ARIZONA WESTERN COLLEGE
SYLLABUS

FSC 150 FIRE ACADEMY
Credit Hours: 16 Lec 12, Lab 9

PREREQUISITES:
1. High school diploma or GED.
2. Meet the minimum written test requirements.
3. Minimum age requirement of 18 years.
4. Meet the medical requirements of NFPA 1582.
5. Complete a liability waiver.
6. Meet the minimum physical fitness requirements
7. Permission of the Academy Coordinator or Public Safety Institute Director

COREQUISITE: PER 101 and FSC 112

NOTE: There is an additional fee for this course.

COURSE DESCRIPTION
This course provides the knowledge and practical skills necessary for and entry-level Firefighter I and Firefighter II. Successful completion qualifies the student to sit for the Firefighter I and II certification examination conducted by the Arizona Center of Fire Service Excellence.

1. COURSE GOALS
   - 1.1 Provide the student with an introduction to the AWC fire-training academy.
   - 1.2 Provide the student with an orientation to the history and mission of the fire service.
   - 1.3 Familiarize the student with modern fire department organization systems.
   - 1.4 Familiarize the student with safety factors associated with the fire service.
   - 1.5 Introduce the student to personal protective equipment, it's operation, and care.
   - 1.6 Provide the student with information and skills covering basic aspects of SCBA operation, care, cleaning, and maintenance.
   - 1.7 Familiarize the student with the various types and ratings of commercial fire extinguishers.
   - 1.8 Educate the student in the proper, safe operation of the various fire extinguishers.
   - 1.9 Familiarize the student with safety factors associated with SCBA and extinguishers.
   - 1.10 Provide the student with information and skills covering fire service ropes and knots, their operation, care, cleaning, and maintenance.
   - 1.11 Familiarize the student with the techniques of rescue and extrication in the fire service.
   - 1.12 Provide practical experience in techniques of rescue and extrication.
   - 1.13 Provide the student with information and skills covering fire service hose.
   - 1.14 Familiarize the student with the techniques of fire streams and fire control and use.
   - 1.15 Provide practical experience in techniques of fire control.
   - 1.16 Provide the student with information on the access and use of various water supply sources.
   - 1.17 Provide the student with information on the tools and techniques of forcible entry.
   - 1.18 Provide the student with information on fire service ground ladders, their use, care, and maintenance.
   - 1.19 Provide the student with information on building materials, methods, and features.
   - 1.20 Provide the student with information on the techniques of fire incident ventilation.
   - 1.21 Provide the student with information on fire sprinkler systems.
   - 1.22 Provide the student with practical experience in fire incident ventilation.
   - 1.23 Provide the student with information on the techniques of salvage and overhaul.

1.24 Provide the student with information on fire service hose evolutions.
1.25 Provide the student with practical experience in fire service hose evolutions.
1.26 Provide the student with information concerning fire prevention.
1.27 Provide the student with information concerning fire alarms and fire service communications.
1.28 Provide the student with practical experience in the techniques of rope use and forcible entry.
1.29 Provide the student with information on fire control.
1.30 Provide the student with information on water supply sources and techniques.
1.31 Provide the student with practical experience in fire stream use for fire control.
1.32 Provide the student with information on basic first aid.
1.33 Provide the student with information on the techniques of fire service search and rescue operations.
1.34 Provide practical experience in the skills of an entry level fire fighter.
1.35 Provide the student with information on OSHA blood borne pathogen compliance.
1.36 Provide the student with information on the fire service accountability system.
1.37 Provide the student with practical experience integrating the skills of the entry level fire fighter.
1.38 Evaluate and improve student competency in all aspects of basic fire ground operations in a simulated setting.
1.39 Evaluate and improve student skill and knowledge of rope use and care.
1.40 Provide practical experience and review of water supply techniques.
1.41 Provide practical experience and review of ventilation techniques.
1.42 Provide the student with an introduction to hazardous materials.
1.43 Educate the student in hazardous materials terminology.
1.44 Educate the student in identification of hazardous materials.
1.45 Orient the student to the use of the Emergency Response Guidebook.
1.46 Familiarize the student with the awareness level responder's role in a hazardous materials emergency.
1.47 Familiarize the student with the Operations level responder's role in the hazardous materials emergency.
1.48 Familiarize the student with hazardous materials protective clothing and equipment.
1.49 Educate the student to identify vehicles transporting hazardous materials.
1.50 Familiarize the student with the control zone system.
1.51 Familiarize the student with decontamination procedures.
1.52 Familiarize the student with incident termination procedures.
1.53 Review the basic concepts and knowledge base of the entry level fire fighter.
1.54 Allow testing of all qualified students
1.55 Acclimatize the student to the disciplinary regimen and conduct standards of the fire service.
1.56 Students will gain the knowledge of the components of fire, phases, and types of fires and methods of control.
1.57 Students will gain a more comprehensive understanding of fire department tools and equipment.
1.58 Students will gain a complex understanding of the use of fire attack lines and fire streams in conjunction with water supply lines.
1.59 Students will develop the skills of rescue operations and protective breathing apparatus.
1.60 Students will gain knowledge on the importance of ventilation.
1.61 Students will become aware of the importance of teamwork while on the fire ground.

2. OUTCOMES

Upon satisfactory completion of this course, students will be able to:

Fire Service and Firefighter Safety

2.1 Explain the mission of the fire service.
2.2 Describe how fire departments are organized.
2.3 Describe the various specializations within the fire service.
2.4 Describe fire department SOPs, rules, and regulations that affect a Fire Fighter I.
2.5 Explain the roles and duties of a Fire Fighter I.

2.6 Describe fire and life safety initiatives aimed at reducing firefighter illnesses, injuries, and fatalities.
2.7 Describe the aspects of NFPA 1500 related to firefighter safety and health.
2.8 Describe fire department programs intended to reduce firefighter illnesses, injuries, and fatalities.
2.9 Summarize general guidelines for operating safely at structural fire scenes.
2.10 Summarize safe practices for riding in fire service vehicles and apparatus.
2.11 Explain the use of emergency scene lighting and equipment.
2.12 Explain the importance of personnel accountability systems.
2.13 Summarize general guidelines for operating safely at highway/roadway incidents.
2.14 Skill Sheet 1-1: Mount and dismount an apparatus for incident response.
2.15 Skill Sheet 1-2: Deploy and operate a portable electrical power supply unit.
2.16 Skill Sheet 1-3: Deploy lighting equipment.
2.17 Skill Sheet 1-4: Demonstrate scene management at a roadway incident using traffic and scene control devices.

Communications
2.18 Explain the procedures for receiving nonemergency calls..
2.19 Describe the types of communications systems and equipment used to receive and process emergency calls.
2.20 Explain the procedures for receiving and dispatching emergency calls.
2.21 Describe radio equipment and procedures used for internal fire department communications.
2.22 Skill Sheet 2-1: Handle emergency and nonemergency phone calls.
2.23 Skill Sheet 2-2: Use a portable radio for routine and emergency traffic.

Building Construction
2.24 Differentiate among types of building construction.
2.25 Describe the construction of floors, ceilings, and walls.
2.26 Explain how basements and stairs may impact fire fighting operations.
2.27 Compare the construction of different roof types.
2.28 Describe the construction and operation methods of different types of doors.
2.29 Describe the construction and operation methods of different types of windows.

Fire Dynamics
2.30 Explain the basic principles of fire science.
2.31 Describe how thermal energy impacts fire behavior.
2.32 Explain the function of fuel within the combustion process.
2.33 Explain the function of oxygen within the combustion process.
2.34 Explain the self-sustained chemical reaction involved in flaming combustion.
2.35 Differentiate among the stages of fire development.
2.36 Explain how fire fighting operations can influence fire behavior in a structure.
2.37 Describe how building construction and layout affects fire development.

Firefighter Personal Protective Equipment
2.38 Describe the various types and uses of personal protective equipment (PPE) worn by firefighters.
2.39 Describe the inspection, cleaning, and maintenance of PPE.
2.40 Describe conditions that require the use of respiratory protection equipment.
2.41 Identify SCBA components.
2.42 Describe SCBA limitations.
2.43 Describe the procedures for donning and doffing SCBA.
2.44 Explain the process of inspecting and cleaning SCBA.
2.45 Describe methods of refilling, replacing, and storing SCBA cylinders.
2.46 Describe safety considerations for working in and exiting a hazardous atmosphere while wearing SCBA.
2.47 Don structural PPE.

2.48 Don SCBA.
2.49 Don SCBA while seated.

Portable Fire Extinguishers
2.50 Distinguish among the five classifications of portable fire extinguishers.
2.51 Distinguish among the various types of portable fire extinguishers.
2.52 Describe the process of selecting and using a portable fire extinguisher.
2.53 Extinguish an incipient Class A, B, or C fire with a portable fire extinguisher.

Ropes and Knots
2.54 Differentiate between life safety rope and utility rope.
2.55 Describe the various materials and methods used to construct ropes.
2.56 Describe the procedures for inspecting, cleaning, and maintaining ropes.
2.57 Describe how webbing is used, inspected, maintained, and stored.
2.58 Identify types of knots.
2.59 Describe the procedure for hoisting various tools and equipment.
2.60 Explain how ropes and knots are used during rescues and at other emergencies.
2.61 Inspect, clean, and store rope.
2.62 Tie an overhand knot.
2.63 Tie a clove hitch.
2.64 Tie a clove hitch around an object.
2.65 Tie a figure-eight knot.
2.66 Tie a figure-eight on a bight.
2.67 Tie a figure-eight follow through.
2.68 Tie a water knot.
2.69 Hoist an axe.
2.70 Hoist a pike pole.
2.71 Hoist a roof ladder.
2.72 Hoist a dry hoseline.
2.73 Hoist a power saw.

Ground Ladders
2.74 Identify the parts of a ladder.
2.75 Differentiate among types of ladders.
2.76 Describe the process of cleaning, inspecting, and maintaining a ladder.
2.77 Describe safe practices for using ladders.
2.78 Describe the process of carrying a ladder.
2.79 Describe the proper procedure for placing a ground ladder
2.80 Describe ways to secure a ground ladder.
2.81 Describe methods for raising and lowering a ladder.
2.82 Describe how to safely work from a ladder.
2.83 Describe methods to assist a victim down a ladder.
2.84 Clean, inspect, and maintain a ladder.
2.85 Carry a ladder using the one-firefighter low-shoulder method.
2.86 Carry a ladder using a two-firefighter carry.
2.87 Raise and lower a ladder using a one-firefighter method.
2.88 Raise and lower a ladder using a two-firefighter method.
2.89 Reposition a ladder.
2.90 Leg lock on a ground ladder.
2.91 Deploy a roof ladder on a pitched roof.
2.92 Assist a victim down a ground ladder.

Forcible Entry
2.93 Describe the basic principles of forcible entry.
2.94 Describe forcible entry tools.

2.95 Explain considerations for forcible entry tool safety.
2.96 Explain how to carry forcible entry tools.
2.97 Describe how to clean and maintain forcible entry tools.
2.98 Describe methods of forcing entry through doors.
2.99 Describe methods for forcing entry through windows.
2.100 Describe methods for breaching walls.
2.101 Clean, inspect, and maintain hand tools and equipment.
2.102 Force entry through an inward-swinging door.
2.103 Force entry through an outward-swinging door.
2.104 Force entry through a door lock.
2.105 Force entry through a padlock.
2.106 Force entry through a window.
2.107 Force entry through a wood-framed wall (Type V construction).
2.108 Breach a masonry wall with hand tools.
2.109 Breach a metal wall with a rotary saw.

Structural Search and Rescue
2.110 Explain best practices to ensure firefighter survival during interior operations.
2.111 Describe air-monitoring operations.
2.112 Describe structural search and rescue operations.
2.113 Describe victim removal methods.
2.114 Describe MAYDAY protocols.
2.115 Describe emergency evacuation methods..
2.116 Describe rapid intervention crew equipment and duties.
2.117 Enact the proper procedures for an SCBA air emergency.
2.118 Operate an air-monitoring device.
2.119 Conduct a primary or secondary search.
2.120 Perform the incline drag.
2.121 Perform the extremities lift/carry using the two-rescuer method.
2.122 Perform the webbing drag.
2.123 Transmit a MAYDAY report.
2.124 Follow a hoseline or search line out as a withdrawal procedure.
2.125 Perform reduced profile maneuvers without removal of SCBA using the side technique.
2.126 Breach an interior wall.
2.127 Perform reduced profile maneuvers without removal of SCBA using the SCBA-first technique.
2.128 Disentangle from debris or wires.

Tactical Ventilation
2.129 Explain why tactical ventilation is performed at a structure fire.
2.130 Describe safety considerations related to tactical ventilation.
2.131 Describe ventilation tools and equipment
2.132 Describe horizontal ventilation.
2.133 Describe vertical ventilation.
2.134 Describe considerations related to the ventilation of basements and other special compartments.
2.135 Perform mechanical positive pressure ventilation.
2.136 Perform horizontal hydraulic ventilation.
2.137 Ventilate a flat roof.
2.138 Ventilate a pitched roof.

Fire Hose
2.139 Describe characteristics of fire hose.
2.140 Describe the inspection, care, and maintenance of fire hose.
2.141 Explain methods of rolling hose.
2.142 Couple and uncouple a hose.

2.143 Inspect, clean, and maintain a hose.
2.144 Make a straight hose roll.
2.145 Make a donut hose roll.
2.146 Make a flat hose load.
2.147 Make the accordion hose load.
2.148 Make the preconnected flat hose load.
2.149 Make the triple layer hose load.
2.150 Make the minuteman hose load.

Hose Operations and Hose Streams
2.151 Describe methods of supplying water for fire-fighting operations.
2.152 Describe methods used to deploy fire hose.
2.153 Describe methods of advancing hoselines.
2.154 Differentiate among types of hose streams and nozzles.
2.155 Explain how to operate different types of hoselines, nozzles, and master stream devices.
2.156 Make soft-sleeve and hard-suction hydrant connections.
2.157 Connect and place a hard-suction hose for drafting from a static water source.
2.158 Deploy a portable water tank.
2.159 Make a hydrant connection from a forward lay.
2.160 Make a reverse hose lay.
2.161 Advance a hose load.
2.162 Extend a hoseline.
2.163 Replace a burst hoseline.
2.164 Advance a charged hoseline using the working line drag method.
2.165 Advance a hoseline into a structure.
2.166 Advance a hoseline up or down an interior stairway.
2.167 Connect to a stairway or improvised standpipe and advance an attack hoseline onto a floor.
2.168 demonstrate an annual service test for fire hose.
2.169 describe and demonstrate the operation of fog and solid stream nozzles.
2.170 Advance an uncharged line up a ladder into a window.
2.171 Advance a charged attack line up a ladder into a window.
2.172 Operate a charged attack line from a ladder.
2.173 Operate a smooth bore or fog nozzle.
2.174 Operate a small hoseline using the one-firefighter method.
2.175 Operate a large hoseline for exposure protection using the one-firefighter method.
2.176 Operate a large hoseline using the two-firefighter method.

Fire Suppression
2.177 Explain the science behind fire suppression.
2.178 Describe methods for suppressing structural fires.
2.179 Explain the role of firefighters with regards to supporting fire protection systems during fire suppression.
2.180 Explain the duties of firefighters related to building utilities.
2.181 Describe the process of attacking a vehicle fire.
2.182 Describe the process of attacking fires in exterior Class A materials.
2.183 Describe ground cover fire attack.
2.184 Attack an interior structure fire at ground level using a direct, indirect, or combination attack.
2.185 Attack a structure fire using a transitional attack.
2.186 Attack a structure fire above and below grade level using an interior attack.
2.187 Operate sprinkler system control valves.
2.189 Stop the flow of water from an activated sprinkler.
2.190 Turn off building utilities.
2.191 Attack a passenger vehicle fire.
2.192 Attack a fire in exterior stacked or piled Class A materials.

2.193 Attack a fire in a small unattached structure.
2.194 Extinguish a fire in a trash container.
2.195 Attack a ground cover fire.
2.196 Construct a fire line.

Overhaul, Property Conservation, and Scene Preservation
2.197 Describe overhaul.
2.198 Explain how to conserve property at a fire scene.
2.199 Describe the duties that firefighters must perform to protect and preserve a fire scene.
2.200 Locate and extinguish hidden fires.
2.201 Roll a salvage cover for a one-firefighter spread.
2.202 Spread a rolled salvage cover using a one-firefighter method.
2.203 Fold a salvage cover for a one-firefighter spread.
2.204 Fold a salvage cover for a two-firefighter spread.
2.205 Spread a folded salvage cover using the two-firefighter balloon throw.
2.206 Construct and place a water chute.
2.207 Construct a catchall.
2.208 Construct a water chute and attach it to a catchall.
2.209 Cover building openigns to prevent damage after fire suppression.
2.210 Clean, inspect, and repair a salvage cover.

Building Materials, Structural Collapse, and Efforts of Fire Suppression
2.211 Describe the effects of fire on various building materials.
2.212 Describe factors that contribute to structural collapse.
2.213 Identify indicators of structural instability and collapse.
2.214 Explain considerations to be taken when establishing collapse zones.
2.215 Describe actions that should be taken when structural collapse is imminent.
2.216 Describe building conditions and fire suppression activities that can impact fire spread and structural stability.

Tactical Rescue Support and Vehicle Extrication Operations
2.217 Describe the duties of a Fire Fighter II at a technical rescue incident.
2.218 Describe rescue practices and goals at various types of rescue incidents.
2.219 Identify tools used at technical rescues.
2.220 Identify vehicle construction methods and components.
2.221 Assist in a rescue operation.
2.222 Describe vehicle stabilization operations.
2.223 Describe techniques used to access victims at a vehicle extrication incident.
2.224 Prevent horizontal movement of a wheel-resting passenger vehicle using chocks.
2.225 Stabilize a wheel-resting passenger vehicle using cribbing.
2.226 Lift a wheel-resting passenger vehicle using a jack.
2.227 Remove laminated vehicle glass.
2.228 Remove tempered vehicle glass.
2.229 Open or remove a door with hydraulic tools.
2.230 Remove the roof of a wheel-resting passenger vehicle.
2.231 Displace a dashboard.

Foam Fire Fighting, Liquid Fires, and Gas Fires
2.232 Describe methods used to generate fire fighting foam.
2.233 Identify materials and equipment needed to generate fire fighting foam.
2.234 Describe methods of foam application.
2.235 Describe operations involving liquid and gas fuel fires.
2.236 Place a foam line in service — In-line eductor.
2.237 Extinguish an ignitable liquid fire.

2.238 Control a pressurized flammable gas container fire.

Incident Scene Operations
2.239 Explain the process of initiating incident operations.
2.240 Explain the process of transferring Command.
2.241 Describe the duties of a unit or team leader during fireground operations.
2.242 Explain the use of postincident reports.
2.243 Establish Incident Command and coordinate interior attack of a structure fire.
2.244 Create a postincident report.

Fire origin and Cause Determination
2.245 Identify the roles and responsibilities of firefighters and fire investigators at a fire investigation.
2.246 Explain the process of determining area of origin.
2.247 Explain the process of fire cause determination.
2.248 Describe considerations related to evidence preservation.
2.249 Protect and document evidence of fire origin and cause.

Maintenance and Testing Responsibilities
2.250 Describe equipment maintenance procedures.
2.260 Explain the process of service testing fire hose.
2.261 Clean, inspect, and maintain power tools and equipment.
2.262 Inspect and maintain a portable generator and lighting equipment.
2.263 Service test a fire hose.

Community Risk Reduction
2.264 Explain the importance of fire and life safety programs.
2.265 Describe fire safety surveys for private dwellings.
2.266 Explain the role of a Fire Fighter II with regard to fire and life safety presentations.
2.267 Explain the process of conducting and documenting a preincident survey.
2.268 Conduct a fire and life safety survey in an occupied structure.
2.269 Deliver a fire and life safety presentation.
2.270 Conduct a fire station tour.
2.271 Prepare a preincident planning survey.

3. METHODS OF INSTRUCTION
3.1 Lecture
3.2 Practical skill demonstration
3.3 Group activity
3.4 Live fire training
3.5 Discussions

4. LEARNING ACTIVITIES
4.1 Lectures and audiovisual materials
4.2 Class discussions
4.3 Individual and group activities requiring oral and physical presentation to the class
4.4 Role-playing
4.5 Physical training and teambuilding exercises
4.6 Simulated field exercises.
4.7 Specially designed fire fighting exercises

5. EVALUATION
5.1 Exams
5.2 Assignments

5.3 Participation

6. STUDENT RESPONSIBILITIES

6.1 Under AWC Policy, students are expected to attend every session of class in which they are enrolled.

6.2 Classroom Assignments: Students are responsible for work missed and for completing all work before the next class meeting. Students are responsible for participating in all oral drills and for taking all exams.

6.3 If a student is unable to attend the course or must drop the course for any reason, it will be the responsibility of the student to withdraw from the course. Students who are not attending as of the 45th day of the course may be withdrawn by the instructor. If the student does not withdraw from the course and fails to complete the requirements of the course, the student will receive a failing grade.

6.4 Americans with Disabilities Act Accommodations: Arizona Western College provides academic accommodations to students with disabilities through AccessABILITY Resource Services (ARS). ARS provides reasonable and appropriate accommodations to students who have documented disabilities. It is the responsibility of the student to make the ARS Coordinator aware of the need for accommodations in the classroom prior to the beginning of the semester. Students should follow up with their instructors once the semester begins. To make an appointment call the ARS front desk at (928) 344-7674 or ARS Coordinator at (928) 344-7629, in the College Community Center (3C) building, next to Advising.

6.5 Academic Integrity: Any student participating in acts of academic dishonesty including, but not limited to, copying the work of other students, using unauthorized “crib notes”, plagiarism, stealing tests, or forging an instructor’s signature—will be subject to the procedures and consequences outlined in AWC’s Student Code of Conduct.

6.6 Textbooks and materials: Students are required to bring notebook or looseleaf book, pens, pencils, dictionaries, and purchase textbook required for class.

6.7 Arizona Western College students are expected to attend every class session in which they are enrolled. To comply with Federal Financial Aid regulations (34 CFR 668.21), Arizona Western College (AWC) has established an Attendance Verification process for "No Show" reporting during the first 10 days of each semester.

Students who have enrolled but have never attended class may be issued a “No Show” (NS) grade by the professor or instructor and receive a final grade of “NS” on their official academic record. An NS grade may result in a student losing their federal financial aid.

For online classes, *student attendance in an online class is defined as the following* (FSA Handbook, 2012, 5-90):

- Submitting an academic assignment
- Taking an exam, an interactive tutorial or computer-assisted instruction
- Attending a study group that is assigned by the school
- Participating in an online discussion about academic matters
- Initiating contact with a faculty member to ask a question about the academic subject studied in the course