School of Public Safety and Health
FSMT 210
Fundamentals of Fire Protection
3 Credit Hours
8-Weeks
Prerequisite(s): None

American Public University System

Table of Contents

Instructor Information	Evaluation Procedures
Course Description	Grading Scale
Course Scope	Course Outline
Course Objectives	<u>Policies</u>
Course Delivery Method	Academic Services
Course Materials	Selected Bibliography

Instructor Information

Instructor. Email:

Phone:

Fax.

Office Hours:

Table of Contents

Course Description (Catalog)

This course is an overview of fire protection and includes career opportunities in fire protection and related fields, philosophy and history of fire protection/service, fire loss analysis, organization and function of public and private fire protection services, fire departments as part of local government, laws and regulations affecting the fire service, fire service nomenclature, specific fire protection functions, basic fire chemistry and physics, introduction to fire protection systems, and introduction to fire strategy and tactics. Students can expect to describe and discuss components of the history and

philosophy of the modern fire service; analyze the basic components of fire as a chemical reaction, examine the major fire phases, and examine the main factors that influence fire spread and behavior; differentiate between fire service training and education, fire protection certificate program and fire service degree program, and explain the value of education in the fire service; list and describe major emergency response services and illustrate how they interrelate; identify fire protection and emergency service public and private careers; synthesize roles of national, state, and local support organizations in fire and emergency services; describe the scope of fire and emergency services organization; describe the common fire facilities, equipment, and apparatus; analyze management concepts for emergency situations; and explain fire prevention including code enforcement, public information, and public and private fire protection systems.

Table of Contents

Course Scope

The purpose of this course is to introduce you to the broad spectrum of fire protection. It is a field of endeavor that is both inspired by and bound by tradition. To understand the fire service we have to understand what went before and how we got to the point we are at presently. During the course we will examine some of these traditions and how they effect what we do today. The fire service has a proud tradition of public service dating from Roman times through the volatile age of the volunteers to the professional career and volunteer service of today. This course will introduce many of the subjects that will be covered in depth later and will allow you to gain a better understanding of what we call "fire protection." We will touch on careers, education, the nature of fire, administration, training, prevention, codes and ordinances, systems equipment, incident management, command and operations. At the end of this course you will have a better handle on the scope of a fire related career and have the foundation to understand how we got to where we are today.

Table of Contents

Course Objectives

Course Objectives:

- CO-1 Explain the process of becoming a member of, and the need for training and education at differing levels as one advances in a career in the fire service.
- CO-2 Identify and describe the career various opportunities in the fire service and life safety fields.
- CO-3 Identify and describe the origins and evolution of modern fire protection and fire equipment.
- CO-4 Describe, define and illustrate the basic principles of fire chemistry and physics and the extinguishing agents and systems used by the fire service.

- CO-5 List and identify the public and private support organizations and identify and describe the types of fire protection organizations and the chains of command used in them.
- CO-6 Identify and describe the support functions required for a modern fire service to function.
- CO-7 Describe and explain the importance of fire prevention to a community.
- CO-8 Explain and describe the adoption and enforcement of codes and standards.
- CO-9 Explain the terms associated with modern fire administration.
- CO-10 Describe and explain the need for emergency incident management. Identify the role and limitations of the fire service at emergencies.
- CO-11 Identify safety considerations at an incident.

Table of Contents

Course Delivery Method

This course will offer the student a highly interactive virtual classroom. Each week's lesson will have a course announcement, assigned readings, a discussion group question based on either course readings or an internet-based project, and lecture notes provided by the instructor. The course will provide the student with the necessary knowledge of the international system to better appreciate and comprehend world events and motivations of the numerous international actors.

Since the student is expected to fully participate in discussions and interact with the instructor and other students, reading assignments and assigned projects should be completed in a timely manner.

Table of Contents

Course Materials

1. Klinoff, Robert W. **Introduction To Fire Protection**; Delmar Publishers; Third Edition, 2007; ISBN 1-4180-0177-5

2. Case Studies

All of the reports listed in this first group are available on-line from the United States Fire Administration's Technical Report Series. See web resources for the locations.

- America at Risk, America Burning Reconsidered, United States Fire Administration, FA-223
- Routley, J. Gordon, Floor Collapse Claims Two Firefighters, Pittston, Pennsylvania, United States Fire Administration Technical Report Series TR-073
- Anderson, John R., The Danvers Butchery Meat Market and Cold Storage, United States Fire Administration Technical Report Series TR-151
- Chubb, Mark, Children Left Alone: Eleven Die in Two Fires, Detroit, Michigan, United States Fire Administration Technical Report Series TR-070
- Duckett, Dennis C., Broward Marine Fire, Fort Lauderdale, Florida, United States Fire Administration Technical Report Series TR-101

- Poole, Stanley L. and Hollis Stambaugh, \$15 Million Sight and Sound Theater Fire and Building Collapse, Lancaster County, Pennsylvania, United States Fire Administration Technical Report Series TR-097
- Styron, Hillary C., CSX Tunnel Fire, Baltimore, Maryland, United States Fire Administration Technical Report Series TR-140
- Oneial, Dr. Dennis, Fire, Police, and EMS Coordination at Apartment Building Explosion, Harlem, New York City, United States Fire Administration Technical Report Series TR-097

3. Supplemental Readings:

N/A

4. Suggested Readings:

The report listed in this fourth group is available on-line from the United States Forest Service at http://www.fs.fed.us, see web resources.

- Butler, Bret W., et. al., Fire Behavior Associated with the 1994 South Canyon Fire on Storm King Mountain, Colorado, United States Department of Agriculture, Forest Service, Rocky Mountain Research Station, Research Paper, RMRS-RP -9
- Maclean, John N., Fire On The Mountain, The True Story of the South Canyon Fire, Washington Square Press, New York, 1999, ISBN -0-7434-1938-6

Table of Contents

Evaluation Procedures

Please see the student handbook to reference the University's grading scale.

Grades for this course will be based upon four grading instruments. There are discussion questions that are provided in the discussion groups. These will allow you a view of what others might think on a topic. You will be able to respond to the posting of other students and thus to gain the insight of others on the topic. The examinations are a composite of multiple choice questions and short essays. The weekly question groups are chosen to reinforce concepts introduced by the text. It is expected that the student will provide a detailed answer to these in order to demonstrate an understanding of the subject. The essay is a way for you to review material and develop a solution based on your research, background and knowledge. The project is designed to allow you to apply lessons learned to a practical problem and give you practice. The Examinations will test your mastery of the subject.

The grade scale, percentages and due dates (Due dates will be part of the **Instructor's Notes** for the course) for each of the evaluations will be provided:

Grade Instruments:	<u>Points</u>	% of Final Grade
Forums	30 pts.	30%
Essays	10 pts.	10%
Quizzes	40 pts.	40%
Final Exam	<u>20 pts.</u>	<u>20%</u>
	100 pts.	100%

Table of Contents

Course Outline				
<u>8-</u> Week	<u>Topics</u>	<u>Course</u> <u>Objectives</u>	<u>Readings</u>	<u>Assignments</u>
1	Fire and Life Safety Education and Careers, Fire Risk in America	CO-1 Explain the process of becoming a member of, and the need for training and education at differing levels as one advances in a career in the fire service. CO-2 Identify and describe the career various opportunities in the fire service and life safety fields.	Klinoff, Chapters 1 & 2 America at Risk, America Burning Reconsidered, United States Fire Administration, FA- 223. http://www.usfa.fema.gov/downloa ds/pdf/publications/fa-223-508.pdf	Read the required readings. Submit your student Bio to the Forums: Due Week 1 Week 1 Forum: Please answer the Week 1 Discussion in the Forums folder. Week 1 Quiz: Complete the weekly quiz.

of APUS				
2	Public Fire Protection Agencies and Support Organizations Hotel Vendome and dangers of structural collapse	CO-3 Identify and describe the origins and evolution of modern fire protection and fire equipment. CO-5 List and identify the public and private support organizations and identify and describe the types of fire protection organizations and the chains of command used in them.	Floor Collapse Claims Two Firefighters, Pittston, Pennsylvania, United States Fire Administration Technical Report Series TR-073. http://www.usfa.fema.gov/downloa ds/pdf/publications/tr-073.pdf	Read the required readings. Week 2 Forum: Please answer the Week 2 Discussion in the Forums folder. Week 2 Quiz: Complete the weekly quiz.
3	A Review of Chemistry and Physics of Fire	CO-4 Describe, define and illustrate the basic principles of fire chemistry and physics and the extinguishing agents and systems used by the fire service.	Klinoff, Chapter 4 The Triangle Shirtwaist Fire: http://www.ilr.cornell.edu/trianglefire/	Read the required readings. Week 3 Quiz: Complete the weekly quiz. Submit your Week 3 Essay: One to two pages on the Triangle Shirtwaist Fire.
4	Resources and Administration of Fire Departments Fire Prevention and Community Fire Safety Problems	CO-6 Identify and describe the support functions required for a modern fire service to function. CO-9 Explain the terms associated with modern fire administration.	Klinoff, Chapters 6, 7 & 8 http://www.usfa.fema.gov/downloads/pdf/publications/tr-101.pdf	Read the required readings. Week 4 Forum: Please answer the Week 4 Discussion in the Forums folder. Week 4 Quiz: Complete the weekly quiz.
5	Training and Fire Prevention	CO-7 Describe and explain the importance of fire prevention to a community.	Klinoff Chapters 9 & 10 http://www.usfa.fema.gov/downloads/pdf/publications/tr-070.pdf	Read the required readings. Week 5 Forum: Please answer the Week 5 Discussion in the Forums folder. Week 5 Quiz: Complete the weekly quiz.

6	Codes, Ordinances And Basic Water Supply	CO-8 Explain and describe the adoption and enforcement of codes and standards. CO-9 Explain the terms associated with modern fire administration.	Klinoff, Chapters 11 & 12	Read the required readings. Week 6 Forum: Please answer the Week 6 Discussion in the Forums folder. Week 6 Quiz: Complete the weekly quiz.
7	Emergency Incident Management CSX Tunnel Fire	CO-10 Describe and explain the need for emergency incident management. Identify the role and limitations of the fire service at emergencies. CO-11 Identify safety considerations at an incident.	Klinoff, Chapter 13 http://www.usfa.fema.gov/downloads/pdf/publications/tr-140.pdf	Read the required readings. Week 7 Forum: Please answer the Week 7 Discussion in the Forums folder. Week 7 Quiz: Complete the weekly quiz.
8	Emergency Operations Hackensack, NJ Ford Fire and cooperation at the scene of an incident	CO-10 Describe and explain the need for emergency incident management. Identify the role and limitations of the fire service at emergencies. CO-11 Identify safety considerations at an incident.	Klinoff, Chapter 14 http://www.usfa.fema.gov/downloads/pdf/publications/tr-068.pdf http://my.firefighternation.com/profiles/blogs/hackensack-tradegy-afailure	Read the required readings. Week 8 Forum: Please answer the Week 8 Discussion in the Forums folder. Final Exam: Complete the final exam.

Table of Contents

Polices

ACADEMIC DISHONESTY: PLAGIARISM AND CHEATING

The University System supports and promotes academic honesty and personal integrity. Cheating can take the following forms:

- Submitting another person's work
- Writing a paper for someone else
- Working in a group effort without faculty consent
- Buying a paper from a research service
- Getting outside help or giving outside help without a teacher's expressed permission

 Submitting the same work for credit without approval (e.g. submitting the same assignment twice for different courses)

The Web & Plagiarism Note: The Web has made it quite easy to copy and insert materials into a paper. Students must be careful to properly attribute materials found on the Web. In a collegiate setting, attribution typically relies on a formal academic style manual for its citation models (See <u>Citation and Reference Style</u>). Such models describe how to append footnotes and endnotes, when:

- Quoting another's exact words, you are obviously expected to name the author and place the words in quotation marks or in indented text blocks. The citation number is placed immediately at the end of the quotation.
- Acknowledging background sources to your own descriptions--. The citation number is normally placed at the end of the paragraph.

Note: The University offers tools in its <u>Online Library Research Center</u> to help you analyze your papers for possible plagiarism violations and for instructors to uncover such activities.

WRITING EXPECTATIONS

All written submissions should be submitted in a font and page set-up that is readable and neat. It is recommended that students try to adhere to a consistent format, which is described below.

- Typewritten in double-spaced format with a readable style and font and submitted inside the electronic classroom (unless classroom access is not possible and other arrangements have been approved by the professor).
- Arial 11 or 12-point font or Times New Roman styles.
- Page margins Top, Bottom, Left Side and Right Side = 1 inch, with reasonable accommodation being made for special situations and online submission variances.

CITATION AND REFERENCE STYLE

Assignments completed in a narrative essay or composition format must follow the guidelines and rules found in the sixth edition of the *Publication Manual of the American Psychological Association* (APA 6).

COURSE EXTENTIONS

Students must determine the need for their first Course Extension and submit their "Request Course Extension" form *before* the end of the course. Please refer to the Student Handbook for the process required.

LATE ASSIGNMENTS

For each week that an assignment is late, two points may be deducted from your grade for the assignment unless the student contacts the instructor ahead of time about an extenuating situation.

DISABILITY ACCOMODATIONS

This institution complies with the <u>Americans with Disabilities Act, Section 504 of the Rehabilitation Act</u>, and the <u>World Wide Web Consortium's (W3C) Universal Access Guidelines</u>. Students with special needs should inform their individual instructors and the University's student services staff.

NETIQUETTE

Online universities promote the advance of knowledge through positive and constructive debate--both inside and outside the classroom. Discussions on the Internet, however, can occasionally degenerate into needless insults and "flaming." Such activity and the loss of good manners are not acceptable in a university setting--basic academic rules of good behavior and proper "Netiquette" must persist. Remember that you are in a place for the fun and excitement of learning that does not include descent to personal attacks, or student attempts to stifle the discussion of others.

- Technology Limitations: While you should feel free to explore the full-range of creative composition in your formal papers, keep e-mail layouts simple. The Educator classroom may not fully support MIME or HTML encoded messages, which means that bold face, italics, underlining, and a variety of color-coding or other visual effects will not translate in your e-mail messages.
- **Humor Note:** Despite the best of intentions, jokes and--especially--satire can easily get lost or taken seriously. If you feel the need for humor, you may wish to add "emoticons" to help alert your readers: ;-), :), ©

DISLCAIMER STATEMENT

Course content may vary from the outline to meet the needs of this particular group.

<u>Table of Contents</u>

Academic Services

ONLINE LIBRARY RESEARCH CENTER & LEARNING RESOURCES

The Online Library Resource Center is available to enrolled students and faculty from inside the electronic campus. This is your starting point for access to online books, subscription periodicals, and Web resources that are designed to support your classes and generally not available through search engines on the open Web. In addition, the Center provides access to special learning resources, which the University has contracted to assist with your studies. Questions can be directed to orc@apus.edu.

- Charles Town Library and Inter Library Loan: The University maintains a special library with a limited number of supporting volumes, collection of our professors' publication, and services to search and borrow research books and articles from other libraries.
- *Electronic Books:* You can use the online library to uncover and download over 50,000 titles, which have been scanned and made available in electronic format.

- Electronic Journals: The University provides access to over 12,000 journals, which are available in electronic form and only through limited subscription services.
- Turnitin.com: <u>Turnitin.com</u> is a tool to improve student research skills that also detect plagiarism. Turnitin.com provides resources on developing topics and assignments that encourage and guide students in producing papers that are intellectually honest, original in thought, and clear in expression. This tool helps ensure a culture of adherence to the University's standards for intellectual honesty. Turnitin.com also reviews students' papers for matches with Internet materials and with thousands of student papers in its database, and returns an Originality Report to instructors and/or students.
- **Smarthinking:** Students have access to 10 free hours of tutoring service per year through Smarthinking. Tutoring is available in the following subjects: math (basic math through advanced calculus), science (biology, chemistry, and physics), accounting, statistics, economics, Spanish, writing, grammar, and more. Additional information is located in the Online Research Center. From the ORC home page, click on either the "Writing Center" or "Tutoring Center" and then click "Smarthinking." All login information is available.

Table of Contents

Selected Bibliography

Websites (for additional reading, research, and information):

Firefighting News

Main Site: http://firefightingnews.com/united-states.cfm

Firehouse Magazine: http://www.firehouse.com

National Fire Protection Association

Main Site: http://www.nfpa.org

National Fire Sprinkler Association

Main Site: http://www.nfsa.org

National Institute of Occupational Safety and Health (NIOSH)

Main Page: http://www.cdc.gov/niosh/homepage
Fire Specific: http://www.cdc.gov/niosh/firehome.html
National Institute of Standards and Technology

Main Site: http://www.nist.gov

Building and Fire Research Library: http://www.brfl.nist.gov

<u>United States Fire Administration</u>
Main site: http://www.usfa.dhs.gov/

Publications: http://www.usfa.dhs./publications

Technical Reports: http://www.usfa.dhs.gov/publications/techreps.cfm

<u>United States Forest Service</u>
Main Site: http://www.fs.fed.us

<u>United States National Records and Archives Administration,</u>
<u>Government Printing Office, Code of Federal Regulations</u>

Main Site: http://www.gpoaccess.gov/cfr/index.html

Women in the Fire Service
Main Site: http://www.wfsi.org/

- Cowan, David and John Kuenster; To Sleep With The Angels, Ivan, Chicago, 1996, ISBN 1-56663-102-5
- Faith, Nicholas; Blaze The Forensics of Fire, St. Marin's Paperbacks, 1999, ISBN 0-31297978-9
- Flynn, Sean; 3000 Degrees, The True Story of a Deadly Fire and the Men Who Fought It, Warner Books, 2002, ISBN 0-446-52831-5
- Gess, Denise and William Lutz; Firestorm at Peshtigo, First Owl Books Editions, 2002, ISBN 0-8050-7193-4
- Heys, Sam and Allen B. Goodwin; The Winecoff Fire, Longstreet Press, Atlanta, 1993, ISBN 1-56352-069-9
- Maclean, John N.; Fire on the Mountain, Washington Square Press, New York, 1999. ISBN 0-7434-1038-6
- Maclean, Norman; Young Men and Fire, University of Chicago Press, Chicago, 1972, ISBN 0-226-50062-4
- Minutglio, Bill; City On Fire, Harper Collins Publishers, New York, 2003, ISBN 0-06-018541-4
- O'Donnell, Edward T.; Ship Ablaze, Broadway Books, 2003, ISBN 0-7679-0905-4
- O'Nan, Stewart; The Arson Fire, Doubleday, New York, 2000, ISBN 0-385-49684-2
- Pyne, Stephen J.; Year of the Fires, The Story of the Great Fires of 1910, Penguin Books, 2001, ISBN 0-14-20:0117-1
- Rust, Claude; *The Burning of the General Slocum*, Elsevier-Dutton Publishing Co., Inc., 1981, ISBN 0-525-66715-6

Table of Contents