



FIRE-522: PRINCIPLES OF FIRE AND EMERGENCY SERVICES SAFETY AND SURVIVAL (FORMERLY FIRE-122)

Effective Term

Fall 2024

BOT Approval Date

01/11/2024

Discipline

FIRE - Fire Technology

Course Number

522

Course Title

Principles of Fire and Emergency Services Safety and Survival (formerly FIRE-122)

Short Title

Fire & ES Safety/Surv

Credit Status (CB 04)

D - Credit - Degree applicable

Units

Lecture Units

3.00

Total Units

3.00

Hours

Lecture Contact Hours

48-54

Out of Class Hours Lecture

96-108

Total Contact Hours

48 - 54

Total Out of Class Hours

96 - 108

Total Student Learning Hours

144 - 162

Distance Education

Yes

Distance Education

Distance Education Type

Both Fully Online and Hybrid Online

Fully Online Delivery Requirements:

a. Students must be notified via the college schedule of classes and the syllabus for the class if proctored tests are required for this course



b. Any planned face-to-face meetings, such as an orientation or study session, must be optional

c. The MSJC curriculum committee requires the use of accessible, asynchronous discussion as a component of every fully online course

Are you using publisher content?

No

Regular Substantive Interaction

Instructor-to-student, student-to-student, and student-to-content contact shall be distributed in a manner that will ensure regular substantive interaction (RSI) is maintained not only weekly but also for the duration of the course. Instructor interactions should be equivalent in time, quality and consistency to the engagement students would receive in a face-to-face course—for example, through announcements, discussion participation, personalized feedback, video messages, or other instructional communications. Instructors are expected to be responsive to student inquiries within a 24-72 hour time frame excluding holidays. RSI will be maintained through a variety of methods:

- Orientation - Students must be oriented to the online and face-to-face portions at the start of the course.
- Announcements - Announcements using the course management system must be posted at least weekly to keep students current on course events, due dates, materials, etc.
- Discussion Forums - Content-related discussion forums within the designated CMS will include appropriate instructor participation and will be initiated and maintained, with timely feedback provided. Instructors are required to monitor the discussions and related activities to provide guidance and direction. Open-ended discussion boards may be used to further learning and interaction.
- MSJC Communication – Instructor will use MSJC-administered communication tools (such as email or the designated CMS communication tools) to regularly communicate with and provide ease of access to students.
- Timely Feedback - Timely feedback on student work will be provided by the instructor, which may include comments and/or rubrics, within the Grades area of the designated CMS.
- Scheduled Meetings – Hybrid and synchronous courses will meet at regularly scheduled times. ADA Compliance - All course interactions and content must be designed with accessibility in mind and meet ADA requirements.

Catalog Description

This course introduces the basic principles and history related to the National Firefighter Life Safety Initiatives focusing on the need for cultural and behavioral change throughout the emergency services. Field trips may occur when available. (formerly FIRE-122)

Codes

TOP Code (CB 03)

2133.00* - *Fire Technology

CIP Code

43.0203 - Fire Science/Fire-fighting.

Repeatability Code

No

Grading Option

Letter grade OR P/NP

Learning Objectives

Learning Objectives

Learning Objective

1. Evaluate and describe the need for cultural and behavioral change within the emergency services relating to safety, incorporating leadership, supervision, accountability and personal responsibility.
2. Distinguish the need for enhancements for personal and organizational accountability for health and safety.
3. Evaluate circumstances that might constitute an unsafe act.
4. Explain the concept of empowering all emergency services personnel to stop unsafe acts.
5. Validate the need for national training standards as they correlate to professional development inclusive of qualifications, certifications and re-certifications.
6. Evaluate the need for annual medical evaluations and the establishment of physical fitness criteria for emergency services personnel throughout their careers.
7. Illustrate how technological advancements can produce higher levels of emergency services safety and survival.
8. Describe how obtaining grants can support safety and survival initiatives.

9. Formulate an awareness of how adopting standardized policies for responding to emergency scenes can minimize near-misses, injuries and deaths.
10. Explain how the increase in violent incidents impact safety for emergency services personnel when responding to emergency scenes.
11. Assess the need for counseling and psychological support for emergency services personnel, their families, as well as, identify access to local resources and services.
12. Validate the importance of public education as a critical component of life safety programs.

Learning Outcome Information

Course Learning Outcomes

Learning Outcome
1. Students will illustrate how technological advancements produce higher levels of emergency safety and survival.
2. Students will explain concepts of risk management and mitigation as it pertains to emergency services, including strategic and tactical decision making.
3. Students will develop a vision and plan to deal with a threat to firefighters health.
4. Students will incorporate diverse perspectives in the accountability and responsibility in firefighting leadership.

Program Learning Outcomes

Learning Outcome
The student will be able to define the need for cultural and behavioral change within emergency services, related to safety. Identify support services for emergency services personnel

Institutional Learning Outcomes

Critical Thinking: The student will analyze problems, gather and synthesize relevant information, evaluate ideas, information, and evaluate alternative points of view to create, innovate and implement effective solutions.

Scientific Awareness: The student will apply the scientific method of inquiry to assess potential solutions for real-life challenges by employing science-based knowledge and methodologies in daily life.

Social Awareness: The student will recognize and analyze the interconnectedness of global, national, and local concerns, analyzing cultural, political, social, and environmental issues from multiple perspectives and appreciate similarities and differences among cultures.

Personal
and Professional Responsibility
Civic

Content

Course Lecture Content

1. Culture of Fire and Emergency Services and Survival
 - a. Fire and Emergency Service Culture
 - b. Personnel Diversity within the Fire Service and the Community Served
 - c. Accountability, Responsibility, Leadership
 - d. Intrinsic and Extrinsic Firefighters Risk Factors
 - e. Candidate/New Hire Testing
 - i. Performance Standards
 - ii. Candidate Physical Ability
 - f. Line of Duty
 - i. Deaths
 - ii. Diesel Exhausts
 - iii. PTSD
2. Historical Factors in Fire and Emergency Services and Survival
 - a. Prevention History
 - b. Origins of Firefighting
 - i. Influence of Industrialization and Fire Service Training
 - ii. Creation of Paid Fire Departments
 - iii. Creation of Trade Analysis for Fire Service Occupation

- iv. Role of the Wingspread Conference
 - v. Role of IAFF in Creating, Recruiting and Training Standards
- 3. Operational Components in Fire and Emergency Services and Survival
 - a. Organizational Accountability
 - i. Safety
 - ii. Situational Awareness
 - iii. Training
 - b. Fire Departments Emergency Medical Services
 - i. Emergency Vehicle Response
 - 1. Crashes
 - 2. Policies and Procedures
 - 3. National Seat Belt Pledge
 - 4. Railroad Crossings
 - 5. Traffic Control Devices
 - 6. Excessive Speed
 - ii. The Safe Response Meaningful Safety Policy
 - 1. Incident Investigation Collision
 - 2. Avoidance Driving through Intersections
 - 3. Backing Operations
 - iii. Prevention's Role in Safety and Survival
- 4. State and Federal Regulations in Fire and Emergency Services and Survival
 - a. Technological Advancement
 - b. Legislation Change in Fire Service\
 - c. Role of NFPA 1500
 - d. Occupational and Behavioral Health (OSHA)
 - e. US Fire Administration Role of Personal Risk Management
 - i. Components and Tools
 - ii. US Army Five-Step Risk Assessment Process
 - f. The Legal Consequences of Unsafe Behavior
 - g. NFPA 1250
 - h. Changes in Standards to Ensure Firefighter Safety
- 5. State and National Associations in Fire and Emergency Services and Survival
 - a. United States Role of the IAFF
 - i. Creating Recruiting and Training Standards
 - ii. Credentialing
 - iii. Accreditation
 - iv. Gaining Recognition of the Professional Qualification Standards
 - v. Fire Department Participation in NFIRS
 - vi. Underwriters Laboratories
 - vii. RAND Institute
- 6. Higher Education and Fire and Emergency Services and Survival
 - a. Colleges and Universities Training
 - b. Fire and Emergency Services Higher Education (FESHE)
 - c. Emergency Medical Services (EMS)
 - d. Hazardous Materials
 - e. Fire Prevention Qualification Systems
 - i. Human Resource Decisions
 - f. Continuing Education Units (CEUs)
 - g. Firefighter's Assessments
 - i. Medical
 - ii. Fitness
 - iii. Wellbeing
- 7. Technology and Fire and Emergency Services and Survival
 - a. Global Positioning Systems
 - b. Geographical Information Systems
 - c. Thermal Imaging Cameras



- d. Accountability Systems Self-Contained Breathing Apparatus (SCBA)
- e. Fire Behavior and Future Trends

Methods of Instruction

Method

Activity

Integration

Research and analyze the relationship between the types of fuel the fire is burning. Analyze both structure and wildland fires regarding potential life threat hazards.

DE Adaptations for MOI

Zoom lectures with open discussion. Discussion boards posted for questions for students who are unable to attend live zoom lecture. This will be facilitated through CMS or video conference software. Lectures can be delivered synchronously through video conferencing software or asynchronously through the CMS. Presentation, closed captions videos, or links to external articles may be incorporated to support lectures and made available to students within the CMS, and will meet accessibility guidelines.

Method

Lecture

Integration

Lecture presentation and classroom discussion on 16 Firefighter life safety initiatives. Examples focusing on the need for cultural and behavioral change # 1, Empowerment #4, Response Policies # 11, and Psychological Support for firefighters in emergency services.

DE Adaptations for MOI

Zoom lectures that are live, and will be recorded for students who can not attend live lecture. Discussion boards created for questions. Students will participate in class in class discussions in asynchronous discussion using accessible video conferencing software. Lectures can be delivered synchronously through video conferencing software or asynchronously through the CMS. Presentation, closed captions videos, or links to external articles may be incorporated to support lectures and made available to students within the CMS, and will meet accessibility guidelines.

Method

Homework

Integration

Students will be responsible for going over power-point slides, reading the chapters in the text book and reviewing and other forms of media.

DE Adaptations for MOI

All Power-points will be uploaded on to Canvas for student use. Zoom lectures with open discussion. Discussion boards posted for questions for students who are unable to attend live zoom lecture. This will be facilitated through CMS or video conference software. Lectures can be delivered synchronously through video conferencing software or asynchronously through the CMS. Presentation, closed captions videos, or links to external articles may be incorporated to support lectures and made available to students within the CMS, and will meet accessibility guidelines.

Methods of Evaluation

Method

Class Participation

Integration

Students will be encouraged to participate in class discussion and will be evaluated on the involvement of discussion boards.



DE Adaptations for MOE

Zoom lectures with open discussion. Zoom lectures that are live, and will be recorded for students who can not attend live lecture. Discussion boards created for questions. Students will participate in class through zoom lectures and in breakout rooms. discussions can be recorded for asynchronous discussion using accessible video conferencing software. Lectures can be delivered synchronously through video conferencing software or asynchronously through the CMS. Presentation, closed captions videos, or links to external articles may be incorporated to support lectures and made available to students within the CMS, and will meet accessibility guidelines. Discussion boards posted for questions for students who are unable to attend live zoom lecture. This will be facilitated through CMS or video conference software. Presentation, closed captions videos, or links to external articles may be incorporated to support lectures and made available to students within the CMS, and will meet accessibility guidelines. Exams and/ or tests administered fully online. They will be evaluated through CMS. The format may include multiple choice, short answer, essay or other formats. Exams/ tests will be evaluated based on the demonstration of identification, and understanding of the applications of major topics and described in the course content. This in alignment with the learning objectives. All exams/ tests must meet accessibility guidelines. Instructor feedback will be provided via CMS, with in 2 weeks.

Method

Exams/Tests

Integration

Written examinations will formatively cover the major terminology and subject and align with the learning objectives.

DE Adaptations for MOE

Exams and/ or tests administered fully online. They will be evaluated through CMS. The format may include multiple choice, short answer, essay or other formats. Exams/ tests will be evaluated based on the demonstration of identification, and understanding of the applications of major topics and described in the course content. All exams/ tests must meet accessibility guidelines. Instructor feedback will be provided via CMS, with in 2 weeks. Exams will evaluate student comprehension of class material. Exams will be administered in an equitable fashion in true or false, multiple choice, fill-in-the-blanks, and short answers questions. This providing an equitable opportunity for all students. Exams will be submitted to the online grading system within the CMS. Exams will be graded, be evaluated based on accuracy and completeness and students will receive feedback within 2 weeks, via the grade book, chat, or other accessible conferencing tools

Method

Homework

Integration

Using a case study/report of an actual incident, the student will be evaluated on their ability to recognize unsafe situations, identify alternatives to correct the unsafe situation and determine if a cultural or behavioral change will prevent the unsafe situation from occurring in the future.

DE Adaptations for MOE

Homework assignments will be assigned periodically to ensure understanding of course content. Homework assignments will cover course content. Homework assignments will cover (example writing a research paper the 16 Firefighter Life Safety Initiatives) among other course concepts. Periodic homework assignments will evaluate students on their understanding of course content. Homework will be evaluated based on accuracy and completeness. Instructor will provide feedback with in 72 hours for all assignments turned into the CMS and will meet accessibility requirements.

Method

Papers

Integration

Students will be evaluated on their ability to analyze an investigative report on a firefighter fatality to determine how and why the fatality occurred and make recommendations on how to prevent future fatalities through a report.

DE Adaptations for MOE

Written papers will administered fully online. They will be evaluated through CMS. The format may include multiple choice, short answer, essay or other formats. Exams/ tests will be evaluated based on the demonstration of identification, and understanding of the



applications of major topics and described in the course content. All papers must meet accessibility guidelines. Instructor feedback will be provided via CMS, with in 2 weeks.

Assignments

Assignment Type

Writing

In-class and/or outside of class

In-class

Formative or Summative

Formative

Assignment

In a group setting evaluate and orally present different unsafe conditions and/or acts encountered and/or performed by firefighters on structure fires. Analyze an investigative report involving a firefighter fatality incident. Explain how and why the fatality occurred. Make recommendations on how to prevent future fatalities from occurring in a similar situation and demonstrate concepts through a report.

How assignment will be adapted in online format

Discussions and e-chat will be through group functions in the CMS. Instructor will monitor discussions and provide on-going feedback to facilitate the discussion.

Assignment Type

Reading

In-class and/or outside of class

In-class

Formative or Summative

Summative

Assignment

Each chapter in the text is to be read. Written examinations will formatively cover the major terminology and subject and align with the learning objectives for each chapter in the text.

How assignment will be adapted in online format

Exams and/ or tests administered fully online. They will be evaluated through CMS. The format may include multiple choice, short answer, essay or other formats. Exams/ tests will be evaluated based on the demonstration of identification, and understanding of the applications of major topics and described in the course content. All exams/ tests must meet accessibility guidelines. Instructor feedback will be provided via CMS, with in 2 weeks.

Assignment Type

Writing

In-class and/or outside of class

In-class

Formative or Summative

Summative

Assignment

Lecture/ self research on what changes are in process regarding the fire service for gender, race and sexuality. Write a 3-5 page paper what changes have occurred in the fire service over the past 20 years. Structural change at the station, and HQ level. Changes that



have began regarding dorm room, bathrooms, uniform policies. This to include all firefighters concerning there sexuality. Training policies that have been enhanced regarding subjects regarding different forms of harassment.

How assignment will be adapted in online format

Course material, including assignments instructions, supplemental resources, website resources, website links etc., available to students through the CMS. and will provided feedback through the grade book function, messaging or form of confidential communication. Any material for students and communication must meet accessibility guidelines

Assignment Type

Reading

In-class and/or outside of class

Outside of class

Formative or Summative

Formative

Assignment

Read the article "A Survey on Robotic Technologies for Forest Firefighting: Applying Drone Swarms to Improve Firefighters' Efficiency and Safety." Appl. Sci. 2021, 11(1). Reflect on the recommendations and compare the State and Federal regulations and need for legislation change to fire safety. Submit a two-page paper in class or upload to the CMS assignment in Canvas.

How assignment will be adapted in online format

The article will be available in the CMS for the students to view and read. Students will submit their responses in a two-page paper to the assignment in the CMS in Canvas.

Course Materials

Textbooks

Travis M. Ford (2017). Fire and Emergency Services Safety and Survival 2nd Edition Pearson Education, Inc.. ISBN: 13:978-0-13-432333-6

Class Size Information

Class Size

40

Class Size Category

A - Lecture/discussion 40

Diversity and Inclusion

Explain how diversity and inclusion(e.g., gender, culture/race, sexuality, etc.) is infused into the course.

The class involves students of all genders and races and encourages class participation from all students. The students will conduct interviews of full-time firefighters of all different races and genders as part of the students research. This course will show how cultural and behavioral change has occurred in the fire serve over the past few years. What changes are in process regarding the fire service for gender, race and sexuality. Structural change at the station, and HQ level has began regarding dorm room, bathrooms, uniform policies. This to include all firefighters concerning there sexuality. Training policies have been enhanced regarding subjects regarding different forms of harassment.

Describe how assignments, instruction, evaluation, course content, and interactions are contextualized for diverse learners promoting an equitable course.

Students have equal opportunities to all learning resources as well as 1-on-1 capabilities via ZOOM, with the professor. Video and other forms of media are utilized to ensure success in the area of DEI Zoom lectures that are live, and will be recorded for students who can not attend live lecture. Discussion boards created for questions. Students will participate in class in class discussions in asynchronous discussion using accessible video conferencing software. All Power-points will be uploaded on to Canvas for student use. Zoom lectures with open discussion. Discussion boards posted for questions for students who are unable to attend live zoom

lecture. This will be facilitated through CMS or video conference software. Exams and/ or tests administered fully online. They will be evaluated through CMS. The format may include multiple choice, short answer, essay or other formats. Exams/ tests will be evaluated based on the demonstration of identification, and understanding of the applications of major topics and described in the course content. This in alignment with the learning objectives. All exams/ tests must meet accessibility guidelines. Instructor feedback will be provided via CMS, with in 2 weeks.

Interactions

Explain how the course will incorporate student-to-student interaction.

All Power-points will be uploaded on to Canvas for student use. Zoom lectures with open discussion. Breakout room will be created for student-to-student interaction. Discussion boards posted for questions for students who are unable to attend live zoom lecture. This will be facilitated through CMS or video conference software.

Explain how the course will incorporate instructor-to-student interaction.

Zoom lectures with open discussion. Breakout room will be created for Instructor-to-student interaction. Zoom meeting will be created for students who need individual instruction. Exams and/ or tests administered fully online. They will be evaluated through CMS. The format may include multiple choice, short answer, essay or other formats. Exams/ tests will be evaluated based on the demonstration of identification, and understanding of the applications of major topics and described in the course content. This in alignment with the learning objectives. All exams/ tests must meet accessibility guidelines. Instructor feedback will be provided via CMS, with in 2 weeks. Students will have time after class zoom to ask questions they need help with.

Explain how the course will incorporate student-to-content interaction.

Zoom lectures that are live, and will be recorded for students who can not attend live lecture. Discussion boards created for questions. Students will participate in class in class discussions in asynchronous discussion using accessible video conferencing software. Exams and/ or tests administered fully online. They will be evaluated through CMS. The format may include multiple choice, short answer, essay or other formats. Exams/ tests will be evaluated based on the demonstration of identification, and understanding of the applications of major topics and described in the course content. This in alignment with the learning objectives. All exams/ tests must meet accessibility guidelines. Instructor feedback will be provided via CMS, with in 2 weeks.

Explain how the course will incorporate student-to-self interaction (metacognitive).

Each chapter in the text is to be read. Written examinations will formatively cover the major terminology and subject and align with the learning objectives for each chapter in the text. exams and/ or tests administered fully online. They will be evaluated through CMS. The format may include multiple choice, short answer, essay or other formats. Exams/ tests will be evaluated based on the demonstration of identification, and understanding of the applications of major topics and described in the course content. This in alignment with the learning objectives. All exams/ tests must meet accessibility guidelines. Instructor feedback will be provided via CMS, with in 2 weeks.

Key: 1602