Plan of Training

CABINETMAKER

Newfoundland Labrador

Government of Newfoundland and Labrador
Department of Education
Institutional and Industrial Education Division

March 2010

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Approved by:

Chairperson, Provincial Apprenticeship and Certification Board

Date: March 17, 2010

Preface

This Apprenticeship Standard is based on the 2007 edition of the National Occupational Analysis for the Cabinetmaker trade.

This document describes the curriculum content for the Cabinetmaker apprenticeship training program and outlines each of the technical training units necessary for the completion of apprenticeship.

Acknowledgements

Advisory committees, industry representatives, instructors and apprenticeship staff provided valuable input to the development of this Apprenticeship Curriculum Standard. Without their dedication to quality apprenticeship training, this document could not have been produced.

We offer you a sincere thank you.

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Approved	**March 2010**	**September 2010**	

Cabinetmaker Addendum

Changes to March 2010 Plan of Training

Course	Changes
AK-1130 – Construction Safety	▪ Remove **protection from light** from objective 5. ▪ Remove **rainwear, winter garments, and sun/UV protection** from objective 7. ▪ Rearranged the **A,B,C fire classification** information in objective 13. ▪ Removed objectives 15, 16, 17 & 19.
AK-1100 – Blueprint Reading 1	▪ Removed **blueprints** from objective 1. Added **work orders** to shop drawings. ▪ Replaced **Canadian Standards Association** with **Newfoundland Labrador Construction Safety Association** in objective 3. ▪ Added **section** and **detail** to the list of drawings in objective 7, and removed **mechanics**.
AK-1220 – Materials	▪ Added **reconstituted** as a type of veneer used in industry
AK-1230 – Portable Power Tools	▪ Objective 2. Added Pneumatic tools, random orbital sander and portable compressors. Removed screwdriver.
AK-1240 – Common Stationary Equipment	▪ Objective 2. Removed Glue Sprayers and added Dust collectors, CNC Machining Centres, and Compressors and Air Dryers.
AK-1260 – Laminating	▪ Objective 6 added. ▪ Practical objective 5 added.
AK-1290 – Basic Case Work	▪ Objective 1. Added **drawer slides**. ▪ Objective 12. Added f**ramed and frameless** to types of casework. ▪ Objective 13 added. ▪ Objective 14. Added **door types**.
AK-1301 – Wood finishing I	▪ Objective 12. Removed **conventional, hot spray** and **electrostatic** systems, and added **spray booth**. ▪ Objective 13 added.

	▪ Objective 1, practical. Added **hand** and **machine** to final sanding.
AK-1320 – Industry codes and practices	▪ Objectives 1, 2, 3. Removed references to **zoning regulations and permits**.
AK-1330 – Installation Procedures	▪ Objective 4. Added **and characteristics** to countertops. ▪ Objective 5. Added **utilities access**. ▪ Objective 6. Added sequence of assembly and temporary product protection.
AK-1270 – Specialty Stationary Equipment	▪ Objective 1. Removed Drill Tub. Renamed drill pocketing machine to pocket hole machine, added shaper and overhead router.
AK-1302 – Wood Finishing II	▪ Objective 10 added.
AK-1310 – Stairs	▪ Objective 7. Removed **drop of stairs**.
AK-2201 – Advanced Casework and Furniture Design	▪ Objective 10 added. ▪ Renamed **Paneling** subsection to **Architectural Millwork** . ▪ Objective 14, 15 & 16. replaced **paneling for walls and ceilings**, with **millwork**. Added list to Objective 14 to highlight types of architectural woodworking. ▪ Objective 19 added. ▪ Practical objective 2 added.

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A. Conditions Governing Apprenticeship Training

1.0 General

The following general conditions apply to all apprenticeship training programs approved by the Provincial Apprenticeship and Certification Board (PACB) in accordance with the *Apprenticeship Training and Certification Act (1999)*. If an occupation requires additional conditions, these will be noted in the specific Plan of Training for the occupation. In no case should there be a conflict between these conditions and the additional requirements specified in certain Plan of Training.

2.0 Entrance Requirements

2.1 Entry into the occupation as an apprentice requires:

Indenturing into the occupation by an employer who agrees to provide the appropriate training and work experiences as outlined in the Plan of Training.

2.2 Notwithstanding the above, each candidate must have successfully completed a high school program or equivalent, and in addition may be required to have completed certain academic subjects as specified in particular Plan of Training. Mature students, at the discretion of the Director of Institutional and Industrial Education, may be registered. A mature student is defined as one who has reached the age of 19 and who can demonstrate the ability and the interest to complete the requirements for certification.

2.3 At the discretion of the Director of Institutional and Industrial Education, credit toward the apprenticeship program may be awarded to an apprentice for previous work experience and/or training as validated through prior learning assessment.

2.4 An Application for Apprenticeship form must be duly completed.

3.0 Probationary Period

The probationary period for each Memorandum of Understanding will be six months. Within that period the memorandum may be terminated by either party upon giving the other party and the PACB one week notice in writing.

4.0 Termination of a Memorandum of Understanding

After the probationary period referred to in Section 3.0, the Memorandum of Understanding may be terminated by the PACB by mutual consent of the parties involved, or cancelled by the PACB for proper and sufficient cause in the opinion of the PACB.

5.0 Apprenticeship Progression Schedule and Wage Rates

5.1 Progression Schedule

7200 Hour Programs	**Requirements for Progression**	**Progress To**
First Year Apprentice	Completion of entry level (Block 1) courses, plus relevant work experience totaling a minimum of 1800 hours *	Second Year
Second Year Apprentice	Completion of advanced level (Block 2) courses, plus relevant work experience totaling a minimum of 3600 hours	Third Year
Third Year Apprentice	Completion of advanced level (Block 3) courses, plus relevant work experience totaling a minimum of 5400 hours	Fourth Year

Fourth Year Apprentice	Completion of advanced level (Block 4) courses and (Blocks 5 & 6) *if applicable,* plus sign-off of workplace skills required for certification totaling a minimum of 7200 hours**	Write Certification Examination

5400 Hour Programs	**Requirements for Progression**	**Progress To**
First Year Apprentice	Completion of entry level (Block 1) courses, plus relevant work experience totaling a minimum of 1800 hours *	Second Year
Second Year Apprentice	Completion of advanced level (Block 2) courses, plus relevant work experience totaling a minimum of 3600 hours	Third Year
Third Year Apprentice	Completion of advanced level (Block 3) courses, plus sign-off of workplace skills required for certification totaling a minimum of 5400 hours	Write Certification Examination

4800 Hour Programs	**Requirements for Progression**	**Progress To**
First Year Apprentice	Completion of entry level courses (Block 1) courses, plus relevant work experience totaling a minimum of 1600 hours *	Second Year
Second Year Apprentice	Completion of advanced level (Block 2) courses, plus relevant work experience totaling a minimum of 3200 hours	Third Year
Third Year Apprentice	Completion of advanced level (Block 3) courses, plus sign-off of workplace skills required for certification totaling a minimum of 4800 hours	Write Certification Examination

* All direct entry apprentices must meet the **Requirements for Progression** either through Prior Learning Assessment and Recognition or course completion before advancing to the next year.

** Apprentices in a 7200 hour program which incorporates more than four blocks of training are considered fourth year apprentices pending completion of 100% course credits and workplace skills requirements.

5.2 For the duration of each Apprenticeship Training Period, the apprentice who is not covered by a collective agreement, shall be paid a progressively increased schedule of wages.

Program Duration	**Wage Rates**		**Comments**
7200 Hours	1st Year	60%	These wage rates are percentages of the prevailing journeyperson's wage rate in the place of employment of the apprentice. No apprentice shall be paid less than the wage rate established by the Labour Standards Act (1988), as now in force or as hereafter amended, or by other Order, as amended from time to time replacing the first mentioned Order.
	2nd Year	70%	
	3rd Year	80%	
	4th Year	90%	
5400 Hours and 4800 Hours	1st Year	60%	
	2nd Year	75%	
	3rd Year	90%	
4000 Hours			(Hairstylist Program) - The apprentice shall be paid no less than the minimum wage for hours worked and a commission agreed upon between the apprentice and the employer.

6.0 Tools

Apprentices shall be required to obtain hand tools as and when specified by the PACB.

7.0 Periodic Examinations and Evaluation

7.1 Every apprentice shall submit to such occupational tests and examinations as the PACB shall direct. If after such occupational tests and examinations the apprentice is found to be making unsatisfactory progress, his/her rate of wage shall not be

advanced as provided in Section 5 until his/her progress is satisfactory to the Director of Institutional and Industrial Education and his/her date of completion shall be deferred accordingly. Persistent failure to pass required tests shall be a cause for revocation of his/her Memorandum of Understanding.

7.2 Upon receipt of reports of accelerated progress of the apprentice, the PACB may shorten the term of apprenticeship and advance the date of completion accordingly.

7.3 For each and every course, a formal assessment is required for which 70% is the pass mark. At the discretion of the instructor, the summative mark may be for completion of a theory examination or a combination of the theory examination and an assigned practical project.

8.0 Granting of Certificates of Apprenticeship

Upon the successful completion of apprenticeship, the PACB shall issue a Certificate of Apprenticeship

9.0 Hours of Work

Any hours employed in the performance of duties related to the designated occupation will be credited towards the completion of the term of apprenticeship. Appropriate documentation of these hours must be provided.

10.0 Copies of the Registration for Apprenticeship

The Director of Institutional and Industrial Education shall provide copies of the Registration for Apprenticeship form to all signatories to the document.

11.0 Ratio of Apprentices to Journeypersons

The ratio of apprentices to journeypersons shall not exceed two apprentices to every one journeyperson employed, with the condition that one of these be a final year apprentice.

12.0 Relationship to a Collective Bargaining Agreement

Collective agreements take precedence over the conditions outlined in the Plan of Training.

13.0 Amendments to a Plan of Apprenticeship Training

A plan of training may be amended at any time by the PACB.

14.0 Employment, Re-Employment and Training Requirements

14.1 The Plan of Training requires apprentices to regularly attend their place of employment.

14.2 The Plan of Training requires apprentices to regularly attend training programs for that occupation as prescribed by the PACB.

14.3 Failure to comply with Sections 14.1 and/or 14.2 will result in cancellation of the Memorandum of Understanding. Apprentices may have their MOUs reinstated by the PACB but would be subject to a commitment to complete the entire program as outlined in the General Conditions of Apprenticeship. An apprentice will be required to pay a reinstatement fee. Permanent cancellation in the said occupation is the result of non-compliance.

14.4 Cancellation of the Memorandum of Understanding to challenge journeyperson examinations, if unsuccessful, would require an apprentice to serve a time penalty of two (2) years before reinstatement as an apprentice or registering as a Trade Qualifier.

14.5 Under the Plan of Training the employer is required to keep each apprentice employed as long as work is available, and if the apprentice is laid off due to lack of work, to give first opportunity to be hired before another is hired.

14.6 The employer will permit each apprentice to regularly attend training programs as prescribed by the PACB.

14.7 Apprentices who cannot acquire all the workplace skills at their place of employment will have to be evaluated in a simulated work environment at a training institution and have sign-off done by instructors to meet the requirements for certification.

15.0 Appeals to Decisions Based on Conditions Governing Apprenticeship Training

Persons wishing to appeal any decisions based on the above conditions must do so in writing to the Minister of Education within 30 days of the decision.

B. Requirements for Red Seal Certification

1. Evidence the required work experiences outlined in this Plan of Training have been obtained. This evidence must be in a format clearly outlining the experiences and must be signed by an appropriate person or persons attesting that these experiences have been obtained to the level required.

2. Successful completion of all required courses in program.

   Normally, a combination of training from an accredited training program and suitable work experience totalling 7200 hours.

   Or

   A total of 9000 hours of suitable work experience.

3. Completion of a National Red Seal examination, to be set at a place and time determined by the Institutional and Industrial Education Division.

4. Payment of the appropriate examination fee.

C. Roles and Responsibilities of Stakeholders

The apprenticeship process involves a number of stakeholders playing significant roles in the training of apprentices. This section outlines these roles and the responsibilities resulting from them.

The Apprentice:

- completes all required technical training courses as approved by the PACB.
- finds appropriate employment.
- completes all required work experiences in combination with the required hours.
- ensures work experiences are well documented.
- approaches apprenticeship training with an attitude and commitment that fosters the qualities necessary for a successful career as a qualified journeyperson.
- obtains the required hand tools as specified by the PACB for each period of training of the apprenticeship program.

The Employer:

- provides high quality work experiences in an environment conducive to learning.
- remunerates apprentices as set out in the Plan of Training or Collective Agreements.
- provides feedback to training institutions, Institutional and Industrial Education Division and apprentices in an effort to establish a process of continuous quality improvement.
- where appropriate, releases apprentices for the purpose of returning to a training institution to complete the necessary technical courses.
- ensures work experiences of the apprentice are documented.

The Training Institution:

- provides a high quality learning environment.
- provides the necessary student support services that will enhance an apprentice's ability to be successful.
- participates with other stakeholders in the continual updating of programs.

The Institutional and Industrial Education Division:

- establishes and maintains program advisory committees under the direction of the PACB.
- promotes apprenticeship training as a viable career option to prospective apprentices and other appropriate persons involved, such as career guidance counsellors, teachers, parents, etc.
- establishes and maintains a protocol with training institutions, employers and other appropriate stakeholders to ensure the quality of apprenticeship training programs.
- ensures all apprentices are appropriately registered and records are maintained as required.
- schedules all necessary technical training periods for apprentices to complete requirements for certification.
- administers provincial/interprovincial examinations.

The Provincial Apprenticeship and Certification Board:

- sets policies to ensure the provisions of the *Apprenticeship and Certification Act (1999)* are implemented.
- ensures advisory and examination committees are established and maintained.
- accredits institutions to deliver apprenticeship training programs.
- designates occupations for apprenticeship training and/or certification.

D. Program Outcomes

Upon completion of the Cabinetmaker Apprenticeship Program, apprentices will have the knowledge and skills required to perform the following tasks:

Task 1 Maintains tools and equipment.

Task 2 Organizes work.

Task 3 Performs routine trade activities.

Task 4 Machines components using stationary and portable power tools.

Task 5 Machines components using automated equipment.

Task 6 Bends wood and composite materials.

Task 7 Laminates wood and composite materials.

Task 8 Applies veneers.

Task 9 Applies laminates.

Task 10 Assembles cabinets and furniture.

Task 11 Assembles architectural millwork products.

Task 12 Prepares surfaces for finishing.

Task 13 Finishes wood products.

Task 14 Modifies products to site conditions.

Task 15 Installs cabinets and countertops.

Task 16 Installs architectural millwork products.

Task 17 Builds stairs and balustrades.

Task 18 Works with solid surface material.

Task 19 Restores woodwork.

E. Program Structure

For each and every course, a formal assessment is required for which 70% is the pass mark. At the discretion of the instructor, the summative mark may be for completion of a theory examination or a combination of the theory examination and an assigned practical project.

The order of course delivery within each block can be determined by the educational agency, as long as pre-requisite conditions are satisfied.

Entry Level Courses - Block 1			
NL Course No.	**Course Name**	**Hours**	**Prerequisites**
TS1510	Occupational Health and Safety	6	
TS1520	WHMIS	6	
TS1530	Standard First Aid	14	
AK1130	Construction Safety	40	TS1520, TS1530
AK1100	Blueprint I - Basic	75	
AK1200	Hand Tools	45	AK1130
AK1210	Fasteners and Adhesives	30	AK1200
AK1220	Materials	45	AK1130
AK1230	Portable Power Tools	45	AK1200
AK1240	Common Stationary Equipment	60	AK1230
AK1250	Joint Fabrication and Assembly	45	AK1240
AK1260	Laminating	45	AK1250
AK1290	Basic Casework	75	AK1101
AK1301	Wood Finishing I	80	AK1230

Entry Level Courses - Block 1			
NL Course No.	**Course Name**	**Hours**	**Prerequisites**
AK1101	Blueprint Il (Intermediate)	40	AK1100
AK1320	Industry Codes and Practices	45	AK1130
AK1330	Installation Procedures	45	AK1320, AK1290
AP1100	Introduction to Apprenticeship	15	
MA1060	Basic Math	60	
CM2150	Workplace Communications	45	
MR1220	Customer Service	30	
SP2330	Quality Assurance/Quality Control	30	
MC1050	Introduction to Computers	30	
SD1700	Workplace Skills	30	
SD1710	Job Search Techniques	15	
SD1720	Entrepreneurial Awareness	15	
	Total Hours	**1011**	

Required Work Experience

Advanced Courses – Block 2			
NL Course NO.	**Course Name**	**Hours**	**Prerequisites**
AK1270	Specialty Stationary Equipment	60	AK1260
AK1302	Wood Finishing II	50	AK1301
AK1310	Stairs	90	AK1101
AK2100	Blueprint III (Advanced)	40	AK1101
Total Hours		**240**	

Required Work Experience

Advanced Courses – Block 3			
NL Course NO.	**Course Name**	**Hours**	**Prerequisites**
AK1281	High Production Equipment	80	AK1270
AK2101	Blueprint lV (CAD)	60	AK2100
AK2201	Advanced Casework and Furniture Design	100	AK1290, AK2100
Total Hours		**240**	

Total Course Credit Hours	**1491**

***A student who can meet the Mathematics requirement through an ACUPLACER® test may be exempted from Mathematics 1060. Please check with your training institution.**

Entry Level – Block 1

TS1510 Occupational Health and Safety

Description:

This course is designed to give participants the knowledge and skills necessary to interpret the Occupational Health and Safety Act, laws and regulations; understand the designated responsibilities within the laws and regulations; the right to refuse dangerous work; and the importance of reporting accidents.

Pre-Requisites: None

Course Outcomes:

Upon successful completion of this unit, the apprentice will be able to:

- prevent accidents and illnesses
- improve health and safety conditions in the workplace

Theory:

1. Interpret the Occupational Health and Safety Act laws and regulations.
   i. explain the scope of the act
      - application of the act
      - Federal/Provincial jurisdictions
      - Canada Labour Code
      - rules and regulations
      - private home application
      - conformity of the Crown by the Act

2. Explain responsibilities under the Act & Regulations.
   i. duties of employer, owner, contractors, sub-contractors, employees, and suppliers
3. Explain the purpose of joint health and safety committees.

i. formation of committee
ii. functions of committee
iii. legislated rights
iv. health and safety representation
v. reporting endangerment to health
vi. appropriate remedial action
vii. investigation of endangerment
viii. committee recommendation
ix. employer's responsibility in taking remedial action

4. Examine right to refuse dangerous work.
   i. reasonable grounds for refusal
   ii. reporting endangerment to health
   iii. appropriate remedial action
   iv. investigation of endangerment
   v. committee recommendation
   vi. employer's responsibility to take appropriate remedial action
   vii. action taken when employee does not have reasonable grounds for refusing dangerous work
   viii. employee's rights
   ix. assigning another employee to perform duties
   x. temporary reassignment of employee to perform other duties
   xi. collective agreement influences
   xii. wages and benefits

5. State examples of work situations where one might refuse work.

6. Describe discriminatory action.
   i. definition
   ii. filing a complaint procedure
   iii. allocated period of time a complaint can be filed with the Commission
   iv. duties of an arbitrator under the Labour Relations Act
   v. order in writing inclusion
   vi. report to commission Allocated period of time to request Arbitrator to deal with the matter of the request
   vii. notice of application

viii. failure to comply with the terms of an order
ix. order filed in the court

7. Explain duties of commission officers.
   i. powers and duties of officers
   ii. procedure for examinations and inspections
   iii. orders given by officers orally or in writing
   iv. specifications of an order given by an officer to owner of the place of employment, employer, contractor, sub-contractor, employee, or supplier
   v. service of an order
   vi. prohibition of persons towards an officer in the exercise of his/her power or duties
   vii. rescinding of an order
   viii. posting a copy of the order
   ix. illegal removal of an order

8. Interpret appeals of others.
   i. allocated period of time for appeal of an order
   ii. person who may appeal order
   iii. action taken by Commission when person involved does not comply with the order
   iv. enforcement of the order
   v. notice of application
   vi. rules of court

9. Explain the process for reporting of accidents.
   i. application of act
   ii. report procedure
   iii. reporting notification of injury
   iv. reporting accidental explosion or exposure
   v. posting of act and regulations

Practical:

1. Conduct an interview with someone in your occupation on two or more aspects of the act and report results.

2. Conduct a safety inspection of shop area.

TS1520 Workplace Hazardous Materials Information System (WHMIS)

Description:

This course is designed to give participants the knowledge and skills necessary to define WHMIS, examine hazard identification and ingredient disclosure, explain labeling and other forms of warning, and introduce material safety data sheets (MSDS).

Pre-Requisites: None

Course Outcomes:

Upon successful completion of this course, the apprentice will be able to:

- interpret and apply the Workplace Hazardous Materials Information System WHMIS) Regulation under the Occupational Health & Safety Act.

Required Knowledge and Skills:

1. Define WHMIS safety.
    i. rational and key elements
    ii. history and development of WHMIS
    iii. WHMIS legislation
    iv. WHMIS implementation
    v. Definitions of legal and technical terms

2. Examine hazard identification and ingredient disclosure.
    i. prohibited, restricted and controlled products
    ii. classification and the application of WHMIS information requirements
    iii. responsibilities for classification
        - the supplier
        - the employer
        - the worker-classification: rules and criteria
        - information on classification
        - classes, divisions and subdivisions in WHMIS
        - general rules for classification

- class A – compresses gases
- class B – flammable and combustible materials
- class C – oxidizing material
- class D – poisonous and infectious material
- class E – corrosive material
- class F – dangerously reactive material

iv. products excluded from the application of WHMIS legislation
- consumer products
- explosives
- cosmetics, drugs, foods and devices
- pest control products
- radioactive prescribed substances
- wood or products make of wood
- manufactured articles
- tobacco or products of tobacco
- hazardous wastes
- products handled or transported pursuant to the Transportation of Dangerous Goods (TDG) Act

v. comparison of classification systems – WHMIS and TDG

vi. general comparison of classification categories

vii. detailed comparison of classified criteria

3. Explain labeling and other forms of warning.

i. definition of WHMIS label
- supplier label
- workplace label
- other means of identification

ii. responsibilities for labels
- supplier responsibility
- employer responsibility
- worker responsibility

iii. introduce label content, design and location
- supplier labels
- workplace labels
- other means of identification

4. Introduce material safety data sheets (MSDS).
    i. definition of a material safety data sheet
    ii. purpose of the data sheet
    iii. responsibility for the production and availability of data sheets
        - supplier responsibility
        - employer responsibility
        - workers responsibility

Practical:

Practical skills enhance the apprentices' ability to meet the objectives of this course. The learning objectives outlined below are mandatory in Newfoundland and Labrador, but are provided as suggestions for Nova Scotia, Prince Edward Island and New Brunswick.

1. Locate WHMIS label and interpret the information displayed.

2. Locate a MSDS sheet for a product used in the workplace and determine what personal protective equipment and other precautions are required when handling this product.

SUGGESTED RESOURCES:

1. WHMIS Regulation.

2. Sample MSDS sheets.

TS1530 Standard First Aid

Description:

This course is designed to give the apprentice the ability to recognize situations requiring emergency action and to make appropriate decisions concerning first aid.

Complete a **St. John Ambulance or Canadian Red Cross** Standard First Aid Certificate course.

Pre-Requisites: None

AK1130 Construction Safety

Pre-Requisites: TS1520 – WHMIS
TS1530 – Standard First Aid

Course Outcomes:

Upon successful completion of this course, the apprentice will be able to:

- demonstrate knowledge of safety regulations applied to industry, to the trade, to employers and employees.
- demonstrate knowledge of hazards, safe work practices and good housekeeping on the job site and in the workshop environment.
- demonstrate knowledge of personal protective safety equipment and fall arrest systems, and their care and use.

Theory:

Personal Protective Clothing and Equipment

1. Identify personal protective clothing and equipment.
   i. hearing
   ii. eye
   iii. respiratory
   iv. body
   v. foot
   vi. hand
   vii. head

2. Identify hearing protection, their types, applications and use.
   i. muffs
   ii. plugs
   iii. combination
   iv. decibels (sound measurement)

3. Identify safety glasses, their types, applications and use.

i. protection from liquids
ii. protection from solid objects
iii. protection from hot objects
iv. protection from compressed air

4. Identify respiratory protection, their types, applications and use.
   i. respiratory system (inhalation)
   ii. air-purifying
   iii. self contained breathing apparatus

5. Identify body coverings, their types, applications and use.
   i. clothing material (natural/synthetic)
   ii. coveralls
   iii. skin protection (corrosives, etc.)

6. Identify foot protection, their types, applications and use.
   i. toe
   ii. arch
   iii. puncture
   iv. ankle

7. Identify hand protection, their types, applications and use.
   i. temperature
   ii. abrasions
   iii. vibration
   iv. chemical

8. Identify head protection, their types, applications and use.
    i. hard hat classification
    ii. liners
    iii. chin straps

9. Identify inspection and maintenance procedures for personal protective equipment.
    i. hearing
    ii. eye
    iii. respiratory
    iv. body
    v. foot
    vi. hand
    vii. head

Fall Protection

10. Identify types of fall prevention equipment and describe their use and care.
    i. arrest
    ii. restraint
    iii. prevention

11. Identify types of fall prevention systems and their use and care.
    i. guardrails system
    ii. floor opening protection
    iii. wall openings

Working Environments

12. Identify the hazards and precautions to be taken when working in a confined space.
    i. health hazards
    ii. oxygen deficiency/enrichment
    iii. explosive atmospheres
    iv. IDLH (immediately dangerous to life or health)
    v. emergency response
    vi. retrieval devices
    vii. monitoring equipment

13. Identify fire control equipment, its applications and procedures for use.
    i. fire extinguisher classification (A, B, C)
    ii. fire blankets

Industrial Health Hazards

14. Identify types of industrial health hazards.
    i. solid (dusts)
    ii. liquid
    iii. atmospheric
    iv. electrical
    v. ergonomics

15. Identify health hazards presented by building materials.
    i. wood preservatives
    ii. dusts
    iii. heavy metals
    iv. off-gassing
    v. fibers
    vi. asbestos
    vii. exotic woods

Practical:

Practical skills enhance the apprentice's ability to meet the objectives of this course. The learning objectives outlined below are mandatory in Newfoundland, but are provided as suggestions for Nova Scotia, Prince Edward Island and New Brunswick.

1. Select and demonstrate the proper use of personal protective equipment

AK1100 Blueprint 1 (Basic)

Pre-Requisites: None

Course Outcomes:

Upon successful completion of this course, the apprentice will be able to:

- demonstrate knowledge of construction drawings, specifications, regulations and codes.

Theory:

Fundamentals of Construction Drawings

1. Identify the different types of drawings and describe their use.
   i. architectural
   ii. structural
   iii. mechanical
   iv. electrical
   v. shop drawings / work orders
   vi. manufacturers supplied drawings

2. Identify architectural specifications and describe their purpose and use.

3. Identify construction regulations, codes and standards.
   i. National Building Code
   ii. Newfoundland Labrador Construction Safety Association
   iii. Architectural Woodwork Manufacturers Association of Canada
   iv. Buildings Accessibility Act and Regulations
4. Describe the importance of specifications and their precedence over working drawings.

5. Describe the alphabet of lines.
   i. object
   ii. broken

iii. extension
iv. dimension
v. centre
vi. leader
vii. break
viii. cutting plane

6. Identify and describe blueprint symbols and abbreviations.
   i. wall symbols
   ii. exterior
   iii. interior
   iv. mechanical
   v. masonry
   vi. scale

Reading Construction Drawings

7. Identify and describe the use of types of drawings.
   i. elevation
   ii. floor
   iii. section
   iv. detail
   v. manufacturers

8. Identify and describe information on building plans.
   i. lines
   ii. symbols
   iii. dimensions
   iv. elevations
   v. plan views
   vi. abbreviations
   vii. design
   viii. window/door schedules
   ix. section views
   x. finish schedules
   xi. isometric

xii. cabinets, casework and furniture details

9. Describe the use of information on elevation views.
   i. orientation
   ii. symbols
   iii. scale

Basic Sketching

10. Explain the purpose of sketching.
    i. communication
    ii. visualization
    iii. explaining details

11. Describe freehand sketching techniques.
    i. lines
    ii. proportion
    iii. circles
    iv. irregular shapes

Practical:

Practical skills enhance the apprentice's ability to meet the objectives of this course.

1. Identify and interpret information contained in construction drawings.

2. Locate information from blueprints and drawings.

3. Read and interpret architectural drawings.
   i. floor
   ii. details
   iii. elevations
   iv. sections

4. Interpret specifications.
   i. manufacturing

ii. tolerance
iii. company standards books

5. Use codes, regulations and standards
   i. National Building Code
   ii. Canadian Standards Association standards
   iii. Architectural Woodwork Manufacturers Association of Canada
   iv. Buildings Accessibility Act and Regulations

6. Develop freehand sketches with regard to:
   i. details
   ii. joints
   iii. layouts

7. Produce shop drawings for a selected project.

AK1200 Hand Tools

Pre-Requisites: AK-1130 – Construction Safety

Course Outcomes:

Upon successful completion of this course, apprentices will be able to:

- use hand tools.

Theory:

1. Identify the main types of hand tools and describe their applications, accessories, care and use.
   i. measuring
   ii. layout
   iii. alignment
   iv. levels
   v. sanders
   vi. edge-cutters (hand planes & chisels)
   vii. saws
   viii. drilling and boring
   ix. clamps
   x. glue applicators
   xi. sharpeners and conditioners

2. Describe the procedures used to sharpen hand tools.

Practical:

Practical skills enhance the apprentice's ability to meet the objectives of this course.

1. Maintain hand tools and demonstrate sharpening procedures.

2. Demonstrate safe working procedures when using hand tools.

3. Demonstrate the storage of hand tools.

AK1210 Fasteners and Adhesives

Pre-Requisites: AK-1200 – Hand Tools

Course Outcomes:

Upon successful completion of this course, apprentices will be able to:

- select and use fasteners and adhesives.

Theory:

1. Identify the main types of fasteners and describe their characteristics, applications and procedures to install.
   i. general
   ii. nail
   iii. brads
   iv. screws
   v. biscuits
   vi. dowels
   vii. staples
   viii. wall inserts
   ix. special purpose
   x. knockdown hardware
   xi. tight joint fasteners
   xii. cabinet connectors
   xiii. angle brackets

2. Identify the various metals and coatings used in fasteners and explain their advantage.

3. Identify the main types of adhesives and describe their characteristics, applications and procedures to prepare and apply.
   i. hide glue
   ii. casein glue
   iii. standard and cross-linking polyvinyl resins

iv. urea-resin
v. resorcinol
vi. epoxy
vii. contact cements
viii. hot-melts
ix. mastics
x. solvents

4. Identify and describe the most suitable adhesive for specific applications in terms of:
   i. shelf-life, pot-life
   ii. assembly times
   iii. moisture conditions, temperatures
   iv. undesirable staining of materials
   v. coloring of glue
   vi. type of material to be glued
   vii. moisture content

5. Describe how to store and maintain adhesives.

Practical:

Practical skills enhance the apprentice's ability to meet the objectives of this course.

1. Select appropriate, space and install fasteners for various tasks.

2. Select and apply glues and adhesives.

3. Mix glues and apply adhesives according to manufacturers specifications using:
   i. brushes
   ii. rollers
   iii. bottles
   iv. glue spreaders
   v. glue injectors

4. Apply the required pressures to glue joints.

5. Square projects using clamps.

6. Glue up solid lumber.

7. Clean, maintain and store gluing tools and equipment.

8. Clean up excess glue from projects following a lay-up period.

AK1220 Materials

Pre-Requisites: AK1130 – Construction Safety

Course Outcomes:

Upon successful completion of this course, apprentices will be able to:

- demonstrate knowledge of the materials used in cabinetmaking.

Theory:

1. Identify and classify the different types of solid wood common to the Cabinetmaker trade.
   i. hardwoods (deciduous):
      - white oak
      - American black walnut
      - elm
      - birch
      - beech
      - maple
      - oak
      - ash
      - walnut
      - mahogany
      - cherry
      - poplar

   ii. softwoods (coniferous):
      - basswood
      - pine
      - cedar
      - spruce
      - fir

2. Identify the geographic areas of growth for hard and softwoods.

3. Describe the different common methods of producing lumber:
    i. plain sawn/flat grained
    ii. quarter sawn/edge grained
    iii. rift sawn/rift grained

4. Describe the relative commercial values of lumber:
    i. costs
    ii. types
    iii. sizes
    iv. waste factor

5. Identify the structure and growth properties of wood

6. Describe the cell structure of wood and how different properties are affected by it.

7. Identify properties of common wood species.
    i. density
    ii. color
    iii. odor
    iv. strength
    v. hardness
    vi. aesthetics
    vii. stiffness
    viii. bending qualities
    ix. affects of light regarding discoloration

8. Identify the different types of wood grains:
    i. straight
    ii. irregular
    iii. curly
    iv. spiral
    v. interlocked
    vi. open and closed

9. Identify common grades and the criteria used for grading softwood and hardwood

lumber.

10. Describe the common defects and flaws related to growth and machining.
    i. felling shakes
    ii. wind shakes
    iii. pitch pockets
    iv. knots
    v. stress
    vi. birds eyes
    vii. burls

11. Describe the nominal and actual dimensions of softwood and hardwood lumber.

12. Describe seasoning and storage processes in relation to:
    i. moisture content
    ii. equilibrium moisture content
    iii. relative humidity

13. Describe the method used to identify the moisture content in wood samples:
    i. oven drying
    ii. moisture meter

14. Describe the process for:
    i. air drying
    ii. kiln drying (types of kilns)

15. Describe flaws and defects related to improper drying and storage:
    i. case-hardening
    ii. checks
    iii. warpage
    iv. honeycomb
    v. stains (stickers, molds, etc.)
    vi. rot

16. Describe the procedures to calculate board, lineal and square feet.

17. Identify the different types of veneers used in industry:
    i. herring bone
    ii. slip match
    iii. book match (flat sliced)
    iv. diamond match
    v. quarter sliced
    vi. rift sliced
    vii. rotary cut
    viii. reconstituted

18. Describe the storage and handling of veneers.

19. Discuss relative commercial values of veneers by cost, type, size and waste factors.

20. Identify manufactured wood products.
    i. plywood (interior, exterior and specialty)
    ii. other core materials

21. Identify the core-types commonly used.
    i. veneer
    ii. lumber
    iii. particle board
    iv. oriented strand board
    v. fibre-board
    vi. combination
    vii. balanced construction (laminates, veneers, etc.)

22. Describe the advantages of core-type woods over solid woods.
23. Describe the manufacturing methods of face veneers.
    i. rotary
    ii. flat sliced
24. Describe the advantages and disadvantages of various composite core materials.

i. particle-board
ii. fibre-board
iii. hard-board

25. Describe how different moisture-conditions affect composite core materials and storage.

26. Describe the use of sheet material.
    i. plastic
    ii. plastic laminated

27. Describe common sizes and types of solid surface materials.
    i. acrylic
    ii. polyester

28. Identify types of glass and describe their properties, thickness and use.
    i. float
    ii. tempered
    iii. laminated
    iv. wired

29. Describe the procedures used to cut glass, smooth and webering edges.

30. Describe installation requirements for glass and mirrors:
    i. setting and spacing blocks
    ii. stops and special tracks
    iii. hardware

31. Describe brass, stainless steel, chrome, copper and aluminum in terms of:
    i. use
        - bases
        - inlays
        - structural
        - facings

ii. strength
iii. surface treatment
iv. types, sizes
v. adhering properties to wood
vi. methods of cutting
vii. finishes

32. Describe extruded mouldings, their types and applications:
    i. vinyl
    ii. aluminum

33. Discuss cutting, shaping and securing methods for extruded mouldings.

34. Describe sound control relative to:
    i. transmission
    ii. absorption
    iii. reflection

35. Describe the materials and methods used to control sound.

36. Describe the standard types of molding.

Practical:

Practical skills enhance the apprentice's ability to meet the objectives of this course.

Theory only.

AK1230 Portable Power Tools

Pre-Requisites: AK1200 – Hand Tools

Course Outcomes:

Upon successful completion of this course, the apprentice will be able to:

- operate portable power tools.

Theory:

1. Identify pneumatic power sources and connections.

2. Identify the types of portable power and pneumatic tools and describe their applications, safety accessories, care and use.
   - i. saws
     - circular
     - jig
     - reciprocating
     - mitre
   - ii. drills
   - iii. planes
   - iv. sanders
     - belt
     - finish (random orbital)
   - v. routers and trimmers
   - vi. nailers and staplers
   - vii. portable compressors
   - viii. plate joiners
   - ix. screw guns
   - x. heat guns
   - xi. pocket screw jigs and dowel jigs

3. Describe the importance of matching accessories for portable power tools to their intended use.
    i. blades
    ii. fences
    iii. knives
    iv. template guides
    v. cutters
    vi. depth gauges
    vii. bits

4. Describe the use and care of extension cords and air hoses.

5. Describe powder-actuated tools (low velocity), their applications, care and use.
    i. types
    ii. safety
    iii. codes and regulations
    iv. fasteners and charges
    v. causes of and disposal of misfires
    vi. relationships between pins, charges and materials.

Practical:

Practical skills enhance the apprentice's ability to meet the objectives of this course.

1. Set up and use pneumatic and electric hand tools.

2. Use the different types of staples and pins with a portable pneumatic nailer and stapler.

3. Service and store powder-actuated tools and supplies.

4. Operate a low velocity tool.

AK1240 Common Stationary Equipment

Pre-Requisites: AK1230 – Portable Power Tools

Course Outcomes:

Upon completion of this course, apprentices will be able to:

- operate common stationary equipment.

Theory:

1. Describe safety precautions for electrical power sources.
   i. single and three phase connections
   ii. voltage and amperage/line loss
   iii. signs of overload in motors
   iv. lockout procedure

2. Identify the types of common stationary equipment and describe their applications, safety accessories, care and use.
   i. saws
   ii. table
   iii. band
   iv. radial-arm
   v. panel (vertical and sliding)
   vi. scroll
   vii. cut-off
   viii. edge-bander
   ix. sanders
      - disk
      - stroke
      - edge
      - spindle
      - drum/wide belt

x. mortisers
   - bit
   - chain
   - oscillating
   - chisel

xi. drill presses
xii. planers
xiii. jointers
xiv. shapers
xv. borers
xvi. bench grinders
xvii. dust collectors
xviii. CNC machining centre
xix. Compressor and air dryer

3. Describe the importance of matching accessories for common stationary equipment to their intended use.
   i. blades
   ii. knives
   iii. cutters
   iv. bits
   v. jigs

4. Describe the requirements for maintenance and log keeping.

Practical:

Practical skills enhance the apprentice's ability to meet the objectives of this course.

1. Set-up and operate common stationary equipment.

2. Change and maintain blades, bits and cutters.

3. Fabricate a jig.

AK1250 Joint Fabrication and Assembly

Pre-Requisites: AK1240 – Common Stationary Equipment

Course Outcomes:

Upon successful completion of this course, the apprentice will be able to:

- fabricate and assemble joints.

Theory:

1. Describe the principles involved in joining wood.

2. Identify and describe the different forces affecting joints.
   i. shear
   ii. tensile
   iii. compression

3. Identify the types of woodworking joints and describe their characteristics and applications.
   i. butt
   ii. mitre
   iii. lap joints
   iv. dado
   v. rabbet joint
   vi. dowel joint
   vii. tongue and groove joints
   viii. spline joints
   ix. mortise and tenon joints
   x. dovetail joints
   xi. biscuit or plate joint
   xii. coped joint
   xiii. finger
   xiv. scarf

xv. pocket screwed joints

4. Describe the procedures used to fabricate and assemble joints.

Practical

Practical skills enhance the apprentice's ability to meet the objectives of this course.

1. Fabricate joints from solid woods and manufactured materials.

2. Develop and interpret basic shop drawings and simple layouts.

3. Develop and fit joints to specifications using:
   i. hand tools
   ii. power tools

4. Assemble joints by using:
   i. glue
   ii. clamps
   iii. assorted fasteners

5. Clean-up joints.

AK1260 Laminating

Pre-Requisites: AK1250 – Joint Fabrication and Assembly

Course Outcomes:

Upon successful completion of this course, the apprentice will be able to:

- identify different types of laminates.
- perform laminating procedures.

Theory:

1. Identify types of laminates and describe their characteristics, applications and use.
   i. wood
   ii. plastic
   iii. metal on plastic laminate

2. Classify laminates according to:
   i. grades
   ii. finishes
   iii. sizes
   iv. specialties (solid core and acid resistant)

3. Describe the properties and applications of laminates regarding:
   i. machining
   ii. bending
   iii. gluing
   iv. installing
4. Describe the manufacturing procedures for plastic laminates.

5. Describe the procedures used to install and finish laminates.
   i. measuring and over sizing
   ii. selection and use of adhesives

iii. adhesion methods
iv. application sequence for edges and surfaces
v. application sequence for curved surfaces
vi. trimming
- hand and power tools
- inside corners

vii. selection and use of cleaning solvents

6. Describe different types of edge treatments
   i. Solid wood
   ii. Veneer
   iii. Laminate
   iv. PVC
   v. T-Molding

7. Describe briefly the manufacturing process for post-formed countertops.

8. Describe the procedures for joining plastic laminates using hand and power tools.

9. Describe the procedures for joining plastic laminates to other materials using hand and power tools.

10. Describe the criteria for selecting materials for laminating.
    i. solid woods, plywoods or veneers
    ii. sizes
    iii. moisture contents
    iv. density
    v. grain patterns
    vi. colors
    vii. temperature

11. Identify the criteria for selecting glues related to use of product:
    i. moisture conditions
    ii. temperature conditions

iii. strength requirements

12. Describe gluing, assembling and clamping systems relative to:
    i. growth rings and grain direction
    ii. special milling of components

13. Describe the clamping and lay-up systems relative to:
    i. clamps, jigs and wedges
    ii. length of lay-up times related to glues and temperature

14. Define the terms sizing and dressing of glued up units.

15. Describe the procedures for dry bending solid woods and plywoods relative to:
    i. wood species
    ii. material
    iii. grains and radii
    iv. kerf cuts
    v. lamination of layers

16. Describe the procedures for steam bending solid woods and plywoods relative to:
    i. wood species
    ii. material
    iii. grains and radii
    iv. lamination of layers

Practical:

Practical skills enhance the apprentice's ability to meet the objectives of this course.

1. Apply laminates.

2. Bend wood using dry and steam methods.

3. Apply laminates to curved surfaces.
    i. select materials
    ii. select adhesives
    iii. select proper tools
    iv. apply laminates
    v. conduct final cleanup

4. Laminate solid wood.

5. Apply edge treatments.

AK1290 Basic Casework

Pre-Requisites: AK1101 – Blueprint II (Intermediate)

Course Outcomes:

Upon successful completion of this course, apprentices will be able to:

- identify and install hardware used in basic casework.
- layout and assemble basic casework.

Theory:

1. Identify common types of hinges and drawer slides and describe their characteristics, applications and procedures to install.

   Hinges

   i. butt
   ii. surface mounted
   iii. concealed
   iv. semi-concealed
   v. pin
   vi. piano
   vii. double action hinge

   Drawer Slides

   i. integrated
   ii. full extension
   iii. soft closing

2. Describe the advantages and disadvantages of common hinges in relation to:
   i. strength
   ii. aesthetics
   iii. adjustments

3. Identify the types of handles, pulls, knobs and accessories and describe their characteristics, applications and procedures to install.

4. Describe typical location of hardware relative to:
   i. style
   ii. balance
   iii. application

5. Identify the types of catches, locks and latches and describe their characteristics, applications, location and procedures to install.
   i. touch latches
   ii. friction
   iii. magnetic and roller - bullet catches
   iv. drawer/door locks
   v. gang locks
   vi. anti-tilt devices (drawers)
   vii. elbow catches
   viii. double-ball catches
   ix. escutheon plates

6. Identify types of hardware used for sliding cabinet doors and drawers and describe their characteristics, applications and procedures to install.
   i. shop made (wood on wood)
   ii. manufactured types (metal and nylon)

7. Identify types of hardware for adjustable/non-adjustable shelves and describe their characteristics, applications, spacing and procedures to install.
   i. standards
   ii. ferrules
   iii. pins
   iv. brackets
   v. cleats

8. Identify types of special purpose hardware and describe their characteristics,

applications, location and procedures to install.

i. tray-lift
ii. turning shelf
iii. tambour
iv. lid stays
v. racks
vi. flipper/pocket door
vii. cabinet connectors
viii. grommets (cable holes)
ix. levelers
x. casters
xi. computer
xii. blind corner
xiii. miscellaneous

9. Describe jigs and templates used for location and installation of hardware.

10. Identify types of knockdown fittings and describe their characteristics, applications, location and procedures to install.

11. Describe the 32mm system.

12. Describe the procedures used to fabricate framed and frameless casework.
    i. preliminary work
    ii. shop drawings
    iii. notes
    iv. layout rods
    v. other full-scale layouts
    vi. cutting lists/optimizing
    vii. planning
        - sectional
        - knockdown
        - shop/site assembled
    viii. selection of materials

- solid stock
- sheet materials
- allowance for waste

ix. selection of cutting and surfacing equipment
x. cutting procedures and sequence
xi. machining methods
- custom work
- mass production

xii. sanding and prefinishing (before final assembly)
xiii. pre-assembly
xiv. assembly

13. Describe cabinet components such as gables, tops, bottoms, doors and drawers.

14. Describe the procedures used to fabricate and construct basic cabinet doors.
    i. planning
    ii. selection of materials
    iii. type of door, such as panel, slab and tambour
    iv. construction
    v. installation and adjustment of hardware

15. Describe the procedures used to fabricate and construct basic cabinet drawers.
    i. planning
    ii. selection of materials
    iii. construction
    iv. installation and adjustment of hardware

Millwork

16. Describe the procedures used to fabricate and construct interior and exterior doors.
    i. planning
    - sizing
    - clearances

    ii. selection of materials

iii. door construction
- panel
- solid
- core (veneer)

iv. installation and adjustment of hardware

16. Identify types of interior and exterior door jambs and describe their characteristics, applications and procedures to install.
    v. machining requirements
    vi. side-light requirements
    vii. transom requirements

17. Describe the procedure used to fabricate window frames and sashes.
    i. planning
    - sizing
    - clearances

    ii. selection of materials
    iii. construction of materials
    - joint selection
    - sash installation
    - glazing procedures

Practical:

Practical skills enhance the apprentice's ability to meet the objectives of this course.

1. Fabricate casework with doors and drawers.
    i. develop layout-rod
    ii. select materials
    iii. produce cutting list
    iv. cut sheet material
    v. break-out solid woods
    vi. dress and cut to size
    vii. glue up or laminate panels

viii. machine components
ix. assemble
x. install hardware

2. Develop a project using:
   i. jigs
   ii. templates
   iii. stops

3. Demonstrate the 32 mm system.

4. Fabricate a project using millwork procedures.

AK1301 Wood Finishing I

Pre-Requisites: AK1230 – Portable Power Tools

Course Outcomes:

Upon completion of this course the apprentice will be able to:

- demonstrate knowledge of finishing products and wood preparation.
- apply finishing products using proper techniques.

Theory:

1. Identify the types of abrasives and describe their applications.
   i. flint
   ii. garnet
   iii. aluminum oxide
   iv. silicon carbide
   v. abrasive fibres

2. Describe grit-sizes and their usage.

3. Describe pre-finishing procedures.
   i. glue removal
   ii. final surface repairs
   iii. final sanding
   iv. filling
   v. metal

4. Identify the types of stains and describe their characteristics, applications and procedures for use.
   i. water
   ii. alcohol
   iii. oil

5. Describe the standard staining operations to achieve the desired color.

6. Describe the use of paste wood fillers.

7. Describe the difference between sealing and wash-coating.

8. Identify the types of finishing products and describe their characteristics, applications and procedures for use.
   i. lacquers
   ii. varnishes
   iii. oils
   iv. water based finishes

9. Identify compatible solvents and thinners for finishing products.

10. Describe the different methods of applying finishing coats.
    i. spraying
    ii. brushing
    iii. wiping

11. Describe common finishing problems and their solutions

12. Identify the types of spray equipment and describe their applications, adjustments, care and use.
    i. airless and air assisted airless
    ii. high volume - low pressure
    iii. flat line (automated) systems
    iv. spray booths

13. Describe fire hazards posed by the use, storage and disposal of finishing products and harmful materials.
    i. oily rages
    ii. lighting and ventilation systems
    iii. vapors

14. Describe the harmful effects of vapors from solvents and how to protect against them:
    i. respiratory
    ii. skin and eye

15. Describe the safe disposal of potentially dangerous or harmful materials.
    i. oily rags
    ii. finishing products

Practical:

Practical skills enhance the apprentice's ability to meet the objectives of this course.

1. Prepare projects previous to applying finish.
    i. removing glue
    ii. final surface repair
    iii. filling
    iv. final sanding (hand and machine)

2. Apply different types of stain to wood.

3. Apply sealer and wash-coats.

4. Apply top-coats.
    i. lacquers
    ii. varnishes
    iii. oils
    iv. water based finishes

5. Use different types of spray equipment to demonstrate spray techniques.

6. Clean and store tools and spray equipment.

AK1101 Blueprint II - Intermediate

Pre-Requisites: AK1100 – Blueprint I - Basic

Course Outcomes:

Upon completion of this course, the apprentice will be able to:

- develop free hand sketches
- develop shop drawings
- layout for shop projects

Theory:

1. Describe the pertinent information found on drawings.
   i. architectural
   ii. structural drawings
   iii. mechanical drawings
   iv. electrical drawings
   v. shop drawings

2. Describe plan views in relation to:
   i. partition-layout
   ii. room-size
   iii. door and window location
   iv. location of millwork

3. Describe the process to interpret interior elevation views, sections and details and cross-reference with specifications and room-finishing schedules to make the shop-drawings.

4. Describe how preparatory and finishing work by other trades affects the cabinetmaker's work.
   i. backing in partitions and walls

ii. interior finish on floors and walls
iii. mechanical and electrical work

5. Describe how to construct geometric shapes and lines.
   i. draw lines to scale
   ii. scale lines
   iii. divide lines into equal parts
   iv. bisect lines
   v. angles
   vi. bisect angles
   vii. concave and convex curves
   viii. circles, arcs, tangents, ellipses, polygons

6. Describe procedures to sketch orthographic projections
   i. visualize object
   ii. select views
   iii. layout sketch
   iv. sketch projection
   v. dimension sketch
   vi. make notations

Practical:

Practical skills enhance the apprentice's ability to meet the objectives of this course.

1. Develop freehand sketches.

2. Develop working drawings and layouts.

3. Construct geometric shapes and lines.
   i. draw lines to scale
   ii. scale lines
   iii. divide lines into equal parts
   iv. bisect lines

v. angles
vi. bisect angles
vii. concave and convex curves
viii. circles, arcs, tangents, ellipses, polygons

4. Sketch orthographic projections.
   i. visualize object
   ii. select views
   iii. layout sketch
   iv. sketch projection
   v. dimension sketch
   vi. make notations

5. Evaluate designs using such concepts as:
   i. balance
   ii. proportion

6. Design an efficient kitchen-cabinet layout.

7. Use working drawings and specifications of a commercial building and produce:
   i. shop drawings
   ii. sketches of typical millwork

8. Develop shop drawings and layouts for shop-projects, including all necessary views and details and materials take-off lists.

AK1320 Industry Codes and Practices

Pre-Requisites: AK1130 – Construction Safety

Course Outcomes:

Upon completion of this course, apprentices will be able to:

- identify the roles of other construction trades

Theory:

1. Describe the role of federal, provincial and municipal authorities with regards to:
   i. regulations and codes (NBC, CSA)

2. Identify and describe the roles of architects, engineers, designers and construction associations.

3. Describe the legal relationship that exists between the general and the sub-contractor.

4. Describe the responsibilities of the cabinetmaker in relationship to the:
   i. client
   ii. architect
   iii. general contractor
   iv. designer

5. Describe sequencing and scheduling of trades relevant to:
   i. bar charts
   ii. critical path methods
   iii. scheduling (supply dates and starts)
   iv. completion times

6. Describe the required procedures to follow for changing design and specifications of work in progress.

7. Identify and describe the importance of appropriate communications with fellow employees.

8. Identify the dangers associated with radiation from high-frequency electronic gluing and drying equipment.

9. Describe the structure of companies with regards to:
   i. difference between proprietorship and limited company
   ii. payments, sales tax and G.S.T.
   iii. contracts (general, construction)
   iv. bid depository
   v. labour costs
   vi. material costs
   vii. overhead costs

10. Explain the basic requirements for valid legal contracts; circumstances that may result in voided contracts; what constitutes a breach of contract.

11. Describe the legal relationships which exist in construction contracts and the legal precedence of construction documents regarding:
   i. owner
   ii. designer
   iii. general contractor
   iv. sub-contractors
   v. suppliers-workers
   vi. architect

12. Describe how labour costs are calculated with regards to:
   i. direct wages
   ii. indirect labour costs
   iii. record keeping- (time sheets)
   iv. piece-work

13. Explain how material costs are calculated from material-lists.

14. Describe the most common overhead costs and identify the differences between:
    i. small shops
    ii. large production shops

15. Describe Quality Control systems.

Practical:

Theory only.

AK1330 Installation Procedures

Pre-Requisites: AK1320 – Industry Codes and Practices
AK1290 – Basic Casework

Course Outcomes:

Upon completion of this course, apprentices will be able to:

- install specific shop casework to specifications and drawings.

Theory:

1. Identify the accepted heights and spacings of wall mounted units.

2. Describe how studs or backings can be found in framed walls.

3. Describe the proper method of securing materials:
   i. adhesives
   ii. screws and bolts
   iii. hollow and solid wall fasteners

4. Identify various types and characteristics of counter-top surface materials :
   i. marble
   ii. granite
   iii. solid surface
   iv. stainless steel
   v. butcher block
   vi. tile
   vii. plastic laminate

5. Describe the problems associated with installations due to
   i. minor warpages
   ii. imperfect walls and floors

iii. utilities access
iv. humidity and temperature

6. Describe procedures for:
   i. sequence of assembly
   ii. leveling
   iii. plumbing
   iv. shimming
   v. scribing
   vi. co-ordinating project with other trades
   vii. temporarily protecting product after installation

7. Describe the checks for ease of operation following installation of doors, drawers, slides, etc.

Practical:

Practical skills enhance the apprentice's ability to meet the objectives of this course.

1. Install casework according to specifications and drawings.

2. Demonstrate good housekeeping practices

AP1100 Introduction to Apprenticeship

Description:

This course is designed to give participants the knowledge base and skills necessary to understand and successfully navigate the apprenticeship/red seal program.

Course Outcomes:

Upon successful completion of this course, the apprentice will be able to:

- Identify the requirements for registering in an Apprenticeship Program.
- Describe the registration process.
- Explain the steps to complete the Apprenticeship Program.
- Articulate the roles of the Apprentice, Journeyperson, Training Institutions, Industry and Governing Bodies in the Apprentice Program.
- Explain the significance of the Red Seal Program.

Pre-Requisites: None

Objective and Content:

1. Define apprenticeship.
    i. define Apprenticeship and Red Seal Certification
    ii. discuss the definition of Apprenticeship and Red Seal Certification
    iii. distinguish between Red Seal and Provincial Certification

2. Explore how apprenticeship is governed and administered.
    i. explain who is responsible for administrating apprenticeship
        - Department of Education
        - Provincial Apprenticeship and Certification Board

3. Explore the roles and responsibilities of those involved in the apprenticeship

process.

i. apprentice
ii. employer/journeyperson
iii. Industrial Training Division
    - explain when and where to take the in-class portion of advance training
    - discuss class calls
iv. Training Institutions
    - various delivery methods
v. Provincial Apprenticeship and Certification Board

4. List and explain the steps in the apprenticeship process.
    i. explain the registration process
    ii. describe apprenticeship as an agreement between employee, employer and Provincial government
    iii. review a Memorandum of Understanding
    iv. legal document
    v. review an application of apprenticeship
        - original high school certificate or equivalent
        - original transcript from the applicant's training institution
    vi. describe the roles of Institutional and Industrial Education Division of the Department of Education in apprenticeship
    vii. explain the role of the Program Development Officer
        - define probation period
        - discusses what constitutes a cancellation of apprenticeship
        - explain the consequences of an apprenticeship cancellation
        - discuss the purpose of the Record of Occupational Progress (Log Book)
        - explore how to maintain your log book
        - discuss who is responsible for tracking and signing-off on trade skills
        - explain how and where to record hours worked
        - identify the importance of updating your file with the Program Development Officer
    viii. differentiate between provincial and interprovincial exams

5. Describe the training and education requirements.

i. discuss the factors affecting on-the-job and in class portions of your training
ii. define in school and on the job training
- review a Plan of Training
- identify the percentage of on-the-job and in class training time
- current labour market implications on completing an apprenticeship program

6. Explain Plans of Training.
   i. identify what is included in the Plan of Training
      - entrance requirements
      - duration of in-school and on-the-job training
      - course content
      - entry level or advanced level
   ii. explain how a Journeyperson Certificate is achieved
      - discuss Certificate of Qualification.
      - discuss Certificate of Apprenticeship.
      - discuss Red Seal endorsement

7. Discuss the Red Seal Program.
   i. define designated trade
   ii. explore the National Occupational Analysis for your trade
   iii. explain Interprovincial Standards Red Seal Program and how it works.
      - labor mobility
      - qualification recognition
   iv. discuss the range of careers possible in your chosen trade

8. Explain apprenticeship progression schedule and wage rates.
   i. review a Record of Occupational Progress (Log Book)
   ii. hours per program
   iii. requirements for progression
   iv. wage rates per year of apprenticeship

9. Identify the examinations and evaluation process used in Apprenticeship.
   i. discuss occupational tests and examinations as directed by the Provincial Apprenticeship and Certification Board

- theory
- practical

ii. explain formal assessment and the pass mark of 70%

10. Examine some of the financial incentives available to apprentices.
    i. Employment Insurance (E.I.) Benefits
    ii. government sponsored student loans
    iii. apprenticeship incentive Federal and Provincial
    iv. scholarships

11. Continuing training outside the Province of Newfoundland Labrador.
    i. training in other provinces and territories
        - procedure for registration and recognition of hours and skills in other provinces
    ii. options for dual certification
        - transfer of credits

12. Review and define the following terms:
    i. Apprenticeship Program Accreditation
    ii. Cancellation of Apprenticeship
    iii. Certificate of Apprenticeship
    iv. Certificate of Qualification
    v. Certification Renewal
    vi. Criteria for Eligibility
    vii. Journeyperson
    viii. Practical Examination
    ix. Prior Learning
    x. Record of Occupational Progress (Logbook)
    xi. Red Seal Certification
    xii. Registered Apprentice
    xiii. Theoretical Examination
    xiv. National Occupational Analysis (NOA)
    xv. Class Call
    xvi. Dual certification

Practical:

Practical skills enhance the apprentice's ability to meet the objectives of this course.

1. Review the Provincial Apprenticeship web site: www.gov.nl.ca/app.
   i. identify the requirements for registering as an apprentice
   ii. and the registration process
   iii. explain the steps to complete an apprenticeship program
   iv. identify who is responsible for tracking and signing-off on trade skills.
   v. identify the nearest Industrial Training Office to your community
   vi. identify the current incentives available to apprentices

2. Review a plan of training on the Provincial Apprenticeship web site.
   i. identify the hours for your trade (in-school and on-the-job)
   ii. explain the roles and responsibilities of the following stakeholders in the apprenticeship process: employer, apprentice, training institution and the Industrial Training Division

3. Visit the Red Seal Web site http://www.red-seal.ca, review the National Occupational Analyses for your trade.
   i. review the scope of work for your occupation and identify the industry
   sectors and job types requiring your trade
   ii. identify the trends of your trade
   iii. provide a list of personal protective equipment required for your trade

MA1060 Basic Math

Description:

This course in Basic Math requires knowledge of general mathematical concepts and processes to enable trades persons to function in the institutional setting by developing numeracy skills required for technical courses. This math course should also provide a foundation for experiential learning through knowledge of math relating to on-the-job skills and practices. A detailed course outline is available from Institutional and Industrial Education, Standards and Curriculum Division to training institutions upon request.

Course Outcomes:

- To develop numeracy skills and knowledge required for institutional and on-the-job learning.
- To develop the capability to apply mathematical concepts in the performance of trade practices.
- To develop an appreciation for mathematics as a critical element of the learning environment
- To use mathematical principles accurately for the purposes of problem solving, job and materials estimation, measurement, calculation, system conversion, diagram interpretation and scale conversions, formulae calculations, and geometric applications.

Pre-Requisites: None

Course Objectives (Knowledge):

1. Define and calculate using whole number operations.

2. Define and demonstrate use of correct orders of operations.

3. Demonstrate examples of operations with fractions and mixed numbers.

4. Demonstrate examples of operations with decimals.

5. Demonstrate examples of operations with percentages.

6. Employ percent/decimal/fraction conversion and comparison.

7. Define and calculate with ratios and proportions.

8. Use the Imperial Measurement system in relevant trade applications.

9. Use the Metric Measurement system in relevant trade applications.

10. Perform Imperial/Metric conversions.

11. Define and demonstrate the formulation of variables.

12. Demonstrate and define the various properties of angles and make relevant calculations.

Major Tasks/Sub-tasks (Skills):

Note: To emphasize or further develop specific knowledge objectives, students may be asked to complete practical demonstrations which confirm proper application of mathematical theory to job skills.

CM2150 Workplace Communications

Description:

This course is designed to introduce students to the principles of effective communication including letters, memos, short report writing, oral presentations and interpersonal communications.

Course Outcomes:

Upon completion of the course, students will be able to:

- Understand and apply communication skills as outlined in the Employability Skills 2000, Conference Board of Canada.
- Understand the importance of well-developed writing skills in business and in career development.
- Understand the purpose of the various types of business correspondence.
- Examine the principles of effective business writing.
- Examine the standard formats for letters and memos.
- Write effective letters and memos.
- Examine the fundamentals of informal reports and the report writing procedure.
- Produce and orally present an informal report.
- Examine effective listening skills and body language in communication.

Pre-Requisites: None

Objectives and Content:

1. Apply rules and principles for writing clear, concise, complete sentences which adhere to the conventions of grammar, punctuation, and mechanics.

2. Explain the rules of subject-verb agreement.

3. Define and describe the major characteristics of an effective paragraph.

4. Examine the Value of Business Writing Skills.
    i. describe the importance of effective writing skills in business
    ii. describe the value of well-developed writing skills to career success as referenced in the Employability Skills

5. Examine principles of Effective Business Writing.
    i. discuss the rationale and techniques for fostering goodwill in business communication, regardless of the circumstances
    ii. review the importance of revising and proofreading
    iii. differentiate between letter and memo applications in the workplace and review samples
    iv. identify the parts of a business letter and memo
    v. review the standard formats for business letters and memos
    vi. examine samples of well-written and poorly written letters and memos
    vii. examine guidelines for writing sample letters and memos which convey: acknowledgment, routine request, routine response, complaint, refusal, persuasive request and letters of appeal

6. Examine the fundamentals of Informal Business Reports.
    i. identify the purpose of the informal report
    ii. identify the parts and formats of an informal report
    iii. identify methods of information gathering
    iv. describe the methods of referencing documents
    v. review the importance of proof reading and editing

7. Examine types of presentations.
    i. review and discuss components of an effective presentation
    ii. review and discuss delivery techniques
    iii. review and discuss preparation & use of audio/visual aids
    iv. discuss and participate in confidence building exercises used to prepare for giving presentations

8. Interpersonal Communications.
    i. examine and apply listening techniques
    ii. discuss the importance of body language

Practical:

Practical skills enhance the apprentice's ability to meet the objectives of this course.

1. Write well-developed, coherent, unified paragraphs which illustrate the following: A variety of sentence arrangements; conciseness and clarity; and adherence to correct and appropriate sentence structure, grammar, punctuation, and mechanics.

2. Write sample letters and memos which convey: acknowledgment, routine request, routine response, complaint, refusal, persuasive request and letters of appeal.

3. Gather pertinent information, organize information into an appropriate outline and write an informal report with documented resources.
    i. edit, proofread, and revise the draft to create an effective informal report
    ii. and present orally using visual aids participate in confidence building exercises

4. Present an effective presentation.

5. Evaluate presentations.

MR1220 Customer Service

Description:

This course focuses on the role of providing quality customer service. It is important to have a positive attitude and the necessary skills to effectively listen and interpret customer concerns about a product, resolve customer problems, and determine customer wants and needs. Students will be able to use the skills and knowledge gained in this course to effectively provide a consistently high level of service to the customer.

Course Outcomes:

Upon successful completion of this course, students will be able to:

- Define customer service.
- Explain why service is important.
- Describe the relationship between "service" and "sales."
- Demonstrate an understanding of the importance of a positive attitude.
- Demonstrate methods of resolving customer complaints.

Pre-Requisites: None

Objectives and Content:

1. Define quality service.
    i. identify and discuss elements of customer service
    ii. explain the difference between service vs. sales or selling
    iii. explain why quality service is important
    iv. identify the various types of customers and challenges they may present
    v. describe customer loyalty
    vi. examine barriers to quality customer service

2. Explain how to determine customer's wants and needs.
    i. identify customer needs
    ii. explain the difference between customer wants and needs
    iii. identify ways to ensure repeat business

3. Demonstrate an understanding of the importance of having a positive attitude.
    i. identify & discuss the characteristics of a positive attitude
    ii. explain why it is important to have a positive attitude
    iii. explain how a positive attitude can improve a customer's satisfaction
    iv. define perception and explain how perception can alter us and customers
    v. describe methods of dealing with perception

4. Communicating effectively with customers.
    i. describe the main elements in the communication process
    ii. identify some barriers to effective communication
    iii. explain why body language is important
    iv. define active listening and state why it is important
    v. identify and discuss the steps of the listening process
    vi. identify and discuss questioning techniques

5. Demonstrate using the telephone effectively.
    i. explain why telephone skills are important
    ii. describe the qualities of a professional telephone interaction

6. Demonstrate an understanding of the importance of asserting oneself.
    i. define assertiveness
    ii. discuss assertive techniques
    iii. explain the use of assertiveness when dealing with multiple customers

7. Demonstrate techniques for interacting with challenging customers in addressing complaints and resolving conflict.
    i. examine and discuss ways to control feelings
    ii. examine and discuss ways to interact with an upset customer
    iii. examine and discuss ways to resolve conflict/customer criticism

iv. examine and discuss ways to prevent unnecessary conflict with customers

Practical:

Practical skills enhance the apprentice's ability to meet the objectives of this course.

1. Participate in activities to demonstrate knowledge of the course objectives.

SP2330 Quality Assurance/Quality Control

Description:

This course is designed to give students an understanding of the concepts and requirements of QA/QC such as, interpreting standards, controlling the acceptance of raw materials, controlling quality variables and documenting the process. It includes information on quality concepts, codes and standards, documentation, communications, human resources, company structure and policy, teamwork and responsibilities.

Course Outcomes:

Upon completion of this course, students will be able to:

- Develop the skills and knowledge required to apply quality assurance/quality control procedures as related to the trade.
- Develop an awareness of quality principles and processes.
- Apply quality assurance/quality control procedures in a shop project.

Pre-Requisites: None

Objectives & Content:

1. Describe the reasons for quality assurance and quality plans.

2. Explain the relationship between quality assurance and quality control.

3. Describe quality control procedures as applied to the production and checking of specifications and processes in applicable occupations.

4. Describe quality control procedures as applied to the acceptance and checking of raw materials.

5. Explain the role of communications in a quality environment.

6. Explain why it is important for all employees to understand the structure of the company and its production processes.

7. Explain how human resource effectiveness is maximized in a quality managed organization.

8. Explain the role of company policy in quality management.

9. Explain the purpose of codes and standards in various occupations.

10. Explain the concepts of quality.
    i. cost of quality
    ii. measurement of quality
    iii. elements of quality
    iv. elements of the quality audit
    v. quality standards
    vi. role expectations and responsibilities

11. Explain the structure of quality assurance and quality control.
    i. describe organizational charts
    ii. identify the elements of quality assurance system such as ISO, CSA, WHMIS, Sanitation Safety Code (SSC)
    iii. explain the purpose of the quality assurance manual
    iv. describe quality assurance procedures

12. Examine quality assurance/quality control documentation.
    i. describe methods of recording reports in industry
    ii. describe procedures of traceability (manual and computer-based recording)
    iii. identify needs for quality control procedures

Practical:

Practical skills enhance the apprentice's ability to meet the objectives of this course.

1. Apply quality control to a project
    i. follow QA/QC procedures for drawings, plans and specifications in
    ii. applicable occupations
    iii. calibrate measuring instruments and devices in applicable
    iv. occupations.
    v. interpret required standards
    vi. follow QA/QC procedures for accepting raw materials
    vii. carry out the project
    viii. control the quality elements (variables)
    ix. complete QA/QC reports

MC1050 Introduction to Computers

Description:

This course is designed to give the student an introduction to computer systems. Particular emphasis is given to word processing, spreadsheet, e-mail and the Internet and security issues.

Course Outcomes:

Upon completion of this course, students will have a basic understanding of:

- Computer systems and their operation.
- Popular software packages, their applications.
- Security issues of computers.

Pre-Requisites: None

Objectives & Content:

1. Identify the major components of microcomputer system hardware and software system.

2. Describe the functions of the microprocessor.
   i. describe and give examples of I/O devices
   ii. describe primary storage (RAM, ROM, Cache)
   iii. define bit, byte, code and the prefixes k.m. and g
   iv. describe secondary storage (diskettes and hard disks, CD ROMS, Zip drives, etc)
   v. describe how to care for a computer and its accessories

3. Describe microcomputer software.
   i. define software
   ii. describe types of operational and application software

iii. define file and give the rules for filenames and file extensions

4. Describe windows software.
   i. start and quit a program
   ii. demonstrate how to use the help function
   iii. locate a specific file using the find function
   iv. identify system settings: wall paper, screen saver, screen resolution, background
   v. start a program by using the Run Command
   vi. shutting down your computer

5. Identify File Management commands.
   i. create folders
   ii. maximize and minimize a window
   iii. describe windows task bar

6. Describe Keyboards.
   i. identify and locate alphabetic and numeric keys
   ii. identify and locate function key & special keys

7. Describe Word Processing.
   i. describe Windows components
   ii. menu bar
   iii. menu indicators
   iv. document window
   v. the Status bar
   vi. the Help feature
   vii. insertion point movements

8. Describe the procedure used to development of a document.
   i. enter text
   ii. change the display

9. Describe the procedure for opening, saving and exiting documents.
    i. saving a document
    ii. closing a document.
    iii. starting a new document Window
    iv. opening a document
    v. exiting word processor

10. Describe the procedure for editing a Document.
    i. adding new text
    ii. deleting text
    iii. using basic format enhancement (split and join paragraphs, insert text)

11. Describe the main Select Features.
    i. identify a selection
    ii. moving a selection
    iii. copying a selection
    iv. deleting a selection
    v. saving a selection

12. Explain how to change Layout Format.
    i. changing layout format: (margins, spacing, alignment, paragraph indent,
    ii. tabs, line spacing, page numbering)

13. Explain how to change Text Attributes.
    i. changing text attributes: (bold, underline, font, etc.)

14. Describe the Auxiliary Tools.
    i. using Spell Check and Thesaurus

15. Describe Print features.
    i. selecting the Print Feature: (i.e; number of copies and current document)
    ii. identifying various options in print screen dialogue box

16. Examine & Discuss Electronic Spreadsheet.
    i. spreadsheet basics
    ii. the worksheet window

17. Describe Menus.
    i. menu bar
    ii. control menu
    iii. shortcut menu
    iv. save, retrieve form menus

18. Describe the components of a worksheet.
    i. entering constant values and formulas
    ii. using the Recalculation feature

19. Describe Use ranges. .
    i. typing a range for a function
    ii. pointing to a range for a function
    iii. selecting a range for toolbar and menu commands

20. Describe how to print a worksheet.
    i. printing to the Screen
    ii. printing to the Printer
    iii. printing a selected Range

21. Describe how to edit a worksheet.
    i. replacing cell contents
    ii. inserting & deleting rows and columns
    iii. changing cell formats
    iv. changing cell alignments
    v. changing column width
    vi. copying and moving cells

22. State major security issues in using computers.
    i. passwords

ii. accessing accounts
iii. viruses and how they can be avoided
iv. identity theft and ways to protect personal information
v. demonstrate how to view directory structure and folder content
vi. organize files and folders
vii. copy, delete, and move files and folders

23. Describe how to use Electronic Mail.

i. e-mail etiquette
ii. e-mail accounts
iii. e-mail messages
iv. e-mail message with attachments
v. e-mail attachments
vi. print e-mail messages
vii. deleting e-mail messages

24. Explain the Internet and its uses.
i. the World Wide Web(www)
ii. accessing Web sites
iii. internet Web Browsers
iv. internet Search Engines
v. searching Techniques
vi. posting documents on-line

Practical:

Practical skills enhance the apprentice's ability to meet the objectives of this course.

1. Create a document using Word Processing.

2. Complete word processing exercises to demonstrate proficiency in word processing.

3. Prepare and send e-mails with attachments.

4. Retrieve documents and e-mail attachments and print copies.

5. Develop and print a spread sheet.

6. Post a document on-line.

SD1700 Workplace Skills

Description:

This course involves participating in meetings, information on formal meetings, unions, workers' compensation, employment insurance regulations, workers' rights and human rights.

Course Outcomes:

Upon completion of this course, students will be able to:

- Participate in meetings.
- Define and discuss basic concepts of:
    - unions
    - workers' compensation
    - employment insurance
    - workers' rights
    - human rights
    - workplace diversity
    - gender sensitivity

Pre-Requisites: None

Objectives & Content:

1. Meetings.
    i. identify & discuss meeting format and preparation required for a meeting
    ii. explain the purpose of an agenda
    iii. explain the roles and responsibilities of meeting participants
    iv. explain the purpose of motions and amendments and withdrawals
    v. explain the procedure to delay discussion of motions
    vi. explain the voting process

2. Unions.
    i. state why unions exist
    ii. give a concise description of the history of Canadian labour
    iii. explain how unions function
    iv. explain labour's structure
    v. describe labour's social objectives
    vi. describe the relationship between Canadian labour and the workers
    vii. describe the involvement of women in unions

3. Worker's Compensation.
    i. describe the aims, objectives, benefits and regulations of the Workplace Health, Safety and Compensation Commission
    ii. explain the internal review process

4. Employment Insurance.
    i. explain employment insurance regulations
    ii. describe how to apply for employment insurance
    iii. explain the appeal process
    iv. identify the components of a letter of appeal

5. Worker's Rights.
    i. define labour standards
    ii. explain the purpose of the Labour Standards Act
    iii. identify regulations pertaining to:
        - hours of work
        - minimum wages
        - employment of children
        - vacation pay
    iv. explain the purpose of the Occupational Health & Safety Act as it refers to workers' rights

6. Human Rights.
    i. describe what information cannot be included on an employment application
    ii. describe what information cannot be included in an interview
    iii. examine the Human Rights Code and explain the role of the Human Rights Commission

iv. define harassment in various forms and identify strategies for prevention

7. Workplace diversity.
   i. define and explore basic concepts and terms related to workplace inclusively including age, race, culture, religion, socio-economic, sexual orientation with an emphasis on gender issues and gender stereotyping.

8. Gender Sensitivity.
   i. explore gender and stereotyping issues in the workplace by identifying strategies for eliminating gender bias

Practical:

Practical skills enhance the apprentice's ability to meet the objectives of this course.

1. Prepare an agenda.

2. Participate in a meeting.

3. Analyze a documented case of a human rights complaint with special emphasis on the application, time frame, documentation needed, and legal advice available.

SD1710 Job Search Techniques

Description:

This course is designed to give students an introduction to the critical elements of effective job search techniques.

Course Outcomes:

Upon completion of this course, students will be able to:

- Demonstrate effective use of job search techniques.

Pre-Requisites: None

Objectives & Content:

1. Identify and examine employment trends and opportunities.

2. Identify sources that can lead to employment.

3. Access and review information on the Newfoundland and Labrador Apprenticeship and Certification Web site and the Apprenticeship Employment Gateway.

4. Analyze job ads and discuss the importance of fitting qualifications to job requirements.

5. Identify and discuss employability skills as outlined by the Conference Board of Canada.

6. Discuss the necessity of fully completing application forms.

7. Establish the aim/purpose of a resume.

8. Explore characteristics of effective resumes, types of resumes, and principles of resume format.

9. Explore characteristics of an effective cover letter.

10. Identify commonly asked questions in an interview.

11. Explore other employment related correspondence.

12. Explore the job market to identify employability skills expected by an employer.

13. Conduct a self-analysis and compare with general employer expectations.

14. Discuss the value of establishing and maintaining a portfolio.

Practical:

Practical skills enhance the apprentice's ability to meet the objectives of this course.

1. Complete sample application forms.

2. Write a resume.

3. Write an effective cover letter.

4. Establish a portfolio.

5. Write out answers to commonly asked questions asked during interviews.

6. Identify three potential employers from the Apprenticeship Employment gateway, Apprenticeship and Certification website.

SD1720 Entrepreneurial Awareness

Description:

This course is designed to introduce the student to the field of entrepreneurship, including the characteristics of the entrepreneur, the pros and cons of self-employment, and some of the steps involved in starting your own business.

Course Outcomes:

Upon completion of this course, the student will be able to:

- Identify the various types of business ownership, the advantages and disadvantages of self-employment and identify the characteristics of an entrepreneur.
- State the purpose and identify the main elements of a business plan.

Pre-Requisites: None

Objectives and Content:

1. Explore self-employment: An alternative to employment.
   i. identify the advantages and disadvantages of self-employment vs. regular employment
   ii. differentiate between an entrepreneur and a small business owner
   iii. evaluate present ideas about business people

2. Identify and discuss various types of business ownership.
   i. explore the characteristics of entrepreneurs
   ii. identify characteristics common to entrepreneurs
   iii. compare one's own personal characteristics with those of entrepreneurs
   iv. examine one's present ideas about business people

3. Identify business opportunities.
    i. distinguish between an opportunity and an idea
    ii. examine existing traditional and innovative business ventures
    iii. identify and summarize the role of various agencies that support business development

4. Review the entrepreneurial process.
    i. explain the entrepreneurial process
    ii. describe the purpose of a business plan

Block 2

AK1270 Specialty Stationary Equipment

Pre-Requisites: AK1260 – Laminating

Course Outcomes:

Upon successful completion of this course, the apprentice will be able to:

- operate specialty stationary equipment.

Theory:

1. Identify the types of specialty stationary equipment and describe their applications, safety accessories, care and use.
   i. lathes
   ii. tenoners
      - single end
      - double end
   iii. cold and hot presses
   iv. dovetailer
   v. guillotine
   vi. hinge & line boring machine
   vii. pocket hole machine
   viii. shaper
   ix. overhead (pin) router

2. Describe the importance of matching accessories for specialty stationary equipment tools to their intended use.
    i. blades
    ii. fences
    iii. knives
    iv. guides
    v. cutters
    vi. hold downs
    vii. bits
    viii. guards
    ix. power feed attachments

Practical

Practical skills enhance the apprentice's ability to meet the objectives of this course.

1. Demonstrate an ability to set up and operate light production equipment.

AK1302 Wood Finishing II

Pre-Requisites: AK1301 - Wood Finishing I

Course Outcomes:

Upon completion of this course the apprentice will be able to:

- demonstrate knowledge of finishing products and wood preparation.
- apply finishing products using proper techniques.

Theory:

1. Identify the types of abrasives and describe their applications.
    i. pumice
    ii. rotten stone
    iii. rubbing compound
    iv. abrasive fibres

2. Describe the characteristics of abrasives.
    i. hardness
    ii. sharpness
    iii. color
    iv. open/closed
    v. wet/dry

3. Identify the differences between types and grades of backing materials used for sheets and belts.
    i. high quality paper
    ii. cloth

4. Identify which finishing process should be used to achieve desired appearances and performance.

5. Identify the bleaches and the compatible neutralizers commonly used for wood.

6. Describe procedures to prepare and apply standard bleach.

7. Identify the products that are compatible with successive top-coats.

8. Identify the types of finishing products and describe their characteristics, applications and procedures for use.
    i. shellacs
    ii. UV finishes
    iii. wax-finishes
    iv. polyesters
    v. synthetic finishes

9. Describe special customized treatments and their applications related to:
    i. glazing
    ii. shading (antique effects)
    iii. distressing

10. Describe procedures to strip and match old or existing finishes.

Practical:

Practical skills enhance the apprentice's ability to meet the objectives of this course.

1. Establish finishing process required to achieve desired appearances and durability.

2. Stain project to achieve desired colors including sap-staining, shading and toning.

3. Apply top-coats.
    i. wax finishes
    ii. synthetic finishes
    iii. shellac

4. Apply finish coats.
    i. clear
    ii. light or dark tones
    iii. high or low sheen

Select and use compounds for a particular application.

    i. pumice
    ii. rotten stone
    iii. wax
    iv. rubbing compound

AK1310 Stairs

Pre-Requisites: AK1101 – Blueprint II (Intermediate)

Course Outcomes:

Upon successful completion of this course, the apprentice will be able to:

- construct and install stairs.

Theory:

Fundamentals of Stair Construction

1. Describe relevant issues, practices and procedures relating to:
    i. safety
    ii. materials
    iii. fasteners
    iv. joinery
    v. tools
    vi. blueprint reading
    vii. building codes

2. Identify and describe types of common stairs.
    i. straight flight
    ii. L-shaped
    iii. U-shaped
    iv. winder
    v. interior
    vi. curved

3. Define stair terminology.
    i. total rise
    ii. total run

iii. unit rise
iv. unit run
v. headroom
vi. flight
vii. line of travel
viii. effective depth
ix. angle of incline
x. open and closed stringers
xi. ballustrade
xii. wedges

4. Identify and describe stair components and their characteristics.
   i. stringers
   ii. risers
   iii. treads
   iv. skirts
   v. nosing
   vi. newels
   vii. ballaster
   viii. handrails
   ix. guardrails
   x. fillets
   xi. rousettes
   xii. finials
   xiii. shoe rails
   xiv. easements
   xv. goosenecks
   xvi. volutes
   xvii. landings

5. Identify and describe components of finish stairs.
   i. stringers
      - open

- closed

ii. housed
iii. wall skirt
iv. mitred skirt
v. nosing return
vi. newels
    - starting newel
    - landing newel
vii. balustrade
viii. gooseneck
ix. volute
x. turn out
xi. level to rake (handrail)
xii. balluster
xiii. fillet
xiv. stringer and buttress cap
xv. riser
xvi. tread
xvii. moldings

6. Describe the procedures to calculate finish stair material.
    i. balluster spacing
    ii. ballusters
    iii. tread stock
    iv. riser stock
    v. skirt material
    vi. stringers
    vii. buttress
    viii. handrail
    ix. newel posts
    x. fillets
    xi. mouldings
    xii. shoe rail
    xiii. housed stringer

xiv. open stringer

7. Describe the layout, construction and installation of finish stairs.
   i. total rise
   ii. total run
   iii. unit rise
   iv. unit run
   v. headroom
   vi. stair ratio
   vii. fasteners
   viii. adhesives
   ix. National Building Code
   x. hangers
   xi. attachment
   xii. handrail
   xiii. guardrails
   xiv. landings
   xv. line of flight
   xvi. storey pole
   xvii. materials
   xviii. stair joinery
   xix. assembly
   xx. scribing
   xxi. jig
   xxii. template
   xxiii. reveal
   xxiv. equalizing first tread rise
   xxv. stairwell opening
   xxvi. code reference

Geometric Stairs

8. Describe the types of geometric stairs.

i. spiral
ii. circular
iii. elliptical
iv. curved

9. Describe the components of geometric stairs.
    i. wall skirts
    ii. mitred skirts
    iii. gooseneck
    iv. volutes
    v. turnouts
    vi. level to rake (handrail)
    vii. ballusters
    viii. ballustrade
    ix. nosing return
    x. starting newel
    xi. landing newel
    xii. fillets
    xiii. string and buttress caps
    xiv. tread
    xv. riser
    xvi. staved stringer
    xvii. laminated stringer
    xviii. handrail
    xix. line of travel
    xx. point of radiance
    xxi. rough framing

10. Describe the procedures to calculate geometric stair dimensions.
    i. inner tread width
    ii. outer tread width
    iii. circumference
    iv. length of handrails
    v. length of stringers

vi. total rise
vii. total run
viii. unit rise
ix. number of risers
x. number of treads
xi. degree of turn
xii. inner radius
xiii. outer radius
xiv. unit run at the line of travel
xv. tread angle
xvi. rough opening dimensions

11. Describe the construction and installation of geometric stairs.
    i. geometric layout
    ii. moulds
        - drums
        - staved
    iii. laminate stringer
    iv. stretch out line
    v. reference lines
    vi. treads
    vii. risers
    viii. staving
    ix. handrails
    x. winders
    xi. fasteners
    xii. adhesives
    xiii. ballusters
    xiv. ballustrades
    xv. volutes
    xvi. rosettes
    xvii. goose necks
    xviii. easements
    xix. shoe rail

xx. finial
xxi. fillets

Practical

Practical skills enhance the apprentice's ability to meet the objectives of this course.

1. Calculate stair dimensions.

2. Estimate materials

3. Design, construct and install a stair system.

AK2100 Blueprint III (Advanced)

Pre-Requisites: AK1101 – Blueprint II (Intermediate)

Course Outcomes:

Upon completion of this course, the apprentice will be able to produce:

- sketches, shop drawings to specifications for commercial projects.

Theory:

1. Describe arbitrary and conflicting information within drawings and specifications for commercial buildings.

2. Describe the various details and specifications for walls, ceilings and column in plan elevations, sectional and exploded views for commercial buildings.

3. Describe Reflected Ceiling Plans and the information they contain.

Practical:

Practical skills enhance the apprentice's ability to meet the objectives of this course.

1. Produce quick freehand sketches.

2. Develop layouts, templates and full-scale patterns.

3. Develop shop drawings for all shop projects.

4. Develop appropriate cutting lists.

5. Produce a shop drawing according to detailed specifications and instructions.

Block 3

AK1281 High Production Equipment

Pre-Requisites: AK1270 – Specialty Stationary Equipment

Course Outcomes:

Upon successful completion of this course, the apprentice will be able to:

- operate high production equipment.

Theory:

1. Identify the types of high production equipment and describe their applications, safety accessories and care and use.
   - i. saws
     - straight line rip
     - multi-rip
   - ii. gluers
     - spray
     - spreader
   - iii. clamping
     - case clamp
     - clamp carrier
   - iv. pneumatic press
   - v. profile grinders
   - vi. CNC equipment
   - vii. horizontal copying lathe
   - viii. profile sander
   - ix. moulder
   - x. edge bander
   - xi. optimizing cut-off saw
   - xii. beam saw

2. Describe the importance of matching accessories for high production equipment tools to their intended use.
    i. blades
    ii. guides
    iii. knives
    iv. guards
    v. cutters
    vi. fences
    vii. bits
    viii. power feed attachments

Practical:

Practical skills enhance the apprentice's ability to meet the objectives of this course.

1. Demonstrate an ability to set-up and operate high production equipment.

AK2101 Blueprint IV (Computer Aided Drafting)

Pre-Requisites: AK2100 – Blueprint III (Advanced)

Course Outcomes:

Upon completion of this course, the apprentice will be able to:

- demonstrate knowledge of computer aided drafting.

Theory:

1. Describe drafting tools and materials used for drawing plans.

2. Describe the use of:
   i. computer assisted drawings
   ii. computer spreadsheets
   iii. computer estimating software
   iv. CNC equipment

3. Describe the procedures in generating computer drawings, including:
   i. orthographic views
   ii. isometric views

4. Describe how to use computer assisted drafting to draw a room containing cabinets which includes:
   i. job parameters
   ii. exterior walls, doors and windows
   iii. peninsula walls
   iv. appliance placement
   v. lower and upper cabinets
   vi. cabinet choice and modifications
   vii. counter tops choice and modification
   viii. moulding choice and placement

ix. view elevation, perspective and bird's eye view
x. set up of rendering graphics(customizing the color & texture specifications)
xi. cut list and modifications
xii. job costing
xiii. accessories
xiv. estimates
xv. set up multi-draw

5. Describe how to use computer assisted drafting to draw a room containing a commercial counter which includes:
   i. cross-sections of the cabinets
   ii. detail drawings of special sections and joints required
   iii. proper text and dimensions
   iv. set up multi-drawings

6. Describe the procedure to save and print plans.

7. Describe the different types of computer software available to the cabinetmaking industry.

Practical:

Practical skills enhance the apprentice's ability to meet the objectives of this course.

1. Use computer assisted drafting to draw a room containing cabinets which includes:
   i. job parameters
   ii. exterior walls, doors and windows
   iii. peninsula walls
   iv. appliance placement
   v. lower and upper cabinets
   vi. cabinet choice and modifications
   vii. counter tops choice and modification
   viii. moulding choice and placement
   ix. view elevation, perspective and bird's eye view

x. set up of rendering graphics
xi. cut list and modifications
xii. job costing
xiii. accessories
xiv. estimates
xv. set up multi-draw

2. Use computer assisted drafting to draw a room containing a commercial counter which includes:
   i. cross-sections of the cabinets
   ii. detail drawings of special sections and joints required
   iii. proper text and dimensions

AK2201 Advanced Casework and Furniture Design

Pre-Requisites: AK1290 – Basic Casework
AK2100 – Blueprint III (Advanced)

Course Outcomes:

Upon completion of this course, the apprentice will be able to:

- demonstrate knowledge of furniture design and layouts of architectural woodwork.
- design and construct casework and furniture using a variety of advanced machining techniques.

Theory:

Furniture

1. Describe principles and elements relating to cabinetry:
   i. harmony
   ii. rhythm (veneer selection)
   iii. proportion
   iv. balance and emphasis

2. Identify and describe the different styles of furniture.

3. Describe the color wheel and its applications.

4. Describe accepted industry practices in heights, widths and depths relative to:
   i. service and work counters
   ii. tables, desks, vanities, chairs, benches, visual boards
   iii. knee and toe spaces
   iv. traffic flow
   v. golden mean rectangle (Geometric ratio & proportion)

5. Describe the use of specifications and drawings and their applications relative to customized cabinets, furniture units and other fixtures.

6. Describe industry practices with regard to:
    i. sequences of work
    ii. layouts, cutting lists
    iii. breakout of material
    iv. machining and assembly
    v. shipping and installation

7. Describe production procedures based on availability of equipment.

8. Describe face and backing veneer preparation including:
    i. selection of veneer
    ii. methods of cutting veneer
    iii. methods of jointing veneer
    iv. matching

9. Describe gluing practices for vacuum, manual and hydraulic presses using hot and cold methods:
    i. type of glue used
    ii. pressures
    iii. loading

10. Describe methods of form construction using various materials and fasteners.

11. Identify the various trimming methods when using hand and power tools.
12. Describe construction relevant to:
    i. legs and rails

13. Describe construction for sloped and contoured casework.
    i. doors
    ii. drawers

iii. hardware
iv. joints

Architectural Millwork

14. Describe architectural woodworking and its application.
    i. paneling
    ii. door and window frames
    iii. store and office fixtures
    iv. columns

15. Describe the various joints for pre-assembled frame and panel construction.

16. Describe installation methods for millwork.
    i. nail
    ii. glue
    iii. screw
    iv. hang

17. Describe the procedures for millwork.
    i. preparation and layout
    ii. selection of hardware
    iii. installation
    iv. touch up and finish

18. Describe the application of solid tongue and groove panelling with considerations given to shrinkage problems.

Solid Surfaces

19. Describe the procedures for preparing and installing solid surface material

i. manufacturers certification programs
ii. material properties
iii. tools and equipment
iv. joining, machining, polishing and cleaning
v. material hazards
vi. adhesives
vii. cutting, fitting, scribing
viii. repairing

Practical:

Practical skills enhance the apprentice's ability to meet the objectives of this course.

1. Layout and build casework to reflect design and style principles:
   i. selection (wood)
   ii. sizing of cores
   iii. wood veneer applications
   iv. various matchings
   v. frame and panel-units
   vi. geometric shapes
   vii. arched items
   viii. wood bending
   ix. laminating

2. Construct a form.

APPRENDIX

Profile Chart

OCCUPATIONAL SKILLS			
AK1100 Blueprint I - Basic	AK1101 Blueprint II - Intermediate	AK1130 Construction Safety	AK1200 Hand Tools
AK1220 Materials	AK1230 Portable Power Tools	AK1240 Common Stationary Equipment	AK1270 Specialty Stationary Equipment
AK1290 Basic Casework	AK1301 Wood Finishing I	AK1330 Installation procedures	AK2100 Blueprint III (Advanced)
AK2201 Advanced Casework and Furniture Design	CM2150 Workplace Communications	MA1060 Basic Math	SD1700 Workplace Skills
SP2330 Quality Assurance / Quality Control	TS1510 Occupational Health and Safety	TS1520 WHMIS	
MACHINING			
AK1220 Materials	AK1230 Portable Power Tools	AK1240 Common Stationary Equipment	AK1250 Join Fabrication and Assembly
AK1270 Specialty Stationary Equipment	AK1281 High Production Equipment	AK1290 Basic Casework	
FORMING AND LAMINATING			
AK1210 Fasteners and Adhesives	AK1220 Materials	AK1260 Laminating	AK2201 Advanced Casework and Furniture Design

VENEERS AND LAMINATES			
AK1210 Fasteners and Adhesives	AK1220 Materials	AK1260 Laminating	AK2201 Advanced Casework and Furniture Design
SHOP ASSEMBLY			
AK1210 Fasteners and Adhesives	AK1250 Join Fabrication and Assembly	AK1290 Basic Casework	AK2201 Advanced Casework and Furniture Design
FINISHING			
AK1200 Hand Tools	AK1220 Materials	AK1301 Wood Finishing I	AK1302 Wood Finishing II
TS1520 WHMIS			
ON-SITE ASSEMBLY AND INSTALLATION			
AK1100 Blueprint I – Basic	AK1200 Hand Tools	AK1220 Materials	AK1230 Portable Power Tools
AK1250 Joint Fabrication and Assembly	AK1290 Basic Casework	AK1301 Wood Finishing I	AK1330 Installation Procedures
SPECIALIZED OPERATIONS			
AK1200 Hand Tools	AK1210 Fasteners and Adhesives	AK1220 Materials	AK1240 Common Stationary Equipment
AK1250 Joint Fabrication and Assembly	AK1290 Basic Casework	AK1301 Wood Finishing I	AK1302 Wood Finishing II
AK1310 Stairs	AK1320 Industry Codes and Practices	AK2201 Advanced Casework and	

		Furniture Design	

NOA Comparison Table

NOA Sub-task		Plan of Training Unit	
Task 1 – Maintains tools and equipment			
1.01	Maintains hand tools	AK1200	Hand tools
1.02	Maintains portable power tools	AK1230	Portable power tools
1.03	Maintains stationary power tools and equipment	AK1240	Common stationary equipment
		AK1270	Specialty stationary equipment
1.04	Maintains pneumatic tools and equipment	AK1230	Portable power tools
		AK1240	Common stationary equipment
1.05	Maintains powder-actuated tools	AK1230	Portable power tools
1.06	Maintains finishing equipment	AK1301	Wood finishing I
1.07	Maintains personal protective equipment (PPE) and safety equipment	AK1130	Construction safety
Task 2 – Organizes Work			
2.01	Communicates with others	CM2150	Workplace communications
		SD1700	Workplace skills
2.02	Uses documentation	AK1100	Blueprint I – basic
		TS1520	WHMIS
2.03	Interprets prints and designs	AK1100	Blueprint I – basic
		AK1101	Blueprint II – intermediate
		AK1290	Basic casework
2.04	Plans project tasks	AK1290	Basic casework
		AK1330	Installation procedures
2.05	Performs basic design	AK1100	Blueprint I – basic
		AK1220	Materials
		AK1290	Basic casework

NOA Sub-task		Plan of Training Unit	
		AK2201	Advanced casework and furniture design
2.06	Performs layout of cabinets, furniture and architectural milllwork	AK1220	Materials
		AK1290	Basic casework
		AK1330	Installation procedures
		AK2100	Blueprint III (advanced)
2.07	Maintains safe work environment	TS1510	Occupational health and safety
		TS1520	WHMIS
		AK1130	Construction safety
Task 3 – Performs Routine Trade Activities			
3.01	Measures	MA1060	Basic Math
		AK1220	Materials
		AK1310	Stairs
3.02	Installs hardware	AK1290	Basic Casework
3.03	Handles materials, supplies and products	AK1130	Construction Safety
		AK1220	Materials
		AK2201	Advanced Casework and Design
		SP2330	Quality Assurance / Quality Control
3.04	Sands components	AK1240	Common Stationary Equipment
		AK1301	Wood Finishing I
3.05	Fabricates jigs and templates	AK1290	Basic Casework
3.06	Builds prototypes	All Block 1 Core Curriculum Courses	
3.07	Applies edge to substrate	AK1210	Fasteners and Adhesives
		AK1240	Common Stationary Equipment

NOA Sub-task		Plan of Training Unit	
3.08	Dry fits components	AK1200	Hand Tools
		AK1290	Basic Casework
		SP2330	Quality Assurance / Quality Control
Task 4 – Machines Components Using Stationary and Portable Power Tools			
4.01	Breaks out solid wood	AK1220	Materials
		AK1240	Common Stationary Equipment
		AK1290	Basic Casework
4.02	Dresses solid wood	AK1220	Materials
		AK1240	Common Stationary Equipment
4.03	Shapes solid wood	AK1220	Materials
		AK1230	Portable Power Tools
		AK1270	Speciality Stationary Equipment
		AK1290	Basic Casework
4.04	Breaks out sheet materials	AK1220	Materials
		AK1240	Common Stationary Equipment
		AK1290	Basic Casework
4.05	Machines sheet materials	AK1220	Materials
		AK1230	Portable Power Tools
		AK1240	Common Stationary Equipment
		AK1290	Basic Casework
4.06	Machines joints	AK1250	Joint Fabrication and Assembly
Task 5 – Machines Components Using Automated Equipment			
5.01	Sets up automated equipment	AK1281	High Production Equipment
5.02	Operates automated equipment		

NOA Sub-task		Plan of Training Unit	
Task 6 – Bends wood and Composite Materials			
6.01	Builds forms	AK2201	Advanced Casework and Furniture Design
6.02	Performs curved laminating	AK1260	Laminating
6.03	Steam-forms wood	AK1260	Laminating
		AK2201	Advanced Casework and Furniture Design
Task 7 – Laminates Wood and Composite Materials			
7.01	Arranges materials for laminating	AK1220	Materials
		AK1260	Laminating
7.02	Applies adhesive for laminating	AK1210	Fasteners and Adhesives
7.03	Clamps pieces together	AK1260	Laminating
Task 8 – Applies Veneers			
8.01	Prepares veneer	AK1220	Materials
8.02	Adheres veneers to substrates	AK1210	Fasteners and Adhesives
		AK1260	Laminating
		AK2201	Advanced Casework and Furniture Design
8.03	Trims veneers		
Task 9 – Applies Laminates			
9.01	Prepares laminate sheets	AK1220	Materials
		AK1260	Laminating
9.02	Adheres laminate to substrate	AK1210	Fasteners and Adhesives
		AK1260	Laminating
9.03	Trims laminate		
Task 10 – Assembles Cabinets and Furniture			
10.01	Assembles cabinet components	AK1210	Fasteners and Adhesives
		AK1290	Basic Casework

NOA Sub-task		Plan of Training Unit	
10.02	Installs doors and drawer fronts	AK1250	Joint Fabrication and Assembly
		AK1290	Basic Casework
		AK2201	Advanced Casework and Furniture Design
10.03	Installs doors and drawer fronts	AK1290	Basic Casework
10.04	Installs face frames	AK1210	Fasteners and Adhesives
		AK1290	Basic Casework
Task 11 – Assembles Architectural Millwork Products			
11.01	Assembles components into sections in the shop	AK1210	Fasteners and Adhesives
		AK1250	Joint Fabrication and Assembly
		AK1290	Basic Casework
11.02	Combines sections into architectural millwork products in the shop	AK1210	Fasteners and Adhesives
		AK2201	Advanced Casework and Furniture Design
Task 12 – Prepares Surface for Finishing			
12.01	Repairs minor imperfections	AK1220	Materials
		AK1301	Wood Finishing I
12.02	Performs final sanding of surfaces	AK1200	Hand Tools
		AK1220	Materials
		AK1301	Wood Finishing I
Task 13 – Finishes Wood Products			
13.01	Prepares finishing materials	TS1520	WHMIS
		AK1301	Wood Finishing I
13.02	Applies finishing material manually	AK1302	Wood Finishing II
13.03	Sprays on finishing material		

NOA Sub-task		Plan of Training Unit	
Task 14 – Modifies Products to Site Conditions			
14.01	Cuts access holes on site	AK1200	Hand Tools
		AK1230	Portable Power Tools
		AK1290	Basic Casework
		AK1330	Installation Procedures
14.02	Scribes to fit on site	AK1200	Hand Tools
		AK1230	Portable Power Tools
		AK1330	Installation Procedures
14.03	Finalizes installation on site	AK1200	Hand Tools
		AK1330	Installation Procedures
Task 15 – Installs Cabinets and Countertops			
15.01	Performs final on-site assembly of cabinets and countertops	AK1100	Blueprint I – Basic
		AK1301	Wood Finishing I
		AK1330	Installation Procedures
15.02	Fastens cabinets and countertops	AK1220	Materials
		AK1230	Portable Power Tools
		AK1330	Installation Procedures
Task 16 – Installs Architectural Millwork Products			
16.01	Performs final on site assembly of architectural millwork products	AK1210	Fasteners and Adhesives
		AK1250	Joint Fabrication and Assembly
16.02	Fastens architectural millwork products	AK1290	Basic Casework
16.03	Installs molding	AK2201	Advanced Casework and Furniture Design
Task 17 – Builds Stairs and Balustrades			
17.01	Lays out stair and balustrade components	AK1200	Hand Tools
		AK1310	Stairs
		AK1320	Industry Codes and Practices

NOA Sub-task		Plan of Training Unit	
17.02	Machines stair and balustrade components	AK1240	Common Stationary Equipment
		AK1290	Basic Casework
		AK2201	Advanced Casework and Furniture Design
17.03	Assembles stairs and balustrades	AK1200	Hand Tools
		AK1210	Fasteners and Adhesives
		AK1310	Stairs
17.04	Installs stairs and balustrades	AK1200	Hand Tools
		AK1210	Fasteners and Adhesives
		AK1310	Stairs
Task 18 – Works With Solid Surface Material			
18.01	Prepares solid surface material	AK2201	Advanced Casework and Furniture Design
18.02	Installs solid surface material		
Task 19 – Creates Decorative Woodwork (Not Common Core)			
This task is not addressed in the provincial plan of training			
Task 20 – Restores Woodwork			
20.01	Repairs woodwork for restoration purposes	AK1220	Materials
		AK1250	Joint Fabrication and Assembly
		AK1301	Wood Finishing I
		AK2201	Advanced Casework and Furniture Design
20.02	Refinishes woodwork	AK1301	Wood Finishing I
		AK1302	Wood Finishing II