



9189

FRAMING (11B)

30S/30E/30M

A Carpentry Course

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Course Description

In this course, students will learn basic framing techniques. It includes many of the objectives found in *Carpenter Level 1*, Unit A6: Wood and Wood Products, from Apprenticeship Manitoba.

Goal 1: Describe and apply appropriate **health and safety** practices.

GLO 1.1: Describe and apply appropriate **health and safety** practices.

SLO 11B.1.1.1 Demonstrate an understanding of and adherence to health and safety practices.

SLO 11B.1.1.2 Identify personal protective equipment (PPE) and procedures. (A2.2)

- employer and employee responsibilities as related to personal protective equipment
- standards: CSA, ANSI (U.S.A. standards), etc.
- Work protective clothing and danger if it fits poorly
- gloves—importance of proper glove selection (when handling chemicals, cold items, slivers, etc.)
- headwear—appropriate protective headwear when required and the approved type of headwear
- eye protection—comparison and distinction of everyday eyeglasses, industrial safety glasses, and safety goggles
- foot protection—when required according to safety standards
- hearing protection
 - hazards of various noise levels (hearing protection must be worn)
 - laws
 - types of hearing protection
- respiratory protection—types, overview of proper selection
- fall protection—Manitoba requirements standards guidelines
 - CSA
 - ANSI (U.S.A. standards), etc.

- ladders and scaffolding
 - safety principles for working with or around industrial trucks site-specific (forklifts, pallet trucks, etc.)
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GLO 1.2: Demonstrate knowledge of the ***Trade Safety Awareness Manual.***

No applicable SLOs.

Goal 2: Demonstrate the identification, installation, and management of **materials.**

GLO 2.1: Demonstrate the identification, installation, and management of **materials.**

- SLO 11B.2.1.1 Identify hazards and describe safe work practices pertaining to handling wood and wood products. (A6.2)
 - SLO 11B.2.1.2 Interpret codes, regulations, and information found on drawings and specifications pertaining to wood and wood products. (A6.3)
 - SLO 11B.2.1.3 Identify types of wood, and describe their characteristics and applications. (A6.4)
 - hardwoods
 - softwoods
 - SLO 11B.2.1.4 Identify types of wood products, and describe their characteristics and applications. (A6.5)
 - lumber
 - panels
 - engineered products
 - lumber
 - structural insulated panels (SIP)
 - SLO 11B.2.1.5 Identify wood defects. (A6.6)
 - SLO 11B.2.1.6 Describe wood processing. (A6.7)
 - sawing
 - seasoning/drying
 - dressing/planning
 - grading
 - treating
 - SLO 11B.2.1.7 Describe the procedures used to select, handle, and store wood products. (A6.8)
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Goal 3: Demonstrate the identification, use, and management of **tools, equipment, fasteners, and adhesives.**

GLO 3.1: Demonstrate the identification, use, and management of **tools and equipment.**

SLO 11B.3.1.1 Identify hazards and describe safe work practices pertaining to tools and equipment. (A3.2)

GLO 3.2: Demonstrate the identification, use, and management of **fasteners and adhesives.**

SLO 11B.3.2.1 Demonstrate the identification, use, and management of fasteners and adhesives.

Goal 4: Demonstrate the basic **skills** of carpentry.

GLO 4.1: Demonstrate the skills related to **project drawings and specifications.**

SLO 11B.4.1.1 Interpret codes, regulations, and specifications pertaining to project drawings, specifications, and trade documentation. (B2.2) *(This objective is also taught in course #9191.)*

- federal
- provincial/territorial
- municipal

SLO 11B.4.1.2 Identify types of specification documents, and describe their applications. (B2.3) *(This objective is also taught in course #9192.)*

- code books
- contract specifications
- manufacturers' specifications
- energy efficiency guides
- safety manuals/instructions
- operating manuals
- permits

- SLO 11B.4.1.3 Identify types of drawings, and describe their applications. (B2.4)
- site/plot/civil
 - architectural
 - mechanical
 - structural
 - electrical
 - shop drawings
 - sketches
- SLO 11B.4.1.4 Describe the procedures used to interpret and extract information from drawings and specifications. (B2.9)
- alphabet/types of lines
 - symbols and abbreviations
 - projections
 - views
 - legend
 - title block
 - general notes
 - schedules
 - scales
 - grid lines
 - two-dimensional information vs. three-dimensional space
 - procedure to report conflict within a set of drawings
- SLO 11B.4.1.5 Demonstrate the literacy skills required to interpret, extract, and apply information from drawings and specifications.
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GLO 4.2: Demonstrate the carpentry skills related to **layout, measurement, and assembly.**

- SLO 11B.4.2.1 Demonstrate the skills required to lay out projects.
- SLO 11B.4.2.2 Demonstrate the skills required to perform on-centre layout.
- SLO 11B.4.2.3 Demonstrate the skills required to align framing members.
- SLO 11B.4.2.4 Demonstrate the skills required to align panel products.

- SLO 11B.4.2.5 Calculate area/volume. (B1.3) *(This objective is also taught in course #9191.)*
- geometrical shapes
 - board-foot measure (BFM)
- SLO 11B.4.2.6 Demonstrate proficiency in manipulating fractions, decimals, ratios, and percentages.
- SLO 11B.4.2.7 Demonstrate proficiency in converting to and from metric and standard/imperial units of measure.
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GLO 4.3: Demonstrate the ability to determine **elevations** and lay out **building lines**.

No applicable SLOs.

GLO 4.4: Demonstrate the knowledge and skills associated with **concrete foundations**.

No applicable SLOs.

Goal 5: Follow the **ethical and legal standards** that pertain to carpentry.

GLO 5.1: Demonstrate an awareness of the **ethical and legal expectations** of carpenters.

- SLO 11B.5.1.1 Demonstrate an awareness of the ethical expectations of carpenters.
- SLO 11B.5.1.2 Demonstrate an awareness of the existence of building codes and other local regulations related to framing.
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Goal 6: Demonstrate **employability skills**.

GLO 6.1: Demonstrate **employability skills**.

- SLO 11B.6.1.1 Demonstrate regular attendance and punctuality.
- SLO 11B.6.1.2 Demonstrate accountability by taking responsibility for own actions.
- SLO 11B.6.1.3 Demonstrate adaptability and effort.
- SLO 11B.6.1.4 Demonstrate the ability to accept and follow direction and feedback.
- SLO 11B.6.1.5 Demonstrate teamwork skills.
- SLO 11B.6.1.6 Demonstrate the ability to stay on task and effectively use time.
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GLO 6.2: Demonstrate **critical thinking** skills.

SLO 11B.6.2.1 Demonstrate problem-solving skills.

SLO 11B.6.2.2 Demonstrate an understanding of the use of critical thinking in carpentry.

GLO 6.3: Demonstrate respectful interactions with individuals of different **cultures**.

SLO 11B.6.3.1 Discuss and define culture.

Goal 7: Demonstrate an awareness of **sustainability** as it pertains to carpentry.

GLO 7.1: Describe the impact of the construction industry on **human sustainability** and the health and well-being of carpenters.

SLO 11B.7.1.1 Identify sustainable practices that influence human health and well-being for carpenters.

GLO 7.2: Describe the construction industry's **sustainability practices** and impact on the environment.

SLO 11B.7.2.1 Demonstrate the efficient use of materials.

Goal 8: Demonstrate an understanding of the **structure and scope** of carpentry.

GLO 8.1: Describe the **scope** of carpentry.

SLO 11B.8.1.1 Demonstrate an awareness of the scope of framing.

GLO 8.2: Describe **apprenticeship, post-secondary education, and employment opportunities**.

SLO 11B.8.1.1 Demonstrate an awareness of employment opportunities in carpentry and in associated occupations.

Goal 9: Demonstrate an understanding of the **evolution** of carpentry, including its **technological progression and emerging trends**.

GLO 9.1: Demonstrate an understanding of the **evolution** of carpentry, including its **technological progression and emerging trends**.

SLO 11B.9.1.1 Demonstrate an awareness of the evolution, technological progression, and emerging trends in framing.
