Fire Science | One-Year Program: Scope & Sequence

Semester 1

FS101 - Fire Service I
(16 Weeks)

Unit 1 (8 Weeks l FSC 106)

Introduction to Fire Protection:

- Public and private fire protection organizations
- Planning a fire service career
- Organizing a municipal fire department
- Characteristics of fire
- Firefighting tactics and strategy

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: 1.1-1.5, 1.7-1.10, 4.1-1.5

Unit 2 (8 Weeks l FSC113)

Introduction to Fire Suppression:

- Fireground and station safety
- Fire department organization
- Modern fire behavior
- Introduction to the SCBA
- Ropes, knots, and hitches
- Fire hydrant operations
- Fire apparatus equipment
- Fire hose and evolutions
- Fire service hand ladders and evolutions
- Power tools
- Forcible entry
- Search and rescue

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: 3.1-3.8, 5.1-5.6, 6.1-6.7, 7.1-7.11, 8.2-8.9, 9.1-9.9, 10.1, 10.2-4, 11.1-11.5, 11.7

Certification: CPR and First Aid Certification

FS102 - Fire Service II
(17 Weeks)

Unit 3 (8 Weeks l 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: 8.1-8.4, 10.2

Certification: Wildland Firefighter Certification Letter

Unit 4 (8 Weeks l FSC101)

Introduction to Fire Selection:

- Application process
- Selection processes for the Fire Services
- Accepted protocol to local fire departments
- Fire Service Culture
- Impact of social media and off duty behaviors
- Resume writing
- Interview Skills
- Writing and reading skills
- Culturally responsive communication
- Mathematical and Mechanical Skills
- Firefighting task development
- Physical Fitness
- Basic education skills for Fire Departments

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: 1.6, 11.8

Semester 2

Unit 5 (1 Week l FSC130)

Fitness and CPAT (FSC130):

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- Physical demands of fire fighting
- Five components of physical fitness
- Principles of exercise
- Cardiopulmonary endurance
- Strength training
- Mental aspects of performance
- Candidate physical ability test (CPAT) events

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 Skills Assessment

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