

# Fire Science | One year Program: Scope & Sequence

## Semester 1

FS101 - Fire Service I  
(16 Weeks)

### Unit 1 (8 Weeks | FSC113)

#### Introduction to Fire Science:

- Fire Service Communications
- Firefighter Safety
- Portable Extinguishers
- Fire Behavior
- Firefighter Survival
- Building Construction | Ropes & Knots
- Search and Rescue
- Water Supply, Fire Attack and Foam Salvage and Overhaul
- Fire Suppression, Alarms, and Suppression Systems
- Forcible Entry, Ladders
- Vehicle Rescue & Extrication
- Firefighter Rehabilitation
- Incident Command
- Response and Size-Up

Professional Skills: 1.A-D, 2.A-C, 3.A-E, 4.A-F5.A-E, 7.A-C, 8.A-I

Academic Standards: AZ.ELA.11-12.W.4,5, 8 & 9,

AZ.ELA.11-12.L.4 & 6, AZ.ELA.11-12.RI.7 & 10,

AZ.MA.6.RP.A.3, AZ.MA.G-GMD.A.3

Work-based Learning: Simulated Lab Experience

Technical Standard: 1.1-10, 2.1-7, 3.1-8, 4.1-5, 6.1-6.7, 8.1-9, 10.3-4,11.1-8

### Unit 2 (8 Weeks | FSC 105)

#### Hazardous Materials First Responder:

- Introduction and Expectations
- **Awareness**
- Regulations, Standards and the Law
- Recognizing and Identifying Hazards
- **Operations**
- Properties and Effects
- Understanding the Hazards
- Estimating Potential Harm and Planning a Response
- Responder Health and Safety
- **Operations Mission-Specific**
- Personal Protective Equipment
- Technical Decontamination
- Mass Decontamination
- Evidence Preservation and Sampling
- Product Control
- Victim Rescue and Recovery
- Response to Illicit Laboratories
- Off-Site Hands-On Drill

Professional Skills: 1.A-D, 2.A-C, 3.A-E, 4.A-F, 5.A-E, 7.A-C, 8.A-I

Academic Standards: AZ.ELA.11-12.W.4,5, 8 & 9,

AZ.ELA.11-12.L.4 & 6, AZ.ELA.11-12.RI.7 & 10

Work-based Learning: Simulated Lab Experience

Technical Standard: 2.1-7, 3.1-8, 9.1-9, 10.1

**Certification: Arizona Center for Fire Fighter Service Excellence-HAZMAT & Semester Final Exam**

## Semester 2

FS102 - Fire Service II  
(17 Weeks)

### Unit 2 (8 Weeks | FSC110)

#### Basic Wildland Firefighter:

- Introduction, Logistics and Overview
- Firefighter Preparedness and Incident Command System
- Resource Types and Orders
- Fire Shelters, Transportation Safety and Hand Tools
- Fire Orders and Watch Outs
- Topographic Influences, Fuels and Weather
- Wildland Fire Behavior and Safety
- Firing Devices and Suppression
- Map Reading and Use of Compass
- Patrolling and Radio Communication
- Mop-Up and Securing the Fire line
- Wildland Urban Interface
- Leadership
- Hands-On Practical Assessment

Professional Skills: 1.A-D, 2.A-C, 3.A-E, 4.A-F5.A-E, 7.A-C, 8.A-I

Academic Standards: AZ.ELA.11-12.W.4,5, 8 & 9,

AZ.ELA.11-12.L.4 & 6, AZ.ELA.11-12.RI.7 & 10,

AZ.MA.6.RP.A.3, AZ.MA.G-GMD.A.3

Work-based Learning: Simulated Lab Experience

Technical Standard: 3.1-8, 4.1-5, 5.1-6, 7.1-11, 8.1-9, 10.2-4, 11.1-8

**Certification: Wildland Firefighter Certification Letter**

### Unit 4 (8 Weeks | FSC282)

#### Volunteerism for Fire Science:

- Class Orientation and History
- Station Etiquette and Dress Code
- National Institute for Occupational Safety and Health (NIOSH) report
- Final Exam Interviews and Critiques

Professional Skills: 1.A-D, 2.A-C, 3.A-E, 4.A-F, 5.A-E, 6.A-C, 7.A-C, 8.A-I, 9.A-C

Academic Standards: AZ.ELA.11-12.W.4,5, 8 & 9,

AZ.ELA.11-12.L.4 & 6, AZ.ELA.11-12.RI.7 & 10

Work-based Learning: Simulated Lab Experience

Technical Standards: 1.1-10

### Unit 5 (1 Week | FSC13)

#### Physical Ability and Stamina:

- Physical skills test

Professional Skills: 1.A-D, 2.A-C, 3.A-E, 4.A-F, 5.A-E

Work-based Learning: Simulated Lab Experience

Technical Standards: 2.1-7

**Certification: International Association of Fire Fighters (AIFF)**

**Candidate Physical Ability Test (CPAT)**

**Semester Final Exam**

**Arizona Department of Education Technical Assessment**

