Program of Instruction
Course Syllabus

Course Title: Building Construction

Course Duration: 1-16 hours

Program: Fire Fighting

Course Prerequisites: The Building Construction class is designed for entry level or seasoned firefighters wanting to: learn, enhance or maintain basic skill and understanding of Building Construction.

Course Description: This class provides an understanding of construction types from fire resistive materials such as brick, block, concrete and steel, to wood frame structures. These typical single family and multifamily residential or business occupancies may be balloon frame, “stick built” with full dimensional lumber, or engineered components. The structural members of floor and roof systems are discussed as they relate to their intended purpose and what they do under live and dead loads while under the stress of fire and suppression activities. Openings such as windows, doors, skylights and ventilation shafts are discussed as they relate to the firefighting, search and rescue profile.

Course Requirements and/or Recommendations: These can be divided into three categories: those completed prior to arriving in class (Pre-Course Work), those completed during class, such as homework assignments and quizzes (Course Work), and requirements completed after class but prior to receiving a certificate of completion. (Post-Course Work)

Summary of Directions

Pre-Course Work**:** None
Course Work: Attend and participate in all lectures and practicals.
Post-Course Work: None

Course Policies:

Safety Policy: Students shall understand and follow all instructions pertaining to operational safety, as stated by instructors or as written in course materials. Instructors and students shall be mindful of safety at all times. Conduct judged to be unsafe shall be grounds for dismissal from the course.

Academic Integrity Policy: IFSI has the responsibility for maintaining academic integrity so as to protect the quality of the education provided through its courses, and to protect those who depend upon our integrity. It is the responsibility of the student to refrain from infractions of academic integrity, from conduct that may

lead to suspicion of such infractions, and from conduct that aids others in such infractions. Any violation of the code of conduct is grounds for immediate dismissal from the course.

References:

IFSTA, Essentials, 4th Edition
Delmar, Firefighter's Handbook, 3rd Edition
Brannigan, Francis. Building Construction for the Fire Service Quincy MA: National Fire Protection Association, 1994.
Brannigan, Francis "The Building is Your Enemy: Part 5" Firehouse July 1998: 58-64.
Brannigan, Francis "The Dangerous Five Classes of Buildings" Fire Engineering May 1999: 120-125.
Brannigan, Francis "The Building is Your Enemy: Heavy Timber Construction" Firehouse July 2000: 64-70.
Brennan, Tom. "Random Thoughts - Collapse: Movement of a Structure" Fire Engineering June 2000: 136.
Brennan, Tom. "Random Thoughts - The Signs of Impending Building Collapse" Fire Engineering July 2000: 108.
Delmar. Firefighter's Handbook: Essential of Firefighting and Emergency Response 3rd Ed. Albany NY: Delmar Publishers, 2008.
Dunn, Vincent. "Safety & Survival: The Deadly Lightweight Truss" Firehouse January 2001: 16-20.
Fire Protection Publications. Building Construction Related to the Fire Service Stillwater OK: Oklahoma State University, 1986.
Smith, Michael L. "Heavy Timber Construction: What Firefighters Need to Know." Firehouse July 2000: 64-70.
Smith, James P. "Fire Studies: Floor Collapse" Firehouse August 2000: 20-26.

Course Content:

Module: 1
Title: Building Construction Part I
Terminal Learning Objectives:
At the conclusion of this module, the student will be able to explain the different types/components of building construction and their associated hazards.

Module: 2
Title: Building Construction Part II
Terminal Learning Objectives:
At the conclusion of this module, the student will be able to explain the different types/components of building construction and their associated hazards.

Course Schedule

Event	**Duration**
Module 1 – Building Construction Part I	1 ½ hours
Module 2 – Building Construction Part II	1 ½ hours
Tour – Building Construction Tour	1 hour
Additional discussion and/or Tour	12 hours