

FIRE-166-FIRE ORIGIN AND CAUSE 2 CREDITS

SYLLABUS

CATALOG DESCRIPTION

This entry level course is designed to give the student an understanding of basic recognition of suspicious fire behavior and conditions. The course is designed to teach students the basic techniques of determining the origin and cause of the fire and preservation of potential evidence. This is the entry level training needed to progress into Fire Investigator. Subjects include Fire Behavior, Building Construction, Building safety, Scene Search, Arson and Scene Indicators, Arson Determination, Evidence detection and preservation, and fatal Fires. This course addresses NFPA 1001 and 1021. Proof of a background check is required to enroll. Permission of the instructor is required to enroll.

Prerequisites: Firefighter 1, Proof of a Background Check

Semester Offered: Spring, Summer

Common Student Learning Outcomes

Upon successful completion of San Juan College programs and degrees, the student will demonstrate competency in...

BROAD AND SPECIALIZED LEARNING

Students will actively and independently acquire, apply, and adapt skills and knowledge with an awareness of global contexts.

CRITICAL THINKING

Students will think analytically and creatively to explore ideas, make connections, draw conclusions and solve problems.

CULTURAL AND CIVIC ENGAGEMENT

Students will act purposefully, reflectively, and ethically in diverse and complex environments.

EFFECTIVE COMMUNICATION

Students will exchange ideas and information with clarity in multiple contexts.

INFORMATION LITERACY

Students will be able to recognize when information is needed and have the ability to locate, evaluate, and use it effectively.

INTEGRATING TECHNOLOGIES

Students will demonstrate fluency in the application and use of technologies in multiple contexts.

Student work from this class may be randomly selected and used anonymously for assessment of course, program, and/or institutional learning outcomes. For more information, please refer to the Dean of the appropriate School.

Course Learning Outcomes

Upon successful completion of the course, the student will be able to...

1. Describe the roles and responsibilities of emergency response personnel and other entities when investigating fires and explosions. Additionally, the student shall explain legal considerations relating to fire investigation.
2. Describe the Incident Command System and site safety assessment, as well as identify various types of safety equipment used at a fire or explosion scene. The student shall also be able to identify hazardous materials, universal precautions for working near biohazards, and scene safety hazards.
3. Explain the science of fire in relationship to its behavior, chemistry, and physics and the reasons fire science are critical to fire origin and cause investigations.
4. Explain the reasons for establishing a scene perimeter and discuss the need to protect evidence at the fire scene.
5. Identify potential evidence and the factors used to identify such evidence at a fire scene. The student will have the ability to differentiate the types of evidence, to describe the proper methods of preserving and protecting different types of evidence, and understand why maintaining the chain of custody is paramount for evidence to be admitted into court as evidence. The student will be able to describe proper methods of collecting and documenting evidence.
6. Describe the benefits of using scientific methodology to determine the origin and cause of a fire. The student shall also be able to recognize various fire patterns and burning characteristics, as well as summarize how to conduct interviews and develop and test hypotheses for origin and cause investigations.
7. Assist first responding investigators in determining fire cause and classification.