assessment and risk analysis for each site / location has been completed.
- All appropriate hazard controls must be in place, and communicated to participants and signed off by participants at the field site orientation and pre-work meeting.
- Arrangements are made if a field site host requires a Waiver of Liability in place and/or that a proof of visitor insurance and liability coverage is in place.
- Ensure that participants have appropriate PPE, clothing and gear for the weather, as required.
- Arrange appropriate transportation to and from field trip sites – van, bus, etc.
- When participants are at field sites / outdoor locations in a supervised observer capacity only, the **first aid requirements for minimum levels of first aid for the workplace will not be affected per OHSR Part 3, Schedule 3-A.**
- As necessary, arrange for appropriate levels of first aid depending on the location and work risk assessment according to requirements of the OHS Regulation for a particular Field Site, and which support the Learning Objectives of the unit.
- Scheduling of the 2 days for the S100 Fire Fighting course in winter months will need to accommodate the practical field exercises (pump operation, handling hoses, etc.).

Several days in advance and on the day before a planned field trip –

- Advise participants that they will need to bring:
  - all the required Personal Protective Equipment,
  - appropriate clothing,
  - food and refreshments for the day,
  - and any other equipment, materials and supplies that may be required for the event.
- Indicate that if anyone does NOT have the required PPE, the participant(s) will not be permitted on the field trip, and will be assigned self-study materials to complete in class.

At the beginning of a planned field trip, before leaving home base, ensure that:

- Participants have:
  - all the required Personal Protective Equipment,
  - appropriate clothing,
  - food and refreshments,
  - and any other equipment, materials and supplies that may be required for the event.
- NOTE - if anyone does NOT have the required PPE and substitute PPE cannot be made available / provided, the participant(s) will not be permitted on the field trip. Assign some online study and review of associated modules from the BCFSC LMS and have the person(s) prepare a short presentation to present to the group for the next day in-class.
- An overview of the field trip is provided including:
  - travel arrangements – times, rendezvous points, any special travel considerations (road conditions, radio use, weather, access challenges, etc.)
  - key features to expect when on-site – general safety precautions, key operational aspects to be aware of and to make note of, etc.



Once at the field trip site:

- Introduce class members to site personnel as appropriate.
- Have the host provide an overview of the site (Logging Plan, Floor Plan and layout, etc.) and broadly describe phases of operations underway and planned/upcoming.
- Describe and discuss the Field Site Hazard Assessment and Safety Plan – the trainer and all participants are to sign off that they understand and will follow safety measures while visiting / moving about the site.
- Observe and discuss site activities – relate to topics covered in class sessions, ask questions of the participants to check their knowledge and understanding of operations and related safety measures.
- Towards the end of the field trip, summarize and debrief any questions that participants may have.
- It is recommended to thank the host and staff. Have the Training Provider send a letter / email of thanks for the visit, and acknowledge the host's contribution in any public press / media releases.

For delivery of the field site visits to logging operations in Mechanized Harvesting (Lesson Plan 4) and Yarding Harvesting (Lesson Plan 5), the trainer should pre-arrange to secure copies of relevant logging and site plans in advance with the field trip site host, so they can be referred to in class prior to visiting the logging site.

### **Pre-planning for On-site Work Experience / Hands-on Training**

- Work placements and on-the-job training may affect the **first aid requirements for the workplace per OHSR Part 3, Schedule 3-A Minimum Levels of First Aid** with respect to the levels of first aid required in terms of supplies, equipment and facility, level of first aid certificate for attendant(s), and transportation requirements. Sites may require more than minimum levels.
- First aid requirements should be determined well in advance and adjustments made to be in compliance with the requirements of **OHSR Part 3, Schedule 3-A**.
- In certain cases, WorkSafeBC can pre-approve a variance regarding the levels of First Aid service required and the number of workers allowed on-site. A variance may be granted through an order under the authority of the [Workers Compensation Act \(Part 2, Division 9\)](#). The order would include special terms and conditions that you must comply with to maintain the variance. Complete a [Request for Variance to the OHS Regulation cover sheet](#) (click link to view).
- More information about variances is available at the WSBC website: <https://www.worksafebc.com/en/health-safety/create-manage/managing-risk/controlling-risks/variances-ohs-regulation>
- Discuss with WorkSafeBC in advance, the specific requirements for particular sites. Contact WorkSafeBC OHS Practice and Engineering Support  
PO Box 5350, Stn Terminal, Vancouver, BC V6B 5L5  
Phone: 604.231.8644 / Toll-free: 1.888.621.7233, local 8644  
Email: [varohs@worksafebc.com](mailto:varohs@worksafebc.com)
- Advise possible field sites providers of the nature and extent of such variances for their business or industry sector, and work with them and WSBC to comply with all requirements of the Act and Regulation.

### **Pre-planning for Guest Speakers / Presenters / Visitors**

The Training Provider program manager-administrator and/or the instructor will need to coordinate with prospective guests, presenters or visitors to ensure that:

- Confirm and coordinate presentation delivery (in-person or virtual online or teleconference, etc.) format, date and timing – preferably in writing.
- As required, provide location (parking, entrances, room number) information in advance for class visitors.

- Confirm and coordinate requirements for pre-printing documents and handouts, audio-visual, internet access, etc.
- When the visitor arrives, make introductions to the class and then take a few minutes to provide 'high level orientation' to the class site safety including:
  - emergency exits – the Trainer will be the visitor's contact during the visit, and will provide direction and escort the visitor in the event of an incident.
  - particular site hazards:
    - slip – trip – fall
    - electrical (cords on floor, etc.), mechanical, etc.
    - outdoor features such as obstructions, overhead wires, etc.
  - and any other general safety considerations specific to the class or presentation site.

### **Suggested Field Sites – Outdoor Locations, Guest Speakers - Presenters**

For field site and other external locations:

- Participants will be under the direct supervision of the instructor and/or site host at all times.
- All participants (and the instructor) will wear full industry-standard PPE as supplied to them at time of their registration and acceptance into the training program.
- All participants and the instructor will be provided with a site safety and operations orientation when they arrive on-site – which they all will sign-off on.
- Unless otherwise arranged, **all participants will be in an observer role only** and will not take part in any on-site operations or work activities. They may move around to various stages of operations on the worksite, but again under the direction and supervision of the instructor and/or site host as appropriate.
- This program is very flexible to meet the needs of regional employers. There is one required field activity (introduction to mechanized harvesting) and many optional activities that can be offered as part of this program.

#### ***Harvesting and Logging***

1. Block planning and layout
2. Mechanized harvesting operation (*required*)
3. Yarding harvesting operations
4. Log yard
5. Dry land sorting operation
6. Water-based sorting and transportation
7. Log grading operation
8. Salvage and waste management
9. Block de-activation
10. Firewood operation
11. Selective logging operation
12. Community Forest operations
13. Culturally significant sites
14. Environmentally significant sites – old growth forest, riparian management, others
15. Portable Sawmill

#### ***Silviculture***

16. Tree identification
17. Tree planting operation – observe operations, plant trees
18. Seedling / tree nursery
19. Stand tending operation (active or completed)
20. Replanted areas in various stages of regrowth

21. Self guided trails
22. Site suitable for using Clinometer
23. Site suitable for GPS navigation

### ***Safety, Emergency***

24. CVSE Scale
25. Walking in the bush, navigating and map reading
26. Helicopter orientation visit
27. FireSMART site
28. Local airport or weather station

### ***Equipment and Tools***

29. Heavy equipment dealership
30. Heavy equipment repair shop
31. General forestry equipment sales, service and repair
32. Rigging - Wire Rope fabrication/repair
33. Mobile welding operator

### ***Manufacturing***

34. Manufacturing operations (ie:)
  - a. Sawmill
  - b. Cedar mill
  - c. Veneer mill
  - d. Re-manufacturing mill / facility
  - e. Pulp mill
  - f. Pole processing operation
  - g. others?
35. Biomass / bio-energy facility
36. Timber Framing construction
37. Log Home construction

### ***Road Building***

38. Active road construction or maintenance site
39. Local independent road contractors / operators
40. Existing road construction site

### ***Agencies, Employers, and Community Representatives (in-person, tele-conference, or video conference presentations)***

41. BCFSC representative
42. WorkSafeBC representative
43. Ministry of FLNRO representative
44. Community Forest representative
45. First Nations representative
46. WorkBC representative
47. CVSE representative
48. Industry Associations (i.e.):
  - a. Interior Loggers Association
  - b. Council of Forest Industries
  - c. Truck Loggers Association
  - d. Interior Lumber Manufacturers Association
  - e. BC First Nations Forestry Council

- 49. Logging Truck Driver owner-operator
- 50. Local forestry employers and operators
- 51. Various local employers in the forest industry or associated businesses and industries.

***Vancouver Island University Simulators***

- 52. VIU Forestry Simulators x 4
  - a. Log Loader
  - b. Feller Buncher
  - c. Dangle Head Processor
  - d. Excavator
- 53. VIU Construction Simulators x 4
  - a. Excavator
  - b. Articulated Rock Truck / Front End Loader
  - c. Dozer
  - d. Grader
- 54. Other simulators (?)

***Other sites?***

## Supporting Resources

There are a number of resources to support the instructor in developing knowledge and skills of the trainee. These include:

- Forest Worker Essentials Training Program - Instructor Overview and Reference Guide
- BC Forest Safety Council Learning Centre - Online training modules:  
<https://learn.bcforestsafe.org/login/index.php>
- BC Forest Safety Council website:  
[www.bcforestsafe.org](http://www.bcforestsafe.org)
- WorkSafeBC website:  
[www.worksafebc.com](http://www.worksafebc.com)
- Supporting course material from the Training Provider Manager/Administrator

## Online Training Modules / Learning Resources

Training modules are available through the BC Forest Safety Council online Learning Centre. These modules may be used for new learning or to reinforce existing training. They are available online or the Training Provider can print them.

Completion of the module quizzes is a requirement for completion and graduation from the Forest Worker Essentials training program. For classroom presentations, participants should be logged into the BCFSC Learning Centre to follow along with the instructor presentation and to complete the knowledge quizzes.

The learning modules include content, scenarios, photos and videos and links to applicable documents and resources. Learning points are incorporated throughout the modules to encourage participants to reflect on the learning, and self-quizzes help participants to test their knowledge.

### Core modules and content include:

| Code | Module Title                                  | Module Content  |
|------|---|---|
| 1002 | Describe Forest Industry                      | <ul style="list-style-type: none"><li>• General forestry</li><li>• Forestry as a business</li><li>• Harvesting methods</li><li>• Environmental and cultural considerations</li><li>• Types of logs and trees</li><li>• Transportation methods</li><li>• Regulations</li></ul> |
| 1003 | Describe Personal and Worksite Safety         | <ul style="list-style-type: none"><li>• Personal safety</li><li>• Worksite safety</li></ul>   |
| 1004 | Communicate in the Workplace                  | <ul style="list-style-type: none"><li>• Verbal communication</li><li>• Signage</li></ul>  |
| 1005 | Recognize Hazards Related to General Forestry | <ul style="list-style-type: none"><li>• Health hazards</li><li>• Operational hazards</li><li>• Environmental hazards</li></ul>  |
| 1006 | Describe Workplace Documentation              | <ul style="list-style-type: none"><li>• Documentation required before starting work</li><li>• General documentation required in Forestry</li></ul>  |

| <b>Code</b> | <b>Module Title</b>  | <b>Module Content</b>  |
|-------------|--|--|
| 1007        | Describe Emergency Preparedness                                | <ul style="list-style-type: none"> <li>• Emergency Response Plans (ERP)</li> <li>• First Aid</li> </ul>  |
| 1008        | Describe and Apply Workplace Attributes                        | <ul style="list-style-type: none"> <li>• Professionalism</li> <li>• Safe productivity</li> <li>• Physical and mental well-being</li> </ul>   |
| 1009        | Recognize, Evaluate, and Control Hazards Related to Yarding    | <ul style="list-style-type: none"> <li>• General hazards</li> <li>• Road change hazards</li> <li>• Breaking out hazards</li> </ul>   |
| 1011        | Describe Stand Tending   | <ul style="list-style-type: none"> <li>• Types of trees in British Columbia (refer to 1002)</li> <li>• Tree disease and deformity</li> <li>• Wood condition and how it affects response to cutting</li> <li>• Cultural and environment trees (covered in 1002)</li> <li>• Contract/prescription requirements</li> <li>• Working the piece</li> <li>• Area based payments</li> <li>• Tools and equipment used in stand tending</li> </ul> |
| 1012        | Conduct Stand Tending Treatments                               | <ul style="list-style-type: none"> <li>• Pruning</li> <li>• Spacing</li> <li>• Brushing</li> <li>• Fire management</li> <li>• Volume of crown closure</li> <li>• Follow prescriptions</li> <li>• When a chainsaw is required</li> <li>• Hazards related to stand tending</li> </ul>  |
| 1013        | Describe Rigging Components and Apply Basic Rigging Practices  | <ul style="list-style-type: none"> <li>• Rigging terminology and components</li> <li>• Basic rigging practices</li> </ul>  |
| 1028        | Describe and Operate Chainsaw                                  | <ul style="list-style-type: none"> <li>• Chainsaw components and safety features</li> <li>• Chainsaw inspection and maintenance</li> <li>• Safe transport and carrying of chainsaw</li> <li>• Chainsaw operation and ergonomics</li> <li>• Hazards related to chainsaw use</li> <li>• Limbing and taping</li> </ul>  |
| 1036        | Describe Regulations and Standards Related to General Forestry | <ul style="list-style-type: none"> <li>• Legislation</li> <li>• Regulation</li> </ul>  |
| 1038        | Recognize, Evaluate and Control Hazards Related to Falling     | <ul style="list-style-type: none"> <li>• Recognize, evaluate and control falling hazards</li> <li>• Designated high risk violations</li> </ul>   |
| 1039        | Describe Risk and Risk Controls                                | <ul style="list-style-type: none"> <li>• Hierarchy of controls</li> <li>• Evaluating risk</li> </ul>   |

| <b>Code</b> | <b>Module Title</b>  | <b>Module Content</b>   |
|-------------|--|---|
| 1068        | Describe Signals Used in Forestry                                      | <ul style="list-style-type: none"> <li>• Hand signals for yarding</li> <li>• Blasting signals</li> <li>• Audible signals</li> <li>• Loading and hauling signals</li> </ul>  |
| 1077        | Describe Job Control and Engineering Basics                            | <ul style="list-style-type: none"> <li>• Terminology</li> <li>• Common instruments</li> <li>• Slope and grade</li> <li>• Common utilities</li> </ul>  |
| 1078        | Describe Soils and Aggregates  | <ul style="list-style-type: none"> <li>• Soils</li> <li>• Aggregates</li> <li>• Compaction</li> </ul>   |
| 1079        | Describe Environmental Awareness, Protection and Enhancement           | <ul style="list-style-type: none"> <li>• Environmental considerations</li> <li>• Spill control</li> </ul>   |
| 1080        | Recognize, Evaluate and Control Hazards Related to Road Building       | <ul style="list-style-type: none"> <li>• Types of hazards related to road building</li> <li>• Risk</li> </ul>   |
| 1081        | Describe Tools and Equipment for Heavy Machinery                       | <ul style="list-style-type: none"> <li>• Mechanic tools</li> <li>• Welding equipment and supplies</li> <li>• Gas powered tools</li> <li>• Lubricants</li> <li>• Common supplies</li> </ul>  |
| 1082        | Describe General Heavy Equipment Inspection and Maintenance Procedures | <ul style="list-style-type: none"> <li>• Major mechanical components and problems</li> <li>• Pre-start, shut down and maintenance</li> </ul>  |
| 1083        | Describe Heavy Equipment Mechanical Systems                            | <ul style="list-style-type: none"> <li>• Engines</li> <li>• Hydraulic systems</li> <li>• Powertrain systems</li> <li>• Track systems</li> <li>• Braking systems</li> <li>• Electrical systems</li> <li>• Ground engaging tools systems</li> </ul> |
| 1090        | Describe Mechanized Harvesting   | <ul style="list-style-type: none"> <li>• Forest harvesting systems and technology</li> <li>• Logging plans</li> </ul>   |

| <b>Code</b> | <b>Module Title</b>  | <b>Module Content</b>   |
|-------------|--|---|
| 1138        | Describe Winch Assist  | <ul style="list-style-type: none"> <li>• Best practice</li> <li>• Machine components and design</li> <li>• Features of winch assist</li> <li>• Wire rope and anchors</li> <li>• Planning and Records</li> </ul>   |
| 1153        | Describe Yarding and Mechanized Harvesting Equipment                           | <ul style="list-style-type: none"> <li>• Grapple Yarders</li> <li>• Towers</li> <li>• Mobile Backspar</li> <li>• Feller Buncher</li> <li>• Skidder</li> <li>• Forwarder</li> <li>• Hoe Chucker</li> <li>• Dangle Head Processor</li> <li>• Hydraulic Log Loader</li> </ul>  |
| 1154        | Describe Road Building Equipment   | <ul style="list-style-type: none"> <li>• Dozer</li> <li>• Excavator</li> <li>• Backhoe</li> <li>• Grader</li> <li>• Wheeled Loader</li> <li>• Rock Drill</li> </ul>   |
| 2039        | Describe Safe Decision Making in a Forestry Workplace                          | <ul style="list-style-type: none"> <li>• Different parts and functions of the brain</li> <li>• How the brain reacts in different environments and different threat levels</li> <li>• How we can influence our decision making</li> <li>• How attitudes can affect decisions and the outcome of stressful situations</li> <li>• Methods of solving problems or dealing with hazardous situations safely &amp; effectively</li> </ul> |
| 2100        | Introduction to Regulations and Standards Related to Mobile Forestry Equipment | <ul style="list-style-type: none"> <li>• Introduction to regulations and standards related to mobile logging equipment</li> </ul>   |
| 2107        | Resource Road Driver Knowledge Unit  | <ul style="list-style-type: none"> <li>• Human factors in safe vehicle operation</li> <li>• Hazards and vehicle dynamics</li> <li>• Radio calling use and resource road procedures</li> <li>• Operation of light trucks and tow trailer</li> <li>• Emergency response</li> </ul>  |



| Code  | Module Title  | Module Content   |
|-------|---|--|
| 2123  | Introduction to Dangerous Trees on Forestry Worksites | <ul style="list-style-type: none"> <li>• What a dangerous tree is and why it's important</li> <li>• What happens on worksites to identify and control dangerous trees</li> <li>• Describe basic dangerous tree characteristics and what to look for</li> <li>• How to keep yourself and others safe when working around dangerous trees</li> </ul> |
| *2125 | Off-Road Vehicle (ORV) Knowledge Unit                 | <ul style="list-style-type: none"> <li>• Knowledge of Legal Requirements</li> <li>• Basic Safe Operation of ORVs in forestry settings</li> </ul>   |

\*Optional

## Program Materials List

The Forest Worker Essentials training program includes an Instructor Guide, lesson plans and program materials and instructional resources such as handout photocopy masters, video resources, print and electronic documents, booklets, tools, equipment and supplies that the Training Provider will need to help coordinate with the Instructor(s). These materials will be available to approved training providers after entering into a Service Agreement with BCFSC.

## Reference Materials

**The BC Forest Safety Council will on request provide the following to authorized Training Providers:**

- Occupation Analysis Charts related to an occupation
- Units of Competency related to an occupation
- Learning resources related to an occupation if available
- Formative assessments related to an occupation

**Contact Information:**

Manager, Training and Standards  
BC Forest Safety Council  
8C – 2220 Bowen Road, Nanaimo, BC V9S 1H9  
Tel: 250-741-1060

## Section 3

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### Training Provider Standards

#### **Classroom Area and Equipment**

- Recommended 2.5 sq. meters per student or as directed by Public Health Authorities
- Projection screen, multimedia projector connected to instructor computer, speakers, whiteboard or similar
- Seating and tables for student work
- Compliance with all safety codes
- Good lighting
- Approved heating and ventilation systems
- Computers with Internet access daily/as required for completion of morning “Homework” / out of class completion of Learning Resources before calls and field sessions
- Flipcharts, paper, markers, wall tape
- Wall space for poster board ‘projects’

#### **Shop Area**

- Have a shop facility or appropriate alternative (shop truck, shop trailer)
- Recommended 2.5 sq. meters per student
- Meet all safety, fire and environmental codes
- Required tools and equipment for number of students
- Approved heating and ventilation systems
- Good lighting

#### **Other Requirements**

- Access to suitable outdoor work areas
- Access to bus or van with appropriate tires suitable to local travel and weather conditions
- If travelling on resource roads, appropriate VHF radio(s) and understanding of calling procedures and rules of the road
- Soil samples to be collected – planning may be required with winter delivery

#### **Recommended student facilities**

- 1 locker per student in a dry room
- Study areas
- Food facility
- Hand wash facility
- Washroom facility
- First Aid
- Lockers to store PPE and supplies

#### **Student supplied apparel**

- Appropriate to the weather season and field site conditions

#### **Recommended instructor’s office space**

- 3.5 sq. meters

## Other

- Storage space for tools and equipment

## Access to Field Sites / Outdoor Locations

- Appropriate first aid dependent on location and work assessment risk according to requirements of the OHS Regulation for the particular Field Sites, and which support the Learning Objectives of the unit.
- Must have all appropriate hazard controls in place, and communicated to participants.
- Refer to the Field Sites – Outdoors Locations, Guest Speakers – Presenters section earlier in this Program Outline.

## Tools and Equipment

- Chainsaws – minimum of 2 that are sufficient to meet the delivery requirements of *Course 1028 – Describe and Operate Chainsaw*
- Chainsaw spare parts – spark plugs, air filters, etc.
- Chainsaw repair tools – round and flat files, bar wrench, raker gauge
- Fuel and mix oil for chainsaws
- Logs for bucking practise
- Personal Protective Equipment that meets WSBC requirements:
  - Hard hat with clip face and earmuff hearing protection
  - Eye protection - safety glasses
  - Gloves
  - Boots appropriate to the region
  - Hi-vis vest or shirt
  - Leg protection (bucking pants/chaps) in appropriate size(s) and quantity for all students as determined by the Instructor
- Appropriate transportation with tires appropriate for the conditions with radios to travel to field sites
- VHF radios pre-programmed for the area
- Instructor measuring tape
- Minimum 1 brush saw for demonstration purposes
- Grease gun
- Hand tools - wrenches, pliers, cutters, files, striking tools, struck or hammered tools, screwdrivers, vises, clamps, snips, saws, drills and knives (suggested)
- Supplies such as O-rings, short length of hydraulic hose and bucket tooth (suggested)
- Samples of rigging equipment – wire rope, choker, blocks (suggested)
- 1 instructor's clinometer and 4 student clinometers
- Samples of spill kit supplies – socks, absorbent, etc.
- Samples of industry signs – flagging tape, falling gate, Licensee notification sign, etc.

# Instructor Requirements

## Work Experience

- 10 years general forest industry related experience
- Preferred harvesting experience
- Experience / familiarity with industry or ability to acquire knowledge of industry occupational groups addressed in the Forest Worker Essentials program
- It is recommended that the trainer for the Chainsaw instruction (Lesson Plan 6) be a Qualified Supervisor Trainer (QST) or be a trainer who is qualified or certified to be able to supervise and manage training delivery of:
  - safety and PPE,
  - equipment orientation and components,
  - inspection and maintenance,
  - hazards and risk assessment,
  - operation and ergonomics,
  - basic bucking and cutting sequences, and
  - limbing and taping.
- Can ensure adequate first aid coverage as determined by the OHS Regulation

## Qualifications, Instructional Experience and Education

- Instructors must be qualified in the subjects that they deliver. In the context of the Regulation, qualified is defined as being knowledgeable of the work, the hazards involved and the means to control the hazards, by reason of education, training, experience or a combination thereof. Where an instructor is not qualified or does not have sufficient depth of knowledge in a particular topic, an alternate instructor(s) should be brought in for delivery of that topic(s).
- Qualified instructor(s) hired to deliver minimum 6 weeks of content. In the context of Regulation, qualified is defined as being knowledgeable of the work, the hazards involved and the means to control the hazards, by reason of education, training, experience or a combination thereof.
- To support the Training Provider in their due diligence requirements, chainsaw trainers should provide evidence of recent Chainsaw use and Instruction experience and exhibit a solid safety ethic. They should be qualified or certified to be able to manage and supervise:
  - safety and PPE,
  - equipment orientation and components,
  - inspection and maintenance,
  - hazards and risk assessment,
  - operation and ergonomics,
  - basic bucking and cutting sequences,
  - and limbing and taping.
- Working knowledge and familiarity with safety legislation and regulations, and best practices in Safe Work Practices (SWPs)
- Experience teaching and training adult learners, training and coaching experience on-the-job
- OFA Level 1/Basic with Transportation Endorsement. Level 3/Advanced is an asset.
- Familiar with ETV (Emergency Transport Vehicle) equipment and tools
- Possess and wear appropriate PPE for site
- Valid Driver's Licence and follow requirements for transporting participants to field sites
- Computer proficiency an asset. Training Provider support may be required