

Fire Science Course Outline – 386 Hours

| Major Units of Instruction Industry Sector and Pathways alignment Public Services Sector and Protective Services Pathway (C) | Key Assignments / (1 per quarter) &Common Assessments | Anchor Standards | Pathway Standards (Key Assignments) | Common Core Standards |
|--|---|---------------------|--|--|
| 1. Fire Service History, Organization, Job Opportunities 3.0 all A. Fire service history B. Fire department organization C. National, state and local fire organizations D. Careers in the fire service E. Introduction to fire investigations | Responsible Individuals Understand the cultural aspects of the fire service. Understanding fire dept. organizations. 1. Oral Presentations 2. Application & Resume 3. Portfolio | A 2.0, A2.2, A2.3 | | 2.1 Reading Applications, 2.3&Comp. 2.3 *Applies to other units-Note at bottom of outline. |
| 2. Chemistry of Fire Extinguishing Agents A. Scientific background (fire chemistry) B. Extinguishing agents C8.1 | Responsible Individuals Technological Producers * Discussion * Tests * Lecture * Demonstration * Group Activities * Projects | A5.1 | | |
| 3. Fire Suppression Equipment And Techniques C9.0, C8.0 A. Motor fire apparatus B. Fire department tools and equipment C. Fire extinguishers | Interpersonal Learners Technological Producers Problem Solvers * Discussion * Tests * Lecture * Demonstration * Group Activities * Projects | A6.0 A6.3 | | |
| 4. Hose Evolutions And Hydraulics C9.0, A. Basic hose evolutions B. Advanced hose evolutions C. Above ground hose evolutions D. Hydraulics - basic - "rule of thumb" E. Pumping and pump operations | Interpersonal Learners Technological Producers Problem Solvers * Discussion * Tests * Lecture * Demonstration * Group Activities * Projects | A6.1 | | |

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| 5. Fire Department Ground Ladders C9.0 A. Ladder terms, definitions and construction B. Straight ladder evolutions C. Extension ladder evolutions D. Hose lines on ladders E. Aerial ladder techniques F. Ladder rescue techniques | Responsible Individuals Interpersonal Learners Effective Communicators Technological Producers Problem Solvers * Discussion * Tests * Lecture * Demonstration * Group Activities * Projects | A6.7 A6.10 | | |
| 6. Ropes, Knots And Hoisting Equipment C9.0 | * Discussion * Tests * Lecture * Demonstration * Group Activities * Projects | A6.2 | | |
| 7. Breathing Apparatus C9.0 | * Discussion * Tests * Lecture * Demonstration * Group Activities * Projects | A6.3 | | |
| 8. Fire Suppression Equipment and Techniques C9.0 A. Fire department tools and equipment B. Forcible entry techniques C. Salvage practices D. Ventilation practices E. Overhaul practices | * Discussion * Tests * Lecture * Demonstration * Group Activities * Projects | A6.1 | | |
| 9. First Aid and Rescue Practices C3.0 A. Structural and rescue practices B. Vehicle rescue practices C. Personal safety | * Discussion * Tests * Lecture * Demonstration * Group Activities * Projects | A6.5 A6.7 A6.8 | | |

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| 10. Oral Boards Examination/Test Taking | * Discussion * Lecture * Demonstration * Group Activities | A1.0 A1.2 A1.4 | | 2.0 communication 2.4 Listen/Speaking 2.2 *Applies to other units-Note at bottom of outline. |
| 11. Review and Testing | * Discussion * Tests * Lecture | A1.2 | | 2.0 communication 2.4 Listen/Speaking 2.2 |
| 12. Cardio-Pulmonary Resuscitation C3.1 | * Discussion * Tests * Lecture * Demonstration * Group Activities * Projects | A6.0 | | |
| 13. Wild Lands Fire Protection and Techniques C9.0 C9.1, C5.3 | * Discussion * Tests * Lecture | A2.7 A4.5 A4.6 | | |
| 14. Fire Protection System C9.0 | * Discussion * Lecture | A5.0, A5,1 | | |
| 15. Fire Prevention C9.0 A. Introduction to fire prevention B. Codes and ordinances C. Inspection practices D. California fire incident reporting system | * Discussion * Tests * Lecture * Demonstration * Group Activities * Projects | A5.0 | | |
| 16. Municipal Fire Defense C9.0 A. Municipal water supplies B. ISO grading schedule | * Discussion * Tests * Lecture * Demonstration * Group Activities * Projects | A6.0 | | |
| 17. Building Construction A. Common construction practices B. Codes and ordinances C. Field trip to new construction site | * Discussion * Tests * Lecture * Demonstration | | | |

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| 18. Fire Station Maintenance Procedures C3.2 | * Discussion * Lecture | A6.5 | | |
| 19. Automotive Fire Apparatus Preventative Maintenance C3.2 | * Discussion * Lecture | A6.6 | | |
| 20. Fire Department Tools and Equipment Maintenance | * Discussion * Lecture * Demonstration | | | |
| 21. Specialty Training Review C9.0 A. Hose evolutions B. Ground ladder evolutions C. Rope, knots, breathing apparatus & forcible entry D. Salvage, overhaul & ventilation | * Discussion * Tests * Lecture * Demonstration * Group Activities * Projects | 6.0 | | |
| 22. Company Inspection Procedures & Pre-fire Planning C5.1 | * Discussion * Lecture * Demonstration * Group Activities * Projects | A5.0 | | |
| 23. Fire Hydrant Testing and Maintenance C3.2 | * Discussion * Lecture | A5.1 | | |
| 24. Fire Suppression Activities C3.2 | * Discussion * Lecture * Demonstration * Group Activities * Projects | A5.1 | | |
| 25. Fire Department Records and Reports C7.0, C8.0 | * Discussion * Lecture | A4.0, 5.0 | | Writing 2.6& 2.3 (1.1, 1.2, 1.3) |
| 26. Hazardous Materials C3.3 | * Discussion * Lecture | A6.8 | | |
| 27. Fire Prevention Activities C3.2 | * Discussion * Lecture | A5.1 | | |
| 28. Fire Alarm Station Procedures C3.2, C9.1 | * Discussion Lecture | A5.1, A6.2 | | |
| 29. Fire Department Pumper Testing C3.2 | * Discussion * Lecture | A5.1 | | |
| 30. Flammable Liquid Fire Control C3.3 | * Discussion * Lecture | A6.8 | | |
| 31. Breathing Apparatus/Water Safety C3.2 | * Discussion * Lecture | A6.8 | | |

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| 32. Fire Hose Maintenance C3.2 | * Discussion * Lecture * Demonstration * Group Activities * Projects | A5.1 | | |
| 33. Fire Department Physical Agility C6.0 | * Discussion * Lecture | A3.0 | | |
| 34. Advanced Auto Extrication Procedures | * Discussion * Lecture * Demonstration * Group Activities * Projects | | | |
| 35. Fire Department Employment Testing 3.0 | * Discussion * Lecture | A1.2 | | |
| 42. Essential Employability Skills/Career Preparation Standards A. Understand how personal skill development affect employability (positive attitude, honesty, self-confidence, time management) 8.3 B. Understand principles of effective interpersonal skills (group dynamics, conflict resolution, negotiations) 9.0 C. Understand the importance of good academic skills, critical thinking and problem-solving in the workplace 1.0, 5.0 D. Understand principles of effective communication 2.0 E. Understand occupational safety issues and observe all safety rules 6.0 F. Understand career awareness, paths and strategies for obtaining employment 3.0 G. Understand and adapt to changing technology 4.0 H. Understand and prepare for employment (resume, job application, job interview, portfolio development) Job Search Skills 3.6 | * Discussion * Lecture * Demonstration * Group Activities * Projects | A1.0, A1.1, A1.3, A1.8 A1.11 | | Language Arts(8) R 1.3, 2.6 W 1.3, 2.5 LC 1.4,1.5,1.6 LS1.2, 1.3, 1.7 (9/10) R2.1, 2.3, 2.6, W2.5:LC1.2 Math(7) NS1.2, 1.3, 1.7 MR 1.1, 1.3, 2.1, 2.7, 2.8, 3.1 CAHSEE Lang. Arts R 8.2.1 (9/10) R 2.1,2.3;W2.5 Math (7) NS 1.2, 1.3, 1.7 MR 1.1, 2.1, 3.1 |
| Total Hours (386) | | | | |

*Almost All Units include (2.1 Reading Applications, 2.3 & Comp. 2.3) to one degree or another. Especially appropriate in "History and Organization" but any activity that is read/researched first might be said to reinforce these academic standards

Similarly, the standards listed specifically under Oral Boards and Reviews/Testing, (2.0 Communication – 2.4 Listen/Speak – 2.2) could apply whenever this is made a part of a given unit/activity.