

# Fire Science (FIRE)

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## Courses

### **FIRE A101 Principles of Emergency Services 3 Credits**

Provides overview of fire protection and emergency services (ES). Includes introduction to the history and development of the fire service, as well as careers in fire and emergency service.

### **FIRE A105 Fire Prevention 3 Credits**

Provides fundamental knowledge relating to the field of fire prevention. Topics include history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use and application of codes and standards, review of prevention plans, fire inspections, fire and life safety education, and fire investigation.

### **FIRE A107 Strategy and Tactics of Fire Suppression 3 Credits**

Provides the principles of fire ground control through utilization of personnel, equipment and extinguishing agents.

**Prerequisites:** FIRE A101 with a minimum grade of C.

### **FIRE A111 Principles of Fire and Emergency Service Administration 3 Credits**

Introduces organization and management of a fire and emergency services department and the relationship of government agencies to the fire services. Emphasis is placed on fire and emergency service, ethics, and leadership from the perspective of the company officer.

**Prerequisites:** FIRE A101 with a minimum grade of C.

### **FIRE A117 Rescue Practices 3 Credits**

Introduces rescue problems, techniques, and equipment. Includes SCBA use, urban search and rescue, scene safety, motor vehicle crashes, technical rescue, water, swift water, and ice rescue, mass casualty incidents, and heavy rescue.

**Special Note:** Students must be physically capable of performing rescue skills and must be currently certified as an Emergency Trauma Technician or an Emergency Medical Technician.

**Registration Restrictions:** Departmental approval

**Prerequisites:** EMT A110 with a minimum grade of D or EMT A130 with a minimum grade of D.

### **FIRE A121 Fire Behavior and Combustion 3 Credits**

Explores the theories and fundamentals of how and why fires start, spread, and are controlled.

**Prerequisites:** MATH A105 with a minimum grade of C or concurrent enrollment.

### **FIRE A123 Fire Investigation I 3 Credits**

Provides the student with the fundamentals and technical knowledge needed for proper fire scene interpretations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives of the fire setter, and types of fire causes.

**Prerequisites:** FIRE A101 with a minimum grade of C and FIRE A121 with a minimum grade of C.

### **FIRE A131 Firefighter I, Series I 3 Credits**

Presents fundamental knowledge of fire behavior, fire organizations, types of fire equipment, emergency response services processes, and methods of their use. Includes orientation, safety, fire behavior, building construction, protective clothing, and self-contained breathing apparatus (SCBA).

**Special Note:** Successful completion of all four Firefighter I series will qualify/prepare the student to sit for Alaska State Fire Fighter I certification exam. All students are required to wear a complete set of fire department approved protective clothing (turnout gear) during skills training. (Turnout gear provided)

### **FIRE A133 Firefighter I, Series II 3 Credits**

Introduces the fundamental knowledge of fire behavior, fire organizations, types of fire equipment, emergency services processes and methods of their use. Includes portable extinguishers, ropes and knots, building search, victim removal, forcible entry tools, construction, techniques, and ground ladders.

**Special Note:** Successful completion of all four Firefighter I series will qualify/prepare the student to sit for Alaska State Fire Fighter I certification exam. All students are required to wear a complete set of fire department approved protective clothing (turnout gear) during skills training. (Turnout gear provided)

**Prerequisites:** FIRE A131 with a minimum grade of D.

### **FIRE A135 Firefighter I, Series III 3 Credits**

Provides fundamental knowledge of fire behavior, fire organizations, types of fire equipment, emergency response services processes, and methods of their use. Includes ventilation, water supply, hose rolling, coupling, loading, carrying, advancing, laying, and water fire streams.

**Special Note:** Successful completion of all four Firefighter I series will qualify/prepare the student to sit for Alaska State Fire Fighter I certification exam. All students are required to wear a complete set of fire department approved protective clothing (turnout gear) during skills training. (Turnout gear provided)

**Prerequisites:** FIRE A133 with a minimum grade of D.

### **FIRE A137 Firefighter I, Series IV 3 Credits**

Provides fundamental knowledge of fire behavior, fire organizations, types of fire equipment, emergency response services processes, and methods of their use. Includes wildland fire control, classes of fire, vehicle fires, sprinkler systems, salvage, overhaul, fire cause, communications equipment and techniques, fire prevention, and public fire education.

**Special Note:** Successful completion of all four Firefighter I series will qualify/prepare the student to sit for Alaska State Fire Fighter I certification exam. All students are required to wear a complete set of fire department approved protective clothing (turnout gear) during skills training. (Turnout gear provided)

**Prerequisites:** FIRE A135 with a minimum grade of D.

### **FIRE A151 Wildland Fire Control I 3 Credits**

Provides entry level and experienced firefighters with fundamental knowledge of wildland fire organization, fire behavior, air operations, suppression methods, safety, ICS, portable pumps, water use and wildfire chainsaw operations.

**Special Note:** Successful course completion combined with physical fitness requirements may qualify the student for an Interagency Fire Qualification Card (Red Card) with a rating of "Firefighter."

**FIRE A160 Personal Emergency Preparedness 1 Credit**

Introduces the main components of the Incident Command System (ICS).

**Special Note:** Course prepares student to complete the Federal Emergency Management Agency (FEMA) Incident Command System (ICS) 100/700/800 certification exam.

**FIRE A161 Community Emergency Organization Response 2 Credits**

Introduces how the Incident Command System (ICS) responds to a disaster.

**Special Note:** Course prepares a student to complete the Federal Emergency Management Agency (FEMA) Incident Command System (ICS) 200 certification exam.

**Registration Restrictions:** Instructor approval if prerequisite is not met

**Prerequisites:** FIRE A160 with a minimum grade of C.

**FIRE A162 Community Emergency Response Resources 2 Credits**

Introduces how ICS fits into the command structure of the National Incident Management Structure (NIMS). Defines and identifies the primary features of the Unified Command.

**Special Note:** Course prepares students to complete the Federal Emergency Management Agency (FEMA) Incident Command System (ICS) 300 certification exam.

**Registration Restrictions:** Instructor approval if prerequisite is not met

**Prerequisites:** FIRE A161 with a minimum grade of C.

**FIRE A163 Community Response to Complex Incidents 2 Credits**

Introduces community-level complex incident response management.

**Special Note:** Course prepares students to complete the Federal Emergency Management Agency (FEMA) Incident Command System (ICS) 400 certification exam.

**Registration Restrictions:** Instructor approval if prerequisite is not met

**Prerequisites:** FIRE A162 with a minimum grade of C.

**FIRE A170 Occupational Safety and Health for Emergency Services 3 Credits**

Introduces the basic concepts of occupational health and safety as they relate to emergency service organizations. Topics include risk and hazard evaluation and control procedures for emergency service organizations.

**FIRE A190 Selected Topics in Fire and Emergency Services 1-3 Credits**

Covers various topics in fire and emergency services technology. Course content is determined by student or industry needs.

**Special Note:** Course may not be repeated with same title.

**Registration Restrictions:** Departmental approval

**FIRE A201 Principles of Emergency Management 3 Credits**

Examines the history of emergency management. Identifies and determines risk assessments for natural and technological hazards. Identifies and assesses the disciplines of emergency management. Examines international disaster management, emergency management and terrorism, and discusses the future of emergency management.

**Prerequisites:** FIRE A101 with a minimum grade of D.

**FIRE A202 Fire Protection Hydraulics and Water Supply 3 Credits**

Provides a foundation of theoretical knowledge in order to understand the principles of the use of water in fire protection and to apply hydraulic principles to analyze and to solve water supply problems.

**Prerequisites:** FIRE A101 with a minimum grade of C and FIRE A121 with a minimum grade of C.

**FIRE A206 Building Construction Issues Related to Fire Protection 3 Credits**

This course examines building construction and design related to firefighter and life safety.

**Prerequisites:** FIRE A101 with a minimum grade of C and FIRE A121 with a minimum grade of C.

**FIRE A214 Fire Protection Systems 3 Credits**

Provides information relating to the features of design and operation of fire alarm systems, water-based fire suppression systems, special hazard fire suppression systems, water supply for fire protection and portable fire extinguishers.

**Prerequisites:** FIRE A101 with a minimum grade of C and FIRE A105 with a minimum grade of C and FIRE A121 with a minimum grade of C.

**FIRE A220 Legal Aspects of Emergency Services 3 Credits**

Introduces the federal, state and local laws that regulate emergency services including review of national standards, regulations and consensus standards.

**Prerequisites:** WRTG A111 with a minimum grade of C or concurrent enrollment.

**FIRE A221 Principles of Fire and Emergency Services Safety and Survival 3 Credits**

Introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavioral change throughout the emergency services.

**Prerequisites:** FIRE A101 with a minimum grade of C and FIRE A121 with a minimum grade of C.

**FIRE A230 Fire Department Organizational Theory and Behavior 3 Credits**

Exposes the student to fire department organizational theory and behavior. Examines various theories developed to explain and predict employee behavior in an organizational context. Develops analytical thinking capabilities by comparing and contrasting conflicting theories of organizations.

**Prerequisites:** FIRE A101 with a minimum grade of D.

**FIRE A295 Fire and Emergency Services Practicum 3 Credits**

Provides an opportunity to observe, participate and apply firefighting, emergency medical or emergency management skills in a structured and supervised organizational setting.

**Registration Restrictions:** Departmental approval

**Prerequisites:** FIRE A101 with a minimum grade of C and (EMT A110 with a minimum grade of C or EMT A130 with a minimum grade of C or FIRE A121 with a minimum grade of C or FIRE A201 with a minimum grade of C).