



FIRE-502: FUNDAMENTALS OF FIRE PREVENTION (FORMERLY FIRE-102)

Effective Term

Fall 2026

BOT Approval Date

12/11/2025

Discipline

FIRE - Fire Technology

Course Number

502

Course Title

Fundamentals of Fire Prevention (formerly FIRE-102)

Short Title

Fundamentals/Fire Prevention

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.

Additional Regular Substantive Interaction

The course will meet asynchronously for the fully online version using the CMS to engage with all course materials and complete assignments. Students may be required to create accessible videos with closed captions of [themselves performing or doing something involving course content. Hybrid sections will meet synchronously once a week via teleconferencing meetings as an Online Real-Time course, or as a hybrid course, they will meet fully face-to-face once a week with the rest fully online via the CMS. Students may be required to create accessible videos with closed captions engaging with course content and upload them into the CMS for feedback and to ensure proper understanding and performance of course content, this will be at the discretion of the instructor. Some assignments may be included in a live synchronous meeting via teleconferencing. Students will receive feedback from faculty regarding assignments performed live in synchronous meetings. Testing may occur using the CMS, or in a live classroom for hybrid courses.

Catalog Description

This course provides fundamental knowledge relating to the field of fire prevention. Topics include history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use and application of fire codes and standards, plans review, fire inspections, fire and life safety education, and fire investigation. (formerly FIRE-102)

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

Minimum Qualifications

Minimum Qualifications	And/Or
Fire Technology	End

Learning Objectives

Learning Objectives

Learning Objective
1. Define key concepts of fire prevention, including fire behavior, fire safety codes, and regulations.
2. Identify common fire hazards in various environments, such as residential, commercial, and industrial settings.
3. Examine various fire prevention methods, including fire protection systems, inspections, and fire drills, and learn how to apply them effectively.
4. Review local, state, and national fire safety codes and regulations, including NFPA standards, and understand their role in fire prevention.
5. Develop skills in conducting fire risk assessments and implementing appropriate risk management strategies to minimize potential fire hazards
6. Learn effective communication strategies for educating the public on fire prevention, safety practices, and emergency preparedness.
7. Examine the role of community involvement in fire prevention efforts, and how public outreach can enhance overall safety.
8. Develop an understanding of the basics of fire investigation to help determine fire causes and contribute to future prevention measures.
9. Learn how fire prevention efforts are integrated with emergency response plans and how to collaborate with fire departments and emergency responders.
10. Discuss the ethical and legal responsibilities of fire prevention professionals in relation to public safety and fire protection laws.
11. Understand how DEI factors influence fire prevention efforts by evaluating the effectiveness of fire prevention strategies in diverse communities.
12. Conduct a fire risk assessment for a specific community or neighborhood, considering factors such as cultural norms, socioeconomic status, language barriers, and accessibility needs. The goal is to identify potential fire hazards and recommend tailored fire prevention strategies that address the unique needs of the community.
13. Review an existing fire prevention policy or safety code (e.g., NFPA standards) and critically analyze it through a DEI lens. They will evaluate whether the policy adequately addresses the needs of diverse communities and propose revisions or improvements to ensure inclusivity and equity.

Learning Outcome Information

Course Learning Outcomes

Learning Outcome
1. Students will describe the education and experience needed to obtain a job in the fire service
2. Students will identify inherently dangerous situation while performing fire life safety inspections
3. Students will illustrate how a fire prevention is structured and functions as an organization
4. Students will analyze the current fire service practices for DEI and evaluate the success or failure of the current trends.

Content

Course Lecture Content

1: Overview of Fire Prevention

1. History and Evolution of Fire Prevention
2. The Role of Fire Prevention in Public Safety
3. Introduction to Fire Prevention Laws and Codes
4. Importance of Fire Prevention Programs in Various Settings (residential, commercial, industrial)
5. DEI Focus: Discuss how fire prevention has historically been shaped by socio-economic, cultural, and racial factors, and how modern fire prevention efforts seek to be inclusive of all communities.
6. Understand the role of fire prevention in public safety and how it has evolved to consider diverse communities.
7. Discuss how fire prevention laws and codes address (or fail to address) the needs of marginalized communities.
8. Recognize the importance of inclusive fire prevention strategies.

2: Fire Behavior and Fire Chemistry

1. The Fire Tetrahedron: Heat, Oxygen, Fuel, and Chemical Chain Reaction
2. Understanding Fire Behavior: Ignition, Growth, Flashover, and Extinguishment
3. Combustion and the Chemistry of Fire
4. DEI Focus: Examine how fire behavior and risks may differ in diverse communities due to factors like building construction types, urban planning, and socioeconomic conditions.
5. Understand fire behavior and the chemical process of fire.
6. Analyze how community characteristics (e.g., socio-economic status, building codes) influence fire risk and prevention efforts.

3: Fire Prevention Principles and Strategies

1. Prevention vs. Protection: Understanding the Difference
2. Fire Prevention Principles: Education, Regulation, and Engineering
3. Fire Prevention Methods: Hazard Identification, Risk Assessment, and Mitigation
4. DEI Focus: Discuss how different communities may have varying levels of access to fire prevention resources and education. Explore strategies for reaching underserved and marginalized populations.
5. Explore strategies used in fire prevention and their impact on diverse communities.
6. Evaluate how fire prevention methods can be tailored to address the unique needs of different populations, including low-income, elderly, and non-English-speaking groups.

4: Fire Safety Codes and Regulations

1. Overview of National Fire Protection Association (NFPA) Codes and Standards
2. Local, State, and National Fire Safety Codes and Regulations
3. Fire Code Enforcement and Inspections
4. The Importance of Compliance with Fire Codes
5. DEI Focus: Examine how fire safety codes and regulations may disproportionately affect vulnerable populations and how policies can be adjusted to ensure equity in fire prevention.
6. Review fire safety codes and standards, including the role of DEI considerations in code enforcement.
7. Discuss how policies can be inclusive and accessible to all communities, particularly marginalized groups.

5: Fire Detection and Alarm Systems

1. Types of Fire Detection Systems (Smoke, Heat, and Flame Detectors)
2. Alarm System Components and Installation Guidelines
3. Fire Alarm System Testing and Maintenance
4. Role of Early Detection in Fire Prevention
5. DEI Focus: Address the importance of ensuring that fire alarm systems are accessible to everyone, including individuals with disabilities, and consider the affordability of these systems in low-income communities.
6. Understand how fire detection systems work and their role in protecting diverse populations.
7. Discuss the accessibility of fire alarm systems for people with disabilities and low-income families.

6: Fire Suppression and Protection Systems

1. Fire Suppression Systems: Sprinklers, Standpipe Systems, and Extinguishers
2. Fire Protection Systems in High-Risk Environments
3. Fire Safety in Commercial, Industrial, and Residential Buildings
4. Evaluating Fire Protection Systems for Effectiveness
5. DEI Focus: Explore the disparities in fire protection resources between different communities, especially underserved and low-income areas, and discuss how to bridge these gaps.
6. Understand various fire suppression systems and their roles in diverse settings.
7. Evaluate how fire protection systems can be made more accessible and equitable for all communities.

7: Human Behavior and Fire Prevention

1. The Role of Human Behavior in Fire Prevention
2. Risk Perception and Fire Safety Education
3. Human Factors in Fire Evacuation and Prevention
4. Public Awareness Campaigns and Their Effectiveness
5. DEI Focus: Discuss how cultural, language, and socio-economic factors influence fire prevention education and how to tailor programs for diverse groups, including immigrants and non-English speakers.
6. Explore the role of human behavior in fire prevention efforts.
7. Learn how to create fire prevention education campaigns that are culturally sensitive and inclusive.

8: Fire Prevention in the Community

1. Community Risk Reduction (CRR) and Fire Prevention Strategies
 2. Targeting Vulnerable Populations: Children, Seniors, and Low-Income Families
 3. Fire Prevention Outreach Programs and Initiatives
 4. Partnerships with Local Organizations and the Public
 5. DEI Focus: Discuss the role of community outreach programs in bridging the fire prevention gap between different demographic groups, including marginalized communities.
 6. Understand how fire prevention strategies can be tailored to meet the unique needs of diverse communities.
 7. Explore effective outreach programs that cater to marginalized and underserved populations.
- 9: Investigating Fires and Determining Cause and Origin
1. The Fire Investigation Process: Scene Preservation, Evidence Collection, and Analysis
 2. Methods for Determining the Cause and Origin of Fires
 3. Role of Fire Investigators in Fire Prevention
 4. Legal and Ethical Considerations in Fire Investigation
 5. DEI Focus: Address the importance of considering DEI factors during fire investigations, such as how cultural norms and socio-economic factors might affect the interpretation of evidence or cause determination.
 6. Learn about the fire investigation process and its role in fire prevention.
 7. Understand the ethical responsibilities of fire investigators when working with diverse communities.
- 10: Emerging Trends and Challenges in Fire Prevention
1. The Impact of Climate Change on Fire Prevention Strategies
 2. New Technologies in Fire Prevention (e.g., drones, AI in fire detection)
 3. Addressing Fire Prevention in High-Risk Occupancies (e.g., hospitals, schools, industrial facilities)
 4. The Future of Fire Prevention: Challenges and Innovations
 5. DEI Focus: Examine how emerging fire prevention technologies and climate change will impact vulnerable and marginalized communities and discuss how to ensure equitable
 6. Understand how climate change and new technologies affect fire prevention practices.
 7. Explore how to ensure that innovations in fire prevention benefit all communities equally, particularly those at higher risk.

Methods of Instruction

Method

Activity

Integration

Hands-on activities such as research assignments are utilized to analyze the relationship between fire prevention efforts and the resulting reduction of life and property loss due to fires.

DE Adaptations for MOI

Students will work in small groups in breakout rooms within accessible video conferencing software to research, collaborate, brainstorm, work on a project, or discuss future activities. All audio and visual aids will meet ADA requirements.

Method

Discussion

Integration

In-class and/or online group discussion will be used to enhance and clarify evaluate student understanding of concepts pertaining to fire life safety code application.

DE Adaptations for MOI

Students will participate in online lectures and discussions with interaction between students and the instructor. This interaction will take place in both a online discussion setting and online video conferencing that meet ADA visual and audio requirements.

Method

Homework



Integration

Out of class reading assignments and summaries of that reading will enhance student comprehension of basic material and help meet all of the course objectives.

DE Adaptations for MOI

Homework assignments are assigned through CMS and will allow students to submit all coursework electronically and receive feedback from the instructor. Homework and instructions for each assignment will have a recorded lesson that students may look at whenever they need review.

Method

Lecture

Integration

Lecture presentations using PowerPoint, and other media presentations, define and describe the function and purpose of the fire prevention bureau and the standard professional qualifications for fire prevention jobs. Lecture will help present the basic concepts such as fire prevention and community risk reduction. The lectures will also cover current trends in the fire services, including hiring practices and DEI impact on the fire service and the community.

DE Adaptations for MOI

Online lessons will be presented by the instructor and supplemented by videos and demonstrations. All lectures will be recorded for online viewing if the student is not able to attend the scheduled lecture. All online presentations will be recorded and be accessible with closed captions.

The lectures will also cover current trends in the fire services, including hiring practices and DEI impact on the fire service and the community.

Method

Observation and Demonstration

Integration

Slide decks, and other forms of media, may be used to demonstrate and illustrate fire inspection practices and procedures and the application of laws, rules, regulations and codes relating to fire inspections.

DE Adaptations for MOI

Online lessons will include videos, live recorded events from real-life fire inspections, fire protection system activation, and public education. All online presentations will be recorded and be accessible with closed captions.

Methods of Evaluation

Method

Class Participation

Integration

Students will participate in simulated fire inspection. Students will be evaluated on problem solving, inspection procedures and completeness.

DE Adaptations for MOE

Students will participate in simulated fire investigations. Students will be evaluated on problem solving, investigation procedures and completeness.

Method

Research Projects



Integration

A final project will be given to evaluate content understanding of terminology, knowledge of subject matter, and ability to contrast and evaluate types of fire prevention situations.

DE Adaptations for MOE

Students will submit research project via CMS and graded per the course syllabus and rubric for each assignment. The instructor will have all student assignments graded within one week of submission.

Method

Homework

Integration

Students will be evaluated on their completion of a variety of written assignments demonstrating an ability to accurately sketch a fire scene to document evidence, analyze different state and local laws pertaining to the crime of arson, and recognize and analyze arson fire indicators.

DE Adaptations for MOE

Evaluation feedback of paper/essays will be provided for students in a timely manner using gradebook, live stream or video conferencing software, inbox messaging or other functions available through the CMS. All papers/essays, submissions and feedback must meet accessibility guidelines. All instructor/student communication must conform to accessibility and confidentiality guidelines. Instructors will provide feedback to individual students based on the results of posted assignment within a week of completion.

Method

Exams/Tests

Integration

Quizzes and a final examination will be administered throughout the CMS to assess students' understanding of key concepts and topics. Quizzes will be integrated into the course content, ensuring that students are actively engaged with the material and can demonstrate their understanding of the concepts.

DE Adaptations for MOE

Exams and/or tests administered fully online will be administered and evaluated through CMS. The format may include multiple choice, short answer, essay or another format. Exams/tests will be evaluated based on the demonstration of identification, understanding and application of major topics as described in course content in alignment with Learning Objectives. Evaluation feedback of paper/essays will be provided for students in a timely manner using gradebook, live stream or video conferencing software, inbox messaging or other functions available through the CMS. All papers/essays, submissions and feedback must meet accessibility guidelines. All instructor/student communication must conform to accessibility and confidentiality guidelines. Instructors will provide feedback to individual students based on the results of posted assignment within a week of completion.

Assignments

Assignment Type

Reading

In-class and/or outside of class

Outside of class

Formative or Summative

Summative

Assignment

Reading Assignment – Chapter 1: The Historical and Philosophical Basis for Fire Prevention
From Introduction to Fire Prevention, 8th Edition
ISBN: 9780133843842



Course: Introduction to Fire Prevention

Focus: Preparing Fire Service Personnel for Fire Prevention Duties

Objective:

To explore the historical evolution of fire prevention and understand the underlying philosophy that supports its critical role in the modern fire service.

Reading:

Chapter 1: The Historical and Philosophical Basis for Fire Prevention

Assignment Tasks:

Reading Summary (1 page max):

In your own words, summarize the key historical events that shaped the development of fire prevention practices in the United States. Include how major fire incidents influenced changes in laws, codes, and public awareness.

Short Answer Questions:

- What are the core philosophical reasons the fire service must prioritize fire prevention?
- How has the mission of the fire service shifted over time in relation to fire prevention?
- Describe one historical fire that led to a significant change in fire prevention practices or legislation.

Application Reflection (Half page):

Consider your current or future role in the fire service. How can an understanding of fire prevention history and philosophy improve how you approach your duties today?

How assignment will be adapted in online format

Read assignments or posts during class and discuss them as a group. Each chapter will have a reading assignment that will be performed in class and then discussed as a group. Students will read and evaluate posts in groups via CMS online video conferencing break-out rooms and then come together to discuss the solution in the larger group.

Each chapter will have a reading assignment that will be performed during the scheduled online class session and then discussed collaboratively.

Students will read and evaluate posts in groups via CMS online video conferencing break-out rooms and then come together to discuss the solution in the larger group.

Using the course's online learning platform and integrated video conferencing tools, students will be placed into breakout rooms to read the assignment and evaluate prompts or case studies as a team. After group discussion, all students will reconvene in the main session to share insights, compare interpretations, and participate in a guided, instructor-led discussion with the entire class.

Assignment Type

Writing

In-class and/or outside of class

Outside of class

Formative or Summative

Formative

Assignment

Research Project Assignment

Course: Fundamentals of Fire Prevention

Project Title: Fire Prevention in Practice: Analyzing Real-World Applications and Emerging Trends

Project Overview:

This research project challenges students to explore a specific area of fire prevention in depth. Using both historical context and current practices, students will analyze how fire prevention strategies are developed, implemented, and enforced. The goal is to connect theoretical knowledge from the course with practical, real-world fire prevention efforts.



Project Objectives:

Demonstrate a comprehensive understanding of a fire prevention topic

Evaluate the effectiveness of prevention strategies through case studies or data

Identify legal, educational, or operational challenges associated with implementation

Present forward-thinking ideas or improvements for future prevention efforts

Research Topics (Choose One or Propose Your Own):

The evolution and impact of a specific fire code (e.g., NFPA 1, California Fire Code)

A case study analysis of a major fire caused by code violations or lack of prevention

Fire prevention in public schools: inspections, drills, and educational outreach

The role of fire prevention in high-risk occupancies (e.g., hospitals, high-rise buildings, wildland-urban interface)

Fire department public education programs: measuring effectiveness and engagement

The inspector's role: balancing code enforcement with community relationships

Innovations in fire prevention: emerging technologies and their potential impacts

Project Requirements:

Length: 4–6 pages (not including title page or references)

Sources: Minimum of 4 credible sources (at least 1 peer-reviewed or industry publication)

Format:

APA or MLA formatting

Title page

In-text citations and reference page

Section headers recommended (Introduction, Background, Analysis, Conclusion, etc.)

Deliverables:

Written Report: Due Date

Optional Presentation (Extra Credit): 5–7 minute in-class presentation or slideshow

Grading Criteria (100 points):

Content Depth & Accuracy – 30 pts

Research Quality & Use of Sources – 20 pts

Organization & Clarity – 20 pts

Application to Fire Prevention Principles – 20 pts

Formatting & Grammar – 10 pts

How assignment will be adapted in online format

Read chapters assigned within the book and complete assignments that correlate to the appropriate chapter.



Each chapter will have at least one assignment that will be submitted to demonstrate understanding of the subject.

The assignments will be submitted every week via CMS.

These can include discussion boards, multiple-choice quizzes, and short answer questions.

The instructor will give feedback and grades to the students, within 48 hours of CMS submissions.

Assignment Type

Other

In-class and/or outside of class

In-class

Formative or Summative

Summative

Assignment

DEI & Fire Prevention: Inspection Case Study Analysis

Assignment Overview:

In this assignment, you will review and analyze case studies or scenarios that illustrate how Diversity, Equity, and Inclusion (DEI) considerations impact fire prevention and life safety inspections. These cases explore how factors such as cultural background, language barriers, socioeconomic status, racial bias, or community trust may influence how fire complaints are received, how violations are identified or interpreted, and how code enforcement decisions are made.

Learning Objectives:

By completing this assignment, you will be able to:

Identify DEI-related issues that may arise during fire inspections.

Analyze how social, economic, cultural, and racial factors influence fire prevention outcomes.

Reflect on the importance of equitable code enforcement practices.

Develop recommendations to improve fairness, inclusiveness, and cultural competence in fire prevention work.

Instructions:

Access & Review the Case Studies:

Download or open the provided case study scenarios in the CMS. Read each scenario carefully, paying special attention to the DEI-related dynamics influencing the inspection process, decision-making, or community interaction.

Write a Report (2–3 pages):

Respond to the following prompts in your report:

Identify and describe the key DEI factors presented in the case(s).

Discuss how these factors could influence the inspection outcome, including communication, code interpretation, or enforcement actions.

Reflect on what challenges inspectors might face in these situations and how bias (implicit or systemic) might play a role.

Recommend specific actions, policy considerations, or training that could support more inclusive and equitable fire inspection practices.



How assignment will be adapted in online format

This online assignment aims to encourage students to explore the role of Diversity, Equity, and Inclusion (DEI) in fire inspections.

Students will critically analyze how cultural, social, and demographic factors can influence fire inspections and outcomes.

Each chapter will have at least one assignment that will be submitted to demonstrate understanding of the subject.

The assignments will be submitted every week via CMS.

These can include discussion boards, multiple-choice quizzes, and short answer questions.

The instructor will give feedback and grades to the students, within 48 hours of CMS submissions.

Course Materials

Textbooks

Robertson J. C. (2014). Introduction to Fire Prevention 8th Prentice Hall. ISBN: 9780133843842

IFSTA. (2023) Fire Inspection and Code Enforcement, 9th Edition. ISBN: 978-0-87939-685-5

Class Size Information

Class Size

40

Class Size Category

A - Lecture/discussion 40

Diversity and Inclusion

Course Design and Materials: Course will incorporate diverse perspectives, authors, and examples that reflect a variety of cultures, identities, and lived experiences. Instructional materials will be reviewed regularly to ensure representation, inclusivity, and alignment with equity-minded practices across disciplines.

Inclusive Learning Environment: Instructors will establish classroom norms and policies that promote respect, civil discourse, and belonging in both online and face-to-face classes. Clear expectations for communication and engagement will support a learning space where all students feel valued and heard.

Accessible Instruction: Course content will be delivered using accessible design. Materials will follow accessibility guidelines within the CMS, including captioned media, readable document formats, and multiple means of engagement to support diverse learning.

Equitable Teaching Practices: Instructors will use transparent and grading criteria, varied assessment methods, and timely feedback to promote fairness and student success. Opportunities for revision, reflection, and multiple demonstrations of learning may be incorporated when appropriate to the discipline.

Culturally Responsive Pedagogies: Instructional strategies will encourage critical thinking about diverse perspectives and systems of power relevant to the course content. Faculty will foster opportunities for students to connect course material to real-world contexts.

Ongoing Reflection and Improvement: Faculty will engage in continuous professional development related to IDEAA principles and reflect on course practices using metacognition to identify opportunities for increased equity, inclusion, and accessibility.

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

The Fundamentals of Fire Prevention course embraces diversity and inclusion by incorporating inclusive language, diverse examples, and case studies representing individuals from various genders, cultures, races, and backgrounds in the fire service industry. Collaborative learning activities promote interaction among students with diverse backgrounds, fostering an inclusive and supportive environment. Assessment methods focus on evaluating skills and knowledge, ensuring fairness and equity. The course emphasizes respect, empathy, and open-mindedness, creating a safe and welcoming classroom environment. By infusing diversity and inclusion

principles, the course prepares students with technical skills and the ability to work effectively in a diverse workforce, contributing to a more inclusive and tolerant fire service.

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

In the Fundamentals of Fire Prevention, a commitment to equity is evident through contextualized assignments, inclusive instruction, appropriate evaluation methods, diverse course content, and inclusive interactions. Online lessons offer flexibility, accommodating various learning styles and abilities. In-person instruction incorporates varied techniques to engage learners through visual aids, demonstrations, and multimedia resources. Evaluation methods are industry-based, transparent, and unbiased, providing equal opportunities for success. Course content represents diverse perspectives and experiences. Online discussions foster a respectful and inclusive environment where all voices are valued. By embracing these practices, the course creates an equitable learning experience, recognizing and supporting all learners' diverse needs and strengths.

Interactions

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

Accessible video conferencing software meetings and other projects will require student-to-student interaction. Students will interact with other students in work groups via video conferencing software and also via discussion boards on CMS.

Within a classroom setting, students will discuss current events in the fire service, including advancements in fire prevention strategies, fire codes, and public education efforts. Students will also give feedback to other students on in-class projects and assignments, such as risk assessments, fire prevention plans, and fire protection system evaluations.

This interactive approach will enhance collaborative learning and ensure a deeper understanding of the fundamentals of fire prevention and fire protection equipment and systems in both theoretical and practical applications.

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

Instructor-led video conferencing sessions, as well as one-on-one meetings, will foster direct interaction between the instructor and students. In both group and individual settings, the instructor will engage with students to ensure they fully understand the material.

During class discussions, the instructor will ask open-ended questions to encourage critical thinking and facilitate deeper understanding. These questions will prompt students to reflect on the material and share their insights, ensuring they are actively engaging with the content and grasping key concepts related to fire prevention and fire protection equipment and systems.

For example, the instructor may ask:

"How do you think diverse perspectives could influence fire investigation outcomes?"

"What challenges might fire departments face in implementing DEI practices, and how can they overcome them?"

"What role does public education play in fire prevention, and how can fire departments improve outreach efforts?"

"How do building codes and fire prevention regulations impact fire protection system design?"

This approach will help gauge student comprehension and promote meaningful classroom interaction in the study of fundamentals of fire prevention and fire protection equipment and systems.

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

The student will analyze concepts learned within the class, conduct real-life interviews, and write a term paper that will demonstrate mastery of the topic related to fire prevention and fire protection equipment and systems.

There are video interactions embedded into the course that each student will participate in and answer questions that directly relate to fire prevention strategies, fire protection systems, and safety regulations.

The instructor provides real-life videos and pictures from actual fire incidents, including fire prevention failures, fire suppression system activations, and post-incident evaluations. These materials will allow for discussion with students, both online via the discussion board in CMS and within a classroom setting.

This approach will enhance student comprehension by connecting theoretical knowledge to real-world applications in fire prevention and fire protection equipment and systems.

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

The course will also focus on teaching students effective study strategies, building confidence through active participation, providing constructive feedback to peers, and engaging in self-reflection. One key component is an assignment where students will evaluate their own performance and grade one of their own assignments, justifying their grading decisions based on their effort and work completed in relation to fire prevention strategies, risk assessments, and fire protection system applications.

Students will be evaluated on their participation in class discussions, both in group settings and one-on-one interactions, where active engagement and critical thinking are encouraged. The evaluation will also consider their completion of assignments, including the self-grading assignment, where students reflect on their efforts, assess their own progress, and provide rationale for their grades based on their understanding of fire prevention principles, fire safety codes, and system implementation.

In addition, peer feedback will be part of the evaluation process, encouraging students to critically engage with each other's work and provide thoughtful, constructive input on topics such as fire risk reduction strategies, public education efforts, and fire protection system effectiveness. Overall, the evaluation will assess students' ability to reflect on their learning, apply new fire prevention concepts, and demonstrate improvement throughout the course.

Key: 1584