

Fire Protection Technology (FIRE)

Program Description

The Fire Protection Technology (FIRE) program is designed to prepare the student for an entry-level career as a firefighter for private, municipal, industrial, state, and federal fire departments. Typical duties of firefighters may include responding to emergencies and performing work to save lives, stabilize emergency situations, reduce loss of property and improve public safety.

Firefighters additionally inspect, examine and care for emergency apparatus and equipment and perform routine maintenance to restore apparatus to a response-ready condition.

Fire Protection Technology is a systematic and organized inquiry into the occurrence of fire and its control. It is about gaining a deeper and useful understanding of fire's development, strategies used by the fire service to prevent its occurrence and lessen its impact, and methods employed to combat it. It is also about understanding a complex vocation that calls upon its members to perform unusually challenging tasks under virtually any condition with little room for error—or better, adapting to the unforgiving culture of a critical public safety industry.

The training of students to become career firefighters is a key component of the Fire Protection Technology program. Subjects included in the program help to improve the firefighter's use of knowledge, tools and systems to improve their career opportunities and the lives of those who they serve.

Entry into the Program

Please apply to the Admissions Office. Enrollment in the program is limited to 36 students entering each September. Selection is on a first-come, first served basis from an "interest" list. Students may enter the program only at the beginning of Fall Quarter. Winter and/or Spring quarter entry is based on prior experience and Department Chair permission. All students must meet with the Fire Protection Technology Department Chair for an orientation prior to registration.

Firefighter courses can be physically demanding. Students must be medically and physically fit to participate. Students will be subject to a background evaluation. Once accepted into the program, the following requirements must be met:

- Complete an Illegal Substance-Drug Screen and Criminal Background check. This is based on emergency medical industry standards and Washington State laws protecting vulnerable populations (RCW 43.43.880 and 43.43.842). This practice is common among colleges and universities in Washington State and is required

by clinical agencies where students complete their clinical experiences.

- Complete a Department of Motor Vehicle violation check. This check is used for training and counseling purposes to determine suitability to gain employment in the fire service.
- Complete and pass a physical/medical evaluation by a physician approved by the program, confirming physical ability to perform structural firefighting activities in compliance with WAC 296-305-0159(7)(b).
- Costs associated with criminal background check, drug screen, motor vehicle violation check and physical/medical evaluations are the responsibility of the student.

Admission to individual classes for those students not in the Fire Protection Technology (FIRE) program is by Department Chair approval only. Prerequisites for all Fire Protection Technology classes must be met before enrolling in that specific FIRE class.

Work-Based Learning

Students will integrate classroom learning with work-based learning experience in Fire Service Internship (FIRE 199) at a supervised work site. Department Chair approval is required. Credits and grades are based on job-hours worked, work performance and completion of the learning objectives specified in the learning contract.

Associate in Technical Arts Degree

An Associate in Technical Arts degree (ATA) is awarded upon completion of a minimum of 90 credits of specified technical and related education course work above the 100 level, with both an overall 2.0 grade point average and a 2.0 grade point average in the technical major. Students who are not certified EMTs must take PE 200 In order to graduate.

ESTED SCHEDULE

ATA FIRE PROTECTION TECHNOLOGY

Includes required ATA courses. Student schedule may vary based on entry point, credit load, and prerequisites. Consult with department chair or SVC counselor for scheduling options.

First Year

FALL	Cr	WINTER.....	Cr	SPRING.....	Cr
FIRE 100.....	3	FIRE 102.....	3	FIRE 101.....	3
FIRE 120.....	5	FIRE 113.....	2	FIRE 122.....	5
FIRE 160.....	2	FIRE 121.....	5	FIRE 130.....	3
PE 161.....	2	FIRE 161.....	3	†ENGL& 101.....	5
.....		ELEC (core).....	3	or †ENGL 170.....	3
.....		PE 261.....	1	PE 261.....	1
Total	12	Total	17	Total	15+

Second Year

FALL	Cr	WINTER.....	Cr	SPRING.....	Cr
FIRE 103.....	3	FIRE 199.....	1	FIRE 125.....	2
FIRE 210.....	3	FIRE 211.....	3	FIRE 212.....	3
FIRE 270.....	5	FIRE 230.....	3	FIRE 240.....	3
CMST 125.....	3	FIRE 271.....	5	FIRE 272.....	5
or CMST& 210.....	5	PE 261.....	1	*LC/GE.....	5-10
†WMATH 100.....	5		PE 261.....	1
PE 261.....	1	
Total	20+	Total	13	Total	19

* Learning Community (5-10 credits) or 5 credits of General Education (social sciences, natural sciences or humanities). Must be outside of technical area, approved by Department Chair. Please see INDEX regarding Learning Communities.

† Students who do not receive appropriate COMPASS test score will require additional coursework to develop necessary skills for entry into class.

Micro-Certificates

These certificates focus on a specific skill within this program. A certificate is awarded to students who complete the following with a 2.0 grade point average or above:

BASIC FIREFIGHTER (15 CREDITS)

FIRE 120, 121, 122.

BASIC EMERGENCY MEDICAL TECHNICIAN (10 CREDITS)

FIRE 242

HAZARDOUS MATERIALS FIRST RESPONDER (5 CREDITS)

FIRE 160, 161

Course Descriptions

FIRE 100 Introduction to Fire Protection (3)

Introduction to the philosophy and history of fire protection as it relates to loss of life and property by fire. Surveys responsibilities of fire departments in a community, organization and function of fire protection agencies and allied organizations, and sources of professional literature. Studies professional career opportunities and requirements and professional development plans.

FIRE 101 Fire Chemistry (3)

Introduction to basic concepts of chemistry and the chemical/physical nature of fire and its development.

FIRE 102 Emergency Incident Management System (3)

Introduction to Incident Management System and emergency operations. Satisfies training requirements for the National Incident Management System and ICS100/200.

FIRE 103 Building Construction for Fire Protection (3)

Concepts of building construction, structure rating and classification, and uniform codes. Building systems including floors, ceilings, wall, roofs and building support systems. Building collapse and firefighter safety in burning buildings.

FIRE 113 Fire Service Employment Strategies (2)

Develop an understanding of the special employment requirements of fire service organizations in hiring entry-level employees. Through comprehensive reading topics, research, discussion and role-playing, students will strengthen their career entry skills in the competitive fire service employment market.

FIRE 120 Firefighter Skills I (5)

Introduction to firefighting tools and equipment and basic firefighting techniques. Cognitive and skills development in emergency ground operations using firefighting companies. Focuses on presenting a fire service organizational structure to assist in developing traits that support professional and cultural development. Emphasis on fire ground safety.

FIRE 121 Firefighter Skills II (5)

Continuation of FIRE 120. Introduction to firefighting tools and equipment and basic firefighting techniques in new firefighter skill sets. Cognitive and skills development in emergency ground operations using firefighting companies. Emphasizes working in companies. Prerequisite: FIRE 120 with minimum C grade or department chair approval.

FIRE 122 Firefighter Skills III (5)

Continuation of FIRE 120 and 121. Introduction to firefighting tools and equipment and basic firefighting techniques in new firefighter skill sets. Cognitive and skills development in emergency ground operations using firefighting companies. Emphasizes multi-company operations. Prerequisite: FIRE 121 with minimum C grade or department chair approval.

FIRE 124 Search & Rescue I (1)

Introduction to basic skills needed to function efficiently during interior search & rescue mission using self-contained breathing apparatus. Gain skills necessary to deal with challenging interior search and rescue. Equal to the Washington State Fire Academy SRC-001. Prerequisite: FIRE 102 and 120 with minimum C grade or department chair approval.

FIRE 125 Fire Service Employer/Employee Relations (2)

Examination of the employer/employee relationship. Topics include characteristics of work maturity, diversity, leadership, teamwork and working styles, organizational structure, decision-making, and setting work goals and priorities.

FIRE 126 Wildland Firefighting (3)

Firefighters who successfully complete this course will be qualified to suppress wildland fires while under close supervision. Provides required training for all personnel prior to certification as a Firefighter

(FFT2) under the Wildland Qualification System (NWCG 310-1). A student who successfully completes the training has a completed Task Book and receives recommendation for certification.

FIRE 127 Fire Operations in the Urban Interface (4)

Designed to meet the training needs for initial attack incident commanders, company officers, and first on-scene units confronting wildland fire that threatens life, property and improvements. Exceeds requirements for NWCG S-215 training. Prerequisite: completion of FFT 126 with minimum C grade or Training Chief approval.

FIRE 130 Emergency Vehicle Accident Prevention (3)

Introduction to driving various types of fire apparatus in emergency and non-emergency modes. Meets academic and drill ground training requirements for Washington State Emergency Vehicle Accident Prevention certification. Valid driver's license required.

FIRE 140 First Responder Certification (5)

Classroom instruction and practical field exercises to prepare students to take the Washington State 60-hour First Responder emergency medical certification test battery. Prerequisite: Concurrent enrollment in CJ 228 or department chair approval.

FIRE 160 Hazardous Materials Awareness For Firefighters (2)

Introduction to safely and effectively managing an emergency involving the uncontrolled release of dangerous chemicals. Focuses on responding to and assessing the hazard, and making necessary notifications of hazardous materials spills. For personnel seeking Washington State Patrol or State Fire Marshal's Office certification for Hazardous Materials First Responder Awareness.

FIRE 161 Hazardous Materials First Responder Operations(3)

Prepares firefighters who witness or discover hazardous materials releases to recognize the presence of hazmat, protect themselves, secure the area, initiate emergency response of additional resources, and take defensive actions. Meets the training requirements for Hazardous Materials First Responder Operations. Prerequisite: FIRE 160 with minimum C grade or department chair approval.

FIRE 162 Hazardous Materials Awareness for Public Safety (1)

Provides the basic skills necessary to safely and effectively manage the initial activities of an emergency involving the uncontrolled release of dangerous chemicals. Focuses on responding to and assessing the hazard involved, and making necessary notifications of hazardous material spills. For emergency pre-hospital care personnel, emergency communications officers, law enforcement officers, private industry

employees, public works personnel, and Wildland firefighters.

FIRE 199 Fire Service Internship (1-2)

Relevant work experience through appointment to a fire protection agency. Augments classroom learning by applying skills and knowledge learned and opportunity to develop workplace ethics, appropriate performance levels, and behavioral traits in workplace settings. Prerequisite: department chair approval.

FIRE 210 Fundamentals of Fire Prevention (3)

History and philosophy of fire prevention. Covers fire protection & prevention challenges, public education, laws and codes, and a review of current fire prevention programs.

FIRE 211 Fire Protection Systems(3)

Introduction to the concepts and principles of fire protection systems including fire extinguishers, automatic sprinkler systems, standpipes, fire detection and alarm systems, and special hazard systems.

FIRE 212 Fire Codes & Ordinances(3)

Covers the International Fire Code and certain chapters of the International Building Code. Develop a working knowledge of the Codes and their application to fire inspections.

FIRE 213 Emergency Service Public Education/Relations (3)

Public education and relations theory and techniques for the emergency service professional. Focuses on developing and delivering public education programs to instill in the community a sense of value in safe personal practices, emergency preparedness and value of emergency services in assuring their quality of life.

FIRE 214 Basic Fire Investigation(3)

Introduction to systematic process for determining point of origin and fire cause in structure fires. Use various techniques, knowledge sets, and tools to evaluate fire damaged structures in order to determine fire cause, and conduct interviews of witnesses and preserve evidence for subsequent criminal and civil proceedings. Culminates in a live-fire investigation.

FIRE 215 Advanced Fire Investigation (3)

In-depth study of fire cause and its documentation. Focuses on approaching a fire scene as an investigator and making accurate observations from available evidence and on appropriate ways to preserve evidence and document the history in relation to the onset of fire. Prerequisite: FIRE 214 with minimum grade C or department chair approval.

FIRE 223 Live Fire Operations (1)

Introduction to fire development theory as well as water application principals in order to effectively extinguish interior "Class A" fires. Provides the skills necessary to function as the nozzle operator of an interior fire attack team. Also introduces the basic properties of fire-fighting foam and the application methods used to control and combat "Class

B⁷ liquid fires. Prerequisite: FIRE 271 or concurrent enrollment.

FIRE 230 Fire Service Hydraulics(3)

Introduction to hydraulics as it affects fire stream development and water supply. Includes formula and table calculation of friction loss and engine pressures using hydraulic principles. Covers water main systems, water tender shuttle operations, and fire engine pumping operations. Studies fire pump construction, operation, and techniques of pumping. Pumping evolutions are practiced to become proficient in performing various water supply and attack evolutions.

FIRE 240 Rescue Systems Awareness (3)

Apply search and rescue skills, approach rescue situations safely, and understand the organizational concerns at a structural collapse incident. Provides skill sets that meet or exceed NFPA 1670 at the awareness level for various rescue situations. Prerequisite: FIRE 102 with minimum C grade or department chair approval.

FIRE 241 Vehicle Extrication (3)

Techniques of rescue company operations to gain entry to damaged vehicles, disentangle and prepare patients for transport, and extricate to safety and care. Includes scene management, heavy rescue apparatus, and equipment and practical applications.

FIRE 242 Basic Emergency Medical Technician (10)

Training for the EMT-Basic level per National Standards Curriculum and abiding by the laws of the Washington State. Learn to recognize, assess and treat medical and trauma related emergencies at the basic life support level. Preparation for National Registry EMT certification testing. Prerequisite: In accordance with Washington State law, must be at least 17 years of age at course start.

FIRE 243 Confined Space Operations (3)

Introduction to equipment necessary to operate safely in permit-required confined spaces. Develops skills to perform basic rescues within a variety of confined spaces. Meets training standards for NFPA 1006, Confined Space Rescue Technician, and WAC 296-305-05003, Confined Space Rescue Operations.

FIRE 244 Water Rescue (3)

Learn how to perform water rescue services during emergency situations involving static and moving water rescues. Satisfies training standards identified in NFPA 1670, Standard on Operations and Training for Technical Rescue for water rescue.

FIRE 245 Rope Rescue (3)

Learn skills to perform rope rescue services during emergency situations involving elevation rescues. Satisfies training standards identified in NFPA 1670, Standard on Operations and Training for Technical Rescue for rope rescue.

FIRE 246 Wilderness EMT (3)

For EMTs who need to acquire wilderness emergency medical skills and knowledge to be certified

as Wilderness EMTs. Learn to provide patient care using improvised equipment. Prerequisite: FIRE 242 or EMT-B certification.

FIRE 260 Hazardous Materials Incident Command (3)

Provides emergency responders/incident commanders with the skills necessary to successfully and safely manage an incident involving hazardous materials. Prerequisite: FIRE 161 with minimum C grade or department chair approval.

FIRE 261 Hazardous Materials Technician (3)

Prepares emergency response personnel to effectively and safely respond to and stabilize incidents involving hazardous materials. Meets the training requirements of OSHA 1910.120 for the hazardous materials technician. Prerequisite: FIRE 161 and 260 with minimum C grade or department chair approval.

FIRE 270 Fire Company Leadership I (5)

Enhancing firefighter skills through company leadership. Includes National Fire Academy, Leadership: Strategies for Company Success and components of the Washington State, Fire Service Leadership training and the opportunity to serve as officers in training companies and work as leaders for FIRE 120 students. Prerequisite: FIRE 122 with minimum grade C, Washington State Firefighter 1 certification, or department chair approval.

FIRE 271 Fire Company Leadership II (5)

Enhancing firefighter skills through company leadership. Includes National Fire Academy, Leadership: Strategies for Personal Success and components of the Washington State, Fire Service Leadership training and the opportunity to serve as officers in training companies and work as leaders for FIRE 121 students. Prerequisite: FIRE 270 with minimum grade C or department chair approval.

FIRE 272 Fire Company Leadership III (5)

Enhancing firefighter skills through company leadership. Includes National Fire Academy, Leadership: Strategies for Supervisory Success and components of the Washington State, Fire Service Leadership training and the opportunity to serve as officers in training companies and work as leaders for FIRE 122 students. Prerequisite: FIRE 271 with minimum grade C or department chair approval.

FIRE 273 Law For Fire Services (2)

Covers the legal responsibilities of firefighters in driving, inspection, emergency operations, communication, fire prevention, and rights.

FIRE 274 Fire Department Budgets (2)

Covers the preparation, adoption, filing and management of a fire district or municipal budget. Case studies are incorporated to enhance learning.

FIRE 275 Emergency Service Leadership (3)

Meets training requirements for National Fire Academy, Leadership training series and part of Washington State training requirement for certification as Fire Officer I. For mid-range managers and company officers to enhance critical skills and experience needed to be effective as leaders.

FIRE 276 Administrative Fire Officer (3)

Preparation for acting in the role of a fire officer and supervising subordinate staff in emergency and non-emergency environments. Successful completion satisfies a portion of the training requirements for certification as a Washington State Fire Officer I.

FIRE 277 Tactical Fire Officer (3)

Continuation of FIRE 276. Advanced preparation for acting in the role of a fire officer and supervising subordinate staff in emergency and non-emergency environments. Successful completion satisfies a portion of the training requirements for certification as a Washington State Fire Officer I. Prerequisite: FIRE 276.

FIRE 278 Managing Company Tactical Operations (3)

Provides a basic foundation for the management of one or more companies operating at a structural fire emergency. Uses simulations to apply concepts and develop skills. Prerequisite: FIRE 102 with minimum C grade or department chair approval.