



OXNARD COLLEGE FIRE TECHNOLOGY
FT R155 Fire Prevention Technology
Fall 2020



Basic Info:

FT R155 Fire Protection Equipment Systems

Thursday: August 17-Dec. 10-16, Online

Class Section Number: 72292

Instructor: Randall Osborne

E-Mail: rosborne@vcccd.edu

The best way to communicate with me is through the inbox. I will do my best to respond to emails within 24 hours on weekdays and 48 hours on weekends. I am available for ConferZoom appointments. Contact me via the inbox and we can set up a time.

Important Fire Technology Contact Info:

Matt Jewett, Assistant Dean of Public Safety

805-678-5307

mjewett@vcccd.edu

Mike Ketaily Department Chair/Faculty Fire Technology

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michael_ketaily@vcccd.edu

Berenice Rodriguez Administrative Assistant

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Textbook (there is a new third edition, **do not buy that one**)

TEXT: Fire Protection Systems By A. Maurice Jones Jr. 2nd Edition

ISBN-13: 978-1-284-03537-7

ISBN-10: 1284035379

Stop before reading this syllabus you need to read the welcome letter and check in by responding to the check in announcement on the home page. If you do not check in by the second day you will be dropped from the class.

There will be a quiz on the welcome letter and syllabus due at the end of the first week of class.

Canvas

On each of my classes one of the first modules is links to information on how to use Canvas. If you are having any trouble with Canvas, use these links and or contact the IT



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people for the school. Of course I welcome you to contact me with any questions you may have or problems you may encounter. Sometimes students cannot access certain quizzes or papers and it turns out to be a corruption in the program or I need to reload the quiz, so please contact me with any problems.

Canvas Support:

Most issues with Canvas can be solved by hitting the help button at the bottom of the far-left column. In the help page there are Canvas student guides where you can find the answers to almost all FAQ's. However, there are some problems that you may need additional assistance, that is when you should call the 24/7 Canvas Tech support line at (844) 603-4262. Additionally, students can contact the library staff during library hours (currently 9AM-4PM) for general Canvas assistance and additional help with Microsoft Office (remember, I have shown you how to get it for free in our Welcome letter and on the home page) and assistance with tutoring at (805) 678-5819 or via email at occirculation@vcccd.edu

Required Reading:

The class will cover a chapter every week, approximately. Every chapter starts with instructions for that chapter. In the odd numbered chapters, the next study guide will be placed on Canvas for you to use to prepare for your online quizzes and then after that for the midterm and final exams. **You will need to go on Canvas every week for study guides and any other additional materials.** Sometimes the study guides are labeled as quizzes, but if it is a word or PDF document that is for you to download and use to study with. Quizzes will be placed on Canvas that will cover 2 chapters at a time and will be available for you to take online. Since you are taking the quizzes online at home, you can have your study guide open to help you, but they will be timed as will the midterm and final, so keep them to prepare for those tests. **It is your responsibility to take the quizzes during the allotted time. There will be no make-up quizzes since the quizzes will be available online for the allotted time.** **Be sure you are ready to complete the quiz when you start it. You only get one attempt at the quiz. If you start but then decide to take it later that counts as an attempt and you are locked out!** Those quizzes will be your study guides for the mid-term and final exams. All questions on the quizzes come from the study guides that you will find in the chapter modules.

Supplemental Reading Canvas:

Supplemental Reading will be placed on Canvas. We are going to cover some subjects that are not in the textbook, so from time to time the instructor may provide supplemental reading material or videos for which the students will be responsible. Supplemental reading can also be assigned for extra credit for those who need it.



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1. Student Learning Outcomes, upon completion of the course the student will be able to:

- A. Identify different types and operation of automatic sprinkler systems.

Evaluation: The student will explain the relevance of sprinkler systems in project two and will evaluate a system in the final project.

- B. Identify different classes of portable fire extinguishers.

Evaluation: The student will, in project one, explain the different classes of fire and the extinguishers used to put them out.

2. Course Objectives:

UPON SUCCESSFUL COMPLETION OF THIS COURSE, THE STUDENT SHOULD BE ABLE TO:

- A. Compare smoke and fire movement in various types of construction, and the relationship to systems and equipment.
- B. Describe organizations that provide information or service to fire protection systems.
- C. Define the types, classifications, and effectiveness ratings of fire extinguishers.
- D. Describe distribution, installation, and test requirements for fire extinguishers.
- E. Identify types, components and operation of fire protection systems and equipment for special hazards.
- F. Explain water supply requirements, distributions systems, and testing for public and private fire protection.
- G. Explain the application of hydraulic theory for fire protection.
- H. Identify types, components and operations of automatic and special sprinkler systems.
- I. Identify types of standpipe systems and water supply requirements.
- J. Compare detection, alarm, and supervisory devices and systems.
- K. Compare heat and smoke control devices and hardware.

3. Catalog Description:

This course provides information relating the features of design and operation of fire detection, fire suppression and fire alarm systems, including heat and smoke control systems, special protection and sprinkler systems, water supply for fire protection and portable fire extinguishers.

4. Grades:

Grade will be determined by the following scale:



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90%-100% = A
80% 89% = B
70%-79% = C
60%-69% = D

The point totals are subject to change, especially if there is a project I decide not to do.
The totals for the various aspects of the class are as follows:

Grades:

Bi-weekly quizzes	= 130
Module projects	= 120 points
Mid-term exam	= 50 points
Final exam	= 50 points
Final Project	= 100 points
Total possible	= 450 points
Extra Credit up to	= 100 points

5. Projects:

Projects:

Students will research two Projects that will illustrate their knowledge of:

- A. The classifications of fire, their extinguisher types and their relevance to fire protection systems.
- B. The various fire protection systems and what every firefighter should know about them.

Project One This project entails making a PowerPoint presentation of each of the classifications of fire and how to extinguish them. This will be accomplished by putting the explanation of each classification with a photograph that illustrates that class or sub-class. Explain which types of extinguishers could be used with this type of fire. Finish the presentation with an explanation of why it is important to understand the fire classifications. Use the following rubric to guide you in completing your project:

Explanations and Photographs of class/type of fire	= 10 points
Extinguishers for each classification	= 10 points
An analysis of why this is important in fire prevention	= 05 points

Project Two will be a project where you will research and present a PowerPoint on the various types of fire protection systems. I highly recommend you start this project early so as to not conflict with the final project. Both are due the same week because I wanted to give you extra time, but if you procrastinate on them, they will come crashing down on



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you in the same week! You do not need to go into the specifics of all fire protection systems, this is only about the 3 basic types and what all firefighters need to know about them. The emphasis of this project is the relevance of the various kinds of systems to a firehouse firefighter (non-fire prevention) and what are the essential aspects of each system they need to understand and be prepared to work with. You can use Google slides, PowerPoint or KeyNote. Remember if you use Google slides you need to include me as having access to your presentation. The presentation needs to have the following:

1. A title slide with the name of the project, "What Every Firefighter Should Know about Fire Protection Systems," your name, my name and the name of this class.
2. Four slides about fire alarm systems. Describe the basics of a fire alarm system, explain what the fire alarm control panel is and why an annunciator panel is a great tool for firefighters. Where would firefighters be able to find the control panel or an annunciator panel and what essential information can they get there.
3. Five slides about the basic Fire extinguishment systems. In one slide name the different types of extinguishment systems. Then the last four slides should be about the two most common systems, which are Fire Sprinklers and Kitchen Hood Systems. Explain the main components that firefighters need to know about with these two systems and how they can turn them off or use them to their advantage.
4. Four slides on Smoke Control Systems and how firefighters need to know how they work, where they might find them and how they can be used by firefighters for ventilation.
5. The last slide should be about what you have learned from doing this project. For instance, did you know that every firefighter needs to know how to turn off a fire sprinkler system? Did you know that skylights and passive smoke evacuation systems can be used by firefighters instead of cutting holes in the roof? BTW, it is way more fun to cut a heat hole, but you can have rapid ventilation just by breaking skylights in a commercial building.

Research Project:

Final Project Corona Virus Version 1.0

Due to the need for social distancing the final project has been changed to be a 25-slide PowerPoint presentation about the main fire protection system components found in a common large restaurant (something like the new Cracker Barrel and or Lure Restaurant in Camarillo or Ventura). We will all use a restaurant because they have many different fire protection systems parts to them. You will show the alarm system, the fire sprinkler system and a kitchen hood system. This project will represent everything we have learned



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in this course and it will be as if you walked through an occupancy taking pictures of the fire protection systems.

The following points need to be remembered as you do this project.

1. Each slide will count for 4 points and will have both a photograph and an explanation of what the photo shows. You will include pictures you find on the internet, but each slide must also have an explanation of what you are seeing and what you were looking for. For example. If you showed a slide of a Fire Department Connection in the front of the building you might write, "This FDC is on the street side of the building with clear access. It is painted red and has a sign on it that states what part of the building it serves. I noticed that the caps for both sides were missing and noted that as a violation. I explained to the manager that the caps protect the threads and keep people from putting things in the FDC that could cause blockage or malfunction." You would put that in the slide alongside the photo that shows the FDC. Even though I have used an example with a violation, the pictures do not have to show a violation, but if it does be sure to point that out and explain. **Each slide should have 3 sentences minimum of what the piece of equipment is and how this piece of equipment works.**
2. You will need to show all of the components with an explanation.
3. Use the rubric that I will place both in this syllabus and in the assignment to guide you in what is required to get an A on this project.
4. There will be 3 portions to this project. Those three parts are (A) 1 title slide than 6 slides showing the various components of the alarm system, (B) 10 slides that show a fire sprinkler system, including the plumbing from the OS&Y into the building and then the sprinkler system itself, (C) 7 slides showing the kitchen hood system components.
5. 1 final slide where you explain why understanding fire protection systems is important to every firefighter and then a reflection on what you learned from this class and this project.

Following instructions is key to getting an "A" on this project. If you have the slides representing the various items, I ask you to find, and you remember to give a reflection then you will get full credit. I minus 2-4 points for missing items/slides.

I deeply regret that you do not get to do this in person. So many students tell me that going out and seeing these systems in person really helps you understand them. However, here we are looking a pandemic square in the eye and doing our best to survive and get on the other side. I hope you invest the time to get the most you can out of this project. I always preach that you should do your best! If your attitude is to do just enough to get by then you should not be a firefighter. Firefighters do things that make the difference



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between life and death. They sacrifice and try to be prepared for anything that may come their way. The attitude of “C’s” get degrees is not the attitude of someone who strives to be the best they can be. So, I hope you invest the time, and learn more about fire protection systems. Here is the rubric:

RUBRIC:

1. Title slide with project name “F. P. Systems,” Your name, Class name, My name 04 pts
2. Six slides of the alarm system: 24 pts
 1. 2 slides of the Fire Alarm Control Panel and Power Expander panel
 2. 1 slide of a manual pull alarm
 3. 1 slide of a smoke detector on a ceiling.
 4. 1 slide of a water flow detector on the riser
 5. 1 slide of a horn/strobe notification device
3. Ten slides of the fire sprinkler system 40 pts
 1. 1 slide of an OS&Y device outside the building
 2. 1 slide of the Fire Department Connection (FDC)
 3. 1 slide of the Post Indicator Valve (PIV)
 4. 1 slide of the Riser showing valves, gauges and water flow device
 5. 1 slide of the fire sprinkler piping/plumbing in a building
 6. 1 slide of the Earthquake bracing supporting the piping
 7. 1 slide of the hangars that the pipe rests on
 8. 1 close-up slide of an upright sprinkler head
 9. 1 close-up slide of a pendant sprinkler head
 10. 1 slide of the water flow gong outside a building
4. Seven slides of the kitchen hood system and K extinguisher 28 pts
 1. 1 slide of the wet-chem product container or containers
 2. 1 slide of the piping in the hood system
 3. 1 slide of a fusible link with wires going to container
 4. 1 slide of the plenum/hood venting
 5. 1 slide of nozzles used in the system
 6. 1 slide of the “K” extinguisher and manual pull for hood system
 7. 1 slide of the automatic shut off device for the gas line
5. Closing slide with reflection of why it is important for firefighters to understand fire protection systems and what you learned from this class and project 04 pts

Total is 100 points if you follow all instructions and include all portions of the project.

Please contact me with any questions via the inbox or my email

rosborne@vccd.edu



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6. Attendance:

In an online course there is no attendance expectation, but there is an expectation of daily involvement. This is not defined by just logging in, but by watching the videos and participating in the projects.

All quizzes are online and are available for at least a week. The quizzes should all be on Canvas and therefore you will have more than adequate time to take the quiz. If you turn in a quiz late your score will automatically be deducted, however if you miss a quiz it is always better to turn it in late than to get a big fat zero.

7. Important Dates:

	DUE
Drop without a W deadline	09/04
Occupancy Project	10/02
Mid-Term Examination	10/17
Egress Project	10/14
Graduation/Certificate deadline	10/29
Violations PowerPoint	11/04
Inspection Project due	12/09
Final Exam and last day	12/09-13

Class Schedule (Subject to change):

Week 1

08/20 **Respond to the check in announcement by Aug. 18. If you do not check in, you will be dropped and someone else will be given your spot.**

Read welcome letter, watch my Intro, read the Syllabus.

Syllabus/welcome letter quiz due 08/23

Discussion project: introduce yourself by 08/20; comments 08/23.

Week 2

08/27 Chap. 1 Fire Basics/History of FP Systems
Fire History Pop-quiz

Week 3

09/03 Chap. 2 Fire Code
Codes Pop-quiz

Week 4

09/10 Chap. 3 Fire Alarm Components
Quiz 1-2

Week 5

09/17 Chap. 4 Fire Alarm Systems
Fire Alarm Pop-quiz



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09/19	Project 1: Fire Behavior PowerPoint
Week 6	
09/24	Chap. 5 Water Supply Systems
09/25	Quiz 3-4
Week 7	
10/01	Chap. 6 Standpipe and Hose Systems
	Standpipe Pop-quiz
Week 8	
10/08	Catch-up and Standpipe operations
10/09	Quiz 5-6
Week 9	
10/15	Chap. 7 Fire Sprinkler Systems
	Sprinkler Pop-quiz
10/16	Mid Term
Week 10	
10/22	Chap. 8 Specialized Water Based Systems
	Foam Systems Pop-quiz
Week 11	
10/29	Chap. 9 Wet and Dry Chemical Systems
	Wet/Dry Chem Systems Pop-quiz
10/30	Quiz 7-8
Week 12	
11/05	Chap. 10 Gaseous Agent Systems
	Gas Systems Pop-quiz
Week 13	
11/12	Chap. 11 Portable Fire Extinguishers
11/13	Quiz 9-10
Week 14	
11/19	Chap. 12 Smoke Control Systems
	Firefighters and Fire Systems PowerPoint
11/26	Thanksgiving
Week 15	
12/03	Chapter 13 and final review
12/04	Quiz 11-12
Week 16	
12/08	Final Project Due
12/09-13	Final Exam

8. Class Demeanor:

In the fire service you are expected to respect each other and the traditions that guide firehouse life. Firefighters are expected to behave in a manner that shows respect,



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tolerance, professionalism, and an amiable attitude. I expect the same in this class. The fire service is a family and we call each other brother and sister, so start acting this way now and you will have a much more successful career as a firefighter. Firefighters are expected to give 100% effort in all they do. Good enough never is. I hope you will take the same attitude in this class. I would love to see every student earn an “A” and come out of this class better prepared to pursue the fire service.

Taking a course online requires the same amount of respect with an amiable attitude as a face-to-face class. Please read the ten Core Rules of Netiquette before class starts, found here: [Netiquette rules](#)

Here are some guidelines I came up with.

Before hitting send or save when posting in the discussion groups, you should reread your post and ask yourself if your post meets the guidelines of the four R's of internet posting. You might even want to consider these guidelines with your Snapchat, Facebook, Instagram and Twitter accounts. Ask yourself is it...

Real: Is this post based on true facts that can be verified? If it is opinion and not factual, then be sure to prefix your post with the statement that this is only your opinion or perspective on the issue.

Respectful: Is what I am saying and how I am saying it respectful of others and their opinions? Why has the internet become a place where everyone feels they can be nasty and mean? Let's treat each other with the respect we would like shown to ourselves. Please, no cursing or foul language in your posts.

Reasonable: Is my perspective lucid and clear and does it make sense? Have you really taken the time to research the issue and to think it through to come up with a reasonable post that adheres to the other guidelines, like being true and honest and respectful?

Relevant: Always ask yourself the question is this really worth saying? Is my post relevant to the subject at hand or am I just rambling? This also goes back to respecting another person's time.

One last thing regarding posts in discussions or in projects. One of the hardest things to learn in college is how to be thorough but terse or brief. I have papers turned in that are only a page but should have been at least 2-3 pages. I also have students who write 5-page papers that could have been said in a paragraph. Learning how to put your thoughts in a paper or post in an intelligent, clear and yet thorough manner is something that I am still working on as well, so proof-read and stop and think about what you have to say. Proof-read posts and make sure it reads the way you meant it and that it makes sense. We have all made mistakes where the auto-correct changed what we said or typed and then end up embarrassed or looking foolish. **Proof-read!**



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Firefighters have to do and say things in a hurry, and they have to be accurate in what they do. Here is a short video that was a commercial for Nextel. [What if firefighters ran Congress.](#)

Students with learning disabilities:

I want you to succeed in this class! If you are having any issues with the lectures, reading or assignments please talk to me. For student assistance and/or to be evaluated, please contact OC Educational Assistance Center at 986-5830. Please read the following from the school catalogue.

Statement of Reasonable Accommodation:

Oxnard College faculty members fully support the Americans with Disabilities Act (ADA), Title 5, Section 508, and the Rehab. Act of 1973. Members of the faculty will provide reasonable accommodation to any student with a disability who is registered with the Educational Assistance Center (EAC) who needs and requests accommodation. Faculty may wish to contact the EAC to verify the presence of a disability and confirm that accommodation is necessary. EAC will arrange and provide for the accommodation. Reasonable accommodation may involve allowing a student to use an interpreter, note taker, or reader; accommodation may be needed during class sessions and for administration of examinations. The intent of the ADA in requiring consideration of reasonable accommodation is not to give a particular student an unfair advantage over other students, but simply to allow a student with a disability to have an equal opportunity to be successful.

Financial Aid:

Financial Aid may be available. Call the Financial Aid office at 805-986-5828 or go to their website:

[Financial Aid](#)

Cheating or Plagiarism:

According to the school catalogue, "Oxnard College takes academic honesty very seriously, since ethical behavior and integrity are vital components of ensuring mutual respect across campus. Instructors, accordingly, have the responsibility and authority for dealing with instances of cheating or plagiarism that may occur in their classes. Such activities could include stealing tests, using "cheat sheets," copying off another's test, or turning in someone else's work as his/her own."

"Furthermore, instructors have the responsibility to report instances of cheating to their Deans in that cheating in any form is a violation of the Oxnard College Student Code of Conduct and as such is subject to investigation, charges of misconduct, and disciplinary consequences."



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Dropping the class:

It is school policy that anyone who fails to participate in an online course is supposed to be dropped. It is your responsibility to drop the class if you cease to attend Students who stop participating in the course but who do not formally withdraw and complete the appropriate drop procedures will receive an "F" grade for the course.

Please be sure to contact me via the Canvas inbox. You can also email me with any questions.