

Occupational Analyses Series

Cabinetmaker

2000

Interprovincial Partnerships and
Occupational Information Division

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Ébéniste

The Canadian Council of Directors of Apprenticeship (CCDA) recognizes this occupational analysis as the national standard for the occupation of cabinetmaker.

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OTHER RELATED OCCUPATIONAL TITLES

This analysis covers tasks performed by a cabinetmaker whose occupational title has been identified by some provinces and territories of Canada under the following names:

- Cabinet Maker
- Joiner

LIST OF PUBLISHED OCCUPATIONAL ANALYSES *

TITLE	NOC** Code
Appliance Service Technician (1997)	7332
Aquaculture Technician (1977)	2221
Arts Administrator (1989)	0114
Automotive Painter (1995)	7322
Automotive Service Technician (1998)	7321
Automotive Technician - Automatic Transmission (1990)	7321
Automotive Technician - Electrical/Electronics (1992)	7321
Automotive Technician - Engine Repair and Fuel Systems (1989)	7321
Automotive Technician - Front-End (1989)	7321
Automotive Technician - Manual Transmission, Driveline and Brakes (1990)	7321
Aviation Machinist (1994)	7231
Baker (1997)	6252
Blaster (Surface) (1987)	7372
Boilermaker (1994)	7262
Bricklayer (2000)	7281
Cabinetmaker (2000)	7272
Carpenter (1998)	7271
Cement Finisher (1995)	7282
Construction Electrician (1994)	7241
Cook (1997)	6242
Electrical Rewind Mechanic (1999)	7333
Electronics Technician - Consumer Products (1997)	2242
Electronics Technician Vol. I (1986) (Video Equipment)	2242
Electronics Technician Vol. II (1986) (Audio Equipment)	2242

* Red Seal analyses are indicated in bold

** National Occupational Classification

Electronics Technician Vol. III (1986) (Computer Equipment)	2242
Electronics Technician Vol. IV (1986) (Office Equipment)	2242
Electronics Technician Vol. VI (1986) (Communication Equipment)	2242
Electronics Technician Vol. VII (1986) (Signaling Equipment)	2242
Electronics Technician Vol. VIII (1986) (Navigation Equipment)	2242
Electronics Technician Vol. IX (1986) (Video Game Equipment)	2242
Electronics Technician Vol. X (1987) (CADD Equipment)	2242
Electronics Technician Vol. XI (1987) (CAM Equipment)	2242
Electronics Technician Vol. XII (1987) (Robotics Equipment)	2242
Electronics Technician Vol. XIII (1987) (Biomedical and Laboratory Equipment)	2242
Electronics Technician Vol. XIV (1987) (Industrial Process-Control Equipment)	2243
Farm Equipment Mechanic (2000)	7312
Floorcovering Installer (1997)	7295
Glazier (1994)	7292
Hairstylist (1997)	6271
Heating (Gas and Oil) Servicer - Commercial and Industrial (1978)	7331
Heavy Duty Equipment Mechanic (1998)	7312
Heavy Equipment Operator (1983)	7421
Industrial Electrician (1997)	7242
Industrial Instrument Mechanic (2000)	2243
Industrial Mechanic (Millwright) (1999)	7311
Insulator (Heat and Frost) (2000)	7293
Ironworker (Generalist) (1993)	7264
Lather (Interior Systems Mechanic) (1994)	7284

Logistics (1992)	0713
Machinist (1998)	7231
Major Electrical Appliance Repairer (1984)	7332
Mobile Crane Operator (1997)	7371
Motorcycle Mechanic (1995)	7334
Motor Vehicle Body Repairer (Metal and Paint) (1997)	7322
New Home Builder and Residential Renovation Contractor (1992)	0712
Oil Burner Mechanic (1997)	7331
Painter and Decorator (2000)	7294
Partsperson (1995)	1472
Plumber (1996)	7251
Power Engineer (1997)	7351
Powerline Technician (1996)	7244
Recreation Vehicle Mechanic (2000)	7383
Refrigeration and Air Conditioning Mechanic (1997)	7313
Roofer (1997)	7291
Sheet Metal Worker (1997)	7261
Sprinkler System Installer (1995)	7252
Steamfitter-Pipefitter (1996)	7252
Steel Fabricator (Fitter) (1994)	7263
Tool and Die Maker (1997)	7232
Truck-Trailer Repairer (1994)	7321
Truck and Transport Mechanic (2000)	7321
Welder (1996)	7265

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FOREWORD

The first National Conference on Apprenticeship in Trades and Industries, held in Ottawa in 1952, recommended that the federal government be requested to co-operate with provincial apprenticeship committees and officials in preparing analyses of a number of skilled occupations. To this end, Human Resources Development Canada sponsors a program, under the guidance of the Canadian Council of Directors of Apprenticeship (CCDA), to develop a series of analyses.

The Occupational Analysis Program has the following objectives:

- to identify and group the tasks performed by skilled workers in particular occupations;
- to identify those tasks that are performed by skilled workers in every province and territory;
- to develop instruments for use in the preparation of interprovincial standards "Red Seal" examinations and curricula for training leading to the certification of skilled workers;
- to facilitate the mobility, in Canada, of trainees and skilled workers;
- to supply employers and employees, and their associations, industries, training institutions and governments with analyses of the tasks performed in particular occupations.

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GUIDE TO ANALYSIS

DEVELOPMENT OF ANALYSIS

A draft analysis is developed by a knowledgeable consultant who, with the assistance of a committee of industry experts in the field, identifies all the tasks performed in the occupation.

The draft is then assigned to occupational analysts at Human Resources Development Canada for translation and then returned to the consultant for review to ensure conformity with the nationally approved format.

The consultant will then forward a copy of this analysis to provincial/territorial authorities for validation by specialists in the field. Their recommendations are assessed and incorporated into the final draft which also includes the identification of the common core tasks performed in the occupation.

The occupational analysis is published in both official languages.

STRUCTURE OF ANALYSIS

To facilitate the understanding of the nature of the occupation, the work performed is divided into the following divisions:

- A. **BLOCK** is the largest division within the analysis and reflects a distinct operation relevant to the occupation.
- B. **TASK** is the distinct activity that, combined with others, makes up the logical and necessary steps the worker is required to perform to complete a specific assignment within a "BLOCK".
- C. **SUB-TASK** is the smallest division into which it is practical to subdivide any work activity and, combined with others, fully describes all duties constituting a "TASK".

Supporting Knowledge & Abilities

The element of skill and knowledge that an individual must acquire to adequately perform the task is identified under this heading.

Trends

Any shifts or changes in technology which affects the block are identified under this heading.

Related Components

All components of a specified task being undertaken by the cabinetmaker are identified under this heading.

Tools and Equipment

All tools and equipment necessary for the cabinetmaker to complete a task are identified under this heading.

Cabinets, furniture and architectural woodwork/millwork

Products commonly manufactured by cabinetmakers.

VALIDATION METHOD

At the request of the Canadian Council of Directors of Apprenticeship (CCDA), the Standardization SubCommittee developed a method for the validation of the national Red Seal occupational analyses.

A draft of the analysis is sent to all provinces/territories for validation. Each jurisdiction rates the sub-tasks and applies percentage ratings to blocks and tasks. This method for the validation of the national occupational analyses identifies common core tasks across Canada for a specific occupation. This feature facilitates the weighting of the Interprovincial Red Seal examinations.

DEFINITIONS

- YES:** the sub-task is performed by workers in the occupation in a specific jurisdiction.
- NO:** the sub-task is not performed by workers in the occupation in a specific jurisdiction.
- BLOCK %:** the average number of questions (items), derived from the collective decision made by workers within the occupation from all areas of Canada, which will be placed on an interprovincial examination to assess each block of the analysis.
- TASK %:** the average number of questions (items), derived from the collective decision made by workers within the occupation from all areas of Canada, which will be placed on an interprovincial examination to assess each task of the analysis.
- NV:** Not Validated by a province/territory.
- ND:** Not Designated in a province/territory.

PROVINCIAL/TERRITORIAL ABBREVIATIONS

- NF:** Newfoundland and Labrador
NS: Nova Scotia
PE: Prince Edward Island
NB: New Brunswick
QC: Quebec
ON: Ontario
MB: Manitoba
SK: Saskatchewan
AB: Alberta
BC: British Columbia
NT: Northwest Territories
YK: Yukon

COMMON CORE

The criteria for determining common core are dependent on the performance of sub-tasks. If 70 percent of the responding jurisdictions (excluding NVs and NDs) perform the sub-task, it shall be considered common core.

Interprovincial Red Seal examinations are based on the common core identified through this validation process. This process identifies what will be assessed through the interprovincial examination.

BLOCKS AND TASKS WEIGHTING (APPENDIX "C")

This appendix represents the block and task percentages as submitted by each jurisdiction.

Each jurisdiction, with the use of a provincial/territorial occupational advisory committee, validates the content, places percentages on blocks and tasks, and indicates whether or not the sub-tasks are performed by the skilled workers within the occupation. The results of this exercise are submitted to the consultant who then analyses the data and develops this appendix which provides the individual jurisdictional validation results as well as the national averages of all responses.

PIE CHART (APPENDIX "D")

The graph depicts the national percentages assigned to blocks in the analysis.

SCOPE OF THE CABINETMAKER OCCUPATION

The term "cabinetmaker" defines a person who is capable of constructing and repairing cabinets, furniture, fixtures and related products for various residential, commercial and industrial uses. Cabinetmakers manufacture furniture and related products whose main components are wood and other composite materials.

A cabinetmaker has the knowledge, skills and abilities to read drawings and specifications; discuss projects with clients; plan work activities and estimate job costs; make layouts and patterns; use various hand tools, power tools, and machines to cut, shape, joint, smooth and assemble cabinets, furniture, joinery and millwork products; apply veneers, inlays and laminates; perform sub-assembly and final assembly of wood products, restore and finish furniture and fixtures and install products at the job site.

Cabinetmakers may be employed in various types of companies such as furniture manufacturing, restoration and construction companies and cabinetmaking contractors or they may also be self-employed.

In recent years, the cabinetmaking industry has been increasingly oriented toward incorporating information technology, such as computer-assisted manufacturing (CAM) in its production system.

OCCUPATIONAL OBSERVATIONS

The National Occupational Analysis committee identified some significant trends during the analysis of the cabinetmaker occupation. These trends are briefly outlined below.

Although we tend to see fewer occupations requiring skilled labour in the manufacturing sector due to rapid technological development, it appears that cabinetmaking, in general, has essentially retained most of its traditional competency requirements. To a large extent cabinetmaking is still a craft industry. This can be explained in part by the high cost of technological innovations and products which do not lend themselves readily to mass production.

There is also some evidence of modernization in the cabinetmaking industry, especially among some large and medium sized factories. Some firms have successfully implemented modern manufacturing systems incorporating new technologies, such as computer-assisted design and manufacturing (CAD-CAM) and computer numerical control (CNC). Present economic conditions have resulted in a tremendous increase in the production of goods for export and have lead to greater investments in technology to increase production. These factors have resulted in an increased demand for new cabinetmakers.

Production is becoming increasingly knowledge-intensive in work environments where technology has been implemented. Consequently, the cabinetmaking occupation has become considerably more specialized in these settings.

As in many other occupations, sound employability skills are becoming increasingly important for cabinetmakers. These essential skills include: learning ability, computation, writing, reading, communication, listening, problem solving, flexibility, adaptability, creative thinking, organizational effectiveness and interpersonal skills.

There is a general concern regarding the decline in the number of apprentices entering the occupation. This problem, while not unique to cabinetmaking, has reached a crisis level in many other apprenticeable trades due to the burst of the baby boom and to the strong emphasis currently being placed on academic learning and completion of higher education. New initiatives are required to attract apprentices to the occupation, especially those from designated groups (young people, women and first nations) who are underrepresented in the industry. In addition, some regions have introduced high school apprenticeship initiative to encourage students to enter the trade.

SAFETY

Safe working procedures and conditions, accident prevention and the preservation of health are of primary importance to industry in Canada. These responsibilities are shared and require the joint efforts of government, employers and employees. It is imperative that all parties become aware of circumstances that may lead to injury or harm. Safe learning experiences and environments can be created by controlling the variables and behaviours that may contribute to accidents or injury.

It is generally recognized that a safety-conscious attitude and work practices contribute to a healthy, safe and accident-free working environment.

It is imperative to apply and be familiar with the Occupational Health and Safety Act and Regulations. As well, it's essential to determine workplace hazards and take measures to protect oneself, co-workers, the public and the environment.

As safety education is an integral part of training in all jurisdictions, personal safety practices are not recorded in this document. However, the technical safety aspect relating to each task and sub-task are included throughout this analysis.

ANALYSIS

BLOCK A

COMMON OCCUPATIONAL SKILLS

- Trends:* *The are a few common denominators among firms employing cabinetmakers. Cabinetmakers may need to be very well rounded or highly specialized.*
- In cabinetmaking firms, estimates are increasingly being produced by specialists using computers. More emphasis is being placed on optimization because of the rising cost of materials. Automation and computer control technologies are becoming more common.*
- In many firms most of the shop drawings are prepared by specialists using the computer assisted design (CAD) system.*
- With increasing emphasis being placed on cost effectiveness, most of the upkeep and sharpening of tools is contracted out to specialized firm.*
- Although each worker is expected to verify the quality of his or her own work, in many firms, more elaborate quality control systems are in place. To maintain competitiveness, greater emphasis is being placed on productivity and quality.*
- The tasks of designing and fabricating templates, jigs and fixtures is accomplished mostly by specialists and often with the help of a CNC.*
- High technology tools such as stud finders, laser beam levels, electronic levels and digital meters have improved the installation process.*

Task 1 Plans work activities.

- Related Components:* Tenders, contract documents, warranty policies, drawings and specifications, material maintenance guidelines, hardwoods, softwoods, sheet materials, hardware, fastening devices, strength of materials, adhesives, finishes, production planning for cabinets, furniture, architectural woodwork/millwork.
- Tools and Equipment:* Drawing instruments, drawing board, calculator, computer, software, digital meter, moisture meter.

Sub-task

1.01 Interprets drawings and specifications.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

Supporting Knowledge & Abilities

- 1.01.01 knowledge of contract documents (drawings, agreements and specifications)
- 1.01.02 knowledge of metric and imperial systems
- 1.01.03 ability to read and interpret contract documents, tenders and standards set by the Architectural Woodwork Manufacturers Association of Canada (AWMAC)
- 1.01.04 ability to determine scope of work and scheduling of deadlines
- 1.01.05 ability to determine type and quality of construction, materials, workmanship and finish from specifications
- 1.01.06 ability to source new materials

Sub-task

1.02 Estimates job cost.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

- 1.02.01 knowledge of various materials and hardware
- 1.02.02 knowledge of waste factors for solid wood, sheet materials and other products
- 1.02.03 ability to determine material requirements
- 1.02.04 ability to determine job costs
- 1.02.05 ability to perform mathematical calculations

Sub-task

1.03 Plans work process.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

Supporting Knowledge & Abilities

- 1.03.01 knowledge of various types of material and hardware used in the construction of cabinets, furniture, millwork, doors and/or frames
- 1.03.02 knowledge of various types of adhesives and application techniques
- 1.03.03 knowledge of lumber technology : hardwood, softwood, wood fibre, wood cells, grain patterns, quality of wood, natural and artificial drying
- 1.03.04 knowledge of the various types of wood parts used in the construction of cabinets, furniture, joinery and millwork
- 1.03.05 ability to plan machining processes so as to ensure a safe, logical sequence of operations
- 1.03.06 ability to plan machining processes in order to ensure that tools, materials and equipment are readily accessible
- 1.03.07 ability to examine and evaluate stock defects
- 1.03.08 ability to use a moisture meter for measuring moisture content in lumber
- 1.03.09 ability to properly store solid wood before and between operations
- 1.03.10 ability to optimise the yield of solid wood stock and sheet goods
- 1.03.11 ability to write schedule of materials
- 1.03.12 ability to distinguish machine set-up, product handling and machine times

Sub-task

1.04 Makes shop drawings.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

Supporting Knowledge & Abilities

- 1.04.01 knowledge of basic principles of orthographic, isometric and oblique drawings
- 1.04.02 knowledge of ergonomics
- 1.04.03 knowledge of the 32 mm system for cabinets, hardware and joints
- 1.04.04 knowledge of furniture styles
- 1.04.05 knowledge of key elements of related trades
- 1.04.06 knowledge of various construction techniques
- 1.04.07 knowledge of miscellaneous materials (i.e. glass, metals, plastics, etc.)
- 1.04.08 knowledge of computer technology (CAD – creating drawings)
- 1.04.09 ability to determine best method of installation
- 1.04.10 ability to prepare sketches
- 1.04.11 ability to draw plan, elevation and sectional views
- 1.04.12 ability to simplify designs to facilitate production
- 1.04.13 ability to draw enlarged construction details, exploded views and joints
- 1.04.14 ability to dimension drawings and to label parts, components, assemblies, sub-assemblies and hardware requirements
- 1.04.15 ability to communicate ideas, designs and methods of construction for the manufacture of a project

Sub-task

1.05 Lays out components.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

- 1.05.01 ability to take and accurately record site measurements
- 1.05.02 ability to check angles and draw rough sketches of site plan with access to building
- 1.05.03 ability to verify access for electricity, plumbing, heating, air-conditioning and communication devices
- 1.05.04 ability to verify compliance with regulations and codes
- 1.05.05 ability to verify sizes of equipment fitting into cabinets
- 1.05.06 ability to assess sizes of units and their installation in relation to constraints regarding transportation and site access
- 1.05.07 ability to create layout and templates accurately

Task 2 Uses hand and portable power tools.

Related Components:

Care, use and upkeep of tools, grinding and sharpening of edge-cutting hand tools, licensing and permit requirements for powder-actuated tools.

Tools and Equipment:

Standard tool kit, hand tools, layout tools, metal working tools, portable power tools, personal protective equipment.

Sub-task

2.01 Uses hand tools.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

Supporting Knowledge & Abilities

- 2.01.01 ability to shape wood using various edge-cutting tools
- 2.01.02 ability to cut wood and wood products using various types of hand saws
- 2.01.03 ability to smooth surfaces with a plane
- 2.01.04 ability to bore and drill holes
- 2.01.05 ability to use metalworking tools

Sub-task

2.02 Maintains hand tools.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

- 2.02.01 ability to maintain hand tools
- 2.02.02 ability to sharpen tool blades and bits

Sub-task

2.03 Uses portable power tools.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

- 2.03.01 ability to use portable wood cutting tools
- 2.03.02 ability to shape cabinet components using a portable router, panel trimmer, spline joinery system, power plane or angle grinder
- 2.03.03 ability to secure and assemble components using portable power drills, screw guns, nail guns, staplers, glue sprayers and powder-actuated tools
- 2.03.04 ability to use portable sanders
- 2.03.05 ability to perform basic maintenance of various portable power tools

Task 3 Maintains machines and equipment.

Related Components: Maintenance schedule, manufacturer instructions.

Tools and Equipment: Refer to Appendix A under Machines and Equipment and Personal Protective Equipment.

Sub-task

3.01 Performs preventive maintenance.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

3.01.01 knowledge of lubricants and lubrication schedule

3.01.02 ability to clean machines and equipment

3.01.03 ability to lubricate working parts

3.01.04 ability to inspect parts for wear and tear

3.01.05 ability to perform preventive maintenance

3.01.06 ability to conduct safety checks of machines and equipment

3.01.07 ability to tune up woodworking machinery

Sub-task

3.02 Performs scheduled maintenance.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

3.02.01 knowledge of grinding angles for various types of cutter blocks

3.02.02 knowledge of cutter balance

Supporting Knowledge & Abilities

- 3.02.03 knowledge of sharpening knives, cutters, etc.
- 3.02.04 ability to install knives and cutters
- 3.02.05 ability to perform scheduled maintenance of woodworking machines and equipment
- 3.02.06 ability to troubleshoot woodworking machines and equipment
- 3.02.07 ability to set table beds

Task 4 Builds prototypes.

Related Components:

Shop-manufactured related devices, cabinet, furniture, architectural woodwork/millwork design, prototyping, tooling and metalwork.

Tools and Equipment:

Standard tool kit, hand tools, portable power tools, metalworking tools, machines and equipment and personal protective equipment.

Sub-task

4.01 Designs templates, jigs and fixtures.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

- 4.01.01 knowledge of the principles of sound design for templates, jigs and fixtures
- 4.01.02 ability to analyse production processes to determine templates, jigs and fixtures required
- 4.01.03 ability to manufacture related devices as needed

Sub-task**4.02 Fabricates templates, jigs and fixtures. Supporting Knowledge & Abilities**

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

- 4.02.01 knowledge of various fastening devices used in the construction of jigs and fixtures
- 4.02.02 knowledge of assembly techniques to withstand stress and physical strain
- 4.02.03 ability to prepare metal parts
- 4.02.04 ability to assemble jigs and fixtures
- 4.02.05 ability to select and install holding clamps on jigs and fixtures
- 4.02.06 ability to try out templates, jigs and fixtures in order to assess accuracy, efficiency and safe operation
- 4.02.07 ability to label jigs and fixtures with the date, job number, cutter diameter, guide dimensions cutters and construction notes
- 4.02.08 ability to select proper materials for durability, time and use

Sub-task**4.03 Designs prototypes. Supporting Knowledge & Abilities**

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

- 4.03.01 knowledge of one-off and mass production techniques
- 4.03.02 ability to plan the construction of a prototype
- 4.03.03 ability to determine most appropriate production techniques and machines for each component

Supporting Knowledge & Abilities

4.03.04 ability to make accurate cost estimates for prototyping

Sub-task

4.04 Builds prototypes.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

4.04.01 ability to machine and assemble prototypes

4.04.02 ability to evaluate prototypes and to modify as required

Task 5 Works on job site.

Related Components:

Shop-manufactured related devices, packaging materials, packaging design, packaging cabinets, furniture, architectural woodwork/millwork and knock-down furniture, leveling, fastening devices, hardware, transportation and storage of cabinets and interaction with other trades persons.

Tools and Equipment:

Refer to Appendix A under Standard Tool Kit and Portable Power Tools.

Sub-task

5.01 Prepares products for shipment.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

5.01.01 ability to visit job site to ensure access, space, services and proper blocking

Supporting Knowledge & Abilities

- 5.01.02 ability to pack and prepare products for transportation in order to prevent damages
- 5.01.03 ability to design cost-effective packages
- 5.01.04 ability to determine products movement on shop floor
- 5.01.05 ability to establish delivery schedules

Sub-task

5.02 Installs products.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

- 5.02.01 knowledge of proper storage
- 5.02.02 knowledge of common fastening devices
- 5.02.03 knowledge of proper site conditions relative to heat, moisture and light.
- 5.02.04 knowledge of subtrades and trades requirements that follow up.
- 5.02.05 ability to prepare site to ensure proper, clean and effective installation
- 5.02.06 ability to unload cabinets to prevent damages
- 5.02.07 ability to align, fit, scribe, adjust, level, shim and secure prefabricated cabinets according to specifications
- 5.02.08 ability to provide proper blocking
- 5.02.09 ability to make cut-outs for electrical and mechanical outlets
- 5.02.10 ability to perform house keeping on-site

Sub-task

5.03 Installs hardware.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

5.03.01 knowledge of hardware available

5.03.02 ability to install hardware

5.03.03 ability to adjust hardware, cabinets and furniture components

BLOCK B

MACHINING

Trends: Greater emphasis is being placed on optimization because of the rising cost of materials. A shift from traditional production techniques to the implementation of computer numerical control (CNC) technology is being experienced.

The task of setting up and operating equipment for shaping furniture, cabinets and architectural woodwork and millwork components is being performed by specialists in some medium and large sized factories where CNC machines have been introduced.

In some jurisdictions, the duration of cabinetmaker training programs has been increased, or other subject areas abridged, to accommodate the additional skill requirements resulting from the introduction of new technologies such as CAD, CAM, CIM, CNC, etc. Manufacturers are increasingly providing training to cabinetmakers in the use of their products.

Task 6 Machines components using stationary woodworking machines.

Related Components:

Shop-manufactured related devices, adhesives, gluing and clamping, optimization of resources, ISO standards, woodworking joints, parts and components for cabinets, furniture, architectural woodwork/millwork, abrasive materials, edge banding.

Tools and Equipment:

Refer to Appendix A under Machines and Equipment and Personal Protective Equipment.

Sub-task

6.01 Breaks out solid wood.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

6.01.01 knowledge of the properties and characteristics of wood

6.01.02 knowledge of machinery used to break out solid stock

6.01.03 ability to take off measurements from production docket

6.01.04 ability to cut stock to rough sizes

6.01.05 ability to edge and surface stock

6.01.06 ability to glue machined stock

6.01.07 ability to trim glued parts to finish size

Sub-task

6.02 Breaks out sheet materials.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

6.02.01 knowledge of proper procedures prior to operation of tools

6.02.02 knowledge of various applications of different types of saw blades

6.02.03 knowledge of the properties, characteristics, grades and strength of various types of built-up materials

6.02.04 ability to adjust fences

Supporting Knowledge & Abilities

- 6.02.05 ability to select and install blades
- 6.02.06 ability to cut stock using different types of saws
- 6.02.07 ability to straighten and square materials
- 6.02.08 ability to maximize the use of sheet materials
- 6.02.09 ability to finish-cut sheet materials

Sub-task

6.03 Dresses solid wood.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

- 6.03.01 ability to surface and edge stock in a logical and proper sequence
- 6.03.02 ability to straighten and square materials
- 6.03.03 ability to cut tapers, bevels, chamfers and rabbets
- 6.03.04 ability to machine stock to thickness and width
- 6.03.05 ability to adjust planers
- 6.03.06 ability to mill lumber to tolerances

Sub-task

6.04 Shapes solid wood and composite materials.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

- 6.04.01 knowledge of CNC equipment and duplicators for duplicating parts
- 6.04.02 ability to use wood shaping equipment

Supporting Knowledge & Abilities

- 6.04.03 ability to mount and dismount cutters
- 6.04.04 ability to machine parts on boring equipment
- 6.04.05 ability to use sawing equipment

Sub-task

6.05 Machines joints.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

- 6.05.01 knowledge of various types of assembly joints
- 6.05.02 ability to lay out assembly joints
- 6.05.03 ability to machine assembly joints
- 6.05.04 ability to set up for machine joints

Sub-task

6.06 Sands products.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

- 6.06.01 knowledge of various types of abrasives
- 6.06.02 knowledge of various types of backing
- 6.06.03 knowledge of sanding actions of various types of sanders
- 6.06.04 ability to sand parts using sanding blocks
- 6.06.05 ability to use portable power sanders
- 6.06.06 ability to use stationary sanders
- 6.06.07 ability to make sanding pads, jigs and fixtures

Supporting Knowledge & Abilities

- 6.06.08 ability to securely mount abrasives on sanding pads
- 6.06.09 ability to perform final sanding ready for the application of finishes

Sub-task

6.07 Performs quality control functions.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

- 6.07.01 knowledge of ISO standards
- 6.07.02 knowledge of allowances required to compensate for material movement
- 6.07.03 knowledge of appropriate environmental conditions for the storage of materials
- 6.07.04 knowledge of grain and colour matching
- 6.07.05 ability to store materials properly
- 6.07.06 ability to inspect materials to ensure compliance with specifications

Task 7 Machines components using automated equipment.

Related Components: Shop-manufactured related devices, optimization of resources, ISO standards, wood, parts and components cabinets, furniture, architectural woodwork/millwork, abrasive materials, edge banding.

Tools and Equipment: Refer to Appendix A under Machines and Equipment and Personal Protective Equipment.

Sub-task**7.01 Sets up automated equipment for production run. Supporting Knowledge & Abilities**

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	no	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

7.01.01 knowledge of various types of industrial equipment in common use

7.01.02 knowledge of the capacity and limitations of machining equipment

7.01.03 ability to set up industrial equipment

Sub-task**7.02 Machines components. Supporting Knowledge & Abilities**

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	no	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

7.02.01 knowledge of computer-controlled NC machines

7.02.02 knowledge of computer assisted design (CAD) and computer assisted manufacturing (CAM)

7.02.03 knowledge of computerized production planning (CPP)

7.02.04 knowledge of computer-integrated manufacturing (CIM)

7.02.05 ability to machine components using industrial equipment

BLOCK C

FORMING AND LAMINATING

Trends: *New bending products have significantly facilitated aspects of forming and laminating.*

Task 8 Bends wood and related materials.

Related Components: Shop-manufactured related devices, cabinets, furniture, architectural woodwork/millwork, chair parts, stringers, handrails, door and door frames, curved mouldings and bendable ply and specialty products.

Tools and Equipment: Standard tool kit and portable power tools, crosscut saw, table saw, jointer, thickness planer, drill press, measuring tape, gloves, goggles, bending and form equipment, clamps, pin table, jigs, vacuum press, vacuum bag.

Sub-task

8.01 Bends cabinets and furniture parts. Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	no	yes	ND	NV	ND	yes	yes	NV	NV

- 8.01.01 knowledge of form construction
- 8.01.02 knowledge of atmospheric pressure
- 8.01.03 knowledge of allowances required for straining, expansion and spring back
- 8.01.04 ability to design and build forms, steam bending box and vacuum presses
- 8.01.05 ability to steam wood for bending
- 8.01.06 ability to bend steamed parts
- 8.01.07 ability to machine steam-bent parts
- 8.01.08 ability to vacuum-press irregular surfaces
- 8.01.09 ability to machine vacuum-bent parts

Sub-task

8.02 Uses flexible composite materials.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

- 8.02.01 knowledge of lay-up of sub-structure prior to application
- 8.02.02 ability to properly identify materials and their uses
- 8.02.03 ability to apply flexible composite materials

Sub-task

8.03 Bends solid and composite materials.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

- 8.03.01 knowledge of materials in common use for bending
- 8.03.02 knowledge of lay-up of sub-structure prior to application
- 8.03.03 knowledge of glue-up procedures
- 8.03.04 knowledge of adhesive properties
- 8.03.05 ability to bend solid and composite material

Task 9 Laminates wood and related materials.

Related Components:

Shop-manufactured related devices, cabinets, furniture, architectural woodwork/millwork, chair parts, panels and blanks, handrails, doors, door frames and specialty products.

Tools and Equipment:

Standard tool kit and portable power tools, crosscut saw, rip saw, jointer, thickness planer, drill press, measuring tape, gloves, goggles, clamping tables.

Sub-task

9.01 Builds forms for curved lamination.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

9.01.01 knowledge of wood laminating principles

9.01.02 knowledge of allowances required for straining, expansion, springback and atmospheric pressures

9.01.03 ability to design and construct wood laminating forms

9.01.04 ability to dress curved laminations

9.01.05 ability to use proper fastening devices

Sub-task

9.02 Laminates parts and components.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

9.02.01 knowledge of the properties and characteristics of various types of adhesives, strength, application, clamping and drying time

9.02.02 ability to prepare wood for laminating

9.02.03 ability to laminate parts

9.02.04 ability to machine components

BLOCK D

VENEERS AND LAMINATES

Trends: The introduction of new materials on the market, combined with the application of new technologies, has resulted in an increased preparation and application of inlays.

There is an increased use of built-up materials and laminated plastics.

The introduction of new products calls for additional skills and knowledge in the area of the preparation and application of inlays and solid surfaces.

Task 10 Applies veneers and inlays.

Related Components: Shop-manufactured related devices, cabinets, furniture, architectural woodwork/millwork, adhesives, flitches, pre-manufactured sheet veneers.

Tools and Equipment: Standard tool kit, guillotine, veneer slicing machine, veneer splicer, knives, jointer, crosscut saw, circular saw, pin router, portable router, veneer saw, stitcher, automated sander, stroke sander, vacuum press, vacuum bag, heat press, J-rollers, pneumatic press, templates, glue application systems.

Sub-task

10.01 Prepares veneers and inlays. Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

10.01.01 knowledge of various methods of cutting veneers

10.01.02 knowledge of proper storage techniques

10.01.03 knowledge of various types of veneers

10.01.04 knowledge of various types of adhesives used for veneering

10.01.05 ability to estimate the quantity of veneer required in the flitch

10.01.06 ability to select veneer by colour and grain pattern

Supporting Knowledge & Abilities

- 10.01.07 ability to cut veneers
- 10.01.08 ability to match veneers to form different patterns: slip, book, diamond, random match, etc.
- 10.01.09 ability to splice veneers
- 10.01.10 ability to prepare surfaces to be veneered
- 10.01.11 ability to apply veneers
- 10.01.12 ability to repair veneers

Sub-task

10.02 Applies veneers and inlays.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

- 10.02.01 knowledge for proper sequencing for applying veneers and inlays
- 10.02.02 ability to recess stock to receive inlays
- 10.02.03 ability to cut and apply inlays

Task 11 Applies laminated materials.

Related Components:

Shop-manufactured related devices, tabletops, countertops, cabinets, furniture, architectural woodwork/millwork, paneling, backing materials, adhesives, metal laminates, plastic laminates, solid core laminates, chemical resistant plastic laminates, acid resistant laminates.

Tools and Equipment:

Standard tool kit, personal protective equipment, table saw, circular saw, band saw, tile knife, trimmer, files, planes, router, router bits, clamps, paint brush, postforming machine, heat gun, J-rollers, press, glue sprayer, glue spreader, carbide tip blade, caulking gun, scrapers, locating spacers.

Sub-task**11.01 Prepares plastic and metal laminates.****Supporting Knowledge & Abilities**

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

- 11.01.01 knowledge of the properties and characteristics of various types of adhesives used for gluing laminates
- 11.01.02 knowledge of various types, sizes and finishes of laminate materials
- 11.01.03 knowledge of the properties and characteristics of various types of plastic and metal laminates
- 11.01.04 ability to cut laminates

Sub-task**11.02 Applies plastic and metal laminates.****Supporting Knowledge & Abilities**

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

- 11.02.01 knowledge of materials required to touch up and repair laminates
- 11.02.02 ability to prepare base for laminates
- 11.02.03 ability to apply laminates
- 11.02.04 ability to trim edges of laminates
- 11.02.05 ability to clean laminates
- 11.02.06 ability to produce laminated joints

Task 12 Applies solid surfaces.

Related Components: Shop-manufactured related devices, cabinets, furniture, architectural woodwork/millwork, pre-formed sinks, solid surfaces such as Corian, Sorrell, etc., specialized bonding agents (seam kits), abrasives.

Tools and Equipment: Routers, sanders, polishers, clamps, hand screws, spring clamps, drill, table saw, methyl hydrate, personal protection equipment, glue guns, heat guns, specialized bits, templates.

Sub-task

12.01 Prepares solid surfaces.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	no	yes	NV	NV

- 12.01.01 knowledge of manufacturers certification programs required to work solid surfaces
- 12.01.02 knowledge of proper sub-structure and perimeter support
- 12.01.03 knowledge of adhesives and installation techniques
- 12.01.04 ability to weld joints of solid surface materials
- 12.01.05 ability to machine, polish and clean solid surface materials

Sub-task

12.02 Installs solid surfaces.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	no	yes	NV	NV

- 12.02.01 ability to prepare base for solid surface materials according to manufacturers instructions
- 12.02.02 ability to install solid surface materials
- 12.02.03 ability to repair solid surface materials

Task 13 Applies edge treatment.

Related Components: Shop-manufactured related devices, cabinets, furniture and architectural woodwork/millwork.

Tools and Equipment: Routers, sanders, polishers, clamps, hand screws, spring clamps, drill, table saw, personal protection equipment, glue guns, heat guns, specialized bits, templates.

Sub-task

13.01 Prepares edges and materials. Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

- 13.01.01 knowledge of various types of edging
- 13.01.02 knowledge of various assembly methods
- 13.01.03 ability to prepare materials for edge treatment

Sub-task

13.02 Applies edge treatment. Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

- 13.02.01 knowledge of various types of adhesives
- 13.02.02 knowledge of various clamping techniques
- 13.02.03 ability to select and apply various clamping techniques
- 13.02.04 ability to apply edging
- 13.02.05 ability to machine edges

BLOCK E

ASSEMBLY

Trends: In some firms, the assembly of products is increasingly accomplished with the aid of automated machinery. In many firms, the use of automated equipment specialized adhesives has resulted in an increased rate of assembly.

Task 14 Assembles cabinets.

Related Components: Shop-manufactured related devices, cabinets, hardware, adhesives.

Tools and Equipment: Standard tool kit, stapler, mallet, nailers, pneumatic compressors, screwdrivers, glue applicator, clamps, personal protective equipment, dowel insertion systems, biscuit joiners, edge banders and hinge boring and inserting machine for adjustable shelvings.

Sub-task

14.01 Performs sub-assembly of cabinets.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

14.01.01 knowledge of various assembly methods

14.01.02 knowledge of various hardware and fasteners

14.01.03 knowledge of adhesives

14.01.04 ability to assemble cabinet frames, fronts, backs, sides and tops

14.01.05 ability to install required hardware

14.01.06 ability to use hardware and fasteners

14.01.07 ability to use adhesives

Sub-task

14.02 Performs final assembly of cabinets.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

14.02.01	knowledge of various hardware and fasteners
14.02.02	knowledge of adhesives
14.02.03	ability to assemble fabricated components and sub-assemblies of cabinets
14.02.04	ability to install and adjust hardware
14.02.05	ability to fit braces to correct angle
14.02.06	ability to use hardware and fasteners
14.02.07	ability to use adhesives

Task 15 Assembles furniture.

Related Components:

Shop-manufactured related devices, furniture, hardware, adhesives.

Tools and Equipment:

Standard tool kit, stapler, mallet, nailers, pneumatic compressors, screwdrivers, glue applicator, clamps, personal protective equipment, dowel insertion systems, biscuit joiners.

Sub-task

15.01 Performs sub-assembly of furniture.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

15.01.01	knowledge of various hardware and fasteners
15.01.02	knowledge of adhesives

Supporting Knowledge & Abilities

- 15.01.03 knowledge of various assembly methods
- 15.01.04 ability to assemble drawers
- 15.01.05 ability to create furniture assemblies
- 15.01.06 ability to assemble panel doors
- 15.01.07 ability to install required hardware
- 15.01.08 ability to use various hardware and fasteners
- 15.01.09 ability to use adhesives

Sub-task

15.02 Performs final assembly of furniture.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

- 15.02.01 knowledge of various hardware and fasteners
- 15.02.02 knowledge of adhesives
- 15.02.03 ability to assemble fabricated components and sub-assemblies of furniture
- 15.02.04 ability to install and adjust hardware
- 15.02.05 ability to fit braces to correct angle
- 15.02.06 ability to use various hardware and fasteners
- 15.02.07 ability to use adhesives

Task 16 Assembles architectural woodwork/millwork products.

Related Components:

Shop-manufactured related devices, cabinets, furniture, architectural woodwork/millwork, adhesives, and specialty products.

Tools and Equipment:

Standard tool kit, stapler, mallet, nailers, pneumatic compressors, screwdrivers, glue applicator, clamps, personal protective equipment, dowel insertion systems, biscuit joiners.

Sub-task

**16.01 Performs sub-assembly of architectural
woodwork/millwork products.**

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

- 16.01.01 knowledge of various hardware and fasteners
- 16.01.02 knowledge of adhesives
- 16.01.03 ability to assemble interior sidelights, transoms, etc.
- 16.01.04 ability to assemble doors, windows and frames
- 16.01.05 ability to install glass
- 16.01.06 ability to prepare components for hardware installation
- 16.01.07 ability to use various hardware and fasteners
- 16.01.08 ability to use adhesives

Sub-task

**16.02 Performs final assembly of architectural
woodwork/millwork products.**

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

- 16.02.01 knowledge of various hardware and fasteners
- 16.02.02 knowledge of adhesives
- 16.02.03 knowledge of various assembly methods

Supporting Knowledge & Abilities

16.02.04	ability to perform final assembly
16.02.05	ability to cut and fit mouldings
16.02.06	ability to carve mouldings
16.02.07	ability to cut regular and irregular shaped panels
16.02.08	ability to use various hardware and fasteners
16.02.09	ability to use adhesives
16.02.10	ability to install and adjust hardware and other components

BLOCK F

FINISHING AND RESTORATION

Trends: In some firms, the finishing process is performed by specialists. The preparation and finishing of products is increasingly being performed with the use of automated equipment. Higher quality non-toxic finishes are being produced. There is an increased awareness of environmental concerns regarding the use of toxic finishes.

Task 17 Prepares and applies finishing materials.

Related Components: Shop-manufactured related devices, various application systems (such as high-volume low-pressure systems), curtain coating, grain printing, finishing materials for cabinets, furniture, architectural woodwork/millwork.

Tools and Equipment: Standard tool kit, sanding block, cabinet scraper, personal protective equipment, wipers, brushes, blow torch, spray booths, respirators, robotic finishing systems, roller coaters, curtain coaters, curing ovens, tack rags, viscosity cups, film gauge.

Sub-task**17.01 Treats surfaces for finishing. Supporting Knowledge & Abilities**

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

17.01.01	knowledge of abrasives suitable for final sanding
17.01.02	knowledge of finishing materials
17.01.03	ability to remove scratches, excess glue and other surface imperfections
17.01.04	ability to repair veneered and solid wood surfaces
17.01.05	ability to recognize defective products
17.01.06	ability to perform final sanding
17.01.07	ability to apply stabilizers

Sub-task**17.02 Prepares finishing materials. Supporting Knowledge & Abilities**

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	no	ND	NV	ND	yes	yes	NV	NV

17.02.01	knowledge of WHMIS (Workplace Hazardous Materials Information System) symbols
17.02.02	knowledge of critical data sheets, such as material safety data sheets (MSDS)
17.02.03	knowledge of various types and properties of finishing materials
17.02.04	knowledge of proper storage techniques to prevent damages
17.02.05	ability to prepare formulas and colours

Supporting Knowledge & Abilities

- 17.02.06 ability to mix finishing materials
- 17.02.07 ability to use viscosity cups and to take readings

Sub-task

17.03 Finishes wood products.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	no	ND	NV	ND	yes	yes	NV	NV

- 17.03.01 knowledge of relative humidity
- 17.03.02 knowledge of surface tension and finishes
- 17.03.03 ability to apply wash coat
- 17.03.04 ability to apply fillers
- 17.03.05 ability to apply top-coats
- 17.03.06 ability to apply stain
- 17.03.07 ability to use various spraying systems
- 17.03.08 ability to recognize and correct furniture flaws
- 17.03.09 ability to use film gauge
- 17.03.10 ability to rub, polish and clean surfaces

Task 18 Restores woodwork.

Related Components:

Shop-manufactured related devices.

Tools and Equipment:

Standard tool kit, hand tools, portable power tools, machines and equipment, personal protective equipment, wipers, brushes, blow torch, spray equipment, spray booths.

Sub-task

18.01 Repairs woodwork for restoration purposes.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

- 18.01.01 knowledge of furniture styles
- 18.01.02 knowledge of furniture assembly methods
- 18.01.03 knowledge of finish removers
- 18.01.04 ability to determine restoration requirements
- 18.01.05 ability to replicate new parts and existing artifacts using hand tools and machinery

Sub-task

18.02 Touches up woodwork.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

- 18.02.01 knowledge of various methods required to retouch finishing
- 18.02.02 ability to replicate finish

Sub-task

18.03 Strips woodwork.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

- 18.03.01 knowledge of various stripping products
- 18.03.02 knowledge of various finishing removal techniques
- 18.03.03 ability to strip old finishes

Supporting Knowledge & Abilities

18.03.04 ability to scrape and sand surfaces for staining and finishing

Sub-task

18.04 Refinishes woodwork.

Supporting Knowledge & Abilities

<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
NV	yes	yes	yes	yes	ND	NV	ND	yes	yes	NV	NV

18.04.01 knowledge of historical finishing techniques

18.04.02 ability to match existing finish

APPENDICES

TOOLS AND EQUIPMENT

Standard Tool Kit

back saw	nail sets
chalk line	plumb bob
clamps	putty knife
compasses	rabbet plane
countersink bits	router plane
dividers	sanding block
dovetail saw	scraper
drill bits	scratch awl
driver tips/bits	screwdrivers
file	side cutting pliers
file card	sliding T-bevel
first aid kit	steel square
hack saw	trammel points
hammer	try square
hand saw	utility knife
jack plane	wood chisels
level	wood file
low-angle block plane	wood rasp
marking gauge	wrenches
measuring tape	

Personal Protective Equipment

apron	safety boots
ear plugs	safety glasses
dust mask	safety gloves
goggles	respirator

Layout Tools

angle finder	marking/mortise gauge
band clamps	measuring tape
belt clamps	mitre clamps
chalk line	personal computer
combination square	pinch clamps
computer software	plumb bob
digital meter	profile finder
dog clamps	scratch awl
drawing board	set square
dividers	sliding bevel
electronic level	speed square
four-foot level	spring clamps
framing square	steel square
French curve	straight edges
hand calculator	stud finder
hand screw clamps	T square
imperial and metric scale rules	trammel points
laser beam level	

Hand tools

auger bits	grease gun
bar clamps	honing stones
bench hook	J-roller
brushes	keyhole saw
burnisher	low-angle block plane
C clamps	mitre trimmer
cold chisels	moisture meter
coping saw	nail sets
counterbore bits	oilcan
countersink bits	ripping bar
doweling jig	rubber mallet
drawknife	smoothing plane
drill	spokeshave
expansion bit	surform
fore plane	wheel dresser
glass cutter	woodcarving chisels

Metalworking tools

centre punch	pliers
channel-lock pliers	pliers, long-nose
file	scriber, metal rule
metal shears	

Portable power tools

angle grinder	orbital sander
belt sander	palm sander
biscuit joiner	panel trimmer
circular saw	planer
detail sander	powder-actuated tools
disc sander	reciprocating saw
heat gun	router
jig saw	router bits
laminare trimmer	sprayer
mitre saw	stapler
nail gun	

Machines/Equipment

band saw	horizontal copying lathe
belt sander	jointer
bench grinder	jointer knives
circular saw	lift tables
case clamp	multi-boring machine
clamp carrier	multi-splindle shaper
clamp rack	oscillating sander
CNC router	overhead pin router
CNC window manufacturing system	pallet jack
continuous gluing machine	panel saw
conveyorized glue applicator	planer
copy grinder	planer knives
crosscut saw (manual)	pneumatic press (clamping)
curing ovens	postforming machine
curtain coater	profile and moulding sanding machine
dimension saw	radial arm saw
disc sander	re-saw band saw
double-ended saw	scroll saw
dovetailer	shaper
doweling machine	shaper knives
drill press	sliding scoring panel saw
drying system	spider clamps (clamp carrier)
edge belt sander	spindle sander
gang saw	spray booth
glue gun	spraying systems
glue mixer	stickers
glue press	stroke sander
glue roller	thickness planer
glue spreader	toe-kick cutter
groove cutter	v-groove cutter
guillotine	vacuum bag
heat press	vacuum press
hinge boring machine	veneer slicer
hinge chisel machine	veneer splicer
horizontal boring machine	wood lathe

Automated equipment

automatic copying shaper	CNC router
automatic feeders	CNC window manufacturing system
automatic gang saw	continuous gluing machine
automatic mortising machine	conveyorized glue applicator
automatic multiblade rip saw	crosscut saw (computerised)
automatic panel saw	dust collection systems
automatic squaring machine	edge banding machine
automatic panel stacker	multiplaner
automatic straightening	semi-automatic copying lathe
automatic throughfeed moulders	stacker
automatic wide belt sander	

Shop-manufactured related devices

angle floats	locating spacers
arc cutter	lifters
assembling tables	machining jigs
assembly jigs	push blocks
auxiliary fence	push sticks
cauls	sanding blocks
centre finders	saw horses
cove-cutting fences	shooting board
cradles	sliding tables
custom benches	steam bending box
feather boards	straight edge
fixed floats	templates
joint fastener jig	

GLOSSARY

adhesive	a substance that is used to bond together materials by surface attachment.
AWMAC	Architectural Woodwork Manufacturers Association of Canada.
bleaching	to apply a chemical solution to wood surfaces for lightening the colour.
Computer-assisted design (CAD)	a technique for designing furniture and cabinet items. This technique can also be used for producing workshop drawings and layouts.
Computer-assisted manufacturing (CAM)	a technique used for manufacturing furniture, cabinets and millwork using machine tools controlled by a computer which has been previously programmed.
crosscut	to cut across the grain of a piece of lumber or sheet goods.
designing	a complex problem solving activity whereby the cabinetmaker must create, invent, search and develop practical solutions to address technical problems. various solutions are analyzed, tried out, modified and incorporated in the design. these solutions are communicated in form of specifications, drawings or models.
final assembly	the final phase of production which involves the fitting together of previously subassembled components.
finishing	the application of finishing materials to wood surfaces for protection and to enhance appearance.
floating construction	a construction technique used in cabinetmaking and furniture production which allows for free movement of solid wood panel to minimize structural damages.
inlaying	the process of decorating by setting previously cut pieces into recessed surfaces.
interchangeability	the standardization of mass-produced parts which ensure that any one part fits in a sub or final assembly.
jigs and fixtures	devices specifically designed and built for the safe performance of repetitive work. they may be used either to hold the work in place or to guide the tools during machining or assembly processes.
layout	the process of setting out full size patterns and shapes of parts and components of cabinet/furniture and architectural woodwork components.

locating spacers	materials used to prevent inaccurate bonding while positioning laminates or veneers over substrate
millwork/architectural woodwork	refers to furniture, cabinets and machined wood products, such as doors, windows, stairways, mouldings, panelling, sidelights, transoms, trims, etc.
prototype	a preliminary version or full-scale model of a cabinet or furniture item, built to ascertain the soundness of the design features. it also helps the production planning process.
quality control	the process of inspecting parts, components or finished products to ensure compliance with previously specified standards.
refinishing	to repair and restore finished surfaces of furniture and cabinets.
restoring	to repair and reconstruct furniture and cabinet components.
rip	to cut along the grain of a piece of lumber, sheet goods or flat stock.
scoring	the process of pre-cutting materials to prevent chipping
shop drawing	technical drawing used to communicate detailed specifications and dimensions of furniture and cabinet items.
shop-manufactured related devices	devices which are custom-designed and manufactured by the cabinetmaker to carry out tasks more efficiently and safely.
solid wood break-out	to perform a rough-cut of material.
steam bending	the process of bending wood while it has been steamed to a malleable state.
sub-assembly	the assembly of parts by gluing, screwing, stapling or other means to form furniture or cabinet components.
templates	a pattern guide or model used for laying out or for verifying the accuracy of machined parts.
veneer	a thin layer of wood, sliced, cut or sawed to even thickness.
veneering	to prepare and cover surfaces with thin layers of wood or veneers.
wood laminating	the process of joining together thin strips of wood by gluing or other means to form a single part.
Workplace Hazardous Materials Information System (WHMIS)	the Canadian legislation governing the use of hazardous materials in the workplace.

BLOCKS AND TASKS WEIGHTING**BLOCK A COMMON OCCUPATIONAL SKILLS**

	<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>	National Average
%	NV	20	28	21	10	ND	NV	ND	25	25	NV	NV	22%

Task 1	Plans work activities.												
%	<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>	24%
	NV	15	15	25	25	ND	NV	ND	20	45	NV	NV	
Task 2	Uses hand and portable power tools.												
%	<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>	28%
	NV	25	35	30	30	ND	NV	ND	30	20	NV	NV	
Task 3	Maintains machines and equipment.												
%	<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>	17%
	NV	20	17	19	5	ND	NV	ND	25	15	NV	NV	
Task 4	Builds prototypes.												
%	<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>	14%
	NV	20	10	9	25	ND	NV	ND	10	10	NV	NV	
Task 5	Works on job site.												
%	<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>	17%
	NV	20	23	17	15	ND	NV	ND	15	10	NV	NV	

BLOCK B MACHINING

	<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>	National Average
%	NV	20	26	18	30	ND	NV	ND	20	30	NV	NV	24%

Task 6 Machines components using stationary woodworking machines.

%	<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>	
	NV	60	92	78	90	ND	NV	ND	80	75	NV	NV	79%

Task 7 Machines components using automated equipment.

%	<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>	
	NV	40	8	22	10	ND	NV	ND	20	25	NV	NV	21%

BLOCK C FORMING AND LAMINATING

	<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>	National Average
%	NV	10	11	12	10	ND	NV	ND	10	10	NV	NV	10%

Task 8 Bends wood and related materials.

%	<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>	
	NV	65	42	25	25	ND	NV	ND	20	40	NV	NV	36%

Task 9 Laminates wood and related materials.

%	<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>	
	NV	35	58	75	75	ND	NV	ND	80	60	NV	NV	64%

BLOCK D**VENEERS AND LAMINATES**

														National Average
%	<u>NF</u> NV	<u>NS</u> 15	<u>PE</u> 11	<u>NB</u> 14	<u>QC</u> 15	<u>ON</u> ND	<u>MB</u> NV	<u>SK</u> ND	<u>AB</u> 15	<u>BC</u> 10	<u>NT</u> NV	<u>YK</u> NV		13%

Task 10 Applies veneers and inlays.

%	<u>NF</u> NV	<u>NS</u> 25	<u>PE</u> 6	<u>NB</u> 20	<u>QC</u> 20	<u>ON</u> ND	<u>MB</u> NV	<u>SK</u> ND	<u>AB</u> 40	<u>BC</u> 35	<u>NT</u> NV	<u>YK</u> NV		25%
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Task 11 Applies laminated materials.

%	<u>NF</u> NV	<u>NS</u> 25	<u>PE</u> 50	<u>NB</u> 39	<u>QC</u> 45	<u>ON</u> ND	<u>MB</u> NV	<u>SK</u> ND	<u>AB</u> 40	<u>BC</u> 35	<u>NT</u> NV	<u>YK</u> NV		39%
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Task 12 Applies solid surfaces.

%	<u>NF</u> NV	<u>NS</u> 25	<u>PE</u> 19	<u>NB</u> 20	<u>QC</u> 5	<u>ON</u> ND	<u>MB</u> NV	<u>SK</u> ND	<u>AB</u> 0	<u>BC</u> 5	<u>NT</u> NV	<u>YK</u> NV		12%
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Task 13 Applies edge treatment.

%	<u>NF</u> NV	<u>NS</u> 25	<u>PE</u> 25	<u>NB</u> 21	<u>QC</u> 30	<u>ON</u> ND	<u>MB</u> NV	<u>SK</u> ND	<u>AB</u> 20	<u>BC</u> 25	<u>NT</u> NV	<u>YK</u> NV		24%
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BLOCK E**ASSEMBLY**

														National Average
%	<u>NF</u> NV	<u>NS</u> 20	<u>PE</u> 16	<u>NB</u> 25	<u>QC</u> 30	<u>ON</u> ND	<u>MB</u> NV	<u>SK</u> ND	<u>AB</u> 25	<u>BC</u> 15	<u>NT</u> NV	<u>YK</u> NV		22%

Task 14 Assembles cabinets.

%	<u>NF</u> NV	<u>NS</u> 34	<u>PE</u> 47	<u>NB</u> 50	<u>QC</u> 40	<u>ON</u> ND	<u>MB</u> NV	<u>SK</u> ND	<u>AB</u> 40	<u>BC</u> 40	<u>NT</u> NV	<u>YK</u> NV		42%
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Task 15 Assembles furniture.

	<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>	
%	NV	33	13	29	50	ND	NV	ND	25	40	NV	NV	32%

Task 16 Assembles architectural woodwork/millwork products.

	<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>	
%	NV	33	40	21	10	ND	NV	ND	35	20	NV	NV	26%

BLOCK F FINISHING AND RESTORATION

	<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>	National Average
%	NV	15	8	10	5	ND	NV	ND	5	10	NV	NV	9%

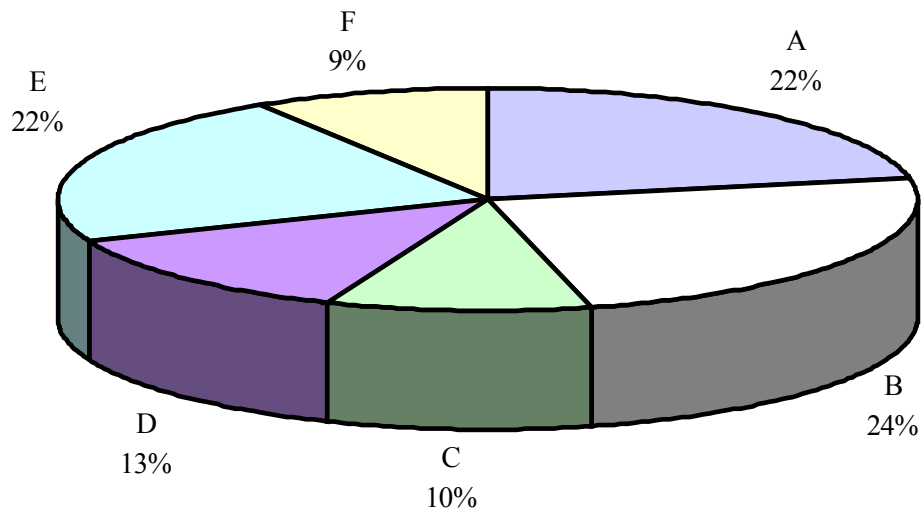
Task 17 Prepares and applies finishing materials.

	<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>	
%	NV	50	86	57	40	ND	NV	ND	80	80	NV	NV	66%

Task 18 Restores woodwork.

	<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>	
%	NV	50	14	43	60	ND	NV	ND	20	20	NV	NV	34%

PIE CHART*
Cabinetmaker



TITLES OF BLOCKS

Block A	Common Occupational Skills	Block D	Veneers and Laminates
Block B	Machining	Block E	Assembly
Block C	Forming and Laminating	Block F	Finishing and Restoration

* The average percentage of the total number of questions on an interprovincial examination, assigned to assess each block of the analysis, as derived from the collective input from workers within the occupation from all areas of Canada. Interprovincial examinations typically have from one hundred up to one hundred and fifty multiple choice questions on each examination.

