



8585

CARPENTRY FUNDAMENTALS
(10)

20S/20E/20M

A Carpentry Course

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Course Description

This course gives students a broad, introductory overview to the carpentry cluster. Students will develop basic knowledge, skills, and attitudes related to carpentry.

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

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

SLO 10.1.1.1 Demonstrate an understanding of and adherence to health and safety practices.

SLO 10.1.1.2 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.)
- SLO 10.1.1.3 Identify the safety requirements as they apply to WHMIS with emphasis on: (A2.8)
- WHMIS is a system
 - provincial regulation under *The Workplace Safety and Health Act*
 - each province has a WHMIS regulation
 - federal *Hazardous Products Act*
 - WHMIS generic training:
 - WHMIS defined and the format used to convey information about hazardous materials in the workplace
 - information found on supplier and workplace labeling using WHMIS
 - hazardous materials in accordance with WHMIS
 - compliance with government safety standards and regulations
 - description of WHMIS (include varieties of WHMIS certification)
 - typology of WHMIS labels, symbols, and classifications
 - scope and use of Materials Safety Data Sheets (MSDS)
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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 10.2.1.1 Identify hazards and describe safe work practices pertaining to handling wood and wood products. (A6.2)
- SLO 10.2.1.2 Define terminology associated with wood and wood products. (A6.1)
- SLO 10.2.1.3 Identify hazards and describe safe work practices pertaining to handling non-wood products. (A7.2)

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 10.3.1.1 Identify hazards and describe safe work practices pertaining to tools and equipment. (A3.2)
- SLO 10.3.1.2 Define terminology associated with tools and equipment. (A3.1)
- SLO 10.3.1.3 Identify the factors to consider when selecting tools and equipment. (A3.7)
 - safety and training requirements
 - condition of tool or equipment (damaged, worn, defective)

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

- SLO 10.3.2.1 Demonstrate the identification, use, and management of fasteners and adhesives.
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Goal 4: Demonstrate the basic **skills** of carpentry.

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

- SLO 10.4.1.1 Define terminology associated with project drawings and specifications. (B2.1)
 - SLO 10.4.1.2 Identify drafting instruments and describe their applications and procedures for use. (B2.5)
 - SLO 10.4.1.3 Identify drawing projections and views, and describe their applications. (B2.7)
 - SLO 10.4.1.4 Demonstrate basic sketching techniques. (B2.10)
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GLO 4.2: Demonstrate the carpentry skills related to **layout, measurement, and assembly**.

- SLO 10.4.2.1 Demonstrate the skills required to lay out projects.
 - SLO 10.4.2.2 Demonstrate the skills required to measure efficiently and accurately, to 1/16th of an inch.
 - SLO 10.4.2.3 Demonstrate the skills required to prepare and assemble a project.
 - SLO 10.4.2.4 Perform basic operations. (B1.1)
 - addition
 - subtraction
 - multiplication
 - division
 - SLO 10.4.2.5 Perform linear measurement. (B1.2)
 - imperial/metric
 - perimeter (rectangles, squares, circles)
 - SLO 10.4.2.6 Apply geometrical principles. (B1.5) (*This objective is also taught in course #9192.*)
 - bisecting angles/lines
 - ellipses/spring line
 - perpendicular parallel lines
 - Pythagorean theorem
 - basic trigonometry
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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 10.5.1.1 Demonstrate an awareness of ethics and its place in the workplace.

SLO 10.5.1.2 Demonstrate an awareness of the existence of building codes, guidelines, and codes of practice within the building industry.

Goal 6: Demonstrate **employability skills**.

GLO 6.1: Demonstrate **employability skills**.

SLO 10.6.1.1 Demonstrate regular attendance and punctuality.

SLO 10.6.1.2 Demonstrate accountability by taking responsibility for own actions.

SLO 10.6.1.3 Demonstrate adaptability and effort.

SLO 10.6.1.4 Demonstrate the ability to accept and follow direction and feedback.

SLO 10.6.1.5 Demonstrate teamwork skills.

SLO 10.6.1.6 Demonstrate the ability to stay on task and effectively use time.

GLO 6.2: Demonstrate **critical thinking** skills.

SLO 10.6.2.1 Demonstrate problem-solving skills.

SLO 10.6.2.2 Demonstrate an awareness of critical thinking.

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

No applicable SLOs.

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 10.7.1.1 Define sustainability as it relates to human health and well-being.

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

SLO 10.7.2.1 Demonstrate an awareness of wood and wood products as limited resources.

SLO 10.7.2.2 Demonstrate an awareness of the opportunities to reduce waste and reuse materials.

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

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

SLO 10.8.1.1 Demonstrate an awareness of the scope of carpentry.

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

SLO 10.8.2.1 Demonstrate an awareness of opportunities in carpentry.

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**.

No applicable SLOs.