



South Portland, Maine 04106

**Fire Science**

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**Title: Hazardous Materials**

**Catalog Number: Fire 200**

**Credit Hours: 3**

**Total Contact Hours: 45**

**Lecture (or Lab): Lecture (live and via Zoom), discussion, case study, independent work, site visitations/field trips, and guest speakers**

**Instructor(s):**

Associate Professor Robert Lindstedt ([rlindstedt@smccme.edu](mailto:rlindstedt@smccme.edu))

Chief J. Wilson ([jwilson@southportland.org](mailto:jwilson@southportland.org))

DC R.Robitaille ([r.robitaille@aol.com](mailto:r.robitaille@aol.com))

**Course Location(s) and Time(s):**

Friday 0800 to 1000 (8/31/2020 to 12/19/2020) Online/BRTSP /Zoom

Friday : 0800-1100, By Arrangement (8/31/2020 to 12/19/2020) off campus/TBA

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**Required Text :** FIRE 200: Hazardous Materials Course, Hazardous Materials for First Responders, 5th Edition (IFSTA)

Media Type: PRINT, ISBN: 978-0-87939-613-8, IFSTA Item #: 36331

**OR**

eBook Hazardous Materials for First Responders, 5th Edition

Product Type: ELECTRONIC, ISBN: 9780879396190, IFSTA Item #: 75004

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# Course Syllabus

## Course Description

Because of the ever-increasing rate at which new industrial materials are being introduced into our modern world, and because it is fire service professionals who must deal with the hazards associated with these new chemicals, this is a particularly valuable course. Some of the areas of study include: standards, rules and regulations, 7 clues of hazmat, hazmat literature, Hazmat IAPs and ICS, Monitoring and detection, hazmat rescue, hazmat event continuum, chemical and physical characteristics of hazmat. This course also provides a broad spectrum but detailed review of other important concepts associated with hazardous materials, and emergency response. The goal is for all students to leave this course with a clear perspective on what it takes to mount a safe and effective hazardous materials response.

**Course objectives:** After successfully completing this course students will be able to.....

- Make connections between hazardous materials events/situations and current standards, rules and regulations.
- Analyze the relationship between historic hazmat event data and responder preparations.
- Identify, analyze and apply concepts associated with all of the components that need to be examined to conduct a pre-incident survey of fixed facility and/or transportation related hazmat events.
- Compare and contrast structural fire responses and hazmat incident responses
- Demonstrate ability to apply resource information in order to determine a plausible initial course of action for hazardous materials emergency responders for various hazmat incidents.
- Critique hazmat responses in order to learn valuable lessons from prior industry experiences
- Identify the causes of harm to emergency responders and possible routes of entry in order to determine the appropriate level of protection, materials and other technology necessary in order to achieve a safe operational response.
- Evaluate the chemical and physical characteristics of various hazardous materials and analyze the meaning of this data.
- Explain the use of Incident Management System, scene management processes and site management practices at hazardous materials incidents.
- Describe the hazmat release continuum and explain how responder actions can improve or worsen event outcomes.
- Analyze search-save-rescue methodologies employed in hazardous materials incidents and understand the information needed to choose an appropriate response tactic.
- Analyze decontamination types, processes and procedures and the information needed to apply the appropriate response for given hazmat situations.
- Describe offensive/defensive tactical control procedures employed at hazardous materials incidents and identify information needed to choose the correct response for given hazmat situations.
- Explain in detail the various product monitoring methods and devices utilized at hazardous material incidents including their capabilities and limitations.
- Create a detailed hazardous materials response scenario given some realistic foundational information regarding material, location and weather.
- Understand the scope of terrorism and implications of terrorism on emergency response.
- Explain the cooperation necessary for incidents involving joint operations of law enforcement and hazardous materials emergency responders.

## Course Requirements

Students will be required to complete the following activities/course work:

Reading assignment notes (due at the beginning of class (G-PCNTG))

Reports/Essays over various case studies and events showing understanding of event/issue details and independent critical thinking

Quizzes covering course readings/lectures/case studies/articles and discussions

Tests over various units of study

Capstone project demonstrating application of the information presented in the course

**COURSE POLICIES:** Students are expected to:

- Respect the classroom, fellow students, faculty
- Attend all sessions (Live and Zoom)
- **No pagers, or cell phones during class time**
- **No food or tobacco of any kind used in the classroom**
- **No hats worn during class time**
  - **\*Professional attitudes, behavior, decorum expected at all times**
  - **Attend all out of classroom sessions in their entirety**

**Tentative Schedule will be presented at the beginning of the course**

#### **Student Evaluation and Grading**

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| • Quizzes/Activities  | 20% |
| • (G- PCNTG)  | 20% |
| • Writing assignments (case studies and after action reviews) | 15% |
| • Test (final)  | 10% |
| • Student Project capstone                                    | 25% |
| • Attendance/positive participation (live & zoom)             | 10% |

**Assignments:** All assignments are expected on time at the **beginning** of class (typed and stapled unless otherwise indicated). **Late work will receive no more than 25% of full credit.** Any assignment not turned in before the following class meeting day will be given a (0) zero. Missed quizzes will only be allowed to be made up if the instructor and student meet and deem that a make-up opportunity is warranted.

- Quizzes are based on the pre-class reading and previous week classroom activities
- Assigned reading is the responsibility of the student.
- **All other homework is due at the beginning of class and it must be typed and stapled as appropriate. Unless otherwise indicated**
- There will be ONE closed book exams covering material presented.
- There will be several case study assignments required throughout the semester
- All field trips will be attended in their entirety, and students will be responsible for a reflection paper related to each out of classroom activity.
- Each student will be required to create and present a semester long project (Capstone); details of this project will be presented in stages throughout the semester.

#### **Attendance Policy**

Considering the nature of the material presented during this course, missing class time can have significant negative consequences. Absences and late arrivals (late arrivals initially or from any break will count for ½ of a missed class) will reduce a student's final grade earned in this class. Missing 2 (two) days of class time will be grounds for course failure. All classroom activities conducted on the date of absence will be given a grade of (0) zero. Any assignments due the day of an absence will be considered as being late. Attendance is expected at all classes (live and zoom) unless otherwise noted. Attendance will be recorded and will affect the class participation grade.

### **Current policy for Administrative Failures (AF)**

Face to face classes:

An Administrative Failure (a final grade of AF) identifies students who have stopped attending class and who have had no contact with the faculty member for a period in excess of one week. A student may be administratively failed after missing one more consecutive class meeting than the number of class meetings per week (4 for a class that meets three times a week, three for a class that meets twice a week, two for a class that meets once a week).

Asynchronous online classes:

A student in an online course may be administratively failed after not submitting an assignment, responding to a discussion question, completing a graded assignment, or otherwise performing some type of activity that shows active involvement in the course for a period of two weeks.

At their discretion, faculty may reinstate students who resume attending after the grade has been assigned.

The current attendance policy for purposes of applying the AF grade are:

- In face-to-face classes, a student is considered to have attended if they are physically present.
- In asynchronous online classes, a student is considered to have attended if they have completed a graded assignment (submitting an assignment, responding to a discussion question, completing a graded assignment, or otherwise performing some type of activity that shows active involvement ) during the course session.

SMCC requires instructors to report the names of students to the registrar's office who stop attending class. For the purpose of this class, students will be reported as no longer attending after two consecutive absences from the class. A report of last date of attendance to the registrar's office results in a grade of Administrative Failure (AF) being recorded for the student. For more information, please refer to the SMCC Student Handbook. Students are expected to notify the instructor, in advance, concerning absences. Students are responsible for all material missed during absences, excused or unexcused. Come to class on time. Late students will count as ½ of a missed class missed class.

### **End-of-Course Evaluation**

Students complete evaluations for each course attended at SMCC. Evaluations are submitted online and can be accessed through the student portal. Students can access the course evaluations beginning one week before the end of classes. The deadline for submission of evaluations occurs Monday at 5 p.m. following the last day of the class. You will receive an e-mail to your student e-mail account when course evaluations are available.

### **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.

### **SMCC Pay-for-Print Policy**

Each semester students receive a \$20 printing credit. The balance resets at the end of the semester and any remaining credits are removed. The College's pay-for-print system monitors printing on all printers (including those in general access labs, library printers, Tutoring Services, Campus Center Lounge and technology labs). Be sure to log OUT of the system when you've finished your printing, to prevent unauthorized access to your account. 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. 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 e-mail to [helpdesk@smccme.edu](mailto:helpdesk@smccme.edu).

### **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.

### **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.

### **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, usually 75 percent of course meeting times; please check with the Registration Office. To withdraw from a course, a student must complete and submit the appropriate course withdrawal form, available at the Registration Office. This process must be completed either in person or by using SMCC e-mail accounts.

### **Plagiarism Statement**

If an instructor suspects that a student has knowingly committed a violation defined in the Maine Community College System Policy on Student Grade Appeals and Academic Misconduct, the instructor has the authority to review the alleged misconduct and determine the grade that the student should receive for the assignment and the course. The instructor may assign a failing grade for the assignment or course and/or may require the student to complete additional work for the course. The instructor may consult with the department chair and/or the College's chief academic officer prior to making such decisions. If a student seeks to challenge an instructor's determination, the student should submit a grade appeal. Grade appeal forms are available in the Advising Office on the South Portland Campus or in the administrative offices in the Learning Commons on the Midcoast Campus. An instructor may also refer the matter to the College's disciplinary officer for review under the procedures of the MCCS Student Code of Conduct.