

SAFM-534
Safety Management
Establishing and Managing Fire Services
Fire Safety Management
Fall 2019

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Phone: (304) 826-0100
Office Hours: Wednesday 4pm-5pm or by appointment (via phone)

Textbooks:

Fire Safety Management Handbook - 3rd Edition (2014)
ISBN: 9781482221220, Publisher- CRC Press

Fire Inspection and Code Enforcement- 8th Edition (2016)
ISBN: 9780879396053, Publisher- Fire Protection Publications, Oklahoma State University

2015 Life Safety Code- Read only (Free on-line) NFPA.org
2015 Fire Code- Read only (Free on-line) NFPA.org

COURSE DESCRIPTION:

A 3-hour required course with a detailed analysis of fire services, usually provided under safety manager jurisdiction, with special attention to legal compliance, organizational structure, services rendered, training needs, and management techniques.

COURSE FORMAT:

This course has been re-designed for a classroom based schedule to include: lectures, field visits, guest speakers, case studies, code based scenarios, and a final project. Two textbooks will be used in addition to the National Fire Protection Association (NFPA) *National Fire Codes*. Free on-line fire code references will also be used to complete individual projects. The Fall 2019 delivery will include the required traditional course goals, objectives, and assessments in the form of a mid-term and final exam. Students should expect to spend extended time completing the required readings, individual research topics, and other provided information. The class will decide if group projects will be modified to personal projects using a management submission format. Successful completion of this course will prepare the student for all required course tracts (comprehensive, thesis, etc). As with all other Safety Management required courses, this delivery places the student into a management learning role. Students must think and act as new managers, and have a fundamental understanding of basic management techniques, theories, and philosophies. *This is a required graduate course that is more demanding and time consuming compared to an elective course. Please approach the course with that in mind.*

COURSE OBJECTIVES:

To assure upon completion of the course, the student will be able to analyze a comprehensive fire service program, usually provided under safety management jurisdiction, with special attention to legal compliance, organizational structure, services rendered, training needs and management techniques.

1. To be able to conduct the management of a fire prevention and abatement program.
2. To describe legal bases for establishing fire service operations (NFPA & IBC) and fire safety

organizations and their management.

3. To evaluate effectiveness of fire prevention, detection, control and emergency systems.
4. To recommend qualifications, training and education of personnel in planning and use of fire service systems.
5. To describe hazard communications and hazardous materials.
6. To describe components of fire service communications and dispatching.
7. Evaluation of fire prevention and inspection programs
8. Identify and apply the characteristics of fire behavior and chemistry
9. Identify and review basic building construction types and features

Assessments to Course Objectives:

1. Analyze standards for fire prevention and protection thru various textbooks and code editions
2. Testing of core subjects through testing and written assignments.
3. Individual projects based on knowledge of the legal bases, techniques, and codes promulgated by NFPA and IBC.
4. Analyze information gathered from literature searches and assigned reading projects
5. Site inspections of hazardous conditions.
6. Midterm Examination
7. Individual or group management report submission in professional format
8. Case study submissions reports
9. Final examination.

SOCIAL JUSTICE SYLLABUS STATEMENT:

West Virginia University is committed to social justice. I concur with that commitment and expect to maintain a positive learning environment based upon open communication, mutual respect, and non-discrimination. Our University does not discriminate based on race, sex, age, disability, veteran status, religion, sexual orientation, color or national origin. Any suggestions as to how to further such a positive and open environment in this class will be appreciated and given serious consideration.

If you are a person with a disability and anticipate needing any type of accommodation in order to participate in this class, please advise and make appropriate arrangements with Disability Services (304-293-6700).

CLASS AGENDA AND TOPICS:

Course Begins: August 27th, 2019

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|-------------|--|
| August 27 | Course Overview
Fire Safety Organizations and Management
Group project decision
Reading Assignments: FSMH (Ch. 1, 3, 9, 12) FICE (Intro + Ch. 1)
Case Study #1 distributed |
| September 3 | Fire Behavior and Chemistry
*** Case Study #1 Due ***
Reading assignments: FSMH (Ch. 2) FICE (Ch. 3)
Case Study #2 distributed |

- September 10 Fire and Building Codes/Standards
***** Case Study #2 Due *****
 Reading Assignments: FSMH (Ch. 9 + Appendix) FICE (Ch. 7, 8)
 Code scenarios distributed
- September 17 Fire and Building Codes/Standards, continued
 Building Construction
 Review / discussion on group projects
 Reading Assignments: FSMH (Ch. 5) FICE (Ch. 4, 5, 6, 15)
- September 24 Building Construction, continued
***** Code Scenarios due *****
 Special topics discussion – historic fires and resulting codes
 (Las Vegas, Chicago, Kentucky)
 Mid-Term Review
- October 1 Mid-Term Exam
 Final project collaboration. Q&A session
- October 8 Fire Detection, Suppression, and Control Systems
 Reading Assignments: FSMH (Ch. 6, 7) FICE (Ch. 11,12,13,14)
 Case Study #3 distributed
- October 15 Fire Detection, Suppression, and Control Systems cont.
***** Case Study #3 Due *****
 Group discussion on exceptions granted due to implementation of active fire detection and suppression systems
- October 22 Field Trip (?)– fire alarm and sprinkler systems.
 Guest Speaker – TBD; NFPA 72 – Fire Alarm Systems
- October 29 Analysis of modern day tragedies resulting in sprinkler code updates
 (Rhode Island, San Francisco)
 Final Project discussion
Bonus Code Scenario distributed
- November 5 Fire Prevention and Inspection Programs
***** Bonus Code Scenario Due*****
 Reading Assignments: FSMH (Ch. 3, 8, 10) FICE (Ch. 9,16)
- November 12 Fire Prevention and Inspection Programs, continued.
 Guest Speaker – City Fire Marshal Ken Tennant
 Group discussions on “self-inspection” vs. third party inspections
- November 19 Hazardous Materials
 Reading Assignments: FSMH (Ch. 4) FICE (Ch. 10)
 Case Study #4 distributed
- November 26 No Class: Thanksgiving Break

December 3 Class Presentations
Group discussions / debates on presentation material

December 10 Exam review
*** **Case Study #4 due** ***

December 17 Final Exam

**Course agenda may be changed or modified at the discretion of the instructor*

READING ASSIGNMENTS

All reading assignments are critical to the student passing this course. The lectures will provide a broad overview of the present subject matter, with key elements identified. Graphic illustrations and video support will also help the student obtain a starting point for further learning. The subject matter beyond the lecture information is very technical in nature and will require extended reading and individual research.

GRADING

The grading and course requirements are listed below. The grading is based on a system of points (250) accumulated on a variety of performance measures including written exams, project submissions, and case studies. Cumulative points will be awarded for the various activities with the point system listed below. There will be no make-up exams except for medical and other pertinent reasons.

GRADING PLAN

		Points
I	Case Studies (4)	40 (10 each)
II	Mid-Term Examination	100
III	Code Scenarios (3)	30 (10 each)
IV	Management Report Project	80
V	Final Exam	100

Total Points 350

A	=	100 - 90%	=	350 - 315
B	=	89 - 80%	=	314 - 280
C	=	79 - 70%	=	279 - 245
D	=	69 - 60%	=	244 - 210
F	=	59 - 0%	=	209 - 0

GRADING DETAILS

Mid-Term Examination

The mid-term will cover subjects up to and including “Building Construction.” Questions will be short answer, multiple choice, and true/false. The mid-term exam is worth 100 points.

Case Studies / Code Scenarios

Case studies will require individual research through course materials and other resources to connect course objectives with real-world examples. Case study reports can usually be presented in 2-3 pages, with specific data and listed references cited. Case studies with no cited references will not be accepted.

Code Scenarios will require using on-line codes or reference material to determine what requirements apply to a given scenario. For example: A code scenario may describe or illustrate (through text, pictures or video) a specific condition or plan. Code scenarios can be answered in a page or less.

There will be four (4) case studies and three (3) code scenarios assigned during the course worth 70 points.

Management Report Project

The Management Report Project consists of six parts. The group (or individual) will be responsible to:

1. Perform a basic fire and life safety inspection on a predetermined facility
2. Report the findings in a written text with supporting documentation
3. Develop Fire and Life Safety forms and / or checklists to facilitate future inspections.
4. Prepare a formal written report of findings in combining with Fire and Life Safety forms and supporting documentation. In addition, make recommendations for correction and prevention moving forward.
5. Develop an OSHA Fire Prevention Plan for the facility.
6. Develop a 15-20 class presentation assuming your target audience is facility management or stakeholders. The goal is to identify deficiencies, make recommendations, and promote the OSHA Fire Prevention Plan you have developed for the facility.

The Management Project Report will be worth 80 points. 60 points for the documentation submitted and 20 points for the class presentation

Final Exam

The final will cover subjects presented after the mid-term exam. Questions will be short answer, multiple choice, and true/false. The final exam is worth 100 points.