

FRAMEWORK FOR THE EVALUATION OF LEARNING

Cabinetmaking DVS 5852

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Introduction

For each new program of study it develops, the Ministère provides the school system with a framework for the evaluation of learning. This framework is intended for school board personnel responsible for the evaluation of competencies.

The framework for the evaluation of learning is divided into two parts.

Part I:

- summarizes the fundamental guidelines for the evaluation of learning
- explains the key elements of each competency in the framework for the evaluation of learning
- provides a summary of the *Cabinetmaking* program (DVS 5852)

Part II contains, for each competency in the program of study:

- the specifications recommended by the Ministère, that is, the key elements and performance criteria selected for evaluation, as well as their weighting (up to 70 out of 100 marks)
- one or more pass/fail conditions, if applicable
- a description of the evaluation

School boards are responsible for developing the remaining 30% of these specifications (30 out of 100 marks). They are also responsible for developing examinations for certification purposes. All examinations developed by the Ministère are mandatory, and school boards are required to use them.



Part I

**Fundamental Guidelines for
Evaluation**

Elements of the Competency

Summary of the Program

Fundamental Guidelines for Evaluation

Learning and evaluation activities are based on the program of study, and evaluation tools must take into account the fundamental characteristics, values and qualities underlying the process. The following summarizes those that inspired the production team in the development of this framework for the evaluation of learning.

Since vocational training programs are competency-based, evaluation for certification purposes must take the following into account:

- **Evaluation is multidimensional**, that is, it is based on an organized body of knowledge and skills from a variety of fields, perceptions, attitudes, etc. However, evaluation for certification purposes takes into account only those dimensions that are essential to the demonstration of the competency.
- **Interpretation is criterion-referenced**, that is, it is based on performance criteria related to the requirements for the application of the competency set out in the program of study.
- **Marking is dichotomous**, that is, students can obtain only one of two results: all the marks allotted to a criterion, or 0. For example, if a criterion is worth 15 marks, the student can either obtain a mark of 15 or 0. Each criterion is weighted in accordance with its relative importance in the trade or occupation.
- **Pass/fail decisions are based on a minimum performance standard**, that is, they include the number of marks required, which is in turn based on the complexity and scope of the task to be performed.

Qualities of an Examination

Evaluation in vocational training is based on the values of justice, equality, equity, rigour, openness and coherence.¹ Whether the examination is developed by the Ministère or a school board, it must possess the essential qualities described in the following table.²

Quality	Description
Validity	An examination is valid if it measures everything it is intended to measure and only what it is intended to measure. All of its components must reflect the corresponding elements of the competency, the performance or participation criteria and, ultimately, the statement of the competency.
Faithfulness	An examination is faithful if, with similar subjects under similar conditions, it measures what it is intended to measure with the same accuracy. Performance criteria are unequivocal, that is, they are clear and have the same meaning for all evaluators.
Feasibility	Feasibility means that the examination can be administered using sufficient and available resources: realistic time frame, reproducible conditions, available human and material resources, etc.

¹. Québec, Ministère de l'Éducation, *Policy on the Evaluation of Learning* (Québec: Gouvernement du Québec, 2004), 7-9.

². Renald Legendre, *Dictionnaire actuel de l'éducation*, 3rd ed. (Montréal: Guérin Éditeur, 2005), 604, 609 and 1404.

Elements of the Competency

Competency and statement of the competency

A competency in vocational training can be defined in terms of a behaviour or a situation, and includes specific practical guidelines and requirements for learning. A behavioural competency describes the actions and results expected of the student. A situational competency describes the educational situation in which students are placed to acquire learning.

Specifications recommended by the Ministère

These specifications are determined based on the scope of the competency, the requirements set out in the performance criteria, the sequence and integration of learning and the feasibility of the evaluation. In the case of a behavioural competency, the specifications include the elements of the competency, the performance criteria and the recommended weighting.

- The **elements of the competency** reflect the essential aspects of the competency. They refer to the major steps involved in performing a task or to the main components of the competency.
- The **performance criteria** define the requirements to be respected. They may refer to elements of the competency or to the competency as a whole.³
- The **recommended weighting** is the numerical value given to the performance criteria. This value is expressed in multiples of 5 and the total accounts for 70 marks out of 100.

In the case of a situational competency, the specifications include the participation phases and the associated participation criteria.

- The **participation criteria** describe the requirements that students must meet when participating in the three key phases of the learning situation: information, participation and synthesis. They focus on how students take part in the activities rather than on the results obtained.

³ Performance criteria associated with the competency as a whole are indicated by the symbol >>.

Pass/fail conditions

Pass/fail conditions have priority over all other performance criteria during the evaluation, and are mandatory. Pass/fail conditions are set only for criteria necessary for the protection of individuals in the workplace, for example occupational health and safety rules, food hygiene and safety, hygiene and asepsis, and environmental protection.

Description of the evaluation

The description of the evaluation specifies certain requirements as well as the conditions under which students should be evaluated for both behavioural and situational competencies.

The description of the evaluation includes the focus of evaluation expressed as an expected result in the case of a behavioural competency or the student's participation in the process in the case of a situational competency; evaluation conditions specifying which materials should be allowed or provided during the evaluation; specific instructions; and guidelines for interpreting the program's performance and participation criteria.

Summary of the Program

The *Cabinetmaking* program (DVS 5852) leads to a Diploma of Vocational Studies.

The duration of the program is 1 650 hours. The program of study is divided into 21 competencies, which vary in length from 15 to 120 hours.

The program includes the following competencies:

Competency	Code	Number	Hours	Credits
The Trade and the Training Process	773312	1	30	2
Interpreting Drawings	773325	2	75	5
Taking Measurements and Doing Calculations	773332	3	30	2
Using Hand Tools	773345	4	75	5
Preparing Furniture Parts	773358	5	120	8
Assembling Furniture	773368	6	120	8
Patterns, Templates, Jigs and Fixtures	773372	7	60	4
Impact of Finishing Processes on Manufacturing	773384	8	60	4
Making Drawings	773395	9	75	5
Making Straight Furniture Out of Solid Wood	773406	10	90	6
Veneering Materials	773412	11	30	2
Making Panel Furniture	773426	12	90	6
Planning the Manufacturing of a Product	773432	13	30	2
Manufacturing Commercial, Industrial or Institutional Furniture	773448	14	120	8
Manufacturing and Installing Kitchens	773457	15	105	7
Exploring Traditional and Innovative Techniques	773468	16	120	8
Making Curved Furniture	773478	17	120	8
Manufacturing and Installing Architectural Products	773488	18	120	8
Developing Products	773494	19	60	4
Technical Support and Prototyping	773504	20	60	4
Entering the Workforce	746085	21	90	6



Part II

Recommended Specifications

Pass/Fail Conditions

Description of the Evaluation

Competency 1

Evaluation for Certification Purposes

Competency

Determine their suitability for the trade and the training process.

Specifications

Students must satisfy the following participation criteria:

Information Phase

- Gather information on most of the topics to be covered.

Participation Phase

- Participate actively in the activities organized.

Synthesis Phase

- Produce a report in which they:
 - sum up their preferences and interests
 - explain their career choice, clearly making the required connections

Description of the Evaluation

Evaluation of student participation will be performed during the time allotted for the competency and will focus on the information gathered at different times throughout the training activities. However, a definitive judgment on a criterion should not be made until the end of the corresponding phase of the learning situation. Each phase of the competency must be accompanied by specific instructions and the documents necessary for its completion. The gathering of information may be done using reference materials in traditional or electronic format. Regardless of the form or format used to record the information, the judgment must not focus on the quality of the information but on the sufficient quantity and relevance of the information gathered with regard to the topics to be covered. The students' active participation in the different individual, group or subgroup activities is considered essential to the attainment of this competency. In their report, the students will be expected to share their preferences as well as their opinion of their aptitudes and the subjects that interest them. They will then confirm or refute their career choice by drawing parallels with the requirements of the occupation.

Competency 2

Evaluation for Certification Purposes

Competency

Interpret drawings.

Specifications

The following performance criteria and their weighting should account for at least 70 out of 100 marks.

	Recommended weighting
2 Visualize a piece of furniture and its components. <ul style="list-style-type: none"> • Accurate interpretation of lines, dashes and hatching 	15
3 Verify the accuracy of the dimensions. <ul style="list-style-type: none"> • Accurate interpretation of the value of the dimensions 	15
5 Communicate their understanding of the product using a sketch. <ul style="list-style-type: none"> • Faithful and proportional representation of the product 	25
<ul style="list-style-type: none"> • Accurate indication of dimensions and relevant information 	15

Pass/Fail Condition

None

Description of the Evaluation

Given furniture drawings that include at least one front view, one top view and one side view, the students must create a detailed sketch of an element of the piece of furniture (e.g. simple module or drawer). The students must also include the dimensions and the information necessary for the manufacture of the element.

Competency 3

Evaluation for Certification Purposes

Competency

Take measurements and do calculations required for manufacturing.

Specifications

The following performance criteria and their weighting should account for at least 70 out of 100 marks.

	Recommended weighting
1 Measure objects and installation areas. <ul style="list-style-type: none"> • Precise measurements 	20
3 Calculate the quantities of raw materials needed. <ul style="list-style-type: none"> • Accurate number of board feet needed 	20
4 Quantify the materials needed for manufacturing. <ul style="list-style-type: none"> • Appropriate calculation of percentage loss 	10
<ul style="list-style-type: none"> • Accurate determination of quantities needed based on the number of objects to be manufactured 	20

Pass/Fail Condition

None

Description of the Evaluation

Using measuring instruments, the students must take the measurements necessary for manufacturing a piece of furniture out of solid wood. Using a calculator, the students must also complete calculations, including percentage loss, to allow them to determine the quantities of raw material needed to manufacture a given number of pieces of furniture. The results must be presented in the appropriate system of measurement and included in paper or electronic versions of the forms for the cutting and order lists.

Competency 4

Evaluation for Certification Purposes

Competency

Make an object using hand tools.

Specifications

The following performance criteria and their weighting should account for at least 70 out of 100 marks.

	Recommended weighting
3 Choose the raw materials. <ul style="list-style-type: none"> • Appropriate selection of raw materials 	15
4 Prepare the hand tools. <ul style="list-style-type: none"> • Appropriate sharpening of tools 	15
5 Prepare the parts for assembly. <ul style="list-style-type: none"> • Accurate part dimensions based on the drawing 	10
6 Assemble the parts. <ul style="list-style-type: none"> • Use of appropriate assembly techniques 	10
7 Check the quality of the object. <ul style="list-style-type: none"> • Compliance with drawing 	20

Pass/Fail Condition

Consistent application of health and safety rules in the workplace

Description of the Evaluation

Given a drawing and procedures, students must manufacture a simple object out of solid wood. The object must be made out of two different types of wood and require the construction of at least one complex assembly (e.g. mortise and tenon, dovetail or slip joint). For their manufacturing project, students must choose the types of wood from a selection provided. They must also sharpen at least one wood chisel selected by the examiner. Two breaks should be scheduled during the session: one to evaluate the quality of the sharpening and one to evaluate the compliance of the parts with assembly requirements.

Competency 5

Evaluation for Certification Purposes

Competency

Prepare the parts for a piece of furniture to be manufactured.

Specifications

The following performance criteria and their weighting should account for at least 70 out of 100 marks.

	Recommended weighting
3 Cut the raw materials. <ul style="list-style-type: none"> • Precise measurements 	15
4 Prepare bonded panels made of solid wood. <ul style="list-style-type: none"> • Appropriate preparation of surfaces to be glued • Compliance with requirements 	10 15
5 Shape parts. <ul style="list-style-type: none"> • Observance of cutting and speed feeds • Compliance with drawing 	10 20

Pass/Fail Condition

Consistent application of health and safety rules in the workplace

Description of the Evaluation

Given a drawing and procedures, students must make a bonded furniture panel out of solid wood. Making the panel must involve at least three different manufacturing operations (e.g. drilling, moulding or fretwork). The compliance of the panels with quality requirements must be recorded on a list or a quality control sheet.

Competency 6

Evaluation for Certification Purposes

Competency

Assemble furniture.

Specifications

The following performance criteria and their weighting should account for at least 70 out of 100 marks.

	Recommended weighting
4 Install the hardware.	
• Use of appropriate techniques	10
• Precise adjustment of hardware according to data sheets	10
5 Assemble the components.	
• Use of appropriate assembly techniques	20
6 Prepare the furniture for staining, if applicable.	
• Use of appropriate sanding techniques	10
7 Ensure the quality of the assembly.	
• Compliance with drawing and quality requirements	20

Pass/Fail Condition

Consistent application of health and safety rules in the workplace

Description of the Evaluation

Given a drawing, technical sheets and procedures, students must assemble a piece of furniture. More specifically, they must install fasteners or use assembly links. Students are also required to install and adjust hardware allowing certain pieces to move, and to complete the sanding required in different assembly steps. To reduce the length of the evaluation session, some of the components required for the project may be prepared in advance. However, such components should not be evaluated. The compliance of the furniture with the quality requirements must be recorded on a list or a quality control sheet.

Competency 7

Evaluation for Certification Purposes

Competency

Make patterns, templates, jigs and fixtures.

Specifications

The following performance criteria and their weighting should account for at least 70 out of 100 marks.

	Recommended weighting
3 Design the pattern, template, jig or fixture. <ul style="list-style-type: none"> • Representation in a precisely dimensioned sketch 	10
5 Shape and assemble the pattern, template, jig or fixture. <ul style="list-style-type: none"> • Meticulous compliance with layout 	20
6 Test the pattern, template, jig or fixture. <ul style="list-style-type: none"> • Safe and functional pattern, template, jig or fixture 	20
<ul style="list-style-type: none"> • Compliance of machined part with drawing 	20

Pass/Fail Condition

Consistent application of health and safety rules in the workplace.

Description of the Evaluation

Given a detailed drawing of a furniture component, students must design and manufacture a pattern, template, jig or fixture that allows a part of a piece of furniture to be shaped. This part must include at least one angle or curve and must be sufficiently complex to meet the requirements of the program of study. The students must produce a part using the pattern, template, jig or fixture they have designed.

Competency 8

Evaluation for Certification Purposes

Competency

Analyze the impact of finishing processes on manufacturing.

Specifications

The following performance criteria and their weighting should account for at least 70 out of 100 marks.

	Recommended weighting
1 Become familiar with the type of finish requested.	
• Accurate identification of finishing processes	20
• Accurate distinction between the products to be used	10
• Appropriate determination of health and safety measures	10
2 Predict the impact of sanding on the required finish.	
• Identification of the quality of the sanding required	10
4 Take the finish into account during the preliminary assembly.	
• Accurate anticipation of potential problems	10
• Relevant solutions to the problems anticipated	10

Pass/Fail Condition

None

Description of the Evaluation

Given a furniture manufacturing plan and an analysis sheet, students must analyze the impact of a given finishing process on the manufacture of a piece of furniture. Students must determine the application steps for the given process, predict problems that may occur during finishing, and suggest relevant solutions. Students must also justify their choices based on the information provided in the technical and product data sheets that are issued with the evaluation documents.

Competency 9

Evaluation for Certification Purposes

Competency

Make technical drawings.

Specifications

The following performance criteria and their weighting should account for at least 70 out of 100 marks.

	Recommended weighting
2 Draw the parts of the product.	
• Proper breakdown of drawing to determine the basic solid shapes	10
• Accurate extrusion of irregular shapes	10
3 Assemble the parts of the product.	
• Appropriate insertion of blocks to provide a comprehensive view	10
4 Format the drawing.	
• Correct location of dimensions on the drawing	15
5 Finish the work.	
• Appropriate drawings printed	10
>> Make technical drawings.	
• Observance of drawing conventions	15

Pass/Fail Condition

None

Description of the Evaluation

Given an illustration or a photo, students must make technical drawings of a piece of furniture or product using modelling software.

Competency 10

Evaluation for Certification Purposes

Competency

Make a straight piece of furniture out of solid wood.

Specifications

The following performance criteria and their weighting should account for at least 70 out of 100 marks.

	Recommended weighting
4 Shape the wood parts. <ul style="list-style-type: none"> • Proper use of techniques 	15
5 Stain the wood. <ul style="list-style-type: none"> • Uniform sanding 	15
6 Assemble the piece of furniture. <ul style="list-style-type: none"> • Use of appropriate assembly techniques 	15
7 Control the quality of the piece of furniture. <ul style="list-style-type: none"> • Compliance with drawing and quality requirements 	25

Pass/Fail Condition

Consistent application of health and safety rules in the workplace

Description of the Evaluation

Given a drawing, a cutting list and procedures, students must manufacture a straight piece of furniture (e.g. table, footrest or trunk) out of solid wood. This piece of furniture must have a level of complexity that meets the requirements of the program of study, must require the manufacturing of at least one complex assembly (e.g. mortise and tenon, dovetail, slip joint) and at least one moulding, and must allow for verification of squaring. Students will have to complete the sanding required during various steps of the manufacturing procedure. To reduce the length of the evaluation session, some of the components required for the project may be prepared in advance. However, such components should not be evaluated. The compliance of the furniture with the quality requirements must be recorded on a list or a quality control sheet.

Competency 11

Evaluation for Certification Purposes

Competency

Veneer materials.

Specifications

The following performance criteria and their weighting should account for at least 70 out of 100 marks.

	Recommended weighting
3 Prepare the veneers.	
• Clean cutting of veneers	10
• Appropriate matching of pattern illustrated in the drawing	10
4 Glue the veneer to the support.	
• Use of appropriate techniques	10
5 Trim the surfaces.	
• Absence of roughness on edges or surfaces	10
6 Sand surfaces as needed.	
• Elimination of all excess glue	10
7 Inspect the veneering.	
• Compliance with drawing and quality requirements	20

Pass/Fail Condition

Consistent application of health and safety rules in the workplace

Description of the Evaluation

Given a drawing, students must veneer all the surfaces of two doors or two drawer fronts. The wood and laminate sheets should be selected based on the veneering method used. Each piece must include a pattern that requires a joint. Students may veneer a different furniture element, but in such a case the same performance criteria must be maintained and the level of complexity must meet the requirements of the program of study. To reduce the length of the evaluation session, some of the components required for the project may be prepared in advance. However, such components should not be evaluated. The compliance of the veneer with the quality requirements must be recorded on a list or a quality control sheet.

Competency 12

Evaluation for Certification Purposes

Competency

Make panel furniture.

Specifications

The following performance criteria and their weighting should account for at least 70 out of 100 marks.

	Recommended weighting
4 Veneer the materials. <ul style="list-style-type: none"> • Compliance with drawing and quality requirements 	10
5 Shape the panels. <ul style="list-style-type: none"> • Proper use of the relevant techniques 	10
6 Prepare the furniture for finishing. <ul style="list-style-type: none"> • Surfaces in accordance with quality requirements 	10
7 Assemble the piece of furniture after finishing. <ul style="list-style-type: none"> • Observance of hardware installation methods specific to panel furniture • Appropriate adjustments to ensure the mobility of the parts 	10
8 Inspect the piece of furniture. <ul style="list-style-type: none"> • Compliance with drawing and quality requirements 	20

Pass/Fail Condition

Consistent application of health and safety rules in the workplace.

Description of the Evaluation

Given a drawing, a cutting list and procedures, students must construct a basic piece of furniture that requires a veneer (e.g. nightstand). Students may construct a different piece of furniture, but in such a case the same performance criteria must be maintained and the level of complexity must meet the requirements of the program of study. The manufacturing and assembly of the piece of furniture must require the cutting and shaping of parts as well as the placing and attaching of fasteners. Students must also complete the sanding required during various steps of the manufacturing procedure and install and adjust hardware allowing certain pieces to move. To reduce the length of the evaluation session, some of the components required for the project may be prepared in advance. However, such components should not be evaluated. The compliance of the furniture with the quality requirements must be recorded on a list or a quality control sheet.

Competency 13

Evaluation for Certification Purposes

Competency

Plan the manufacturing of a product.

Specifications

The following performance criteria and their weighting should account for at least 70 out of 100 marks.

	Recommended weighting
2 Establish a cutting list. <ul style="list-style-type: none"> • Accurate information 	10
3 Establish the manufacturing procedure. <ul style="list-style-type: none"> • Logical sequence of operations 	20
4 Draw a section plan. <ul style="list-style-type: none"> • Consideration of wood grain or laminate pattern • Minimal loss 	10 10
6 Convey the information to the people concerned. <ul style="list-style-type: none"> • Relevant, comprehensive and accurate information 	20

Pass/Fail Condition

None

Description of the Evaluation

Given a drawing and specifications, students must plan the manufacture of a piece of furniture that consists of a wooden door and a panel case (e.g. melamine panels with wood grain or particle board covered with wood veneer). Students may plan the manufacture of a different piece of furniture, but in such a case the same performance criteria must be maintained and the level of complexity must meet the requirements of the program of study. The planning process includes establishing a cutting list, developing a manufacturing procedure using the provided forms, and drawing section plans.

Competency 14

Evaluation for Certification Purposes

Competency

Manufacture commercial, industrial or institutional furniture.

Specifications

The following performance criteria and their weighting should account for at least 70 out of 100 marks.

	Recommended weighting
1 Plan the work.	
• Establishment of a detailed cutting list	10
• Section plan optimizing the use of materials	10
• Logical sequence of operations	10
4 Manufacture the furniture.	
• Techniques and work methods appropriate for the type of project	20
5 Control the quality of the product.	
• Compliance of parts with drawing and quality requirements	20

Pass/Fail Condition

Consistent application of health and safety rules in the workplace

Description of the Evaluation

Given a drawing taken from a manufacturing project for commercial furniture, students must complete a manufacturing study and manufacture a display stand or another piece of furniture of the same type. The project must be carried out using medium-density fibreboard (MDF) panels, melamine panels, particle board covered with wood veneer, or solid wood. At least one element (e.g. pane of glass, piece of metal, plastic panel, ceramic tile) must be inserted into the piece of furniture. Students may manufacture a piece of industrial or institutional furniture, but in such a case the same performance criteria must be maintained and the level of complexity must meet the requirements of the program of study. To reduce the length of the evaluation session, some of the components required for the project may be prepared in advance. However, such components should not be evaluated. The compliance of the furniture with the quality requirements must be recorded on a list or a quality control sheet.

Competency 15

Evaluation for Certification Purposes

Competency

Manufacture and install modular kitchen components.

Specifications

The following performance criteria and their weighting should account for at least 70 out of 100 marks.

	Recommended weighting
3 Prepare the materials, equipment, patterns, templates, jigs and fixtures needed. <ul style="list-style-type: none"> • Use of appropriate preparation techniques for the materials used 	15
4 Manufacture the modules. <ul style="list-style-type: none"> • Shaping of parts and hardware preparations in accordance with drawing • Proper use of numerical control machine tool 	10 10
7 Install the modules on site. <ul style="list-style-type: none"> • Precise levelling • Solid and safe fastening of modules • Meticulous adjustment of moving parts 	10 15 10

Pass/Fail Condition

Consistent application of health and safety rules in the workplace.

Description of the Evaluation

Given a drawing and specifications for a residential renovation project, students must manufacture and install a modular kitchen element. To reduce the length of the evaluation session, some of the components required for the project may be prepared in advance. However, such components should not be evaluated.

Competency 16

Evaluation for Certification Purposes

Competency

Explore traditional and innovative techniques.

Specifications

The following performance criteria and their weighting should account for at least 70 out of 100 marks.

	Recommended weighting
2 Experiment with wrinkling, marquetry and sculpting techniques.	
• Correct application of techniques and steps	20
• Compliance of product with initial pattern	20
3 Experiment with new products, materials, equipment or techniques.	
• Accurate determination of the necessary operations and equipment	10
• Critical analysis of results	10
>> Explore traditional and innovative techniques.	
• Pertinent and well-organized notes taken	10

Pass/Fail Condition

Consistent application of health and safety rules in the workplace

Description of the Evaluation

Given technical documentation and the forms required for the manufacturing study and the analysis of the result, students must carry out a given project that requires the use of at least two traditional techniques and at least one innovative product or material.

Competency 17

Evaluation for Certification Purposes

Competency

Make curved furniture.

Specifications

The following performance criteria and their weighting should account for at least 70 out of 100 marks.

	Recommended weighting
4 Shape the straight parts. <ul style="list-style-type: none"> • Application of the appropriate techniques and methods for the various operations 	10
6 Shape the curved parts. <ul style="list-style-type: none"> • Compliance of bending with the drawing and straight parts 	20
7 Assemble the furniture <ul style="list-style-type: none"> • Use of appropriate assembly techniques • Meticulous preparation for finishing 	10 10
8 Inspect the piece of furniture. <ul style="list-style-type: none"> • Compliance with drawing and quality requirements 	20

Pass/Fail Condition

Consistent application of health and safety rules in the workplace

Description of the Evaluation

Given a drawing, students must manufacture and assemble a basic piece of furniture or a furniture element made up of curved and straight parts. Different materials may be used (e.g. flexible products, wood slats, thick pieces of solid wood). The shaping and bending techniques must be adapted to the materials chosen and the equipment available. Students must also carry out the finishing operations. The compliance of the product with the quality requirements must be recorded on a list or a quality control sheet.

Competency 18

Evaluation for Certification Purposes

Competency

Manufacture and install architectural products.

Specifications

The following performance criteria and their weighting should account for at least 70 out of 100 marks.

	Recommended weighing
4 Shape the components of the product.	
• Precise location of holes for assembly	10
• Appropriate installation of hardware and mechanisms	10
6 Install the architectural product on site.	
• Precise levelling	10
• Precise adjustment of components during preliminary assembly	10
• Precise installation of mouldings and other decorative elements, as applicable	15
>> Manufacture and install architectural products.	
• Precise measurements	15

Pass/Fail Condition

Consistent application of health and safety rules in the workplace

Description of the Evaluation

Given a drawing and specifications, students must install a door, a window or a moving part in an opening or on a wall. The installation process must include the mounting of finishing moulding and hardware to ensure that all the relevant criteria can be assessed.

Competency 19

Evaluation for Certification Purposes

Competency

Help develop a product.

Specifications

The following performance criteria and their weighting should account for at least 70 out of 100 marks.

	Recommended weighting
1 Analyze the mandate.	
• Appropriate choice of raw materials	10
• Establishment of a detailed cutting list	10
2 Plan the manufacturing process.	
• Establishment of a logical sequence of operations	15
• Accurate determination of the necessary work spaces, equipment, patterns, templates, jigs and fixtures	10
4 Produce shop drawings.	
• Drawings meeting production needs	15
5 Estimate the cost of materials and manufacturing time.	
• Identification of lowest cost for raw materials based on demand	10

Pass/Fail Condition

None

Description of the Evaluation

Using a request and forms for the manufacture of a simple product (e.g. cutting board or address plaque), students must analyze the mandate; establish the cutting list; plan the manufacturing process; determine the necessary work spaces, equipment, patterns, templates, jigs and fixtures; produce shop drawings; and estimate the cost.

Competency 20

Evaluation for Certification Purposes

Competency

Provide technical support for a manufacturing project.

Specifications

The following performance criteria and their weighting should account for at least 70 out of 100 marks.

	Recommended weighting
3 Make a prototype.	
<ul style="list-style-type: none"> • Compliant patterns, templates, jigs and fixtures 	20
<ul style="list-style-type: none"> • Application of the appropriate techniques at each step in the manufacturing process 	10
<ul style="list-style-type: none"> • Meticulous monitoring of quality and compliance 	10
4 Validate various aspects of the manufacturing process.	
<ul style="list-style-type: none"> • Appropriate revision of the cutting list and plan 	15
5 Propose adjustments to the project.	
<ul style="list-style-type: none"> • Appropriate correction of shop drawings 	15

Pass/Fail Condition

Consistent application of health and safety rules in the workplace

Description of the Evaluation

Using a drawing, specifications, a cutting list and a cutting plan for a manufacturing project with errors and omissions, students must produce a prototype. The production of this prototype must involve the creation and use of a pattern, template, jig or fixture and allow for the validation of various aspects of the object's manufacturing process. Students must identify the errors and omissions and suggest relevant solutions to the problems encountered.

Competency 21

Evaluation for Certification Purposes

Competency

Enter the workforce.

Specifications

Students must satisfy the following participation criteria:

Information Phase

- List companies that meet their predetermined selection criteria.

Participation Phase

- Comply with company policies concerning the tasks they are allowed to perform as trainees, work schedules, occupational health and safety rules and professional ethics.
- Record information about the work context and the tasks performed in the company.

Synthesis Phase

- Write a practicum report.

Description of the Evaluation

Participation will be evaluated during the time allotted to the development of the competency and will be based on the information gathered at different points during the training activities. However, no definitive judgment should be made until the end of the corresponding phase in the learning context. Specific instructions and the documents needed for competency development are expected to be provided for each phase. The evaluation should not be based on the performance of professional activities, but on whether or not the student displays a professional attitude while completing these activities, complies with established standards and regulations, asks for explanations if needed and changes techniques if necessary. The students must be punctual and report to work faithfully. In addition, they must write their observations in a logbook and include a report of the activities performed or observed during the practicum in a paper or electronic practicum report.