FIRE-112 – Hazardous Materials Operations

Fire Services

Effective Term & Year: Fall 2025
Course Outline Review Date: 2030-03-01

Program Area: Fire Services

Description:

This course meets and exceeds the 2022 Edition NFPA 470 at the Core Operations (Chapter 7) and Mission Specific (Chapter 9.2 and 9.6) Hazardous Materials/Weapons of Mass Destruction (WMD) Standard for Responders. At this (Responder) level, students learn the skills and additional knowledge necessary to respond to hazardous materials or weapons of mass destruction (WMD) incidents and protect nearby persons, the environment, and property from the effects of the release.

Program Information:

This course is a required course for the Fire Training Certification program. It is delivered as a standalone course as a part of a specialized contract training program.

Delivery Methods: Hybrid – On-campus (Face-to-Face) and Online

Credit Type: College of the Rockies Credits

Credits: 2

Instructional Activity and Hours:

Activity	Hours
Classroom, Directed Studies or Online Instruction	24
Seminar/Tutorials	
Laboratory/Studio	

Practicum/Field Experience	8
Co-op/Work Experience	
Other	
Total	32

Course Requisites:

- Complete 1 of the following
  - Completed the following:
    - FIRE111 – Hazardous Materials Awareness (0.5)
  - Or NFPA 1072/470 Hazardous Materials Awareness.

Prior Learning and Recognition: Yes

Students are able to request formal recognition of their prior learning or experience outside the classroom. Challenge examination, portfolio-assisted assessment, work-based assessment or a combination of assessments that is appropriate to identify, assess, and recognize prior skills, competencies, and knowledge to achieve course credit. Tuition fees apply, refer to Policy 2.5.5 Prior Learning Assessment and Recognition (PLAR) or contact an education advisor for more information.

Course Transfer Credit:

For information about receiving transfer credit for courses taken at either British Columbia or Alberta institutions, please see https://www.bctransferguide.ca/ or https://transferalberta.alberta.ca . For more transfer credit information, please visit https://www.cotr.bc.ca/Transfer

All requests for course transfer credit from institutions in British Columbia or elsewhere should go to the College of the Rockies Enrollment Service office.

Textbook Resources:

Textbook selection varies by instructor and may change from year to year. At the Course Outline Effective Date the following textbooks were in use:

Schnepp, R., & International Association of Fire Chiefs. (2018). *Hazardous Materials Awareness and Operations* (3rd ed.). Jones & Bartlett Learning.

The course will provide: Chemical splash suits

Please see the instructor's syllabus or check COTR's online text calculator https://textbook.cotr.bc.ca/ for a complete list of the currently required textbooks.

Learning Outcomes:

Upon the successful completion of this course, students will be able to perform the duties of an operations level hazardous materials responder according to the criteria set by the National Fire Protection Association, standard NFPA 470; i.e.:

- analyze a hazardous materials/WMD incident to determine the scope of the problem and potential outcomes;
- plan an initial response to a hazardous materials/WMD incident within the capabilities and competencies of available personnel and personal protective equipment;
- implement the planned response for a hazardous materials/WMD incident to favorably change the outcomes consistent with the emergency response plan and/or standard operating procedures; and
- evaluate the progress of the actions taken at a hazardous materials/WMD incident to ensure that the response objectives are being met safely, effectively, and efficiently.

Course Topics:

- Chemical Properties and Hazardous Materials Incidents
- Incident Management
- Strategic Goals and Tactical Objectives
- Terrorist Attacks, Criminal Activities and Disasters
- Personal Protective Equipment
- Decontamination
- Product Control
- Air Monitoring and Sampling
- Victim Rescue and Recovery
- Evidence Preservation and Sampling
- Illicit Laboratories

See instructor syllabus for the detailed outline of weekly readings, activities and assignments.

Evaluation and Assessments

Assessment Type: On-Campus (face-to-face) and Online, or Hybrid

Assessment Type	% of Total Grade
Written Test (Proboard)	50%
Practical Skills Assessment	50%

Total	100%

Grade Scheme

COM	NCG
Completed to the defined standard – 70% and higher	No credit granted – less than 70%

No pass requirements available.

Evaluation Notes Comments:

A grade of COM is awarded for a minimum of 70% on all theory based tests and a pass on all practical assessments.

The theory portion of the course is assessed with a Pro Board-approved written test. Students must achieve a minimum mark of 70%.

The practical skills portion of the course is assessed on a pass/fail basis. Students must earn a passing grade on each of the skills tests as required by the Pro Board.

A passing grade is required in both theory and practical skills components in order to earn credit for the course.

All courses (whether credit-bearing or continuing education courses) must be passed or marked “complete” according to the criteria listed before the student can be awarded the Fire Services Training Certificate.

Exam Attendance:

Students must attend all scheduled exams at the appointed time and place. Instructors may approve an alternate exam to accommodate an illness or personal crisis. Department heads will consider other written requests. Any student who misses a scheduled exam without prior approval will receive a “0” on the exam.

Academic Policies:

College of the Rockies policies related to courses can be found at https://cotr.bc.ca/about-us/college-policies/ and include the following:

- Policy 2.1.4 Course Audit
- Policy 2.4.1 Credential Framework
- Policy 2.4.3 Students with Documented Disabilities
- Policy 2.4.4 Student Rights, Responsibilities and Conduct
- Policy 2.4.8 Academic Performance

- Policy 2.4.9 Student Feedback and Concerns
- Policy 2.4.11 Storage of Academic Works
- Policy 2.5.3 Student Appeal
- Policy 2.5.5 Prior Learning Assessment and Recognition (PLAR)

Course Changes:

The College of the Rockies updates course outlines regularly to meet changing educational, employment and marketing needs. The instructor will notify students in writing of any updates to this outline during the semester. The instructor reserves the right to revise, add or delete material while meeting the learning outcomes of this course outline.