

**Justice Institute of British Columbia**  
**COURSE OUTLINE**

<b>Course Code:</b>	FSS282
<b>Course Title:</b>	Building Construction: Issues in Fire Safety
<b>Prerequisite Courses:</b>	Physical Science 100 (or equivalent)
<b>School:</b>	School of Public Safety & Security
<b>Division/Academy/Centre:</b>	Fire & Safety Division
<b>Previous Course Code &amp; Title:</b>	N/A
<b>Course First Offered:</b>	2008

<b># of Credits:</b>	<b>3.0</b>
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**Course Description:**

Building construction and design are important considerations for building inspections, preplanning at fire operations and operating at emergencies. Learners will be able to identify how elements of construction and design impact fire and life safety, and will integrate and apply the principles of building codes, building construction, fire resistance, and fire behaviour to maximize the safety of all personnel. They will also learn to differentiate collapse and ventilation-related fire safety issues in combustible and non-combustible forms of construction

**Course Goal(s):** To minimize the danger to fire fighting personnel through increased knowledge of building construction principles and their relationship to fire behavior, and to apply appropriate elements of the Building Code and Fire Code for a given jurisdiction

**Learning Outcomes:**

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

1. Analyze the hazards and tactical considerations associated with the various types of building construction
2. Explain the interrelationships of the different loads and stresses placed on buildings
3. Identify the structural components of different types of buildings and their related functions
4. Differentiate between fire resistance and flame spread and explain the testing procedure used to establish the ratings for each
5. Identify the indicators of potential structural failure as they relate to fire fighter safety
6. Identify how different types of building construction impacts firefighter safety, strategy and tactics
7. Classify the major types of building construction

**Course Topics/Content:**

- Fire Risks, Protection, Loss Management and Life Safety
- Principles of Construction
- Building Construction: Structures, Design and Fire Behaviour
- Principles of Fire Resistance
- Combustible Construction
- Non-Combustible Construction
- Fire Protection Equipment
- Hazards of Building Services
- Trusses
- Special Structures

**Text and Resource Materials:**

**Required:**

Brannigan, F. L. (1992). *Building construction for the fire service* (3rd ed.). Quincy, MA: National Fire Protection Association.

International Fire Service Training Association. (1999). *Building construction: Related to the fire service*. Stillwater, OK: Fire Protection Publications, Oklahoma State University.

Smith, Michael, L. (2008). *Building construction: Methods and materials for the fire service*. Prentice Hall.

**Recommended:**

**Course Level:**

	First Year	X	Second Year		Third Year		Fourth Year
	Graduate		Other (describe):				

**Equivalent Course(s) within the JIBC:**

**Class Delivery Methods:**

Delivery Methods	Class Option A (Hours)	Class Option B (Hours)	Class Option C (Hours)	Class Option D (Hours)
Classroom/Lecture/Discussion				
Simulation/Lab				
Practicum/Fieldwork				
Online	42			
Correspondence				

<b>Total Class Hours</b>	42			
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**Comments on Delivery Methods:**
**Course Grading System:**

Letter Grades	X	Percentage	Pass/Fail
Complete/Incomplete		Attendance Only	

<b>Passing Grade:</b>	50%
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**Evaluation Activities and Weighting:**

Final Exam	%	Assignments	80%	Project	%	Capstone Project	%
Midterm Exam	%	Portfolio	%	Participation	20%	Other	%
Quizzes/Test	%	Simulations	%	Practicum	%	TOTAL	100%

**Comments on Evaluation Activities and Weighting:**
**Other Course Guidelines, Procedures and Comments:**

View official versions of related JIBC academic regulations and student policies in the *JIBC Calendar* on the following pages of the JIBC website:

**Academic Regulations:**

<http://www.jibc.ca/programs-courses/jibc-calendar/academic-regulations>

Student Academic Integrity Policy  
 Academic Progression Policy  
 Admissions Policy  
 Academic Appeals Policy  
 Evaluation Policy  
 Grading Policy

**Student Policies:**

<http://www.jibc.ca/programs-courses/jibc-calendar/student-policies>

Access Policy  
 Harassment Policy – Students  
 Student Records Policy  
 Student Code of Conduct Policy

**JIBC Core Competencies**

The JIBC promotes the development of core and specialized competencies in its programs. Graduates of our programs will demonstrate high levels of competence in the following areas:

**Critical thinking**

Identify and examine issues and ideas; analyze and evaluate options in a variety of fields with differing assumptions, contents and methods.

**Communication, oral and written**

Demonstrate effective communication skills by selecting the appropriate style, language and form of communication suitable for different audiences and mediums.

**Leadership**

Inspire individuals and teams to reach their potential by embracing innovation through strategic thinking and shared responsibility.

**Independent learning**

Show initiative by acting independently in choosing effective, efficient and appropriate applied learning, research and problem solving strategies.

**Problem solving**

State problems clearly; effectively and efficiently evaluate alternative solutions; choose solutions that maximize positive and minimize negative outcomes.

**Interpersonal relations**

Know and manage oneself; recognize and acknowledge the needs and emotions of others including those with diverse backgrounds and capabilities.

**Inter-professional teamwork**

Understand and work productively within and between groups, respect others' perspectives and provide constructive feedback with special attention to inter-professional relationships.

**Information literacy**

Recognize and analyze the extent and nature of an information need; efficiently locate and retrieve information; evaluate it and its sources critically, and use information effectively and ethically.