



South Portland, Maine 04106
Fire Science Department

Title: Fire Protection Systems

Catalog Number: FIRE 110

Credit Hours: 3

Total Contact Hours: 60

Methods: Lecture/Tours/Projects/Reports

Course Location: 01 WED 1500 - 1700h Pine Point

02 THURS 1300 - 1500h Zoom

01 + 02 FRI 1030 - 1200h Zoom

Instructors + Contact info:

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Course Syllabus

Course Description

This course is an introduction to fire protection and detection systems and their role in community fire protection. The focus of this course is on understanding fire behavior and the basic components that make up fire protection systems. Topics covered in this class include: Fire behavior, portable fire extinguishers, fire alarm and detection systems, standpipe systems, commercial/industrial automatic sprinkler systems, residential sprinkler systems, special extinguishing systems, and community fire protection.

Fire Science Learning Outcomes

Successful completion of an associate degree in Fire Science from Southern Maine Community College will prepare students to:

- 1) Analyze and apply proactive fire prevention and control methods for safe and cost-effective fire protection.
- 2) Analyze and apply reactive fire and emergency scene operations for safe and cost-effective fire protection.
- 3) Examine and appraise principles of supervision and management necessary for effective leadership and administration in the fire/rescue service.

Course Objectives

The student will be able to: demonstrate a basic understanding of the need for fire detection and protection systems, the benefits, capabilities and challenges of systems, and the role of systems in community fire protection.

Specifically: The student will be able to:

- 1) Explain why firefighters should have a basic understanding of fire protection systems.
- 2) Determine when and if fire protection systems are required.
- 3) Describe the operation and application on the following automatic fire sprinkler systems:
 - a. Wet-pipe system

- b. Dry-pipe system
 - c. Pre-action system
 - d. Deluge system
- 4) Describe the fire department's role in operating sprinkler systems.
 - 5) Identify the three types of standpipes and the differences among them.
 - 6) Describe different types of fire extinguishers, their extinguishing agents and appropriate uses.
 - 7) Describe the fire department's role in resetting fire alarm systems.
 - 8) Identify and describe the use of specialized extinguishing systems.

This course will help you prepare for a variety of jobs including municipal firefighter, sprinkler and/or alarm installer and industrial safety and/or fire brigade member.

Skills expected of municipal firefighters include:

- 1) Visually inspect systems for operational readiness
- 2) Supply water to sprinkler or standpipe systems
- 3) Advise members of the public of the benefits of automatic detection and protection systems

Skills expected of system installers include:

- 1) Understanding of fire protection systems' purpose, requirements, design, components operations and maintenance
- 2) Ability to install, inspect, troubleshoot and repair systems

Skills expected of safety/fire brigade members include:

- 1) Maintain, inspect for operational readiness and use automatic fire protection systems in a commercial and/or industrial setting.

Course Requirements

Students are expected to complete pre-class assignments, attend all classes and take notes. Students will be expected to actively participate in classroom discussions and group assignments. There will be class trips that are required for students to attend or view pre-recorded video trip. Online quizzes and in-class quizzes and tests will also be given.

Student Evaluation and Grading

Capstone Project	15%
Online Quizzes	20%
Writing Projects	20%
Midterm + Final Exam	20%
Pre-Class Note Taking Guides	20%
Attendance + Participation	5%

Required Texts

*Fire Protection Systems, Third Edition; A. Maurice Jones, Jr
Jones & Bartlett, Publishers ISBN#: 978-1-284-18013-8*

Student Face to Face and Zoom Classroom Behavior & Expectations

§ *Students are expected to attend the entire time of all classes. You are expected to arrive at class on time, with your pre-class work done.* Absences from class – or lack of engagement and response to questions during Zoom class - regardless of reason, will be recorded, and may result in a failing course grade (see details below).

§ *Students are expected to stay engaged in class, whether face to face or via Zoom.* Stay on task. Keep your camera on. Please do not be distracted by personal discussions, electronic devices, etc. during class. Live-in students who respond to emergencies during class time will be marked absent during the time away from class.

§ *Students are expected to submit original work unless other sources are clearly credited.* Students are expected to equitably share the load in group work. Cheating will not be tolerated. Students found cheating may result in penalizing actions up to and including a failing grade in this course following policies in the student code of conduct.

§ *Students are expected to prepare for class and complete all assignments.* Readings and homework provide the foundation for class lectures, discussions, and projects. Weekly quizzes will be given over the assigned readings. Homework will be assigned each week and must be submitted at the beginning of the next class. *You cannot pass this course without doing your homework every week!*

§ *Students are expected to take notes during class. If it's on the whiteboard or in PowerPoints it should be in your notes!*

§ *Students are expected to respect the classroom, fellow students and faculty.* Listen thoughtfully when others speak, even if you disagree with what they are saying. Challenge your own notions. Defend your positions with facts.

§ *Students are expected to actively participate and think critically.* This is necessary for knowledge sharing and to get the most from practice/application opportunities.

§ *Students are expected to set pagers, or cell phones on vibrate* during class time and ignore unless emergency.

§ *Students are expected to not use tobacco of any kind in the classroom.* Food and drinks should be used respectfully of others and the facility.

§ *Students are expected to doff hats and not wear any distracting attire* during class time.

§ *Students will be held accountable.* For working hard, staying engaged, persisting, asking for help as needed (earlier, rather than later), taking responsibility and holding yourself accountable, meeting expectations + mastering course materials.

Homework and Written Assignments

Assignments are due in BrightSpace on the date listed on the assignment and/or calendar. Late assignments (papers, take-home quizzes, etc.) will not be accepted and will receive a 0 unless prior written authorization is given by the instructor. All written assignments (other than your class notes) are to be typed neatly and stapled using MSWord, RTF or PDF file format and shall be in APA format.

APA Format:

- Use white 8 ½ x 11” paper
- Make 1 inch margins on the top, bottom and sides
- The first word in every paragraph should be indented one half inch
- Times New Roman font, size 12

Assignments for the Course

- Reading assignments
- Quizzes
- PCNTGs
- Written Assignments
- Capstone Project
- Capstone Presentation
- Final Exam

Attendance + Participation

Attendance will be recorded and will affect a student's course grade. SMCC requires instructors to report the names of students to the registrar's office who stop attending class. *Missing a portion of class will be measured as ½ an absence. Students will be reported as no longer attending after two consecutive – or a total of three -- absences from the class, resulting in a grade of Administrative Failure (AF) being recorded for the student. FMI, please refer to the SMCC Student Handbook. Students are expected to notify the instructor, in advance, concerning absences. Students are responsible for all material – and meeting deadlines – regardless of absences.*

Early Warning Letters

After students have completed 5 weeks of the course, early warning letters will be sent home to students with unsatisfactory performance. Unsatisfactory performance is determined by a combination of grades and attendance.

Mid-Term Grades

After students have completed Weeks 8 of the course, mid-term grades will be posted for all students. Those demonstrating unsatisfactory performance will be required to meet with the instructors and peer mentor and develop a plan for course success. Unsatisfactory performance is determined by a combination of grades, attendance + habits of success.

End-of-Course Evaluation

In order to gain access to final course grades, students must complete evaluations for each course attended at SMCC. Evaluations are submitted online and can be accessed through the student portal site. Students can access the course evaluation report beginning two weeks before the end of classes. The deadline for submission of evaluations occurs 24 hours after the last day of classes each semester. Instructors will announce when the online course evaluation is available. Course evaluations are essential to instructor and course improvement.

SMCC Pay-for-Print Policy

***Per Page Costs**

Each semester students receive a \$20 printing credit. The balance resets at the end of the semester and any remaining credits are removed. The cost varies depending upon page size and whether printing is done in black and white or color.

- a. There is a \$0.10 per page fee for standard 8.5" by 11" black and white documents.
- b. The reverse sides of duplex (double-sided) documents are free.
- c. There is a \$.50 per page fee for standard 8.5" by 11" color documents.
- d. There is a \$.20 per page fee for 8.5" by 14" (legal) or 11" by 17" (tabloid) black and white documents.
- e. There is a \$1.00 per page fee for 8.5" by 14" (legal) or 11" by 17" (tabloid) color documents.

Duplex charges (printing on both sides of a page) work in the following fashion: One page is \$0.10, two pages are \$0.10, three pages are \$0.20, and four pages are \$0.20, etc. The flipsides are free, but another sheet of paper is \$0.10. Please be aware that a document with any color at all (when printed to a color printer) will by default be printed in color. You are responsible for setting the print job to print black and white if you do not need color. For directions, please go to the IT Help tab in My SMCC.

***Refunds**

Print jobs are eligible for a refund in the event of mechanical or electronic error on the part of the printer, print server, or software used to submit the job. Jobs are not eligible for a refund in cases where the job was not set up correctly, was submitted multiple times, or the student is not satisfied with the result. To request a refund, please bring the offending print to the IT Department in the basement of the Ross Technology Center. Refunds will be granted in the form of a credit to the student's account.

***Why is SMCC charging for printing?**

The pay-for-print system is an effort to control escalating printing costs. Charging for printing helps offset the increasing cost of supplies and encourages students to conserve resources. To find ways to reduce your printing charges, please go to the IT Help tab on My SMCC. If you have questions about the pay-for-printing policy or your printing charges, please contact the Help Desk at 741-5696 or send an email to helpdesk@smccme.edu. Be sure to log OUT of the system when you've finished your printing, to prevent unauthorized access to your account.

***How does it work?**

The College's pay-for-print system monitors printing on all printers (including those in general access labs, library printers, the Academic Achievement Center, Noisy Lounge and technology labs). Students can check the number of pages they have printed by using the Printing Balance tool available on SMCC computers (located in the lower right corner of the screen, near the clock). Departments with work study students who need to print documents for the department should contact the Help Desk at 741-5696 to have a special account set up.

Add-Drop Policy

Students who drop a course during the one-week "add/drop" period in the fall and spring semesters and the first three days of summer sessions receive a 100% refund of the tuition and associated fees for that course. Please note any course that meets for less than the traditional semester length, i.e., 15 weeks, has a pro-rated add/drop period. There is no refund for non-attendance. **Add/drop deadline for the Fall, 2021 semester is Tuesday, September 7, 2021 @ 1700 hours.**

Withdrawal Policy

A student may withdraw from a course only during the semester in which s/he is registered for that course. The withdrawal period is the second through twelfth week of the fall and spring semesters and the second through ninth week of twelve-week summer courses. This period is pro-rated for shorter-length courses. To withdraw from a course, a student must complete and submit the appropriate course withdrawal form, available at the Enrollment Service Center (no phone calls, please). The designation “W” will appear on the transcript after a student has officially withdrawn. A course withdrawal is an uncompleted course and may adversely affect financial aid eligibility. Failure to attend or ceasing to attend class does not constitute withdrawal from the course. There is no refund associated with a withdrawal.

Plagiarism Statement

Students are responsible for adherence to ethical academic standards. Cheating is a serious offense, whether it consists of taking credit for work done by another person or doing work for which another person will receive credit. Taking and using the ideas or writings of another person without clearly and fully crediting the source is plagiarism and violates the academic code as well as the Student Code of Conduct. If it is suspected that a student in any course in which s/he is enrolled has knowingly committed such a violation, the faculty member will refer the matter to the College’s Disciplinary Officer and appropriate action will be taken under the Student Code of Conduct. Sanctions may include suspension from the course and a failing grade in the course. Students have the right to appeal these actions to the Disciplinary Committee under the terms outlined in the SMCC Student Code of Conduct.

Inclement Weather

If any classes are canceled due to inclement weather, tests or student presentations will be rescheduled for the next class period. School closure info is available at www.smccme.edu, by calling 741-5500 or tune into any local TV station.

ADA Syllabus Statement

Southern Maine Community College is an equal opportunity/affirmative action institution and employer. For more information, please call 207-741-5798. If you have a disabling condition and wish to request accommodations in order to have reasonable access to the programs and services offered by SMCC, you must register with the Disability Services Coordinator, Sandra Lynham, who can be reached at 741-5923. Further information about services for students with disabilities and the accommodation process is available upon request at this number. Course policies about online testing are modified to suit each individual’s accommodations.

SEE STUDENT HANDBOOK FOR OTHER ACADEMIC POLICIES