



FIRE-212 – Fire Investigator

Technology

Effective Term & Year: Fall 2022

Course Outline Review Date: 2026-03-01

Program Area: Fire Services

Description:

This course is based on NFPA 1033: Standard for Professional Qualifications for Fire Investigator. This course targets Fire Investigators, Police Officers, company-level Officers, Private Cause and Origin Investigators with a desire to learn more about determining the origin and cause of the fire. Topics include fire methodology, basic fire science, fire patterns, building systems, fire protection systems, electricity and fire, human behaviour, legal considerations, planning the investigation, documentation, evidence, origin determination, fire causes and classification, failure analysis, explosions, and managing complex investigation. Students wishing to attend this course should be prepared for intense training and practical skills application.

Program Information:

This course can be delivered as a stand-alone course or as 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	32
Seminar/Tutorials	16
Laboratory/Studio	
Practicum/Field Experience	
Co-op/Work Experience	
Other	
Total	48

Course Requisites:

None

Flexible Assessment: No**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 Enrolment Services 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:

Fire Investigator, Jones & Bartlett

Learning Outcomes:

Upon the successful completion of this course, students will be able to

- permit application;
- process a plan review application;

- investigate complex complaints;
 - recommend modifications to codes and standards of the jurisdiction;
 - recommend policies and procedures for the delivery of inspection services;
 - compute the maximum allowable occupant load of a multi-use building;
 - identify the occupancy classifications of a mixed-use building;
 - determine the building's area, height, occupancy classification, and construction type;
 - evaluate fire protection systems and equipment provided for the protection of life safety, building, or a facility;
 - analyze the egress elements of a building or portion of a building;
 - evaluate hazardous conditions involving equipment, processes, and operations;
 - evaluate emergency planning and preparedness procedures;
 - verify code compliance for storage, handling, and use of flammable and combustible liquids and gasses;
 - evaluate code compliance for the storage, handling, and use of hazardous materials;
 - determine fire growth potential in a building or space;
 - inspect emergency access for a site;
 - verify compliance with construction documents;
 - classify the occupancy type;
 - compute the maximum allowable occupant load;
 - review the proposed installation of fire protection systems;
 - verify that means of egress elements are provided; and
 - verify the construction type of a building or portion thereof.
-

Course Topics:

- Fire methodology
 - Basic fire science
 - Fire patterns
 - Building systems
 - Fire protection systems
 - Electricity and fire
 - Human behaviour
 - Legal considerations
 - Planning the investigation
 - Documentation
 - Evidence
 - Origin determination
 - Fire causes and classification
 - Failure analysis
 - Explosions
 - Managing complex investigation
-

Evaluation and Assessments

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

Assessment Type	% of Total Grade
Projects and practical assessments	50%
Final Exam	50%
Total	100%

Grade Scheme

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

Evaluation Notes Comments:

Successful completion requires that the candidate perform to a minimum 70% competency on the examination, and successfully complete a skills/project evaluation to a minimum of 70% competency and successful completion of all critical points. Evaluators will test at least 25% of the skills for each. Skill sheets to be tested will be randomly selected by College of the Rockies Fire Program Administrator for the practical examination.

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 2.4.3 Students with Documented Disabilities
- Policy 2.4.4 Student Conduct (plagiarism, other cheating, behavioral misconduct)
- Policy 2.5.8 Academic Performance
- Policy 2.5.3 Grade Appeal
- Policy 2.4.9 Student Concerns Re Faculty

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.