ARIZONA WESTERN COLLEGE
SYLLABUS

FSC 149 FIRE ACADEMY 2
Credit Hours: 7 Lec 5 Lab 5

PREREQUISITE: FSC 148
NOTE: There is an additional fee for this course.

COURSE DESCRIPTION
Knowledge and practical skills necessary for certification as an entry-level firefighter II. Successful completion qualifies the student to sit for the Firefighter I and II certification examination conducted by the Office of the Arizona State Fire Marshall.

1. COURSE GOALS
   - 1.1 Students will gain the knowledge of the components of fire, phases, and types of fires and methods of control.
   - 1.2 Students will gain a more comprehensive understanding of fire department tools and equipment.
   - 1.3 Students will gain a complex understanding of the use of fire attack lines and fire streams in conjunction with water supply lines.
   - 1.4 This course will continue to expand on the skills of rescue operations and protective breathing apparatus.
   - 1.5 Students will gain knowledge on the importance of ventilation.
   - 1.6 The students will become aware of the importance of teamwork while on the fire ground.
   - 1.7 Provide the student with an introduction to hazardous materials.
   - 1.8 Educate the student in hazardous materials terminology.
   - 1.9 Educate the student in identification of hazardous materials.
   - 1.10 Orient the student to the use of the Emergency Response Guidebook.
   - 1.11 Familiarize the student with hazardous materials protective clothing and equipment.
   - 1.12 Educate the student to identify vehicles transporting hazardous materials.
   - 1.13 Familiarize the student with the control zone system.
   - 1.14 Familiarize the student with decontamination procedures.
   - 1.15 Familiarize the student with incident termination procedures.
   - 1.16 Familiarize the student with the awareness level responder's role in a hazardous materials emergency.
   - 1.17 Familiarize the student with the Operations level responder's role in the hazardous materials emergency.
   - 1.18 Students will become educated with fire prevention and investigation methodology.
   - 1.19 Students will understand the fire departments role in Community Risk Reduction.
   - 1.20 Student will have a thorough understanding of NIMS and the ICS system.
   - 1.21 Increase the students' knowledge of the techniques of rescue and extrication in the fire service.
   - 1.22 Evaluate and improve student competency in all aspects of basic fire ground operations in a simulated setting.
   - 1.23 Allow testing of all qualified students for IFSAC FFI/II.
   - 1.24 Reinforce the disciplinary regimen and conduct standards of the fire service for the student.

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

ALARMS AND COMMUNICATIONS

2.1 Summarize guidelines for radio communications.
2.2 Describe information given in arrival and progress reports.
2.3 Explain the purpose of tactical channels.
2.4 Discuss calls for additional resources and emergency radio traffic.
2.5 Discuss evacuation signals and personnel accountability reports.
2.6 Summarize the information in incident reports.
2.7 Create an incident report.

HOSE

2.8 Describe the characteristics of hose appliances and tools.
2.9 Explain service testing fire hose.
2.10 Discuss test site preparation for service testing fire hose.
2.11 List equipment necessary to service test fire hose.
2.12 Explain the service test procedure.
2.13 Service test fire hose.

FIRE STREAMS

2.14 Describe the suppression characteristics of fire fighting foam.
2.15 Define terms associated with types of foam and the foam-making process.
2.16 Discuss how foam is generated.
2.17 Discuss foam concentrates.
2.18 Describe methods by which foam may be proportioned.
2.19 Discuss foam proportioners.
2.20 Discuss foam delivery devices.
2.21 List reasons for failure to generate foam or for generating poor-quality foam.
2.22 Describe foam application techniques.
2.23 Discuss hazards associated with foam concentrates.
2.24 Place a foam line in service — In-line eductor.

LIVE FIRE TRAINING

2.25 Summarize considerations for hoseline selection.
2.26 Discuss stream selection.
2.27 Discuss suppressing Class B fires.
2.28 Explain why bulk transport vehicle fires are difficult incidents.
2.29 Discuss control of gas utilities.
2.30 Discuss command at structural fires.
2.31 Extinguish an ignitable liquid fire.
2.32 Control a pressurized flammable gas container fire.
2.33 Establish Incident Command and coordinate interior attack of a structure fire.

SALVAGE AND OVERHAUL

2.34 Discuss the roles of firefighters and investigators at investigations.
2.35 Summarize important observations to be made en route, after arriving at the scene, and during fire fighting operations.
2.36 Discuss firefighter conduct and statements at the scene.
2.37 Explain firefighter responsibilities after the fire.
2.38 Explain how legal considerations affect firefighters during operations that may involve incendiary evidence.
2.39 Discuss protecting and preserving evidence.
2.40 Protect evidence of fire cause and origin.

SEARCH AND RESCUE

2.41 Discuss maintaining emergency power and lighting equipment.

2.42 Describe characteristics of hydraulic rescue tools.
2.43 Describe characteristics of nonhydraulic rescue tools.
2.44 Discuss cribbing for rescue operations.
2.45 Describe the characteristics of pneumatic tools.
2.46 Discuss lifting/pulling tools used in rescue operations.
2.47 Explain the size-up process for a vehicle incident.
2.48 Describe items to look for when assessing the need for extrication activities.
2.49 Discuss stabilizing vehicles involved in a vehicle incident.
2.50 List the three methods of gaining access to victims in vehicles.
2.51 List the most common hazards associated with wrecked passenger vehicles.
2.52 Explain the dangers associated with Supplemental Restraint Systems (SRS) and Side-Impact Protection Systems (SIPS).
2.53 Describe basic actions taken for patient management.
2.54 Describe patient removal.
2.56 Describe laminated safety glass and tempered glass.
2.57 Discuss removing glass from vehicles.
2.58 Explain considerations when removing vehicle roof and doors.
2.59 Describe common patterns of structural collapse.
2.60 Describe the most common means of locating hidden victims in a structural collapse.
2.61 Describe structural collapse hazards.
2.62 Describe shoring.
2.63 Discuss technical rescue incidents.
2.64 Service and maintain portable power plants and lighting equipment.
2.65 Extricate a victim trapped in a motor vehicle.
2.66 Assist rescue teams.
2.67 demonstrate the following evolutions, which may be required to extricate an entrapped victim of a motor vehicle accident by displacing:
(a) vehicle roof,
(b) vehicle door,
(c) vehicle windshield,
(d) steering wheel,
(e) steering column and dashboard.
2.68 Raise and lower a person a maximum of 20 vertical ft (6 m) with a rope rescue system.

WATER SUPPLY
2.69 List sources of water supply.
2.70 Describe the three methods of moving water in a system.
2.71 Discuss water treatment facilities.
2.72 Explain the operation of water storage and distribution systems.
2.73 Distinguish among the pressure measurements relevant to water supply.
2.74 Use a pitot tube.

SPRINKLER SYSTEMS
2.75 Describe types of heat detectors.
2.76 Describe types of smoke detectors/alarms.
2.77 Explain how flame detectors and fire-gas detectors operate.
2.78 Discuss combination detectors and indicating devices.
2.79 Describe types of automatic alarm systems.
2.80 Discuss supervising fire alarm systems and auxiliary services.
2.81 Describe the operation of an automatic fire sprinkler system.
2.82 Discuss water supply for sprinkler systems.
2.83 Describe major applications of sprinkler systems.

PREVENTION

2.84 Describe a survey and an inspection.
2.85 Discuss the fire prevention activities of reviewing community data and code enforcement.
2.86 Summarize common fuel and heat-source hazards.
2.87 Discuss common fire hazards and why they increase the likelihood of a fire.
2.88 Summarize special fire hazards in commercial, manufacturing, and public-assembly occupancies.
2.89 Summarize target hazard properties.
2.90 Discuss personal requirements and equipment requirements for conducting inspections.
2.91 Discuss scheduling and conducting fire inspections.
2.92 Discuss the benefits of pre-incident planning surveys.
2.93 Explain how a pre-incident planning survey is conducted.
2.94 Explain the purpose of a residential fire safety survey.
2.95 Summarize guidelines for conducting residential fire safety surveys.
2.96 Summarize common causes of residential fires.
2.97 Summarize items to address when conducting residential fire safety surveys.
2.98 Discuss general considerations for the preparation and delivery of fire and life safety information.
2.99 Discuss presenting fire and life safety education for adults.
2.100 Discuss presenting fire and life-safety information for young children.
2.101 Discuss fire and life-safety presentation topics.
2.102 Discuss fire station tours.
2.103 Prepare a pre-incident survey.
2.104 Conduct a residential fire safety survey.
2.105 Make a fire and life safety presentation.
2.106 Conduct a fire station tour.

BUILDING CONSTRUCTION

2.107 Describe the effects of fire and suppression activities on common building materials.
2.108 Describe items to be observed during size-up of a building.
2.109 Describe dangerous building conditions created by a fire or by actions taken while trying to extinguish a fire.
2.110 Identify indicators of building collapse.
2.111 Describe actions to take when imminent building collapse is suspected.
2.112 Describe building conditions that create additional risk in construction, renovation, and demolition.

HAZARDOUS MATERIALS: FIRST RESPONDER AWARENESS AND OPERATIONS

2.113 meet the requirements defined in NFPA 472, Standard for Professional Competence of Responders to Hazardous Materials Incidents, Section 2-2, First Responder Awareness Level.
2.114 meet the requirements defined in NFPA 472, Standard for Professional Competence of Hazardous Materials Incidents, Chapter 3, First Responder Operational Level.

3. METHODS OF INSTRUCTION

3.1 Lecture and class discussion
3.2 Practical skill demonstration
3.3 Textbook and supplemental instructional technology
3.4 Group activity
3.5 Live fire training

4. LEARNING ACTIVITIES

4.1 Lectures and instructional technology
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 firefighting 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