

# Fire Science

## Fire Science Degrees and Certificates

- Fire Science

## Fire Science Classes

### FS 106: Basic Fire Science

Through a combination of lecture and hands-on training, students will learn how to perform basic functions of structural firefighting in a safe and effective manner. This course in combination with Intermediate Fire Science (FS 121) will include an embedded certification of IFSAC Firefighter One. Fire Department Sponsorship Required.

**Credits** 10

**Weekly Contact Hours** 10

**Meets Degree Requirements For**  
Restricted Elective

### FS 107: Customer Relations for Fire Service

This course advances the student's skills in maintaining good relations with the public through effective communication and delivering customer service in a sometimes difficult setting. Includes the roles and responsibilities firefighters play in community relations and public information/education. Also includes the firefighter's roles caring for the 'internal' and 'external' customers.

**Credits** 4

**Weekly Contact Hours** 4

**Meets Degree Requirements For**  
Restricted Elective

### FS 110: Pumpers and Water System Hydraulics

Studies of fluid mechanics dealing with the mechanical properties of water at rest and in motion, its application to suppression operations, and fire streams. Includes municipal and rural water supply operations, basic fire pump components, systems and operational skills. Fire Department Sponsorship Required.

**Credits** 4

**Weekly Contact Hours** 4

**Meets Degree Requirements For**  
Restricted Elective

### FS 121: Intermediate Fire Science

Through a combination of lecture and hands-on training, the student will learn how to perform intermediate functions of structural firefighting in a safe and effective manner. This course in combination with Basic Fire Science ([FS 106](#)) will include an embedded certification of IFSAC Firefighter One. Fire Department Sponsorship Required.

**Credits** 10

**Weekly Contact Hours** 10

**Meets Degree Requirements For**  
Restricted Elective

**Prerequisites**

[FS 106](#) and fire department sponsorship

## FS 130: Wildland Firefighting Basics

Provides the new wildland firefighter with basic FFT2 Red Card-qualifying skills to effectively and safely suppress wildfires while under close supervision. Fire Department Sponsorship Required.

**Credits** 4

**Weekly Contact Hours** 4

**Meets Degree Requirements For**

Restricted Elective

## FS 152: Building Construction

Overview of engineering principles by building construction, characteristics of building classifications, life and fire safety devices, fire assemblies, fire loading, fire resistance, and flame spread ratings. Covers the hazards of various methods, techniques, components and materials of building construction. Fire Department Sponsorship Required.

**Credits** 3

**Weekly Contact Hours** 3

**Meets Degree Requirements For**

Restricted Elective

## FS 160: Tactics

Includes the planning, implementation and evaluation of basic fire tactics at the responding officer level. Principal elements include size-up, fire simulation, fire behavior, tactics, strategy, resource requirements and proper allocation of resources. Fire Department Sponsorship Required.

**Credits** 3

**Weekly Contact Hours** 3

**Meets Degree Requirements For**

Restricted Elective

**Prerequisites**

[FS 106](#), [FS 121](#) and fire department sponsorship

## FS 180: Hazardous Materials Operations

Designed to prepare the student in the knowledge of hazardous materials and how it relates to the fire service. This course will include embedded certifications of IFSAC Hazardous Materials Awareness and Operations. Fire Department Sponsorship Required.

**Credits** 3

**Weekly Contact Hours** 3

**Meets Degree Requirements For**

Restricted Elective

## FS 196: Cooperative Work Experience

Designed to provide students with on-the-job practical field experience. One credit for each five hours of work experience per week.

**Credits** 1-5

**Weekly Contact Hours** 25

**Meets Degree Requirements For**

Restricted Elective

## FS 200: Advanced Fire Science

Through a combination of lecture and hands-on training, students will learn how to perform advanced functions of structural firefighting in a safe and effective manner. This course will include an embedded certification of IFSAC Firefighter Two. Fire Department Sponsorship Required.

**Credits** 10

**Weekly Contact Hours** 10

**Meets Degree Requirements For**

Restricted Elective

**Prerequisites**

[FS 106](#), [FS 121](#) and fire department sponsorship

## FS 296: Work Experience

Designed to provide students with on-the-job practical field experience. One credit for each five hours of work experience per week.

**Credits** 1-5

**Weekly Contact Hours** 25

**Meets Degree Requirements For**

Restricted Elective