

FIRE ACADEMY



COURSE CALENDAR
1988 - 1989

JUSTICE INSTITUTE OF BRITISH COLUMBIA

MISSION AND GOALS STATEMENT

MISSION STATEMENT

The Justice Institute of B.C. is dedicated to improving the quality of justice and public safety by developing and delivering training programs and educational services to professionals and the public.

SUPPORTING THE MISSION STATEMENT IS THE FOLLOWING SET OF GOALS:

- 1) To develop and deliver programs and services in the areas of justice and public safety consistent with the identified needs of the Ministries of the Attorney General, Health and Municipal Affairs.
- 2) To develop and deliver programs and services consistent with the identified needs of other government ministries, private agencies, community groups and others engaged in justice and public safety.
- 3) To engage in partnerships with other organizations in pursuit of the Justice Institute mission.
- 4) To share services, resources and expertise among Academies/Divisions to achieve more effective delivery of programs.
- 5) To heighten awareness of the unique nature and structure of the Justice Institute and its services.

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FIRE ACADEMY MISSION STATEMENT

To develop and provide training programs and services
consistent with the needs identified by the Fire Commissioner
and the Fire Services Community of British Columbia.

JUSTICE INSTITUTE OF BRITISH COLUMBIA FIRE ACADEMY

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Vancouver, British Columbia
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The 1988 Fire Academy Academic Calendar lists programs, courses and services available for members of the fire service in British Columbia and others.

More training programs are available this year than in previous years. This year, a new program, the Community Instructor, is being introduced. This will provide far more training in the field and establish training resource personnel in different regions of the Province.

Also offered are the Administrations Officer program and Fire Prevention Inspector. Distance education classroom components are being offered for Training Officer and Company Officer. These programs are comprehensive in offering hands-on activities.

The distance education training officer program along with the fire prevention program are open to all training officers and fire prevention officers in the fire service in the province.

Some programs have been made available to the public through distance education. More information on this is contained within.

Please do not hesitate to contact the Academy if you have questions concerning this year's course offering.



Paul C. Smith
Director
Fire Academy



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LEARNING WITH THE FIRE ACADEMY

Fire Academy Programs

"Edukits" are packages of written and videotaped instructional material which enable fire fighters to upgrade and standardize their knowledge and skills. They form the basis of much practical Fire Fighter training in various subject areas.

Volunteer Fire Fighter Certification formally recognizes a volunteer fire fighter's ability to work at the level specified in the B.C. Volunteer Fire Fighter's Training Standards.

Distance Education allows career Fire Officers to upgrade their knowledge through self-study in their own locality, in order to be certified at a level of professional qualification established by the Fire Commissioner. The final Block of a chosen course is held at the Fire Academy.

Other Programs: In-field programs include workshops for new Volunteer Fire Departments and course blocks offered for non-Fire Service personnel through the Justice Institute, Extension Programs as well as workshops in risk management.

ADMISSION AND REGISTRATION

Only current members of the Fire Service in British Columbia and related emergency and support service personnel are eligible for admission to Fire Academy programs. Fire Service means volunteer, paid, and industrial fire fighters. Support service personnel includes staff of the Fire Academy and the Fire Commissioner's Office. Specific prerequisites and special eligibility restrictions are noted for each course or program in this calendar, or may be determined by the Fire Commissioner and/or the Director of the Fire Academy. Application forms are provided in this calendar and can also be obtained from the Academy.

ADMISSION

Admission into the Program is through the Fire Department. All admission forms must be signed by the Fire Chief and then approved by the Director of the Fire Academy.

REGISTRATION

Volunteer Certification Program

For admission into the program, the student should obtain an Application for Admission from the Fire Chief and submit a completed copy to the Fire Academy.

Eligibility for Programs - Volunteer Certification

To be admitted to the Program the fire fighter must meet the following criteria:

- Member of a Volunteer Fire Department recognized by the Office of the Fire Commissioner
- Fire Academy staff member
- Member of the Fire Commissioner's office staff

The candidate must also possess a valid driver's license conforming to Fire Department policies and the policies of the Motor Vehicle Act

Training and Education

General Eligibility

To be admitted to a course in the Program, a student must meet the following eligibility criteria:

- Full time, paid member of the British Columbia municipal Fire Department, which includes Fire Commissioner Office and Fire Academy Staff
- Attained first-class fire fighter status
- Must submit a completed **Application for Admission** bearing the signature of the Fire Chief; in the case of Fire Commissioner office staff, the form must be signed by the Fire commissioner
- Application approved by the Director of the Fire Academy

The course level at which a student may enter the Program is to be determined locally. Table 1 lists approximate equivalencies between local Fire Department positions and currently available course levels. It should be understood that these equivalencies may vary among jurisdictions. The entry level is determined on the application form which must be signed by the Fire Chief.

Suggested Course Equivalents for Entry Level into Program

Company Officer	Lieutenant, Captain (Suppression)
Command Officer	District Chief, Assistant Chief (Suppression)
Administration Officer	Deputy Chief, Fire Chief
Fire Training Officer	Assistant Training Officer, Training Officer
Fire Prevention Inspector	Fire Prevention Inspector, Fire Prevention Fire Marshall, Fire Warden

TABLE 1

FIRE ACADEMY SEMESTER SYSTEM

There are three semesters in the Calendar year. Students register in the semester of their choice. Block Material will be sent to the students by the semester start. At this time tutors will receive student lists and may contact each registered individual by telephone. The student is expected to complete Block Material within the semester, which means within 13 weeks. An individual who cannot complete in this time will receive a one semester extension but must complete by the end of the second semester. A student who cannot complete a Block in two semesters (approximately seven months) will be required to reregister to continue in the block. In order to complete a Block, the student must receive a "successful" grade on all projects. On receipt of a successful final project, a tutor will request the Fire Academy to generate an exam for the student.

ACADEMY DRESS REQUIREMENTS

Candidates attending Fire Academy classes must wear their department dress uniforms. For those candidates whose department does not have a uniform, the candidate is required to wear slacks, shirt or sweater (sport shirt is acceptable), socks, shoes, and blazer or department jacket.

For any activity involving fire or the use of equipment, full protective turn-out clothing (helmet, jacket, pants, boots, and gloves) must be provided by the student.

Generally, candidates are expected to be clean shaven. However, moustaches that do not interfere with breathing or safety apparatus are acceptable. Personnel with beards who are enrolled in an in-field training program or a program which requires wearing SCBA are not allowed to participate in the hands-on portion and will receive no credit for the program.

ATTENDANCE

When attending a Fire Academy course, the candidate is required to be on time and to attend all classes. Late arrival to class or absence without approval will result in the candidate's return to his or her department. An attendance report will be sent to the candidate's department stating any absence and the reason.

A Senior Academy Officer may excuse a candidate for the following reasons:

- Illness
- Candidate is required to be in court
- Compassionate grounds or urgent personal reasons

A candidate who becomes ill while at the Academy must report the illness to the Fire Academy.

Smoking is not permitted during instruction periods, indoors or outdoors. Lawrence Hall is a designated non-smoking building.

Because of the nature of training involving fire situations and the use of equipment, apparatus, power tools, and hydraulic tools it is imperative that students be physically fit and mentally alert. Students may not participate, who are under the influence of any substance, whether medically prescribed or not, that can impair physical or mental alertness.

CANDIDATE ACCOMMODATION AND TRAVEL

Authorized travel, meal and accommodation expenses for fire service personnel attending courses at the Academy are reimbursed for by the Academy on the following basis.

Outside the Greater Vancouver Regional District (GVRD)

- Travel -** Return travel arrangements are made by the candidate. The cost of travel is reimbursed by the Academy, based on the quickest and most economical means. Receipts are required for transportation costs and must be submitted with the student's expense sheet within 30 days after course completion. After 30 days expense claims may not be accepted.
- Meals -** The Academy provides a per diem meal allowance while attending the Academy.
- Telephone -** Candidates are reimbursed for one 3-minute long distance phone call within the province per week while attending the Academy.
- Hotel -** Arrangements are made by the Academy only, on a two-person-per-room basis. These are paid for directly by the Academy.

Accommodation for NON-GVRD course participants has been reserved at:

THE SANDS BEST WESTERN
1755 Davie Street
Vancouver, B.C.
V6G 1W5 Phone: 682-1831

Accommodation is prepaid by the Fire Academy. Please note that while staying at the Sands, the Hotel rules and regulations shall apply to all Fire Academy course participants. Budgetary restrictions require that rooms be shared by two (2) persons. Reservations will be made from the day preceding course start to the morning of the last day of the course. Course participants staying at the Sands are requested to remove all personal possessions from their respective rooms on the morning of the last day of the program.

Inside the GVRD

- Travel -** Candidates using their own vehicles who must travel farther to reach the Justice Institute campus than to reach their workplace are reimbursed for the extra mileage.
- Meals -** Lunch or a lunch allowance is provided by the Fire Academy.

RESOURCE CENTRE

The Resource Centre is a library housing films, videos, slides, books and magazines on public safety and justice topics.

Fire Science topics include:

- Training
- Fire behaviour
- Management
- Disasters and hazardous materials
- Fire prevention and suppression
- Apparatus and equipment
- Extinguishers and extinguishing agents
- Breathing apparatus
- Smoke and ventilation
- Rescue and first aid
- Fire investigation
- and others

Library Services

- Audio visual catalogue listing the films, videos and slides is available for \$5.00 prepaid. Send \$5.00 to J.I.B.C. Resource Centre.
- Borrowing of materials by mail or in person
- Materials provided in response to specific requests for information
- Library News, a monthly newsletter mailed to fire chiefs, lists new books, magazine articles and audio visual materials available

Members of recognized fire departments are granted borrowing privileges. A library card is not required. Borrowers are responsible for loss or damage to materials. For further information contact:

Lynne Clark, 228-9771 Local 202
Field Services Librarian
Resource Centre
Justice Institute of B.C.
4198 West 4th Avenue
Vancouver, B.C.
V6R 4K1

VOLUNTEER FIRE FIGHTER CERTIFICATION PROGRAM

Volunteer Fire Fighter Certification

Volunteer Fire Fighter Certification is formal recognition by the province that a fire fighter has attained a basic proficiency in the subjects identified in the B.C. Volunteer Fire Fighter Training Standards. The Training Standards define two successive levels at which a fire fighter can become certified - Level I and Level II. This reflects the fact that not all departments require the same equipment. For example, larger ground ladders are covered only in Level II. Depending of the equipment requirements for that department, Fire fighters in departments that do not use these ladders can still attain certification in Ground Ladders at Level I. Other subjects, such as Self-Contained Breathing Apparatus, are covered completely in Level I.

CERTIFICATION PROCESS

Accepted applicants receive a Certificate of Enrollment identifying required subjects for either Level I or Level II, and a list of subjects currently available in which to be evaluated. All identified subjects require a written test, and most subjects also require demonstration of practical skills. Upon successful evaluation of a subject, a subject-identification sticker is sent to the individual to be affixed to the enrollment certificate in the corresponding subject area.

Certification for Level I can only be attained by successfully completing all 21 subjects identified in the Volunteer Fire Fighter Training Standards as Level I. Level II requires those objectives identified as Level II.

PREREQUISITES:

- Valid driver's license conforming to the candidates's Fire Department policies and with the Motor Vehicles Act of B.C.

Subject reference materials are as follows:

- International Fire Service Training Association Manuals (IFSTA)
- Essentials of Firefighting (second edition)
- Fire Service Practices for Volunteer and Small Community Fire Departments (sixth edition)
- Edukits developed by the Fire Academy of the Justice Institute of B.C. These are videotapes with supporting manuals, skills checklists and progress evaluation questionnaires that cover the theoretical and practical skills of fire fighting. Edukits may be purchased from the academy as they become available.

EVALUATOR TRAINING

This intensive course on conducting evaluations leads to Certification as a Volunteer Fire fighter and as a Fire Academy Evaluator for the Volunteer Fire Fighter Certification Program.

Evaluator training is given in three separate 5-day segments during the calendar year. Together the three segments cover all sections of the Volunteer Fire Fighter Training Standards of British Columbia. An Evaluator is certified in each segment of subjects taken.

Certification is valid for two years. At the end of the two years, the candidate is required to attend a refresher seminar conducted by the Academy. The Director of the Academy may extend validation until the next available refresher course.

PREREQUISITES:

- Approval of the Fire Chief of the department
- Ability to travel to other departments to conduct evaluations on evenings and/or weekends
- Good physical condition
- Valid First Aid Certificate (S.O.F.A. - Safety Oriented First Aid) or better
- Valid B.C. driver's license, Class 3 or better, with Class 15 air brakes endorsement
- 5 or more years of experience in the Volunteer Fire Service

FIRE ACADEMY COMMUNITY INSTRUCTORS' COURSE

This is an intensive fire-day course on instructional techniques based at the Fire Academy. It consists of a workshop that involves preparation and delivery of fire fighting training skills. Upon completion of the course, the trainee will be able to deliver a shorter version of the same course of Training Officers in the field. The course provides a substantial practical training experience.

Candidates must provide full protective clothing:

- Helmet
- Coat
- Pants
- Boots
- Gloves

The following qualifications are preferred (not mandatory):

- Minimum 2 years service in the Fire Service of B.C.
- Instructional experience
- Currently enrolled in the Certification Program
- Experience as an Evaluator in the Certification Program
- Willingness to provide two - 2 1/2 day instructional techniques programs based on the timetable and materials coordinated by the Fire Academy. This may involve travel to other Fire Departments.(Travel expenses reimbursed by the Fire Academy).

TRAINING TECHNIQUES WORKSHOPS

The training techniques workshop will prepare training officers to be effective and efficient in their training program. After the 2 1/2 day workshop the training officer will be able to:

- Write a performance objective
- Design a lesson
- Deliver a lesson
- Evaluate student performance

This training program will help the training officer utilize time and resources to the maximum.

Candidates will prepare and deliver several mini sessions to other members of the class.

The describe/demonstrate/practice/feedback model is the basis of this course. Emphasis will be on effective use of edukits as training aids. Candidates must provide their own full protective clothing.

TRAINING AND EDUCATION PROGRAM FOR THE PROFESSIONAL FIRE SERVICE

The Training and Education Program for the Professional Fire Service in the Province of British Columbia is a series of courses that allows career fire fighters and Officers to upgrade their knowledge through self-study of learning materials provided to them in their own locality. This method lets students work at their own pace, within established semesters. Students are encouraged to work at an accelerated pace according to schedules arranged within their own Department. Support personnel including Fire Department Liaison Officers and Fire Academy tutors are an integral part of the program.

Several courses are available for different levels of certification. The courses are based on the professional qualifications established by the NFPA and amended as necessary by the Fire Commissioner to reflect the needs of the B.C. Fire Service. Successful completion of a full course leads to certification at that level.

Courses and Blocks

Five courses of certification are available or under development:

COURSE

Company Officer
Command Officer
Administration Officer
Fire Prevention Inspector
Training Officer

Eligibility Restrictions:

- Minimum First Class Fire Fighter
- Full time career

Special request for admission must be addressed to the Director, Fire Academy

Each course comprises subject Blocks, as listed under Course Descriptions. Each Block ends with a test. Most Blocks may be taken in any order. The exception is Fire Prevention Inspector; Blocks in this course must be taken in sequence. The final Block is the classroom component, which must be taken when all distance education Blocks have been successfully completed. The classroom component is held at the Fire Academy. Blocks are offered in each semester, and may be taken over two semesters. A student must be admitted to a course before registering in any Blocks.

Blocks are subdivided into Units composed of individual booklets, from two to six per Block.

SUPPORT PERSONNEL

Tutors

In each Block the student's progress is guided and evaluated by a tutor appointed by the Fire Academy. The tutor stays in touch by telephone or in writing, evaluates block projects and informs the Academy when the student is ready to write the Block test.

Liaison Officer

The Fire Chief appoints a Liaison Officer to co-ordinate the delivery of the program within the Fire Department. The Liaison Officer (usually the Training Officer) supports and helps plan studies and activities in the course, and supervises the writing of tests in the Fire Department.

COURSE MATERIALS

Course materials are sent out in Blocks. The student registers for specific Blocks, in consultation with the Liaison Officer. Each course contains the following materials:

- Study guide to assist the student in the use of all the other components and offering tips on how to study Distance Education materials.
- Course Blocks presented as a series of printed booklets, each containing objectives, self-tests, practical exercises, and projects to be completed.
- A Block Test to be administered by the Liaison Officer and marked by the Fire Academy.
- Support materials for the Liaison Officer and the tutors.

EDUKITS

Edukits are self-contained training packages consisting of the following:

- Instructional manual
- Accompanying video
- Guidelines for an instructor
- Quiz sheet (in most packages)
- Skills checklist
- Masters for overheads

Each Edukit focuses on a particular subject or skill. The purpose of the Edukits is to enable fire fighters to upgrade their knowledge and skills and to practise a standardized and uniform set of fire fighting procedures. The Edukits have been developed by the Fire Academy.

Subjects

Edukits cover the following subjects:

Fire Behaviour covers theory of combustion, the combustion process, phases of fire, combustion products, fire spread, and classes of fire.

Ground Ladders: Basic Lifts, Carries and Raises illustrates the techniques involved in the basic lifts, carries and raises of ground ladders.

Apparatus Familiarization explains the functions and operation of pumpers, tankers, aerial apparatus, and rescue apparatus, and illustrates safe driving practices.

Ventilation defines ventilation, explains the reasons for ventilating, and illustrates the procedures, decisions, precautions and hazards involved in ventilating a fire in a contained structure.

Self Contained Breathing Apparatus covers types, various models, operation, safety, and emergency procedures for self-contained breathing apparatus used in the fire service. It also includes testing and maintenance of equipment.

Small Tools and Equipment Fire fighters use many tools, both manual and power-operated, for such tasks as forcible entry, ventilation, salvage and overhaul, rescue, and vehicular extrication. This Edukit shows the four main categories of small tools and how to use them: prying tools, cutting tools, lifting and pulling tools, and striking tools. It shows axes, sledge hammers, pry bars, crow bars, jaws of life, saws, chisels, shears, belt cutters, jacks, air bags, etc. It also shows care of tools.

FIRE ACADEMY CALENDAR

1988 - 1989

PULL OUT SECTION



FIRE ACADEMY SEMESTERS 1988 - 1989

- Winter, 1988
January 4 - March 31
Cut off for Spring Registration - *March 31*
- Spring
May 2 - July 29
Cut off for Fall Registration - *July 29*
- Fall
September 6 - November 30
- Winter, 1989
January 2 - March 31
Cut off for Spring Registration - *July 31*
- Fall
September 5 - November 30
Cut off for Winter 1990 - *November 30*

DATES FOR COURSES

June	13-16 20-24	Incident Command, Block CO-10 Community Instructors Program
July	4-8 11-13	Evaluators - Basic/Advanced Risk Management (Summer Institute)
Sept.	7-9 19-23 26-29	Risk Management for the Fire Service Community Instructors Program Training Officer, Block TO-10
Oct.	16-18 24-27	Liaison Officers Workshops Incident Command, Block CO-10
Oct.31-Nov.4		Evaluators Workshop - Basic/Advanced
Nov.	8-10 14-18 14,15 21-25	Risk Management for the Fire Service Evaluators - Basic/Advanced Liaison Officers, Workshop (Justice Institute) Community Instructors Program (if required)
Training Techniques -		to be scheduled by area of need and by individual community instructors and host departments
New Department Basic Schedule -		as required

SCHEDULED COURSES

Training Officer CO-2	September 26 - 29
Incident Command CO-10	June 13 - 16 October 24 - 27
Risk Management	November 8 - 10 July 11 - 13 (Summer Institute) September 7 - 9
Liaison Officer Workshops	October 16 - 18 November 14, 15
LAFC (FPI)	Schedule as required
New Dept. Basic Schedule as required	April 22 - 24
Evaluators Basic/Advanced	July 4 - 8 October 31 - November 4 November 14 - 18
Community Instructor Programs	June 20 - 24 September 19 - 23 [November 21 - 25 if required]
Training Techniques 1 - 3	To be scheduled by area of need and by individual community instructors and host departments

CONFERENCES

Fire Prevention Officers' Association of B.C.
May 30 - July 3
Whistler, B.C.

Fire Chiefs' Association of B.C.
June 5 - June 9
Kamloops, B.C.

Volunteer Fire Fighters' Association of B.C.
July 9, 10
Surrey, B.C.

Vancouver Island Volunteer Fire Fighters' Field Days
July 30 - August 1
Nanaimo, B.C.

Canadian Association of Fire Chiefs
July 31 - August 4
Kitchener, Ontario

Fire Training Officers' Association of B.C.
September 11 - 15
Peachland, B.C.

Society of Native Indian Fire Fighters of B.C.
General Conference/Regional Fire Fighter Competitions
September 16/17
Bella Coola, B.C.

Ropes and Knots shows rope construction, application, knots and hitches, inspection and maintenance, and types of ropes commonly used in the Fire Service. It discusses the differences in ropes, the two basic types used (laid and Kernmantle), the 5 parts of rope, how ropes are made, and when knots and ropes are used.

Fire Service Orientation and Safety briefly describes the origin of the Fire Service, its organization, and its legal responsibilities. It also identifies most common causes of injury and describes basic safety procedures.

Extinguishers and Extinguishing Agents covers the basic chemistry of fire, seven common types of extinguishing agents used in portable extinguishers, and the classes of fire on which they would be used. Also covered is operation of each type of extinguisher and their general care and maintenance

Fire Streams describes the properties of fire streams, basic terminology, water and foam, and methods of handling various sized hoselines.

Hose describes basic hoses and hose handling procedures.

Pumps and Pumping describes the operation for priming and centrifugal main pumps. It explains the importance and function of pump gauges, describes pump operating procedures, and illustrates the effects of friction loss and elevation.

Water Supplies discusses three sources of water and describes the water-distribution system and its key components.

The following subjects are currently available as Edukits:

- Group Ladders
- Self-Contained Breathing Apparatus
- Ventilation
- Fire Behaviour
- Apparatus Familiarization
- Extinguishers and Extinguishing Agents
- Water Supplies
- Orientation and Safety
- Ropes and Knots
- Small Tools and Equipment

COURSE DESCRIPTIONS

Company Officer

CO-1 Fire Service Organization

This Block provides a review of organizations concerned with fire protection, with a focus on Canadian organizations at the federal, provincial and local levels. It also reviews the structure of fire suppression organization, the Company Officer's role in it, and the chain of command in line and staff functions.

Self-study hours: 20

CO-2 Basic Fire Science

This Block introduces basic chemical and physical principles underlying fire and dangerous goods behaviour in emergency situations. This includes vapour pressure and density, ignition temperature, flash point and flammable limits, as well as other topics of concern to personnel involved in fire protection.

Self-study hours: 40

CO-3 Fire Prevention and the Company Officer

This Block introduces concepts in fire prevention for suppression officers at the company level. The material provides basic background information on fire prevention and discusses the important role that the Company Officer can play. Topics include an overview of pertinent legislation, community fire prevention programs, and routine or survey inspections. The Block offers specific instruction on identifying fire hazards in various building types, recognizing dangerous goods and their unique hazards, and visually inspecting fire protection systems such as automatic sprinklers and fire detection equipment. Some of the course work involves field exercises for hands-on experience in fire prevention-oriented activities.

Self-study hours: 60

CO-4 Company Leadership

Company Leadership covers the leadership and administrative aspects of the Company Officer course and is designed to develop the relevant skills required at this level. Areas covered include situational leadership, maintaining morale among subordinates, handling complaints and disputes as they arise, interpreting and implementing departmental policies relating to personnel and local administration, setting goals and objectives for the crew, planning and implementing training in conjunction with the Training Officer, safety awareness, and interpersonal communication. The Block presents a global and historical perspective on the nature and principles of leadership, and follows this with a specific focus on leadership within the Fire Department.

Self-study hours: 80

CO-5 Communication Skills

This Block provides a short, to-the-point overview of principles of effective writing and speaking. Tips are presented on how to present information clearly and with impact. The skills gained from this Block should prove helpful in all types of writing, including reports and memos, as well as in public speaking and communication in general.

Self-study hours: 20

CO-6 Records and Reports

Records and Reports addresses gathering, managing, and using information in Fire Department operations. The major premise of this Block is that information is a key element in the effective functioning of any size of Fire Department. Topics include exploration of the role of information within the Fire Service, understanding the place of the records system in managing information, production of both formal and informal reports, Fire Department records, and computerized information systems. As an Officer, the student can make better use of information as a valuable resource.

Suggested Prerequisites: CO-5 Communication Skills

Self-study hours: 40

FIRE ACADEMY CALENDAR

CO-7 Technical Math

This Block presents basic math skills for fire flow calculations such as volume and surface area. Frequent opportunities for practice in practical situations are provided. Units covered include whole numbers, fractions and decimals, percentages, averages, algebraic equations, powers and square roots, ratios and proportions, and measurements of length, area, and volume. It is assumed that the student has basic skills in addition, subtraction, multiplication and division.

Self-study hours: 40

CO-8 Fire Cause Determination

The Block provides an overview of fire cause indicators and emphasizes the importance of preserving the scene for Fire Investigators in situations where the fire cause is not apparent.

Self-study hours: 40

CO-9 Dangerous Goods

The Company Officer may be first on the scene of a dangerous goods incident. This Block discusses the inherent hazards of dangerous goods, how to identify them under emergency conditions, and how to assess a situation, determine the resources required, and take appropriate initial action. The Block also discusses the legal authority of the Company Officer to act under different circumstances, the legislation that affects safety in storage and transport of dangerous goods, and national, provincial, and local information sources. Some field work is involved.

Self-study hours: 60

CO-10 Incident Command

Officers apply a model of incident command in simulated incidents on site and by use of a simulator. Also covered are the development and organization of drills and scenarios and the determination of specifications for equipment. Block CO-10 provides an individualized training component. Location: Fire Academy, Justice Institute of British Columbia campus.

Prerequisites: Completion of CO-1 to CO-9

Duration: 4 days

Command Officer

CM-1 Advanced Communication Skills

This Block extends the skills acquired in the Block CO-5 by presenting further methods to communicate clearly in writing and in speaking. The Block then focuses on speaking to groups, relating to the media, and gaining increased awareness and skills in public relations between the Fire Department and the community it serves.

Suggested Prerequisites: CO-5 Communication Skills

Self-study hours: 40

CM-2 General Physics

General Physics is an introductory course that familiarizes the student with basic concepts of physics at a practical, operational level. The topics include the physical phenomena of heat, motion, electricity, magnetism, light, sound and radioactivity. This Block also provides an appendix on metrics for those unacquainted with the SI system of measurement.

Suggested Prerequisites: CO-7 Technical Math

Self-study hours: 40

CM-3 Major Emergency Planning

Major Emergency Planning presents principles of Fire Department planning and response to major emergencies within a local jurisdiction. Planning activities are outlined with attention given to assessing major fire hazards in a community, preparing the Fire Department component of a community major emergency plan, and exercising the plan. Response strategies are discussed for actual or simulated major emergencies in terms of assessing the situation, determining the resources required and deploying personnel and resources. The Block also discusses the roles and responsibilities of the Command Officer in major emergency planning.

Self-study hours: 80

CM-4 Fire Protection Systems and Water Supply Systems

Fire Protection Systems presents the basic types of fixed fire suppression systems, fire alarms, fire detection devices, and water supply systems. This knowledge enables the Command Officer to recognize the different types of systems and their operation and applications, and to discuss water supply and distribution requirements with appropriate persons and agencies.

Suggested Prerequisites: CO-3 Fire Prevention and the Company Officer; CO-7 Technical Math

Self-study hours: 60

CM-5 Industrial Fire Protection and the Command Officer

This Block presents an overview of the Command Officer's role in fire protection in the municipal-industrial setting. Roles and responsibilities are outlined in terms of decisions required to direct multi-company response to a major industrial fire. Topics include assessment of hazards; fire protection measures for each of the nine classes of dangerous goods; pertinent federal, provincial and local acts and regulations; and working with plant emergency response organizations and fire brigades. Some field work is required.

Suggested Prerequisites: CO-3 Fire Prevention and the Company Officer; CO-9 Dangerous Goods and the Company Officer; CM-3 Major Emergency Planning; CM-4 Fire Protection Systems

Self-study hours: 60

CM-6 Command Officer Leadership and Administration

This Block offers a detailed study of command leadership and communication, planning and achieving excellence, meeting the dollar challenge, achieving organizational effectiveness, and managing people.

Suggested Prerequisites: CO-4 Company Leadership; CO-6 Records and Reports; CO-7 Technical Math; CM-1 Advanced Communication

Self-study hours: 80

CM-7 Command Officer Seminar

Two days are spent in the Academy's Risk Management Seminar to increase awareness of the need for risk management in the Fire Service. An additional two days cover the Incident Command model used in the Company Officer course, from the perspective of the Command Officer. Location: Fire Academy, JIBC campus.

Prerequisites: Completion of CM-1 to CM-6

Duration: 4 days

Administration Officer

AO-1 Executive Leadership and Communication

This Block focuses on the leadership role of the Administrative Officer. In addition to expanding the concepts of the leadership role, the Block reviews the use of an effective team approach in managing a Fire Department. The Block explores the central role of communication in enhancing Administrative Officer effectiveness, including meeting skills.

Suggested prerequisites: CO-6 Records and Reports; CM-6 Command Officer Leadership and Administration

Self-study hours: 100

AO-2 The Social Environment

This Block focuses on the social environment in which a Department functions, providing an overview of political, economic and legal aspects of our culture.

Self-study hours: 20

AO-3 Planning

The focus of this Block is on plans that can be used for the management of a Fire Department. It explores:

- Assessment of needs and resources
- Choosing strategy based on these
- Methods for using plans in an environment of change and uncertainty.

Self-study hours: 100

AO-4 Financial Management

This Block focuses on the financial aspects of administering a Fire Department, including an overview of municipal financing, considerations of capital financing, a detailed approach to budget preparation, management and control and the issues of cost management.

Suggested prerequisites: CO-7 Technical Math

Self-study hours: 80

AO-5 Organizational Administration

This Block addresses organizational administration as a basis for the efficient operation of a Fire Department. It explores current trends on organization structures and philosophies that help the Administrative Officer select and maintain the most effective organization given the resources available. Various considerations for assigning human and other resources are discussed. Finally, structural and administrative considerations for developing and maintaining a modern and effective management information system are addressed.

Suggested prerequisites: CO-1 Fire Service Organizations;

CO-6 Records and Reports

Self-study hours: 100

AO-6 Administering the Human Resource

This Block on personnel administration covers the establishment of effective guidelines, procedures, and practices, with particular consideration given to the administration of effective human resource management in the context of municipal operations. An overview is given in the following areas:

- Job analysis
- Job descriptions
- Compensation
- Recruiting and employee selection
- Training
- Development
- Evaluation

In addition, information is provided on labour relations, the collective bargaining process, the administration of the collective agreement, and day-to-day management of employee relations.

Suggested prerequisites: CM-6 Command Officer Leadership and Administration

Self-study hours: 120

AO-7 Public Relations

This Block provides practical tools and knowledge in the area of public relations. Guidance is given on the establishment of appropriate policies and guidelines for the relationship between the Department, the municipality, and the community at large.

Suggested prerequisites: CM-1 Advanced Communication Skills

Self-study hours: 80

AO-8 Risk Management for the Fire Service

Risk Management Workshop for the Fire Service

Location: Fire Academy, JIBC campus

The three-day session is led by legal experts, active risk managers, and specialists in the field of Risk Management.

This practical program is directed toward Fire Officers who are concerned with legal liability and actions in negligence.

Participants will leave the workshop with a structured approach to Risk Management that they can implement in their own Departments.

Prerequisites: Completion of AO-1 to AO-7 or by permission of the Director of the Fire Academy.

Fire Prevention Inspector

FPI Blocks must be taken in sequence.

FPI-1 Introduction to Fire Prevention

This Block discusses the background, philosophy, and purpose of legislative aspects of fire prevention. It provides an overview of fire prevention and specific information on the fire problem and fire prevention in British Columbia, building a framework for the more detailed and technical Blocks to follow. Other topics include the principles and goals of fire prevention practice; history and evolution of fire prevention; elements of the fire problem; issues and trends in fire prevention; fire prevention agencies and legislation at the federal, provincial and local levels; and the role of the Fire Prevention Inspector.

Suggested prerequisites: CO-1 Fire Service Organization

Self-study hours: 60

FPI-2 Basic Fire Science*

This Block is an introductory study of basic chemical and physical principles underlying fire and dangerous goods behaviour. The Block looks at such subjects as vapour pressure and density, ignition temperature, flash point and flammable limits, as well as other topics of concern to personnel involved in fire prevention.

Self-study hours: 40

* Students who have completed CO-2 need only complete a short exercise to obtain credit for FPI-2.

FPI-3 Blueprint Reading for the Fire Service

This Block familiarizes the student with concepts of reading building construction drawings at an operational level. This information enables the Fire Prevention Inspector to check that building plans conform to the appropriate codes, bylaws and regulations. The student learns to read architectural, plumbing, electrical, mechanical and sprinkler piping blueprints.

Self-study hours: 120

FPI-4 Elements of Life and Fire Safety

This Block forms a foundation for the technical Blocks that follow, presenting detailed information on life and fire safety concepts pertaining to egress design, building construction types, occupancies, and fire safety plans.

Self-study hours: 60

FPI-5 Fire Protection Systems and Extinguishers

This Block presents the basic types of fire protection systems including sprinklers, standpipe and hose systems, fire pumps, special extinguishing systems, and portable fire extinguishers. The Block offers a detailed study of each system, its operation and application, and offers specific instructions on code requirements and fire prevention inspection procedures.

Self-study hours: 100

FPI-6 Signalling and Detection Systems

This Block presents an in-depth study of fire alarm systems and the various types of heat, smoke and flame detectors. The Block also outlines code requirements for installing fire alarms for each type of occupancy hazard, and specifies the inspection procedures.

Self-study hours: 60

FPI-7 Water Supply Systems

This Block covers details of water supply systems for private fire protection, water flow in pipes and hydrants, and fire flow requirements. Water supply systems covered include gravity tanks, pressure tanks and fire pumps. The Block focuses on the operation of each system, code requirements and inspections.

Self-study hours: 60

FPI-8 Building Systems and Hazards

This Block presents the various services and systems that provide power, environmental control and convenience for a building. The course material provides the Fire Prevention Inspector candidate with a broad knowledge of fire hazards and fire protection associated with electrical systems and appliances, air conditioning and ventilation, heating systems, cooking equipment, materials and waste handling, housekeeping and storage systems. Each Unit concludes with specific guidance on code requirements and how to inspect target building systems.

Self-study hours: 60

FPI-9 Hazardous Materials

This Block gives the student an understanding of the duties and responsibilities of a Fire Prevention Inspector regarding hazardous materials, as set out in the B.C. Fire Services Act. It describes the classification of hazardous materials, their identification, and the hazards they pose. It also outlines the responsibilities of other authorities in this area as well as procedures for co-operating to ensure safe handling, use and storage of these materials.

Self-study hours: 60

FPI-10 Flammable and Combustible Liquids and Compressed and Liquefied Gases

As a supplement to the preceding Block, this Block concentrates on the two most important hazardous material classifications. It gives the student an understanding of their characteristics, their specific fire and explosion hazards, and the regulations under the *British Columbia Fire Code Regulation* governing their handling, storage, and use. It describes procedures for inspection for leaks in containers and transfer systems, and for abatement of fire hazards associated with leaks and spills, as well as describing the role of other agencies having jurisdiction.

Self-study hours: 60

FPI-11 Fire Prevention Practice

This Block focuses on the practice of fire prevention on a day-to-day basis and the application of fire prevention theory and technical principles to the fire problem in the community. It concludes the in-field part of the course by examining the specific fire prevention activities carried out by the Fire Prevention Inspector. Topics covered include:

- Fire prevention inspections
- Code enforcement methods
- Fire safety plans
- Public education
- Fire cause determination
- Duties of an LAFC
- Legal remedies
- Judicial aspects of fire prevention activities such as evidence and testimony.

Self-study hours: 60

FPI-12 Fire Prevention Workshop

Hands-on practice inspecting fire detection systems, extinguishing systems and buildings. Location: Fire Academy, Justice Institute of British Columbia campus

Prerequisites: FPI-1 to FPI-11

Duration: 4 days

Training Officer

TO-1 Training Officer

This Block covers the skills required to effectively perform the function of a Fire Training Officer, including communication, learning concepts, planning a training program, presentation methods, training aids, evaluation and development.

Self-study hours: 100

TO-2 Training Officer Workshop

Four classroom days of intensive practical application of knowledge gained in TO-1, enabling the prospective training officer to design and deliver training programs within the department. This workshop involves physical activity requiring a degree of physical fitness. Location: Fire Academy, Justice Institute of British Columbia campus

Prerequisites: TO-1

Duration: 4 days

ORIENTATION FOR NEW DEPARTMENTS

This weekend program is designed to assist new Volunteer Fire Departments in establishing standard fire fighting procedures and safe, effective practices.

The courses are held at the new department's home base Friday evening through Sunday, and focus on practicing basic fire fighting skills. Basic instruction is given on fire behaviour, use and care of portable extinguishers, controlling fire through proper ventilation, Fire Service rescue and protective breathing practices, and proper utilization of water supplies.

Eligibility Restrictions:

Offered only to newly formed volunteer Fire Departments recognized by the Fire Commissioner Office

Required:

Basic fire fighting equipment

Contact Fire Academy for further information.

LIAISON OFFICER WORKSHOP

The Liaison Officer acts as the liaison between the Fire Academy and the Distance Education students in the Liaison Officer's own Fire Department. The Liaison Officer Workshop is designed to familiarize Liaison Officers with their roles. These roles include the following:

- Coordinating Fire Department admissions
- Assisting in registration in a Block
 - Distributing course information
 - Scheduling students
 - Completing necessary forms
 - Discussing study hours and schedules
- Expediting admission process
 - Obtaining Fire Chief's signature
- Supervising writing of final Block test
- Organizing the learning environment and information flow within the Department
- Assisting with learning Activities

Eligibility Restrictions:

Must be appointed by the Fire Chief of the Fire Department.

RISK MANAGEMENT PROGRAM FOR THE FIRE SERVICE

Risk Management Workshop

The three-day session is led by legal experts, active risk managers, and specialists in the field of Risk Management.

This practical program is directed toward Fire Officers who are concerned with legal liability and actions in negligence.

Participants will leave the workshop with a structured approach to Risk Management that they can implement in their own Departments.

This workshop also comprises the classroom component of the Administration Officer Course, Block AO-8

Eligibility: Designated Risk Managers or individuals with a responsibility for Risk Management

Suggested Prerequisites: Prereading "Risk Management for the Fire Service"

Duration: 3 days

Risk Management Seminar

This is a shorter version of the Risk Management Workshop.

Eligibility: Fire Service Members

Suggested Prerequisite:

Read "Risk Management for the Fire Service"

Duration: 2 days

Maximum Registration: 150

JUSTICE INSTITUTE OF B.C. EXTENSION PROGRAMS

Two self-study courses are available to the general public through the Extension Programs of the Justice Institute of B.C. - DE100 Basic Fire Science, and DE101 Dangerous Goods. They were originally developed for Fire Service personnel, corresponding to Blocks CO-2 and CO-9 of the Distance Education Program. Basic Fire Science is recommended for corporate managers or safety officers, or those considering a career in the Fire Service. Dangerous Goods is recommended for the following service personnel:

- Police
- Search and rescue teams
- Utilities staff
- Provincial Emergency Program personnel
- Ambulance attendants
- Employees of transportation companies
- City works personnel
- Government personnel
- Private fire protection companies

Registrants to distance education courses receive access to a knowledgeable tutor by telephone and correspondence throughout the course. Upon successful completion of the assignments and written examinations for either of these courses, a Certificate of Achievement is issued by the Fire Academy.

For further information on the content and format of these courses, contact the Registration Office of the Justice Institute.

Basic Fire Science (#DE100)

Length: 40 self-study hours
Fee: \$230

The course provides an introductory level study of basic chemical and physical principles underlying fire and dangerous goods behaviour in emergency situations. Topics include subjects such as vapour pressure and combustion, elements of fire suppression and general methods of fire control.

Dangerous Goods (#DE101)

Length: 60 self-study hours
Fee: \$300

A series of 5 self-study booklets present the basic principles of controlling dangerous goods incidents. The course covers legal jurisdictions and relevant legislation that affects safety in storage and transport of dangerous goods. The course discusses the inherent hazards of dangerous goods, with attention given to how to assess a situation, determine the resources required, and take appropriate initial action.

TO PURCHASE COURSE MATERIAL

Materials may be purchased from the Academy. Product list is included.

Contact the Fire Academy for more information.

Available Edukits

- SCBA
- Ground Ladders
- Apparatus Familiarization
- Ventilation
- Fire Behaviour
- Small Tools and Equipment
- Ropes and Knots
- Extinguishers and Extinguishing Agents
- Orientation and Safety
- Water Supplies

Extra Edukit Videos

Edukit Overheads (on acetate)

Distance Education Material:

- Booklets
- Copies of Photos for CO-8
- Sets of drawings for FPI-3

Risk Management for the Fire Service (booklet)

Binders (specify which binders are required)

STAFF OF THE FIRE ACADEMY

Paul Smith
Director

Irwin DeVries
Deputy Director

Jack Tyler
Coordinator Instructor

Dennis Leigh
Coordinator Instructor

Ed Colin
Instructor

Jackie Goodwin
Course Designer

Jim Bond
Program Developer

Diane Raniseth
Divisional Secretary

Catherine Gutosky
Programs Secretary

Sherri McLennan
Secretary

Karen Lai
Student Data Bases



Province of
British Columbia
Ministry of
Municipal Affairs
OFFICE OF THE FIRE COMMISSIONER