

# Framing Course Descriptions

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## **ORIENTATION** **(40 Hours)**

This course provides an overview of the carpentry profession, tools of the trade, and jobsite safety. Discussion topics will include the history of the trade, apprenticeship responsibilities, and hiring-hall practices, and measurements. Successful students will receive OSHA 10 and Powder Actuated Tool certification cards. Qualified candidates will be issued a UBC gradall operator's card.

## **SAFETY & HEALTH CERTIFICATIONS** **(40 Hours)**

This course covers the safe and appropriate use of scaffolds, aerial lift equipment, and emergency response procedures. Successful students will receive UBC Scaffold Erector and Aerial Lift Operator qualification cards. First Aid and CPR certification will be issued upon successful completion of the American Red Cross training provided.

## **BASIC WALL FRAMING** **(40 Hours)**

This course presents the theory, methods, and procedures required to frame basic walls. Hands-on practice using proper tool techniques and appropriate materials will enhance fundamental skill development. Beginning with an introduction to print reading, students will perform: basic wall layout; plating procedures; framing assembly and bracing; before aligning and completing selected wall construction project to industry standards.

## **PRINTREADING** **(40 Hours)**

This course introduces the basic principles and conventions associated with architectural print interpretation. Print characteristics, drawing methods, and standard graphic representations are explained and thoroughly discussed. Students will review plans and apply the visualization techniques presented in the training.

## **BASIC COMMERCIAL FRAMING** (40 Hours)

This course provides an introduction to basic wall framing theory and construction techniques. Floor plan interpretation will be used for job planning, design recognition, and to determine materials. Students will layout and detail wall plates for locating basic wall components and door openings. Instruction will include measuring skills, mathematical principles, wall assembly and installation procedures, and detail how structural connections are made.

## **COMMERCIAL FLOOR FRAMING** (40 Hours)

This course covers floor joist construction and the various installation techniques used within the commercial industry. Students will interpret floor plans for job planning, interpretation of the applicable floor joist system and to calculate material take offs. Integration of wall plating, joist layout and floor sheathing methods will be included. Instruction will incorporate measuring skills, use of mathematical principles, specialty hardware identification and applicable building codes.

## **BASIC STAIRS** (40 Hours)

This course provides an introduction to stair framing theory, terminology and construction techniques. Students will interpret floor plans and drawing elevations for job planning, and to layout and detail stair stringers. Basic calculations for the number of stairs, landing height, stair thread and riser dimensions will be presented. Instruction will include measuring skills, mathematical principles, stair and handrail fabrication, assembly and installation.

## **BASIC ROOF FRAMING** (40 Hours)

This course provides an introduction to basic gable roof framing, terminology and construction characteristics. Students will interpret print views and drawing elevations for job planning, and to determine rafter systems and layout details. Basic rise, run, rafter angles and length calculations will be practiced. Framed wall construction will be incorporate to facilitate the gable roof assembly techniques and installation procedures that are the focus of this training.

## **ADVANCED COMMERCIAL FRAMING** (40 Hours)

This course incorporates advanced commercial wall framing theory and construction techniques with structural hardware and shear panel installation. Students will interpret floor plans for job planning, and to layout and detail plates for complex walls, rake walls and door openings. Instruction will include measuring skills, use of mathematical principles, wall construction, plywood shear panel installation, and structural hardware attachment.

## **RIGGING** (40 Hours)

This course presents both lifting theory and practical rigging methods and procedures. The design, characteristics and safety working load of lifting hardware will be discussed. Rigging attachment procedures, lifting equipment, limits of operation and communication practices will be covered. Successful students will receive UBC rigging qualification cards

## **TRANSIT LEVEL / LASER** (40 Hours)

This course covers the terminology, optical principles, and operating procedures for the transit and laser levels. The conventional methods for measuring angles, using degrees, minutes, and seconds on vernier scales will be included in the transit portion of this class. Students will set up levels, determine benchmarks, take and record elevation readings.

**ADVANCED STAIRS** **(40 Hours)**

This course is designed to enhance the student's existing skills in the construction of basic stairs. Students will interpret floor plans and drawing elevations for job planning, and to layout and construct complex stair designs. Stair calculations will be adapted to determine the number of stairs, landing height, stair thread and riser dimensions. In addition to measuring skills, mathematical principles, stair and handrail fabrication and assembly, the installation techniques required for circular and "u" shaped stair configurations will be covered.

**ADVANCED ROOF FRAMING** **(40 Hours)**

This course provides an introduction to hip roof framing, terminology and construction characteristics. Students will interpret print views and elevations for job planning; to determine rafter systems and layout details. Basic rise, run, rafter angles and length calculations will be performed. Framed wall construction will be incorporate to facilitate the hip roof assembly techniques and installation procedures that are the focus of this training.

**PANELIZED ROOF** **(40 Hours)**

This course covers the structural components and building techniques associated with heavy timber construction and panelized roof systems. The advantages and types of manufactured wood used, and their load carrying strength, span, and spacing will be discussed. A distinction between standard post and beam, and heavy timber construction will be emphasized. Students will interpret floor plan, section views and drawing elevations for job planning, and to layout and construct a heavy timber post and beam supported panelized roof.

**EXTERIOR FINISH DETAILS** **(40 Hours)**

In this course the terminology, design considerations and construction techniques for various types of exterior detail installations will be covered. Plan views and drawing elevations will be used for job planning activities, including calculating dimensions and materials, identifying wall covering types and other exterior construction details. Students will use the construction techniques presented to complete various exterior detail installations to print specifications.

**METAL FRAMING** **(40 Hours)**

This course provides an overview of residential metal framing theory and construction techniques. Students will interpret prints for job planning and to estimate materials. Students will layout and detail wall plates for locating all wall and truss components, and openings. Instruction will include measuring techniques, mathematical principles; wall and roof assembly and installation techniques; and describe how structural connections are made.

**ADVANCED PRINTREADING** **(40 Hours)**

In this course, students will analyze multi-view drawings to determine construction type, locate benchmark, find building element, references, and perform calculations for construction purposes. The training will include sketching, material take-off, labor estimation, and the methods used to interpret schedules and specifications.