## American Public University System

The Ultimate Advantage is an Educated Mind

School of Public Service and Health Fire Protection Systems FSMT 201 3 Credit Hours 8-Weeks Prerequisites: None

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## Instructor Information

Instructor: Email:

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## **Course Description (Catalog)**

This course addresses the study of suppression systems and their critical components as well as their application to selected fire protection problems. It will cover the duties, responsibilities and ethical aspects of the Fire Protection Engineer with focus on contract drawings and their relationship to contract specifications, and an actual survey of a large building. It will include the philosophy, history and fundamentals of public and private fire protection, and relations with other disciplines including architecture and the building industry, and will extend to the application of hydraulic theory to a range of design considerations.

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## **Course Scope**

The Fire Protection Systems course, FSMT 201, introduces the student to many areas of fire protection systems. The study of fire technology is multifaceted and involves the study of the complete fire protection system. This course will introduce the student to fire protection systems design,

methodological approach for the design and calculation of the most commonly encountered system types, installation, and the ethical practice of fire protection system design and layout.

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## **Course Objectives**

**Course Objectives:** Please see the Course Outline below for the weeks that correspond with these course objectives:

**CO-1:** Identify the origins of modern fire protection systems.

- **CO-2:** Describe the evolution of fire protection systems.
- **CO-3:** Describe the various water-based systems and their effectiveness.
- **CO-4:** Examine and identify the types of fire protection systems.

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## **Course Delivery Method**

This course delivered via distance learning will enable students to complete academic work in a flexible manner, completely online. Course materials and access to an online learning management system will be made available to each student. Online assignments are due by 11:55 PM (EST) on Sunday of the week as noted and include Forum questions (accomplished in groups through a threaded forum), and individual assignments submitted for review by the Faculty Member). Assigned faculty will support the students throughout this eight-week course.

# Note: If you are in a different time zone, please make sure that you plan ahead to fulfill course requirements. You may get locked out of tests and quizzes if late!

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## **Course Materials**

Required Course Textbook: (This book is an E-book) All test questions will come from this book.

Jones, A. M. (2009). *Fire Protection Systems*, Delmar Publishers. ISBN 1-4018-6262-4

#### The following two classroom tabs contain important course information:

Lessons: The Lessons tab, located on the left side of the classroom, will contain the following items.

**PowerPoint's:** The PowerPoint's provide an overview of each chapter.

**Supplemental Readings:** The supplemental readings are there to give you more insight into the textbook chapters. They will also provide you with some necessary information to complete your weekly assignments. You will not be tested on these readings.

**Resources:** The Resources tab, located on the left side of the classroom, will contain the following items:

FSMT201 E-book: You will find the links to your E-book in the Resources folder.

**APA 6<sup>th</sup> Edition Guides:** The APA 6<sup>th</sup> Ed. Writing Style Guide must be used for all written assignments. You do not need to purchase the book as I have provided several APA 6<sup>th</sup> Ed. resources in the Resources tab.

PowerPoint's: The PowerPoint's provide an overview of each chapter.

**Supplemental Readings:** The supplemental readings are there to give you more insight into the textbook chapters. They will also provide you with some necessary information to complete your weekly assignments. You will not be tested on these readings. All of the reports listed in this group are available on-line from the United States Fire Administration's Technical Report Series at: <a href="https://www.usfa.dhs.gov/applications/publications/">https://www.usfa.dhs.gov/applications/</a>publications/

- Week 2: TR-049 High-rise Office Building Fire One Meridian Plaza, Philadelphia, Pennsylvania http://www.usfa.dhs.gov/downloads/pdf/publications/tr-049.pdf
- Week 2: TR-082 Operational Considerations for High-rise Firefighting http://www.usfa.dhs.gov/downloads/pdf/publications/tr-082.pdf
- Week 4: TR-071 New York City Bank Building Fire Compartmentation vs. Sprinklers, New York, New York http://www.usfa.dhs.gov/downloads/pdf/publications/tr-071.pdf
- Week 5: TR-106 Sprinklered Records Storage Facility, Chicago, Illinois http://www.usfa.dhs.gov/downloads/pdf/publications/tr-106.pdf
- Week 6: TR-039 Sixteen-Fatality Fire in High-Rise Residence for the Elderly, Johnson City, Tennessee
- http://www.usfa.dhs.gov/downloads/pdf/publications/tr-039.pdf
- Week 6: TR-040 Success Story at Retirement Home Fire, Sterling, Virginia http://www.usfa.dhs.gov/downloads/pdf/publications/tr-040.pdf

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## **Evaluation Procedures**

Grades for this course will be based upon four grading instruments:

1. Forums (6): There are six forum questions that are provided in the Forums which can be found by clicking the Forum link. The student, when directed by the instructor, will respond to the postings of other students. You will not receive a grade until you have responded to the proper number of students or the assignment has closed. Please have your initial post in the forum by Thursday night and your replies in the forum by Sunday night of the week the assignment is due.

Participation in the forums is mandatory. I have provided a minimum word count for each initial posting and each reply. Your replies must provide more discussion than "good point" or "nice job". Challenge each other, if you disagree then say so and explain why.

2. **Essays (2):** There are two essays that will be based on the readings from this course. The Essays can be found by clicking the Assignments tab on the left hand side of the classroom.

3. Quizzes (6): There are six quizzes. The quizzes can be found in Weeks 1 - 3 and 5 - 7. Each quiz will consist of 10 multiple choice questions.

4. Exams (2): There will be two exams, a midterm and a final.

The Midterm Exam will open in Week 4 and will be based on Chapters 1 - 7 in the textbook. The Midterm Exam will consist of 20 multiple choice questions.

The Final Exam will open in Week 8 and will be based on Chapters 1 – 14 in the textbook. The Final Exam will consist of 25 multiple choice questions.

The Exams can be found by clicking the Test and Quizzes tab on the left hand side of the classroom.

All due dates are found in the Course Outline below.

#### All graded items for this course will be based on a 100 point grading scale.

Grading Instruments	Assignment Totals		% of Each Assignment	Total % of Final Grade
<b>F</b>			00/	0.001/
Forums	6	X	6%	36%
Essays	2	X	7%	14%
Quizzes	6	х	6%	36%
Exams	2	X	7%	14%
Total	16			100%

The total percentage you can earn for this course is 100%.

Each week begins at 12:01 am on Monday and ends at 11:59 pm on Sunday. All assignments must be turned in by the due dates listed below.

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## **Grading Scale**

Please refer to the APUS "Policy" link on the left hand side of the page for more information on this topic.

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## **Course Outline**

8 Week	Topics	Course Objectives	Readings	Assignments
1	Basics of Fire Behavior Fire Protection Systems and the Model Code Process	CO-1: Identify the origins of modern fire protection systems. CO-2: Describe the evolution of fire protection systems.	Fire Protection Systems - Jones: Chapters 1 and 2	Do all of the following: Read the required readings. Submit Week 1 – Forum 1 Introductions Submit to the Forum Submit Week 1 – Quiz 1 10 question multiple choice quiz on Chapters 1 and 2. You have 1 hour to complete the quiz.

Γ	2	Water Supplies	CO-2: Describe	Fire Protection Systems - Jones:	Do all of the following:
		for Fire	the evolution of fire	Chapters 3 and 4	-
		Protection	protection		Read the required readings.
		Systems	systems.	TR-049 High-rise Office Building	

of APUS.				
	Standpipe and Hose Systems		Fire One Meridian Plaza, Philadelphia, Pennsylvania available on line at TR-082-Operational Considerations for High-rise Firefighting	Submit Week 2 – Forum 2 Submit to the Forum Submit Week 2 – Essay 1 See the assignments folder for instructions. Submit Week 2 – Quiz 2 10 question multiple choice quiz on Chapters 3 and 4. You have 1 hour to complete the quiz.
3	Automatic Fire Sprinkler Systems Specialized Water-Based Fire Protection Systems	<b>CO-3:</b> Describe the various water- based systems and their effectiveness. <b>CO-4:</b> Examine and identify the types of fire protection systems.	Fire Protection Systems - Jones: Chapters 5, 6 and 7	Do all of the following: <b>Read</b> the required readings. <b>Submit Week 3 – Forum 3</b> Submit to the Forum <b>Submit Week 3 – Quiz 3</b> 10 question multiple choice quiz on Chapters 5, 6 and 7. You have 1 hour to complete the quiz.
4	Fire Alarm System Components and Functions Types of Fire Alarm and Detection Systems	<b>CO-3:</b> Describe the various water- based systems and their effectiveness. <b>CO-4:</b> Examine and identify the types of fire protection systems.	TR-071 New York City Bank Building Fire Compartmentation vs. Sprinklers	Do all of the following: <b>Read</b> the required readings. <b>Submit Week 4 – Forum 4</b> Submit to the Forum <b>Submit Week 4 - Midterm Exam</b> The Midterm Exam will consist of 20 multiple choice questions from Chapters 1 – 7. You have 2 hours to complete the exam.
5	Wet and Dry Chemical Extinguishing Systems Gaseous Agent Extinguishing Systems	<b>CO-3:</b> Describe the various water- based systems and their effectiveness. <b>CO-4:</b> Examine and identify the types of fire protection systems	Fire Protection Systems - Jones: Chapters 8, 9 and 10 TR-106 Sprinklered Records Storage Facility, Chicago, Illinois	Do all of the following: <b>Read</b> the required readings. <b>Submit Week 5 – Essay 2</b> See the assignments folder for instructions. <b>Submit Week 5 – Quiz 4</b> 10 question multiple choice quiz on Chapters 8, 9 and 10. You have 1 hour to complete the quiz.
6	Portable Fire Extinguishers Smoke Control and Management Systems	<b>CO-3:</b> Describe the various water- based systems and their effectiveness. <b>CO-4:</b> Examine	Fire Protection Systems - Jones: Chapters 11 and 12 TR-039 Sixteen-Fatality Fire in High-Rise Residence for the Elderly, Johnson City, Tennessee	Do all of the following: <b>Read</b> the required readings. <b>Submit Week 6 – Forum 5</b> Submit to the Forum

and identify the types of fire protection systems.	TR-040 Success Story at Retirement Home Fire, Sterling, Virginia	Submit Week 6 – Quiz 5 10 question multiple choice quiz on Chapters 11 and 12. You have 1 hour to complete the quiz.
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7	Property Security, Emergency Response, and Fire Protection Systems Emerging Technologies	<b>CO-3:</b> Describe the various water- based systems and their effectiveness. <b>CO-4:</b> Examine and identify the types of fire protection systems.	Fire Protection Systems - Jones: Chapters 13 and 14	Do all of the following: <b>Read</b> the required readings. <b>Submit Week 7 – Quiz 6</b> 10 question multiple choice quiz on Chapters 13 and 14. You have 1 hour to complete the quiz.
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8		Do all of the following:
		Submit Week 8 – Forum 6 Submit to the Forum
		Submit Week 8 - Final Exam The Final Exam will consist of 25 multiple choice questions from Chapters 1 – 14.
		You have 2 hours to complete the exam.

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## Policies

Please see the student handbook or the Policy link in the classroom to reference all University policies.

#### WRITING EXPECTATIONS

All writing assignments must be submitted in APA format and shall include the following:

- 1. Title Page
- 2. Abstract
- 3. Main Body (With proper in-text citations)
- 4. Reference Page (Be sure to pay attention to the indentions for each source)

All writing assignments must meet the following page setup:

- 1. Times New Roman font
- 2. 12 Point font size
- 3. Double Spaced
- 4. 1 inch Page Margins: Top, Bottom, Left and Right (Not 1.25 inches)

These instructions must be followed or points will be deducted.

It is your responsibility to ensure your paper is formatted according to APA guidelines.

I have provided all the necessary APA information in the Resources folder.

#### PLAGIARISM

Please refer to the APUS "Policy" link on the left hand side of the page for more information on this topic.

#### CITATION AND REFERENCE STYLE

Assignments completed in a narrative essay or composition format must follow the American Psychological Association (APA), 6<sup>th</sup> edition format.

IMPORTANT: Using improper in-text citations and having an incomplete bibliography will give you a failing grade quicker than anything else. The APA 6<sup>th</sup> Edition has all the necessary information to ensure that you do this correctly.

#### **DROP/WITHDRAWAL**

Please refer to the APUS "Policy" link on the left hand side of the page for more information on this topic.

#### **COURSE EXTENTIONS**

Please refer to the APUS "Policy" link on the left hand side of the page for more information on this topic.

#### LATE ASSIGNMENTS

Your assignments and the due dates can be found in the Syllabus under the Course Outline topic or in the Assignments link on the left hand side of the class page.

The class week begins at 12:01 am on Monday and ends at 11:59 pm on Sunday. All assignment due dates will be by 11:59 pm on Sunday. The initial Discussion Board Postings must be posted by Thursday of the week the assignment is due. This gives the other student's plenty of time to respond to your posting.

Assignments uploaded or posted late will be penalized in the following manner:

- One week late receives 75% credit
- Two weeks late receives 50% credit
- Greater than two weeks receives 0 credits

Course Extensions will not be approved unless assignments are 90% completed and you have not fallen more than three weeks behind. There has been a continuous issue about course extensions in every class in every semester. The professor has the authority to grant an extension and I suggest that each student read the course extension policy in the student handbook available online.

We are very flexible with student's needs and do our best to accommodate our military folks. I understand that mission requirements and austere conditions often don't lend themselves well to the on line environment. It is critical that my military students keep their professors informed up front on pending TDY's or mission-necessary delays.

#### 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.

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## **Academic Services**

The Online Library 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 Online Library provides access to special learning resources, which the University has contracted to assist with your studies. Questions can be directed to **librarian@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.
- Tutor.com: AMU and APU Civilian & Coast Guard students are eligible for 10 free hours of tutoring provided by APUS. <u>Tutor.com</u> connects you with a professional tutor online 24/7 to provide help with assignments, studying, test prep, resume writing, and more. Tutor.com is tutoring the way it was meant to be. You get expert tutoring whenever you need help, and you work one-to-one with your tutor in your online classroom on your specific problem until it is done.
- **Turnitin.com:** Faculty may require assignments be submitted to Turnitin.com. Turnitin.com will analyze a paper and report instances of potential plagiarism for the student to edit before submitting it for a grade. In some cases professors may require students to use Turnitin.com. Typically the course professor will establish a Turnitin.com access code for his/her classes. If the code has not been established, those who wish to use Turnitin.com may ask their professor to establish the code.

#### Request a Library Guide for your course (http://apus.libguides.com/index.php)

The AMU/APU Library Guides provide access to collections of trusted sites on the Open Web and licensed resources on the Deep Web. The following are specially tailored for academic research at APUS:

- Program Portals contain topical and methodological resources to help launch general research in the degree program. To locate, search by department name, or navigate by school.
- Course Lib-Guides narrow the focus to relevant resources for the corresponding course. To locate, search by class code (e.g., SOCI111), or class name.
  If a guide you need is not available yet, please email the APUS Library: librarian@apus.edu.

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#### 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 **United States Fire Administration** Main Site: http://www.usfa.dhs.gov/ Publications: http://www.usfa.dhs./publications Technical Reports: http://www.usfa.dhs.gov/publications/techreps.cfm **United States Forest Service** Main Site: http://www.fs.fed.us United States House of Representatives Office of the Law Revision Counsel, **United States Code** Main Site: http://uscode.house.gov/ United States National Records and Archives Administration, Government Printing Office, Code of Federal Regulations Main Site: http://www.gpoaccess.gov/cfr/index.html Women in the Fire Service Main Site: http://www.wfsi.org/

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

- 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
- Heys, Sam and Allen B. Goodwin; *The Winecoff Fire*, Longstreet Press, Atlanta, 1993, ISBN 1-56352-069-9
- O'Nan, Stewart; The Arson Fire, Doubleday, New York, 2000, ISBN 0-385-49684-2

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