



Fire Training Certificate Program Trades Training

Program Outline

COURSE IMPLEMENTATION DATE: September 2001
OUTLINE EFFECTIVE DATE: September 2008
COURSE OUTLINE REVIEW DATE: March 2013

GENERAL COURSE DESCRIPTION:

The Fire Services Training Associate Certificate program is a partnership between College of the Rockies and the Cranbrook Fire Department, and is designed to prepare students for entry-level positions in Fire Fighting, Industrial Safety Personnel and Medical First Responder positions. Through realistic case-based training, students develop the skills needed to meet the challenges and risks of these demanding occupations. Students may also pursue a multitude of employment opportunities, such as those in the oil and gas, forestry, and mining industries.

The Fire Training Associate Certificate program has been developed by College of the Rockies, a post-secondary institution recognized by the British Columbia Ministry of Advanced Education. The program adheres to the standards put forth by the National Fire Protection Association (NFPA). The program utilizes the most current teaching techniques and IFSTA and/or Jones and Bartlett curriculum; and is accredited by the National Board of Fire Service Professional Qualifications (the Pro Board) for Fire Fighter 1 and 2 and HazMat Awareness and Operational levels and Industrial Firefighter Incipient level.

It is the goal of this program is to provide a safe, innovative and optimal training experience for students pursuing an emergency services career path.

Program Information: The Fire Training Associate Certificate Program is designed to prepare students for entry-level Fire Fighter, Industrial Safety Officer and Medical First Responder positions. Students complete a number of highly relevant components in order to achieve a broad-based background in emergency procedures.

Delivery: This course is delivered block intake

Time for this course: 22 weeks/880 hours

Typical Structure of Instructional Hours:

Instructional Activity	Duration
Theory based training (approximately per week)	60%
Practical shop floor training (approximately per week)	40%
Total Contact Hours	880

Practicum Hours (if applicable):

Type of Practicum	Duration
On-the-job Experience	N/A
Formal Work Experience	N/A
Other	N/A
Total	

Course Outline Author or Contact:

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Signature

APPROVAL SIGNATURES:

Dean of Instruction
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Dean of Instruction Signature

EDCO

Valid from: September 2008 – August 2013

Education Council Approval Date

PROGRAM PRE-REQUISITES AND TRANSFER CREDIT

Prerequisites: (subject to change based on industry input)

- Provincial Grade 12 or GED equivalent
- 19 years of age or older
- BC Class 5 driver's license or provincial equivalent, valid at time of application (Note: to be eligible for obtaining a BC Class 3 driver's license, applicants must have less than four (4) penalty point incidents in the past two (2) years and must not have one (1) or more motor-vehicle-related Criminal Code convictions in the past three (3) years (or equivalent if incurred outside BC)
- Completed Criminal Record Check

In addition, applicants must meet the following health and fitness requirements:

- Meet the Canadian Vision Standard for Fire Fighters, as endorsed by the Canadian Association of Fire Chiefs (dated July 8, 1985)
- Provide a signed statement from your physician indicating an acceptable level of health for this program
- Possess normal unaided hearing
- Meet the physical fitness test criteria

Prior Learning Assessment (PLA):

Credit can be awarded for this course through PLA Yes No

Learners may request formal recognition for prior learning at the College of the Rockies through one or more of the following processes: External Evaluation, Worksite Assessment, Demonstration, Standardized Test, Self-assessment, Interview, Products/Portfolio, Challenge Exam. Contact an Education Advisor for more information.

Prior Course Number: N/A

Textbooks and Required Resources:

Textbook selection varies by instructor and may change from year to year. At the Course Outline Effective Date the following textbooks were in use:

all required texts are provided

LEARNING OUTCOMES:

Upon successful completion of this program, you should be able to:

Fire Safety outcomes:

- initiate response to a reported emergency or alarm following fire hall procedures
- conduct safety and fire education activities
- don and doff personal protective clothing and equipment (SCBA)
- demonstrate fire-ground emergency procedures in and on a structure as a team member
- identify, operate and deploy appropriate fire suppression equipment
- identify and use portable fire extinguishers to extinguish a variety of fire types
- predict probable fire behaviours and apply fire control procedures to combat or prevent these behaviors
- conserve property as a member of a team
- implement and maintain an incident management system
- identify and strategically respond to the effects of fire and fire suppression activities on structures
- identify and safely use various rescue and extrication tools
- extricate trapped victims as a member of a rescue operation team
- deploy appropriate foam concentrate and assemble and operate a foam fire stream system
- coordinate an interior attack as a member of a team to control/extinguish ignitable liquid fires and flammable gas cylinder fires
- assess fire cause determination and protect fire cause origin
- conduct a pre-incident survey
- use ropes and rescue techniques in a safe and effective manner

Medical/First Responder & Emergency Medical Responder outcomes:

- demonstrate the Priority Action Approach for conscious patients and patients with a decreased level of consciousness
- perform appropriate critical interventions of the airway with C-spine control for conscious patients and for patients with a decreased level of consciousness
- identify respiratory emergencies and perform appropriate critical interventions
- identify circulatory emergencies and perform appropriate critical interventions
- identify and perform appropriate interventions for minor soft tissue injuries including the need for medical referral and required paperwork
- implement basic life support in emergency situations
- perform single rescuer CPR on adults, children, and infants
- demonstrate two-rescuer CPR on an adult

- manage an obstructed airway on a conscious and unconscious adult, child, and infant
- educate public on basic risks and prevention of cardiovascular disease and childhood injuries
- identify the role, equipment and safety concerns of a first responder
- demonstrate appropriate primary survey for life-threatening injuries
- identify the appropriate conditions and conduct a secondary survey for life-threatening injuries
- identify the method of contacting the poison control centre serving the local jurisdiction
- identify the symptoms of trauma patients and demonstrate appropriate emergency medical care
- identify and demonstrate the emergency medical care of chemical and thermal burns, including chemical burns of the eyes.
- assess an accident scene and understand the concept of triage
- utilize appropriate moving and lifting equipment
- apply practical knowledge of basic anatomy and physiology
- apply appropriate oxygen administration techniques
- apply basic cardiac life support and automated external defibrillation
- apply appropriate spinal management techniques
- identify pediatric and geriatric emergencies
- spiking and hanging of I.V.'s
- childbirth

Incident-related outcomes:

- understand the structure, organization and terminology of Incident Command System (ICS 100 and ICS 200)
- explain how the twelve principles of ICS can be used to manage an emergency response
- identify agencies that would be involved in responding to any emergency incident
- identify facilities that may be located at an incident for event and implement an appropriate management system
- identify and define the role of the Incident Safety Officer within the fire department

Vehicle-related outcomes:

- conduct fire truck safety checks
- respond appropriately to emergency driving elements
- operate a fire truck safely and efficiently under emergency conditions (to and from an incident)
- identify and define license classification, Air Brakes Schedules and ICBC safety standards regarding Airbrakes.
- assess and demonstrate airbrake adjustment
- perform pre-trip inspection on commercial vehicles
- identify and appropriately use the principles of vehicle extrication
- determine the most efficient tools for vehicle extrication based on automobile anatomy
- demonstrate safety precautions at vehicle extrications
- assess and execute techniques of vehicle extrication
- prepare victim for safe removal from vehicle
- implement standard operating procedures for vehicle extrications

Hazardous Materials outcomes:

- identify and define hazardous materials or dangerous goods and their properties
- recognize, identify and appropriately respond to a hazardous material situation in an emergency
- conduct a hazard and risk assessment
- select, don and maintain appropriate personal protective equipment for hazardous materials emergencies
- establish and command safety and scene control in hazardous materials emergencies
- prioritize and execute tactical priorities and defensive control strategies on hazardous materials
- implement appropriate incident control strategies and tactics for various hazardous materials (Class 1 through 8)
- demonstrate decontamination techniques

Forest Fire Suppression outcomes:

- understand basic field operations when working around helicopters: loading, slinging, and general safety
- apply an appropriate and safe manner when working with water bombing operations
- understand concepts of fire behavior: the manner in which fuel ignites, flame develops, fire spreads and exhibits other related phenomena by the interaction of fuels, weather and topography
- learn how, where, and why burnout tactics are applied to remove the fuel ahead of a raging wildfire
- utilize hand tools such as shovels, axes, pulaskies, and back pack pumps for numerous tasks in forest firefighting
- demonstrate the proper etiquette and operation of hand held radio systems as used in firefighting situations, especially as utilized in remote locations and contentious situations
- apply a well organized systematic approach to hose laying and the application of water
- understand the physical and environmental conditions that affect personal safety and the safety of co-workers on the fireline
- utilize appropriate safe working practices when operating chainsaws or while in the vicinity of any chainsaw operation
- set-up, operate and retrieve a power pump efficiently
- set-up, use and retrieve tents and camp equipment in a manner in accordance with user safety
- utilize mop-up principles to ensure that the control line is safe and the fire is totally extinguished
- apply numerous observation techniques to recognize fire safe areas and escape routes

Live Fire Experience outcomes:

- observe fire progress from incipient stage to free-burning stage
- understand differences in the evolution and management of small fires (limited to single rooms) and larger fires
- identify heat stress, ignition sources, and formation of combustible gases
- understand the following terms: rollover, flashover, backdraft, fire attack
- utilize all senses to identify stages in the natural evolution of the fire
- recognize the stages of fire and the effects that fire attack and ventilation will produce
- practice the management of fire suppression, including incident command, strategies and tactics, and communications

- appreciate the necessity to approach fires in a cool, calm calculated manner using established concepts and strategies
- adapt tactics as the burn situation reveals itself

Workplace Preparation outcomes:

- compose an effective resumé and cover letter, tailored to the requirements of the emergency services' employer
- job search
- use effective interviewing skills to market your abilities
- utilize technology to complete workplace tasks in an effective and professional manner
- maintain a level of personal fitness appropriate to the demands of an emergency services occupation
- recognize and respond to injuries that may be caused by or aggravated by work
- participate in the day-to-day operation of a fire hall or other emergency services workplace
- maintain the personal presentation and attitude required of the emergency services profession

EMPLOYABILITY SKILLS DEVELOPED IN THIS PROGRAM:

- interpersonal skills: communicate and collaborate to work effectively within a group, use good listening skills
- project management: practice specific problem-solving processes and recognize when it is necessary to seek more information from others
- professional and personal development: be prompt; be accountable for work and behaviour; utilize job search and application strategies to locate suitable employment

COURSES:

FIRE 127	Fire Fighting Practices Level I (Pro Board certified to NFPA 1001 standards)
FIRE 127	Fire Fighting Practices Level II (Pro Board certified to NFPA 1001 standards)
FIRE 111 & 115	Hazardous Materials Awareness and Operations (Pro Board certified to NFPA 472 standards)
FIRE 123	Industrial Fire Fighter (Pro Board certified to NFPA 1081 standards)
FIRE 105 & 116	B.C. Medical First Responder Level III and CPR C
FIRE 124	Emergency Medical Responder
FIRE 113 & 114	Incident Command Systems: Levels 100 & 200
FIRE 119 & 125	Forest Fire Suppression (Ministry of Forests' S100 and S215)
FIRE 126	Transportation of Dangerous Goods
FIRE 120	Vehicle Extrication
FIRE 102 & 104	Class 3 with Airbrakes Endorsement
FIRE 106	Emergency Vehicle Operations
FIRE 103	Basic Chainsaw Safety and Maintenance
FIRE 117	Preparation for the Emergency Services Workplace
FIRE 128	Confined Space (Awareness and Operations)

ESSENTIAL SKILLS DEVELOPED IN THIS COURSE:

Students can expect to develop the following skills in this course

Skills for Busy Students

- Use support systems and College resources

Research Skills

- Using the library catalogue; renew materials; place holds on resources
- Use the OUTLOOK database (database providing access to all libraries in BC)
- Use full-text online database to locate current journal and magazine articles
- Place interlibrary loans
- Using the internet to locate information; evaluate information from internet sources

Getting Hired Skills

- Recognize personal skills and attributes
- Write a focussed, effective resumé
- Write a strong cover letter
- Prepare for an effective job interview
- Use WorkopolisCampus to find information about jobs
- Use effective job-finding techniques

EVALUATION AND ASSESSMENT:

Component	Minimum Grade
Fire Fighting Practices Level I (Pro Board certified to NFPA 1001 standards)	70%
Fire Fighting Practices Level II (Pro Board certified to NFPA 1001 standards)	70%
Hazardous Materials Awareness (Pro Board certified to NFPA 472 standards)	70%
Hazardous Materials Operations (Pro Board certified to NFPA 472 standards)	70%
Industrial Fire Fighter (Pro Board certified to NFPA 1081 standards)	70%
B.C. Medical First Responder Level III and CPR C	70%
Emergency Medical Responder Alberta	70%
EMP Advanced Level III	Completed
Incident Command Systems: Levels 100 & 200	70%
Forest Fire Suppression (Ministry of Forests' S100, S215 and F1-110)	70%
Transportation of Dangerous Goods	100%
Vehicle Extrication	70%
Class 3 with Airbrakes Endorsement	Completed
Emergency Vehicle Operations	70%
Basic Chainsaw Safety and Maintenance (S-214)	Completed
Preparation for the Emergency Services Workplace	Completed
Confined Space (Awareness and Operations)	Completed

Note: Students who attempt re-writes must achieve a minimum passing score of 70%. Students can achieve a maximum of 70% only on the re-write. Successful completion of NFPA 1001 program work requires completion of all related chapters and assignments.

Pro Board Certification Tests

Students must have successfully completed the Firefighter Levels 1 and 2 in the program before writing the Pro Board Certifications tests.

Pro Board certification tests (written & practical) are required for NFPA 472 (HazMat Awareness & Operations) and NFPA 1001 (Fire Fighter I & II)

- Written tests require a mark of 70% or better for a pass
- All practical (performance-based skills) tests must be passed according to the criteria outlined in *Preparing for the Practical Skill Certification Exam* in the FTCP Student Manual.
- Students receive a separate Pro Board Certificate for NFPA 1001 and 472.

Fire Training Associate Certificate

Students are awarded a College of the Rockies Fire Training Associate Certificate based on the achievement of passing scores in all Pro Board certification tests, as well as a passing grade (min. 70%) for all program work (NFPA 1001 plus enhancement courses).

Assignments	% Of total Grade
Students must maintain an acceptable level of attendance (as described in the College Policies and Procedures), complete all assigned projects and pass all exams to successfully complete the program.	
Program Work/Courses/Practical/Attendance	70%
Pro Board Certifications tests (Theoretical)	<u>30%</u>
Total	100%

NOTES:

- Before being certified for HazMat (NFPA 472) at the Operations level, candidates must meet all competencies at the HazMat Awareness level.
- Before being certified at the Firefighter I level, candidates must have already passed HazMat (NFPA 472) at the Awareness level.
- Before being certified at the Firefighter II level, candidates must be certified as Firefighter I and have already passed HazMat (NFPA 472) at the Operational level.

Re-writes of the NFPA 1001 and 472 tests and practical tests are permitted.

PROGRAM CREDITS

Continuing Education Credits	Program Components
12.0	Fire Fighting Practices Level I & Level II (NFPA 1001)
2.0	Hazardous Materials Awareness & Operations (NFPA 472)
4.0	BC Medical First Responder Level III
4.0	Emergency Medical Responder Alberta
.5	Airbrakes Endorsement
.5	Class 3 Driver Training (licensing separate)
1.0	Emergency Vehicle Operator
.5	CPR Level C
2.0	Vehicle Extrication
2.0	Industrial Fire Fighter
1.5	Incident Command 100 & 200
1.0	S100 Basic Fire Suppression & Safety
1.0	S215 Wildland/Urban Interface / F1-110 Fire Behaviour/Cause Determination
.5	Basic Chainsaw Operations & Safety
.5	Transportation of Dangerous Goods
2.0	Preparation for the Emergency Services Workplace
1.0	Confined Space (Awareness and Operations)

STUDENT RESPONSIBILITY

Students are expected to follow all College Policies and Practices as outlined in the program handout package. Regular attendance is encouraged for success in this program. Competency in the techniques and methods necessary to a given trade requires significant supervised practice. Students are expected to follow Policy 2.6.2 – "**Vocational Student Withdrawals as a Result of Absence**".

Worker's Compensation Board regulations apply to all trades programs. Students are expected to behave accordingly. For shop activities students must have safety-toed footwear. This footwear must be worn at all times in the shop. Trades programs require that students own use and maintain proper eye safety wear and work clothes (coveralls).

Safety procedures must be followed while working in the shop area. The tool room attendant is also the first aid attendant for the building. Students may only work in the shop during assigned lab times. If an incident occurs, no matter how minor, report it to the tool room attendant immediately.

INDUSTRY SITE VISITS

There may be off-site work practicums and field trips organized in the program as opportunity or resources are available during this program. Students **ARE REQUIRED** to supply their own transportation for practicums and field trips. Students are expected to follow all college policies and procedures when participating in off-campus activities.

EXAM POLICY

Students must attend all required scheduled exams that make up a final grade at the appointed time and place.

Individual instructors may accommodate for illness or personal crisis. Additional accommodation will not be made unless a written request is sent to and approved by the appropriate Department Head prior to the scheduled exam.

Any student who misses a scheduled exam without approval will be given a grade of "0" for the exam.

COURSE GRADE

Course grades are assigned as follows:

Grade	A+	A	A-	B+	B	C	F
Mark (Percent)	≥ 95	94-90	89-85	84-80	79-75	74-70	< 70

Minimum average mark must be 70% combined

ACADEMIC POLICIES

See www.cotr.bc.ca/policies for general college policies related to course activities, including grade appeals, cheating and plagiarism.

COURSE CHANGES:

Information contained in course outlines is correct at the time of publication. Content of the courses is revised on an ongoing basis to ensure relevance to changing educational, employment, and marketing needs. The instructor will endeavour to provide notice of changes to students as soon as possible. The instructor reserves the right to add or delete material from courses.