



Saskatchewan Apprenticeship

Carpenter

construct, renovate and repair buildings and structures made of wood and other materials

Training Requirements:

7200 hours (4 years) including:

four 7-week training sessions at SIAST Palliser Campus in Moose Jaw and Woodland Campus in Prince Albert

Journeyman to apprentice ratio

for this trade is: 1:1

Apprenticeship & Trade Certification Commission

2140 Hamilton St
Regina SK S4P 2E3

Tel: (306) 787-2444

Fax: (306) 787-5105

Toll Free: 1-877-363-0536

District Offices

Estevan	(306) 637-4930
La Ronge	(306) 425-4385
Moose Jaw	(306) 694-3735
North Battleford	(306) 446-7409
Prince Albert	(306) 953-2632
Saskatoon	(306) 933-8476
Swift Current	(306) 778-8945
Yorkton	(306) 786-1394



Saskatchewan
Apprenticeship and
Trade Certification
Commission

Apprenticeship Training

The information contained in this pamphlet serves as a guide for employers and apprentices. Apprenticeship training is mutually beneficial to both employer and apprentice. The employer's investment in training apprentices results in skilled and certified workers.

The pamphlet summarizes the tasks to be covered by the apprentice during the on-the-job portion of apprenticeship training.

An apprentice spends approximately 85% of the apprenticeship term training on-the-job.

It is the employer's or journeyman's **training responsibility** to supervise an apprentice's practical skills development until a satisfactory level of proficiency has been reached.

Carpenter

On-the-Job Training Guide

EMPLOYER TRAINING RESPONSIBILITY

- *promote a safety-conscious workplace*
- *provide mentored, hands-on practice in the use of tools and equipment*
- *demonstrate procedures relevant to layout, forming, framing, exterior and interior finishing*
- *further the apprentice's ability to interpret technical drawings*
- *allow the apprentice to apply procedures used for estimating materials, costing projects and supervising personnel*
- *ensure that the apprentice can evaluate the end product*
- *where possible, expose the apprentice to new technology in the Carpenter trade*

Employers should make every effort to expose their apprentices to work experience in as many areas of the trade as possible.

Below, in-school instruction is listed first; suggestions to help employers assist the apprentice to prepare for in-school training are listed next.

Level One

Construction Safety

Safety regulations (OH&S)
Personal protective equipment
Fall protection equipment
Recognizing unsafe working environments
Fire safety
Industrial health hazards

The employer can assist the apprentice to achieve these objectives by:

- *ensuring familiarization with the scope and content of the OH&S Regulations*
- *ensuring the proper understanding of the WHMIS system and symbols*
- *identifying hazardous materials in the workplace and instruct in the use of the Material Safety Data Sheets*
- *making the use of personal protective equipment mandatory*
- *demonstrating the proper use and maintenance of fall protection equipment*
- *describing unsafe working conditions and industrial health hazards and monitoring for action appropriate to situations*
- *describing the seriousness of confined space entry and methods to safely enter these areas*
- *ensuring the use of site fire equipment is described and demonstrated*

Scaffolds

Safe use of ladders and ramps
Erection, maintenance and dismantling of wood and metal independent scaffolds
Rigging accessories

The employer can assist the apprentice to achieve these objectives by:

- *explaining the relationship between access equipment and OH&S Regulations*
- *monitoring the use of ladders and ramps and ensuring their proper installation*
- *exposure to installation, maintenance and dismantling procedures of numerous types of scaffolds and other access equipment*
- *familiarization with the application and uses of various types of rigging equipment and accessories*
- *demonstrating various knots and hitches and describing their correct applications*

Building Materials

Types of wood and lumber
Types of panel products
Proper storage of building materials
Adhesives and fasteners

The employer can assist the apprentice to achieve these objectives by:

- *explaining the identification and use of various types of wood, engineered wood and panel products and the proper storage techniques for each*
- *describing the terminology used to identify the various types of nails, screws and fasteners and giving examples of their applications*
- *having the apprentice select materials for projects*

Tools

Hand tools
Portable power tools
Stationary power tools and equipment
Powder actuated tools
Oxy-acetylene cutting torch

The employer can assist the apprentice to achieve these objectives by:

- *demonstrating the use and care of common hand, portable and stationary tools and equipment*
- *monitoring the use and care of these tools to ensure competency in their use*
- *having the apprentice complete repetitive projects using these tools and equipment*
- *having the apprentice maintain and sharpen tools*

- *demonstrating the safe use of the equipment and products associated with powder actuated tools and oxy-acetylene cutting equipment*

Construction Documents

Symbols and definitions
Basic residential blueprints
Building codes and permits
Quantity surveys - concrete foundations

The employer can assist the apprentice to achieve these objectives by:

- *explaining the various pages of blueprint documents, their functions and having the apprentice interpret various aspects of the job using these documents*
- *assisting to interpret blueprint document lines, symbols and abbreviations*
- *explaining the content and use of the Canadian Building Code and explaining the requirements and reasons for building permits*
- *providing instruction and opportunity for the sketching of miscellaneous simple building components*
- *providing the opportunity to perform concrete quantity calculations for various shapes and sizes of foundation and slab formwork*

Site Layout

Elevations with a builder's level
Building layout with hand tools
Building layout with a transit

The employer can assist the apprentice to achieve these objectives by:

- *demonstrating the set-up and use of a builder's level to determine elevations*
- *explaining how different styles of grade rods are marked and read*
- *explaining and demonstrating how building foundations can be located using hand tools only with tape measures, string lines, levels and the 3-4-5 method*
- *demonstrating the set-up and use of a transit to perform building layout and to locate building foundations*

Foundations

Formwork for footings, grade beams and walls
Formwork for columns and piers
Piling

The employer can assist the apprentice to achieve these objectives by:

- *providing instruction and opportunities to set-up various types foundation formwork*
- *explaining the principles and processes for the installation of different types of piling and allowing the observation of installation*

Concrete

Concrete mixes and admixtures
Testing concrete
Placing, finishing and curing concrete

The employer can assist the apprentice to achieve these objectives by:

- *explaining the contents of a concrete mix and the effect different admixtures have on this mix*
- *allowing observation and participation in the testing procedures for concrete*
- *providing opportunities to assist in the placement, finishing and curing of concrete in the various types of building foundation and slab formwork*

Trade Math

The employer can assist the apprentice to achieve competency by:

- *ensuring that the metric and imperial graduations on measuring tools and instruments are fully understood*
- *requiring the repetitive use of the math required to interpret blueprints and calculate quantities using fractions, decimals, percentages, ratios, perimeters, volumes and areas by hand and using calculators*
- *teaching the 3-4-5 method of squaring explaining the Pythagorean theorem*
- *providing opportunities to work with angles and perform the bisecting of these angles*

Level Two

Floor Framing

Building code
Floor beams and columns
Layout and assembly
Floor openings
Sunken and cantilevered floors
Bow and bay windows
Floor trusses
Subfloors

The employer can assist the apprentice to achieve these objectives by:

- *ensuring familiarity with the contents of the Canadian National Building Code and how these contents relate to all types of floor framing requirements*
- *exposure to the interpretation of floor framing blueprints and details*
- *providing examples and explanations of various types of floor beams and columns*
- *allowing participation in or exposure through information to all aspects of layout, assembly and sheathing of various types of framed floors*
- *exposure to the various types of trusses and engineered products used in floor framing and explaining their special requirements*
- *explaining the framing requirements for the installation of bow and bay windows*

Wall and Ceiling Framing

Building code
Rough openings
Layout and assembly
Blocking, backing and firestops
Wall sheathing and bracing
Erect walls and partitions
Ceiling joists
Steel stud framing
Steel door frames
Permanent wood foundations
Heavy timber construction

The employer can assist the apprentice to achieve these objectives by:

- *ensuring familiarity with the contents of the Canadian National Building Code and how these contents relate to all types of wall and ceiling framing requirements*
- *exposure to the interpretation of wall framing blueprints and details*
- *allowing participation in or exposure through information to all aspects of layout, assembly and sheathing of various types of framed walls including standard wood, preserved wood, steel stud and heavy timber types of construction*
- *exposure to the various types of engineered products used in wall framing and explaining their special requirements*
- *explaining the framing requirements for the installation of steel door frames*

Roof Framing

Building code
Roof geometry
Common rafters and gable ends
Hip roof framing
Dormers
Roof ladders, collar ties and ridge boards
Roof trusses (gable and hips)
Girder and cantilevered trusses
Roof openings

The employer can assist the apprentice to achieve these objectives by:

- *ensuring familiarity with the contents of the Canadian National Building Code and how these contents relate to all types of roof framing requirements*
- *explaining the terminology used to describe different roof styles and shapes*
- *exposure to the interpretation of roof framing blueprints and details*
- *allowing participation in or exposure through information to all aspects of layout, assembly and sheathing of various types of framed roofs including standard wood rafter and wood truss systems*
- *explaining the framing requirements for the installation of skylights and other roof openings such as chimney chases*

Roof Coverings

Preparation and flashings
Asphalt, cedar shingles and cedar shakes
Special roof coverings

The employer can assist the apprentice to achieve these objectives by:

- *explaining the requirements for different roof covering systems*
- *ensuring familiarity with the contents of the Canadian National Building Code and how these contents relate to all types of roof covering requirements*
- *allowing participation in the installation of various types of roof coverings*
- *provide examples of special roof coverings and information regarding their requirements*

Exterior Finishes

Soffit and fascia
Claddings
Exterior doors and windows
Caulking and sealants

The employer can assist the apprentice to achieve these objectives by:

- *demonstrating how a storey pole or layout rod is created and used for siding installation*
- *providing opportunities to install soffit, fascia and various types of wall cladding*
- *allowing participation in the installation of exterior doors and windows*
- *explaining the different applications for various types of caulking and sealant and allow the apprentice to install these products while monitoring speed and technique*

Residential Blueprints and Quantity Surveys

Interpreting residential blueprints
Quantity surveys - framing and exterior finishes

The employer can assist the apprentice to achieve these objectives by:

- *assisting in the interpretation of various pages of a set of blueprints*
- *having the apprentice interpret various aspects of the job using these documents*

- *explaining and demonstrating the use of various types of scales and the use of scale rulers*
- *providing the opportunity to perform quantity surveys on various shapes and sizes of building floor, wall and roof framing and exterior wall and roof coverings*

Insulation and Air Barriers

The employer can assist the apprentice to understand the principles of these materials by:

- *explaining the terminology used when describing these materials*
- *explaining the different types of materials used in building insulation and air barriers, their applications and their limitations*
- *explaining the installation procedures and allowing the apprentice to install various types of these materials*

Trade Math

The employer can assist the apprentice to achieve competency by:

- *having the apprentice check calculations performed by others*
- *continuing to require the repetitive use of the math required to interpret blueprints and calculate quantities using fractions, decimals, percentages, ratios, perimeters, volumes and areas by hand and using calculators*
- *continuing to graduate the apprentice to more difficult applications of mathematics use as appropriate to the job*

Level Three

Commercial Blueprints and Quantity Surveys

Construction freehand sketching
Interpreting commercial blueprints, specifications and schedules
Interpreting masonry and light structural steel
Quantity surveys - interior finishes

The employer can assist the apprentice to achieve these objectives by:

- *providing instruction and opportunity for the sketching of miscellaneous simple and more elaborate building components*
- *continuing to assist in the interpretation of various pages of a set of commercial blueprints, specifications and room schedules and explaining the way they are associated to each other*
- *providing an old set of specifications for the apprentice to study and become familiar with the contents*
- *providing exposure to basic masonry and light structural steel terminology, definitions and applications*
- *providing the opportunity to perform quantity surveys on various types of interior finishes*

Building Envelope

Fundamentals of building science

Procedures for insulating and sealing the building envelope

The employer can assist the apprentice to achieve these objectives by:

- *explaining and demonstrating how a good building envelope affects heat and sound transfer*
- *providing examples of a poor building envelope and demonstrate repair techniques*
- *encouraging the apprentice to monitor the mechanical equipment being installed and explaining why this equipment is needed*

Doors and Hardware

Rough openings

Exterior frames, doors, hardware and weatherstripping

Interior frames, doors and hardware

Specialty doors

The employer can assist the apprentice to achieve these objectives by:

- *explaining the rough opening requirements for various door and frame styles*
- *ensuring familiarity with the contents of the Canadian National Building code and how these contents relate to door and hardware requirements for commercial and residential applications*

- *explaining the importance of being able to read and comprehend installation instructions*
- *assisting the apprentice to install various types of hardware*
- *monitoring the apprentice's ability to interpret instructions for the installation of products*

Interior Finishes

Wall and ceiling finishes

Floor finishes

Trims and mouldings

Bathroom and lavatory hardware

Wheelchair accessibility

The employer can assist the apprentice to achieve these objectives by:

- *allowing the apprentice to install interior wall products, having them work with subtrades periodically if necessary*
- *encouraging the apprentice to watch installation techniques by experts*
- *circulating apprentices with company experts to assist in the installation of these products*
- *having the apprentice install baseboard, casings, crown mouldings and other trims*
- *ensuring familiarity with the contents of the Canadian National Building code and how these contents relate to bathroom hardware and wheelchair accessibility requirements for commercial and residential applications*

Wood Stairs

Code requirements, terminology, stair types and design of stairwells

Layout of basic wood stairs and construction of finish stairs

Stair construction using housed, mitred and cut-out stringers

Balustrades, winder stairs and calculating geometric stairs

The employer can assist the apprentice to achieve these objectives by:

- *providing opportunities to calculate the size of stairwell openings*

- *having the apprentice assist in the layout and construction of various types of stairs and balustrades*
- *giving exposure and examples using the various formulas used to calculate geometric stairs on paper*

Cabinets

Wall cabinet layout

Machining and assembly

The employer can assist the apprentice to achieve these objectives by:

- *explaining the terminology used for the construction of wall cabinets*
- *describing and demonstrating how a storey pole or layout rod is created*
- *exposing the apprentice to construction and installation techniques*
- *describing the types and applications of hardware used for different styles of cabinets*

Laser Levels

The employer can assist the apprentice to achieve competency by:

- *ensuring that specific safety aspects of this equipment is explained and followed*
- *demonstrating the set-up and use of different laser levels to determine elevations, lines and centre lines*

Level Four

Commercial Blueprints, Specifications and Quantity Surveys

Blueprint and specification interpretation

Quantity surveys - concrete quantities for stair, beam and slab formwork; roof areas, framing and roof covering quantities for intersecting roofs

The employer can assist the apprentice to achieve these objectives by:

- *continuing to expose, explain and allow the apprentice to interpret building documents*

- *continuing to allow and increasing the difficulty of estimation duties*

Transits

Transit use for advanced building layout

Using "total station"

The employer can assist the apprentice to achieve these objectives by:

- *exposing the apprentice to building layout using these techniques*
- *monitoring the apprentice's ability to perform the math functions required to use these systems*
- *coach the apprentice in the use of scientific calculators as related to this work*

Concrete Design

Design concrete mixes

Concrete maintenance and repair

The employer can assist the apprentice to achieve these objectives by:

- *explaining the reasons various concrete additives are used*
- *having the apprentice work with a concrete finisher to gain exposure to repair materials and techniques*
- *allowing the apprentice to install various concrete maintenance products*

Suspended Scaffolds and Hoarding

Suspended scaffolds

Construction and safe heating of construction hoardings

Propane safety

The employer can assist the apprentice to achieve these objectives by:

- *ensuring the apprentice is familiar with the OH&S requirements for this equipment*
- *demonstrating safe set up and use of suspended scaffolds*
- *detailing reasoning and procedures for ventilation requirements*
- *demonstrating and monitoring the proper set up of heating equipment*

Concrete Stairs

Concrete stair formwork

The employer can assist the apprentice to achieve this objective by:

- *describing the components used to make stair formwork*
- *exposing the apprentice to the techniques used to install this type of formwork*
- *allowing the apprentice to work on the concrete placement and the finishing of a set of concrete stairs*

Commercial Formwork

Slab and beam formwork

Wall formwork for commercial construction

The employer can assist the apprentice to achieve these objectives by:

- *describing the parts and the construction of this type of formwork*
- *having the apprentice install these and other specialty wall and commercial formwork*

Intersecting Roof

Intersecting roof - imperial

Intersecting roof - metric

Unequal sloped intersecting roof

The employer can assist the apprentice to achieve these objectives by:

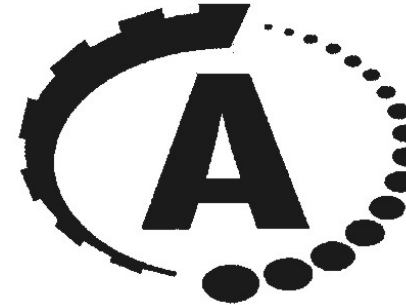
- *explaining the terminology used for various components used in the construction of these types of roofs*
- *showing the apprentice examples of styles and shapes particular to these types of roofs*
- *having the apprentice interpret blueprints and truss shop drawings particular to this type of roof construction*

Cabinets

Kitchen base cabinets

The employer can assist the apprentice to achieve this objective by:

- *explaining the terminology used for the construction of base cabinets*
- *exposing the apprentice to construction and installation techniques*
- *explaining the terminology used particular to laminate, solid and natural product countertops*
- *explaining the techniques and procedures used for the cutting, gluing and installing of laminate materials*
- *demonstrating the techniques and tools used to cut, scribe, mitre, butt and install countertop components*
- *having the apprentice construct and install various styles of countertops*



Note: The content of the training components is subject to change without notice.

Consider apprenticeship training as an investment in the future of your company and in the future of your workforce.

Ultimately, skilled and certified workers increase your bottom line.

Get involved in the apprenticeship training system. Your commitment to training helps to maintain the integrity of the trade.

Do you have employees who have been working in the trade for a number of years but don't have trade certification? Contact your local apprenticeship office for details on how they might obtain the certification they need.

VISIT OUR WEB SITE!
www.saskapprenticeship.ca