7

BUILDINGS AND PUBLIC WORKS

NORTHERN BUILDING MAINTENANCE

PROGRAM OF STUDY

5702

VOCATIONAL and TECHNICAL EDUCATION

Québec

NORTHERN BUILDING MAINTENANCE

PROGRAM OF STUDY
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Gouvernement du Québec
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The *Northern Building Maintenance* program leads to the Diploma of Vocational Studies (DVS) and prepares the student to practise the occupation of

NORTHERN BUILDING MAINTENANCE TECHNICIAN

but excludes tasks related to the practise of the trades of electrician, pipe fitter and carpenter.

Direction générale de la formation professionnelle et technique

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François Legault
Minister of Education

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INTRODUCTION

The *Northern Building Maintenance* program was designed on the basis of a new framework for developing vocational education programs that calls for the participation of experts from the workplace and the field of education.

The program of study is developed in terms of competencies, expressed as objectives. These objectives are divided into modules, which are organized into teaching blocks. Various factors were kept in mind in developing the program: training needs, the job situation, purposes, goals, and strategies and means used to attain objectives.

The program of study lists the competencies that are the minimum requirements for a Diploma of Vocational Studies (DVS) for students in both the youth and adult sectors. It also provides the basis for organizing courses, planning teaching strategies, and designing instructional and evaluation materials.

The duration of the program is 1320 hours, which includes 990 hours spent on the specific competencies required to practise the occupation and 330 hours on general competencies. The program of study is divided into 19 modules, which vary in length from 15 to 120 hours (multiples of 15). The time allocated to the program is to be used not only for teaching but also for evaluation and remedial work.

This document contains two parts. Part I is of general interest and provides an overview of the training plan. It includes a synoptic table of basic information about the modules, a description of the program training goals, the competencies to be developed and the general objectives, and an explanation of operational objectives. Part II is designed primarily for those directly involved in implementing the program. It contains a description of the operational objectives of each module.

In keeping with this broad approach, three accompanying documents will be provided: a teaching guide, an evaluation guide, and a planning guide.

GLOSSARY

Program Training Goals

Statements that describe the educational aims of a program. These goals are the general goals of vocational education adapted to a specific trade or occupation.

Competency

A set of socio-affective behaviours, cognitive skills or psycho-sensori-motor skills that enable a person to correctly perform a role, function, activity or task.

General Objectives

Instructional objectives that provide an orientation for leading the students to attain one or more related objectives.

Operational Objectives

Statements of the educational aims of a program in practical terms. They serve as the basis for teaching, learning and evaluation.

Module of a Program

A component part of a program of study comprising a first-level operational objective and the related second-level operational objectives.

Credit

A unit used for expressing quantitatively the value of the modules in a program of study. One credit corresponds to 15 hours of training. Students must accumulate a set number of credits to graduate from a program.

PART I

1. SYNOPTIC TABLE

Number of modules: 19
Duration in hours: 1320
Credits: 88

Northern Building Maintenance
CODE: 5702

CODE	TITLE OF THE MODULE	HOURS	CREDITS*
759 311	1. The Occupation and the Training Process	15	1
759 322	2. Occupational Health and Safety	30	2
759 333	3. Reading Building Plans and Specifications	45	3
759 343	4. Measurements and Calculations	45	3
759 358	5. Exterior Building Work	120	8
759 368	6. Interior Building Work	120	8
759 373	7. Concepts of Electricity	45	3
759 384	8. Maintaining Tools and Equipment	60	4
759 398	9. Maintaining Electrical Materials	120	8
759 405	10. Repairing Home Appliances	75	5
759 412	11. Maintaining Security Systems	30	2
759 423	12. Warehouse Management	45	3
759 432	13. Communicating in the Workplace	30	2
759 445	14. Preventive Maintenance of Northern Plumbing Systems	75	5
759 458	15. Maintaining Northern Plumbing Systems	120	8
759 466	16. Preventive Maintenance of Heating Systems	90	6
	17. Maintaining Forced-Air Heating Systems		
759 477	18. Maintaining Liquid Heating Systems	105	7
759 488	19. Job Search Techniques	120	8
759 492		30	2

* 15 hours = 1 credit
This program leads to a DVS in Northern Building Maintenance.

2. PROGRAM TRAINING GOALS

The training goals of the *Northern Building Maintenance* program are based on the general goals of vocational education and take into account the specific nature of the occupation. These goals are:

To develop effectiveness in the practice of an occupation.

- To teach students to perform northern building maintenance tasks and activities correctly, at an acceptable level of competence for entry into the job market.

- To prepare students to perform satisfactorily on the job by fostering:
  - the intellectual skills needed to make sound decisions on the job;
  - concern for communicating effectively with superiors, tenants and users of public buildings;
  - a constant concern for occupational health and safety;
  - the observation skills required to detect problems, and concern for quickly and accurately determining the seriousness of the problems identified and requiring decisions;
  - the habits of order and cleanliness;
  - the habit of reacting calmly and rationally in urgent and unforeseen circumstances.

To ensure integration into the job market.

- To familiarize students with their rights and responsibilities as workers.

- To familiarize students with the job market in general, as well as the occupation of northern building maintenance technician, especially the isolation and the climate.

To foster personal development and the acquisition of occupational knowledge.

- To foster initiative, independence and a sense of responsibility.

- To help students acquire a general understanding of how the various systems in a building work and interrelate.

- To develop the desire for excellence.

- To help students acquire work habits conducive to managing their time efficiently and establishing relevant priorities.

To ensure job mobility.

- To help students develop a positive attitude toward technological change.

- To help students increase their ability to understand and acquire the habit of consulting appropriate documentation on materials, tools and the types of equipment used.

- To prepare students for a creative job search.

3. COMPETENCIES

The competencies to be developed in the *Northern Building Maintenance* program are shown in the grid of learning focuses on the following page. The grid lists general and specific competencies as well as the major steps in the work process.

General competencies involve activities common to several tasks or situations. They cover, for example, the technological or scientific principles that the students must understand to practise the trade or occupation. Specific competencies focus on tasks and activities that are of direct use in the trade or occupation. The work process includes the most important steps in carrying out the tasks and activities of the trade or occupation.

The grid of learning focuses shows the relationship between the general competencies on the horizontal axis and the specific competencies on the vertical axis. The symbol (△) indicates a correlation between a specific competency and a step in the work process. The symbol (○) indicates a correlation between a general and a specific competency.

The symbols (▲) and (●) indicate that these relationships have been taken into account in the formulation of objectives intended to develop specific competencies related to the trade or occupation.

The logic used in constructing the grid influences the course sequence. Generally speaking, this sequence follows a logical progression in terms of the complexity of the learning involved and the development of the students' autonomy. The vertical axis of the grid shows the competencies directly related to the practice of a specific trade or occupation. These competencies are arranged in a relatively fixed order; therefore, the modules should be taught, insofar as possible, in the order represented on the grid. The modules including the general competencies on the horizontal axis should be taught in relation to those on the vertical axis. This means that some modules are prerequisite to others, while other modules are taught concurrently.

GRID OF LEARNING FOCUSES NORTHNERN BUILDING MAINTENANCE		FIRST-LEVEL OPERATIONAL OBJECTIVES	DURATION (IN HOURS)	WORK PROCESS (major steps)				GENERAL COMPETENCIES (technology, personal development, etc.)								TOTALS	
SPECIFIC COMPETENCIES (directly related to the practice of the specific occupation)				Plan the work	Do the work	Check the work	Record information	Apply occupational health and safety rules	Read building plans and specifications	Take measurements and do calculations	Apply concepts of electricity	Maintain tools and equipment	Manage a warehouse	Communicate in the workplace	Use job search techniques	NUMBER OF OBJECTIVES	DURATION (IN HOURS)
MODULE	MODULE							2	3	4	7	8	12	13	19		
	FIRST-LEVEL OPERATIONAL OBJECTIVES							B	B	B	B	B	B	B	S	8	
	DURATION (IN HOURS)							30	45	45	45	60	45	30	30		330
1	Determine their suitability for the occupation and the training process	S	15					○	○	○	○	○	○	○	○		
5	Carry out work on the exterior of buildings	B	120	▲	▲	▲	△	●	○	●	○	○	○	○			
6	Carry out work on the interior of buildings	B	120	▲	▲	▲	△	●	●	●	○	●	○	○			
9	Check and replace electrical material and components	B	120	▲	▲	▲	▲	●	●	○	●	●	○	○			
10	Repair home appliances	B	75	▲	▲	▲	△	●		○	●	●	○	○			
11	Maintain security systems	B	30	▲	▲	▲	△	●	○	○	●	○	○	○			
14	Do preventive maintenance on northern plumbing	B	75	▲	▲	▲	▲	●	●	●	○	●	○	○			
15	Maintain northern plumbing systems	B	120	▲	▲	▲	▲	●	○	●	○	●	○	●			
16	Do preventive maintenance on heating systems	B	90	▲	▲	▲	▲	●	○	○	●	○	●	○			
17	Maintain forced-air heating systems	B	105	▲	▲	▲	▲	●	○	○	●	●	●	●			
18	Maintain liquid heating systems	B	120	▲	▲	▲	▲	●	●	○	●	●	●	●			
NUMBER OF OBJECTIVES		11														19	
DURATION (IN HOURS)			990														1320

S: Situational objective

B: Behavioural objective

△ Correlation between a step and a specific competency

▲ Correlation to be taught and evaluated

○ Correlation between a general and a specific competency

● Correlation to be taught and evaluated

4. GENERAL OBJECTIVES

The general objectives of the *Northern Building Maintenance* program are presented below, along with the major statement of each corresponding first-level operational objective.

To develop in the students the competencies required to perform tasks on the exterior and interior of buildings.

- Read building plans and specifications.
- Take measurements and do calculations.
- Carry out work on the exterior of buildings.
- Carry out work on the interior of buildings.

To develop in the students the competencies required to perform tasks related to the maintenance and repair of systems and electrical appliances.

- Apply concepts of electricity.
- Check and replace electrical material and components.
- Repair home appliances.
- Maintain security systems.

To develop in the students the competencies required to perform the tasks related to inventory management and the maintenance of tools and equipment.

- Maintain tools and equipment.
- Manage a warehouse.

To develop in the students the competencies required to perform tasks related to the maintenance and repair of a plumbing system.

- Do preventive maintenance on northern plumbing systems.
- Maintain northern plumbing systems.

To develop in the students the competencies required to perform tasks related to the preventive maintenance and repair of different heating systems.

- Do preventive maintenance on heating systems.
- Maintain forced-air heating systems.
- Maintain liquid heating systems.

To develop in the students the competencies required to integrate smoothly into school and the workplace.

- Determine their suitability for the occupation and the training process.
- Communicate in the workplace.
- Use job search techniques.

To develop in the students the competencies required to adopt safe behaviours in the workplace.

- Apply occupational health and safety rules.

5. FIRST- AND SECOND-LEVEL OPERATIONAL OBJECTIVES

5.1 DEFINITION

A first-level objective is defined for each competency to be developed. Competencies are organized into an integrated training program designed to prepare students to practise the trade or occupation. This systematic organization of competencies produces better overall results than training by isolated objectives. More specifically, it fosters a smooth progression from one objective to the next, saves teaching time by eliminating needless repetition, and integrates and reinforces learning material.

First-level operational objectives are the main, compulsory teaching/learning targets and they are specifically evaluated for certification. There are two kinds of operational objectives: behavioural and situational.

- **A behavioural objective** is a relatively closed objective that describes the actions and results expected of the student by the end of a learning step. Evaluation is based on expected results.

- **A situational objective** is a relatively open-ended objective that outlines the major phases of a learning situation. It allows for output and results to vary from one student to another. Evaluation is based on the student's participation in the activities of the learning context.

Second-level operational objectives are intermediate teaching/learning targets deemed prerequisite for attaining first-level objectives. They are grouped according to the specifications (see 5.2 A) or the phases (see 5.2 B) of the first-level objective.

The division of operational objectives into first- and second-level objectives is based on a clear distinction between the levels of learning:

- learning involving prerequisite knowledge

- learning involving competencies

Second-level operational objectives indicate prerequisite knowledge. They prepare the students to learn what is necessary to attain the first-level operational objectives, which collectively lead to the development of a competency. The objectives should always be adapted to meet the particular needs of the individual students or groups of students.

First-level operational objectives cover the learning that the students need to develop a competency:

- The specifications or the phases of the objective determine or guide specific learning, thereby allowing the competency to be developed step by step.

- The objective as a whole (i.e. the six components and in particular the last phase of a situational objective) determines or guides the overall learning and the integration and synthesis of this learning, allowing the competency to be developed fully.

To attain the objectives, the following learning activities may be prepared:

- specific learning activities for second-level objectives
- specific learning activities for the specifications or phases of first-level objectives
- general learning activities for first-level objectives

5.2 HOW TO READ FIRST-LEVEL OPERATIONAL OBJECTIVES

A. How to Read a Behavioural Objective

Behavioural objectives consist of six components. The first three provide an overview of the objective:

1. The **expected behaviour** states a competency in terms of the general behaviour that the students are expected to have acquired by the end of the module.

2. The **conditions for performance evaluation** define what is necessary or permissible to the students during evaluation designed to verify whether or not the students have attained the objective. This means that the conditions for evaluation are the same wherever and whenever the program is taught.

3. The **general performance criteria** define the requirements by which to judge whether or not the results obtained are generally satisfactory.

The last three components ensure that the objective is understood clearly and unequivocally:

4. The **specifications of the expected behaviour** describe the essential elements of the competency in terms of specific behaviours.

5. The **specific performance criteria** define the requirements for each of the specifications of behaviour. They ensure a more enlightened decision on the attainment of the objective.

6. The **field of application** defines the limits of the objective, where necessary. It indicates cases where the objective applies to more than one task, occupation or field.

B. How to Read a Situational Objective

Situational objectives consist of six components:

1. The **expected outcome** states a competency as an aim to be pursued throughout the course.

2. The **specifications** outline the essential aspects of the competency and ensure a better understanding of the expected outcome.

3. The **learning context** provides an outline of the learning situation designed to help the students develop the required competencies. It is normally divided into three phases of learning:

   - information
   - performance, practice or involvement
   - synthesis, integration and self-evaluation

4. The **instructional guidelines** provide suggested ways and means of teaching the course to ensure that learning takes place and that the same conditions apply wherever and whenever the course is taught. These guidelines may include general principles or specific procedures.

5. The **participation criteria** describe the requirements the students must fulfil, which are usually related to each phase of the learning context. They focus on how the students take part in the activities rather than on the results obtained. Participation criteria are normally provided for each phase of the learning context.

6. **The field of application** defines the limits of the objective, where necessary. It indicates cases where the objective applies to more than one task, occupation or field.

PART II

MODULE 1: THE OCCUPATION AND THE TRAINING PROCESS

CODE: 759 311 **Duration: 15 hours**

FIRST-LEVEL OPERATIONAL OBJECTIVE
SITUATIONAL OBJECTIVE

EXPECTED OUTCOME

By participating in the required activities of the learning context according to the indicated criteria, the students will be able to
determine their suitability for the occupation and the training process.

SPECIFICATIONS

During this module, the students will:

- Become familiar with the nature of the occupation.
- Understand the training process.
- Confirm their career choice.

LEARNING CONTEXT

PHASE 1: **Information on the Occupation**

- Learning about the job market in northern building maintenance, i.e. work environments, job prospects, wages, opportunities for advancement and transfer.
- Learning about the nature and requirements of the occupation (e.g. tasks, working conditions).
- Presenting the information gathered at a group meeting and discussing their views on the occupation.

FIRST-LEVEL OPERATIONAL OBJECTIVE
SITUATIONAL OBJECTIVE

LEARNING CONTEXT

PHASE 2: **Information on and Participation in the Training Process**

- Discussing the skills, aptitudes and knowledge required to practise the occupation.
- Becoming familiar with the training process, i.e. program of study, training process, evaluation methods, certification of studies.
- Discussing how the training program prepares them for work as northern building maintenance technicians.

PHASE 3: **Evaluation and Confirmation of Career Choice**

- Assessing their career choice by comparing the nature and requirements of the occupation with their preferences, aptitudes and interests.
- Preparing a report in which they present the results of their evaluation.

INSTRUCTIONAL GUIDELINES

The teacher should:

- Create a climate that favours the students' personal growth and integration into the job market.
- Encourage the students to engage in discussions and express their opinions.
- Motivate the students to take part in the suggested activities.
- Help the students to arrive at an accurate perception of the occupation.
- Provide the students with the means to assess their career choice honestly and objectively.
- Organize visits to companies that are representative of the workplace in northern building maintenance.
- Make available all pertinent reference materials, e.g. information on the occupation, training programs, guides.
- Organize a meeting with specialists in the field.

FIRST-LEVEL OPERATIONAL OBJECTIVE
SITUATIONAL OBJECTIVE

PARTICIPATION CRITERIA

PHASE 1:

- Gather information on most of the topics to be covered.
- Adequately express their views on the occupation during a group discussion, relating them to the information they have gathered.

PHASE 2:

- Give their opinions on some requirements for practising the occupation.
- Adequately express their views on the training program during a group meeting.

PHASE 3:

- Write a report that:
  - sums up their preferences, interests and aptitudes;
  - clearly explains how they arrived at their career choice.

SECOND-LEVEL OPERATIONAL OBJECTIVES

IN ORDER TO ACHIEVE THE FIRST-LEVEL OBJECTIVE, THE STUDENTS SHOULD HAVE PREVIOUSLY ATTAINED SECOND-LEVEL OBJECTIVES, SUCH AS:

Before undertaking any of the activities:

1. Be willing to share their views on the occupation with the other members of the group.

Before undertaking the activities of Phase 1:

2. Find information.
3. Determine how to record and present information.
4. Distinguish between the main tasks involved in the procedures and sub-procedures carried out by northern building maintenance technicians.
5. Explain the term *entry-level qualifications*.
6. Explain the main rules governing group discussion.

Before undertaking the activities of Phase 2:

7. Differentiate between the skills, and the aptitudes and knowledge required to practise the occupation of northern building maintenance technician.
8. Describe the nature, purpose and content of a program of study.

Before undertaking the activities of Phase 3:

9. Differentiate between preferences, and aptitudes and interests.
10. Describe the main parts of a report confirming their career choice.

MODULE 2: OCCUPATIONAL HEALTH AND SAFETY

CODE: 759 322 **Duration: 30 hours**

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

EXPECTED BEHAVIOUR

To demonstrate the required competency, the students must
apply occupational health and safety rules
in accordance with the following conditions, criteria and specifications.

CONDITIONS FOR PERFORMANCE EVALUATION

- On the basis of questions or learning situations representative of the risks of the occupation and the corresponding preventive measures
- Using relevant reference materials (e.g. CSST documents, workplace material safety data sheets, etc.)

GENERAL PERFORMANCE CRITERIA

- Observance of work methods and techniques that reduce the risk of accidents
- Concern for working in a safe manner

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

SPECIFICATIONS OF THE EXPECTED BEHAVIOUR	SPECIFIC PERFORMANCE CRITERIA
A. Organize the work area in a safe manner.	- Observance of rules for organizing a safe work area - Uncramped, uncluttered work area - Proper organization of work area - Safe installation of apparatus and equipment - Orderly storage of materials and tools - Proper lighting
B. Indicate and explain the preventive measures associated with: • handling toxic products; • handling contaminants; • erecting and using scaffolding.	- Accurate explanation of dangers and risks - Relevant association of preventive measures and given risk factors - Proper selection of personal protective equipment for various work situations
C. Associate safe behaviours with transporting and carrying loads.	- Relevant explanation of the dangers and risks associated with transporting loads - Correct description of safe postures and lifting techniques - Proper selection and use of lifting and handling equipment according to the loads to be moved

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

SPECIFICATIONS OF THE EXPECTED BEHAVIOUR	SPECIFIC PERFORMANCE CRITERIA
D. Make sure the work area is safe.	- Thorough review of safety rules applicable to the task to be carried out: • safe organization of work area and work station • application of appropriate preventive measures • proper use of personal protective equipment
E. React to an accident or emergency situation.	- Accurate assessment of the seriousness of the accident according to signs and symptoms - Observance of sequence for administering first aid - Proper care according to observed signs and symptoms - Promptness of communication with the emergency services concerned

SECOND-LEVEL OPERATIONAL OBJECTIVES

IN ORDER TO ACHIEVE THE FIRST-LEVEL OBJECTIVE, THE STUDENTS SHOULD HAVE PREVIOUSLY ATTAINED SECOND-LEVEL OBJECTIVES, SUCH AS:

Before learning how to organize the work area in a safe manner (A):

1. Explain the main provisions of the *Act respecting occupational health and safety* (R.S.Q., c. S-2.1).
2. Distinguish between the various organizations involved in occupational health and safety in Québec.
3. Give an overview of the situation with respect to work accidents in Québec.
4. Explain the main risk factors associated with the occupation of northern building maintenance technician.

Before learning how to indicate and explain the preventive measures associated with:

- **handling toxic products;**
- **handling contaminants;**
- **erecting and using scaffolding (B):**

5. Explain the main provisions of the Workplace Hazardous Materials Information System (WHMIS).
6. Distinguish between the various pieces of personal protective equipment.

Before learning how to react to an accident or emergency situation (E):

7. Describe the main items in a first-aid kit.

MODULE 3: READING BUILDING PLANS AND SPECIFICATIONS

CODE: 759 333 **Duration: 45 hours**

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

EXPECTED BEHAVIOUR

To demonstrate the required competency, the students must
read building plans and specifications
in accordance with the following conditions, criteria and specifications.

CONDITIONS FOR PERFORMANCE EVALUATION

- On the basis of:
  - the teacher's instructions
  - problems related to finding locations, systems and their components (on a plan and on site, and vice versa)
  - information contained in specifications
- Using:
  - a set of residential plans
  - a set of plans for a public building (architecture, electrical installation, plumbing, heating, ventilation and fire protection)
  - specifications

GENERAL PERFORMANCE CRITERIA

- Observance of instructions
- Accurate interpretation of information in the plans and specifications
- Careful handling of plans
- Use of proper terminology

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

SPECIFICATIONS OF THE EXPECTED BEHAVIOUR	SPECIFIC PERFORMANCE CRITERIA
A. Select a series of plans.	- Correct selection of plans for a given problem
B. Interpret general information in a plan.	- Accurate interpretation of information in the: • title block • legends - Accurate interpretation of codes and conventions
C. Find certain locations and their related components on a plan.	- Exact location
D. Find systems and their components on a plan: • plumbing • heating • ventilation • electricity • fire protection	- Exact location
E. Find on an actual system elements represented on a plan.	- Exact location
F. Identify on a plan the information related to a given problem and find the possible causes.	- Identification of relevant information regarding: • the systems and sub-systems in question • components - Accurate list of components likely to cause a given problem - Accurate identification of causes related to a given problem

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

SPECIFICATIONS OF THE EXPECTED BEHAVIOUR	SPECIFIC PERFORMANCE CRITERIA
G. Find information in the specifications.	- Proper use of each section of the specifications - Exact location of information

SECOND-LEVEL OPERATIONAL OBJECTIVES

IN ORDER TO ACHIEVE THE FIRST-LEVEL OBJECTIVE, THE STUDENTS SHOULD HAVE PREVIOUSLY ATTAINED SECOND-LEVEL OBJECTIVES, SUCH AS:

Before learning how to select a series of plans (A):

1. Be aware of the importance of carefully reading a plan.
2. Describe the rules for handling building plans.
3. Recognize common types and methods of filing plans.
4. Distinguish between the types of plans according to their use.

Before learning how to find certain locations and their related components on a plan (C):

5. Recognize the different types of lines.
6. Distinguish between views.
7. Differentiate symbols.
8. Distinguish between the different types of sections shown on a plan.
9. Describe the types of information in a table.
10. Develop their spatial perception.

Before learning how to identify on a plan the information related to a given problem and deduce the possible causes (F):

11. Describe, using a plan, how the different systems of a building work.

Before learning how to find information in the specifications (G):

12. Describe the purpose of specifications.
13. Recognize the usefulness of specifications for a northern building maintenance technician.
14. Distinguish between the various chapters of the specifications and their general content.
15. Describe how the various sections of each chapter are presented.
16. Describe how to find information in specifications.

MODULE 4: MEASUREMENTS AND CALCULATIONS

CODE: 759 343 **Duration: 45 hours**

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

EXPECTED BEHAVIOUR

To demonstrate the required competency, the students must
take measurements and do calculations
in accordance with the following conditions, criteria and specifications.

CONDITIONS FOR PERFORMANCE EVALUATION

- On the basis of:
  - geometric shapes
  - problems related to the application of the basic rules of mathematics
- Using:
  - an electronic calculator

GENERAL PERFORMANCE CRITERIA

- Proper selection of operations
- Accurate calculations
- Logical sequence

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

SPECIFICATIONS OF THE EXPECTED BEHAVIOUR	SPECIFIC PERFORMANCE CRITERIA
A. Estimate quantity and size.	- Thorough identification of all elements to be considered for a visual assessment - Proper selection of operations
B. Measure distance, mass and quantity.	- Proper selection of measuring instrument - Accurate interpretation of readings - Proper use of calculator - Proper use of imperial and international units of measurement
C. Calculate area, perimeter and volume.	- Accurate calculations - Proper verification - Correct conversion of fractions into decimals, and vice versa

SECOND-LEVEL OPERATIONAL OBJECTIVES

IN ORDER TO ACHIEVE THE FIRST-LEVEL OBJECTIVE, THE STUDENTS SHOULD HAVE PREVIOUSLY ATTAINED SECOND-LEVEL OBJECTIVES, SUCH AS:

Before learning how to estimate quantity and size (A):

1. Interpret a problem on the basis of a given situation.
2. Distinguish between the main units of measurement used in northern building maintenance.

Before learning how to measure distance, mass and quantity (B):

3. Distinguish between the fundamental properties of the four basic operations.
4. Use the international and imperial systems of measurement.

Before learning how to calculate area, perimeter and volume (C):

5. Differentiate various geometric shapes.
6. Distinguish between the principles and concepts of geometry used in the occupation.

MODULE 5: EXTERIOR BUILDING WORK

CODE: 759 358 **Duration: 120 hours**

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

EXPECTED BEHAVIOUR

To demonstrate the required competency, the students must
carry out work on the exterior of buildings
in accordance with the following conditions, criteria and specifications.

CONDITIONS FOR PERFORMANCE EVALUATION

- On the basis of:
  - specific instructions from the teacher
  - damaged roofs and exterior coverings requiring repairs
- Using:
  - proper tools, equipment and materials
  - relevant reference materials

GENERAL PERFORMANCE CRITERIA

- Observance of occupational health and safety rules
- Correct work process
- Solid, careful, clean work
- Results in conformity with original shapes and colour

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

SPECIFICATIONS OF THE EXPECTED BEHAVIOUR	SPECIFIC PERFORMANCE CRITERIA
A. Understand the work to be done.	- Accurate interpretation of the work order
B. Evaluate and plan the work.	- Accurate planning with respect to tools and materials required for the work - Correct sequence of tasks
C. Repair accessories attached to the building: • garbage boxes • oil tank support rack • balcony • stairs	- Proper selection of materials - Observance of techniques for measuring and cutting - Safe use of tools - Solid assemblies - Application of paint and sealants
D. Repair roofs.	- Meticulous removal of sections of damaged coverings - Careful inspection of roofing shingles and frame - Proper selection of materials - Proper method of installation - Watertightness of repaired sections - Proper finishing of edges
E. Maintain and repair exterior coverings.	- Proper preparation of section to be repaired - Sufficient anchoring - Observance of techniques for cutting and laying wood and metal coverings - Proper caulking around openings and intersections - Careful application of paint and sealants - Aesthetic work

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

SPECIFICATIONS OF THE EXPECTED BEHAVIOUR	SPECIFIC PERFORMANCE CRITERIA
F. Adjust and repair garage doors.	- Accurate diagnosis - Proper selection of tools and materials - Meticulous replacement of defective parts - Proper techniques for the preventive adjustment of components - Solid, aesthetic repairs

SECOND-LEVEL OPERATIONAL OBJECTIVES

IN ORDER TO ACHIEVE THE FIRST-LEVEL OBJECTIVE, THE STUDENTS SHOULD HAVE PREVIOUSLY ATTAINED SECOND-LEVEL OBJECTIVES, SUCH AS:

Before learning how to repair accessories attached to the building:

- **garbage boxes**
- **oil tank support rack**
- **balcony**
- **stairs (C):**

1. Use measuring and drawing tools.
2. Use manual tools for sawing, drilling and shaping.
3. Use portable electric tools for sawing and drilling.
4. Nail in different positions.

Before learning how to repair roofs (D):

5. Describe the techniques for safely setting up scaffolding.
6. Recognize by sight any damages or irregularities in the frame, structure and roof covering.
7. Describe the characteristics of different types of roofing materials.

Before learning how to maintain and repair exterior coverings (E):

8. Explain the principle of covering joints according to the order in which materials are laid down.
9. Detect by sight slight differences in the colour of finishing materials.
10. Develop a sense and taste for aesthetics.

Before learning how to adjust and repair garage doors (F):

11. Describe the characteristics of different types of garage doors.
12. Recognize the components of mechanisms for different types of garage doors.
13. List the procedures involved in the regular maintenance of mechanisms.

MODULE 6: INTERIOR BUILDING WORK

CODE: 759 368 **Duration: 120 hours**

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

EXPECTED BEHAVIOUR

To demonstrate the required competency, the students must
carry out work on the interior of buildings
in accordance with the following conditions, criteria and specifications.

CONDITIONS FOR PERFORMANCE EVALUATION

- On the basis of:
  - a work order
  - damaged surfaces and components requiring major repairs
- Using:
  - hand and power tools (portable)
  - trestles and shop vacuum cleaner
  - proper materials such as gypsum plasterboard, prefinished panels, wood mouldings, baseboards, doors, windows and hardware
  - relevant reference materials

GENERAL PERFORMANCE CRITERIA

- Accurate measurements and calculations
- Accurate, quality work
- Cleanliness of work area
- Aesthetic work
- Effective, safe use of products, equipment and tools
- Correct work process
- Observance of occupational health and safety rules

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

SPECIFICATIONS OF THE EXPECTED BEHAVIOUR	SPECIFIC PERFORMANCE CRITERIA
A. Plan the work.	- Gathering of relevant information from occupants - Logical organization of the work - Proper preparation of materials - Accurate assessment of the scope and duration of the work
B. Repair gypsum and prefinished coverings.	- Proper selection of materials - Presence of required support for nailing - Observance of cutting and installation techniques - Observance of finishing steps - Proper sanding - Meticulous installation of mouldings - Safe use of tools
C. Replace vinyl and ceramic tiles.	- Proper preparation of surface to be covered - Proper selection of materials and adhesives - Precision of cutting - Observance of installation and gluing technique - Proper application of grout for ceramic tiles
D. Replace wall-to-wall carpeting.	- Observance of technique for removing mouldings - Accurate measurements of surface to be covered - Proper use of measuring, cutting and joining tools - Observance of cutting techniques - Observance of installation techniques - Meticulous re-installation of mouldings

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

SPECIFICATIONS OF THE EXPECTED BEHAVIOUR	SPECIFIC PERFORMANCE CRITERIA
E. Repair, change and adjust doors and windows.	- Observance of techniques for installing pre-assembled and non-assembled doors - Precise cutting - Sufficient anchoring - Observance of techniques for installing hinges and locks - Proper installation of tracks - Precise adjustment: clearance, squareness and levelling - Observance of glass-cutting techniques - Proper use of caulking products - Proper sanding and finishing
F. Repair cupboards and build shelving.	- Proper selection of materials and products - Observance of material-shaping techniques - Precise assembly - Solid assembly - Observance of techniques for installing and adjusting hardware - Observance of technique for finishing touch-ups - Quality of work: solidity, aesthetics and finishing

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

SPECIFICATIONS OF THE EXPECTED BEHAVIOUR	SPECIFIC PERFORMANCE CRITERIA
G. Repair stairs.	- Proper selection of materials and tools - Proper selection of fasteners for assembling steps, risers and stringers - Proper drawing and cutting method - Observance of technique for replacing a stringer - Proper method for assembling steps and risers - Solid anchoring of railing
H. Apply paint and varnish.	- Proper use of plastic covers to protect furniture - Proper selection of finishing coats and solvents - Proper preparation of surfaces - Proper application technique - Proper sanding between coats of varnish - Harmonious combination of colours - Thorough cleaning of tools for applying finishing coats

SECOND-LEVEL OPERATIONAL OBJECTIVES

IN ORDER TO ACHIEVE THE FIRST-LEVEL OBJECTIVE, THE STUDENTS SHOULD HAVE PREVIOUSLY ATTAINED SECOND-LEVEL OBJECTIVES, SUCH AS:

Before learning how to repair gypsum and prefinished coverings (B):

1. Use cutting and joining tools.
2. Describe the characteristics of interior wall coverings.
3. Describe the methods for installing and anchoring interior coverings.
4. Describe various mouldings and their use.

Before learning how to replace vinyl and ceramic tiles (C):

5. Use tools to remove, cut and install vinyl and ceramic tiles.
6. Describe the finishing products for ceramic tiles.

Before learning how to replace wall-to-wall carpeting (D):

7. Describe the method for meticulously removing mouldings.

Before learning how to repair, change and adjust doors and windows (E):

8. Use tools for cutting (wood, glass and other materials), shaping and squaring.
9. Describe the function of and adjustments to door and window hardware.
10. Use door and window shimming methods.

Before learning how to repair cupboards and build shelving (F):

11. List the different steps to be done.
12. Recognize slight differences in the colours and patterns of the materials used.

Before learning how to repair stairs (G):

13. Recognize the different types of wood used to build stairs.

SECOND-LEVEL OPERATIONAL OBJECTIVES

IN ORDER TO ACHIEVE THE FIRST-LEVEL OBJECTIVE, THE STUDENTS SHOULD HAVE PREVIOUSLY ATTAINED SECOND-LEVEL OBJECTIVES, SUCH AS:

Before learning how to apply paint and varnish (H):

14. Describe the characteristics of different types of paints and their solvents.
15. Interpret the occupational health and safety rules applicable to the preparation and use of painting products.

MODULE 7: CONCEPTS OF ELECTRICITY

CODE: 759 373 **Duration: 45 hours**

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

EXPECTED BEHAVIOUR

To demonstrate the required competency, the students must
apply concepts of electricity
in accordance with the following conditions, criteria and specifications.

CONDITIONS FOR PERFORMANCE EVALUATION

- On the basis of:
  - the teacher's instructions
  - simple electrical diagrams
- Using:
  - blackboards and experimental circuit boards
  - proper tools and measuring instruments

GENERAL PERFORMANCE CRITERIA

- Use of proper terminology
- Proper use of measuring instruments and correct interpretation of readings
- Work in conformity with diagrams
- Functioning of simulated circuits

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

SPECIFICATIONS OF THE EXPECTED BEHAVIOUR	SPECIFIC PERFORMANCE CRITERIA
A. Make electrical connections.	- Electrical and mechanical quality of connections: • welds • splices • terminals - Solidity and neatness of welds
B. Draw and assemble: • series circuits • parallel circuits • mixed circuits	- Precision of drawn or completed plan - Proper functioning of assembled circuits
C. Use measuring instruments: • voltmeter • ammeter • ohmmeter • multimeter • amprobe	- Proper connections - Proper choice of scale - Accurate readings and interpretations - Careful handling of instruments
D. Combine the parameters of different circuits.	- Accurate measurements of current voltage and intensity - Accurate calculations combining the voltage and intensity of an electric circuit to determine the power
E. Differentiate wires according to their size and use.	- Accurate interpretation of regulations on the size and types of conductors in the tables of the *Québec Electrical Code*

SECOND-LEVEL OPERATIONAL OBJECTIVES

IN ORDER TO ACHIEVE THE FIRST-LEVEL OBJECTIVE, THE STUDENTS SHOULD HAVE PREVIOUSLY ATTAINED SECOND-LEVEL OBJECTIVES, SUCH AS:

Before learning how to make electrical connections (A):

1. Define the role of welding on welded connections.

Before learning how to draw and assemble:
- **series circuits**
- **parallel circuits**
- **mixed circuits (B):**

2. Define the term *circuit* as it applies to electricity.
3. Distinguish between circuit components and their respective symbol.
4. Describe the role of electrical components in building systems.
5. Distinguish between series and parallel connections.

Before learning how to use measuring instruments:
- **voltmeter**
- **ammeter**
- **ohmmeter**
- **multimeter**
- **amprobe (C):**

6. Describe the nature and properties of electricity.
7. Define *electron*.
8. Describe the methods of producing electricity: direct current and alternating current.
9. Describe electrical distribution systems.
10. Define *volt*, *ampere* and *ohm*.

Before learning how to combine the parameters of different circuits (D):

11. Apply the four basic operations of mathematics.
12. Define *Ohm's law*.
13. Define *watt*.

SECOND-LEVEL OPERATIONAL OBJECTIVES

IN ORDER TO ACHIEVE THE FIRST-LEVEL OBJECTIVE, THE STUDENTS SHOULD HAVE PREVIOUSLY ATTAINED SECOND-LEVEL OBJECTIVES, SUCH AS:

Before learning how to differentiate wires according to their size and use (E):

14. Locate in the *Québec Electrical Code* the different tables describing the types and sizes of wires and cables to be used.

MODULE 8: MAINTAINING TOOLS AND EQUIPMENT

CODE: 759 384 **Duration: 60 hours**

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

EXPECTED BEHAVIOUR

To demonstrate the required competency, the students must
maintain tools and equipment
in accordance with the following conditions, criteria and specifications.

CONDITIONS FOR PERFORMANCE EVALUATION

- On the basis of:
  - tools requiring maintenance
  - specific instructions regarding the sharpening of cutting tools, and the cleaning and lubrication of hand and power tools
- Using:
  - proper tools and equipment
  - manufacturers' instruction manuals
  - relevant reference materials

GENERAL PERFORMANCE CRITERIA

- Observance of occupational health and safety rules
- Accurate interpretation of technical references
- Correct work process
- Optimal functioning of tools and equipment

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

SPECIFICATIONS OF THE EXPECTED BEHAVIOUR	SPECIFIC PERFORMANCE CRITERIA
A. Sharpen hand and power tools used for cutting and shaping.	- Proper use of templates, files, grinders and stones - Proper cutting angle for each tool - Observance of sharpening technique adapted to the material of the tool
B. Maintain and repair electric power tools.	- Proper cleaning of all parts - Proper selection of lubricant - Observance of techniques for adjusting components - Proper disassembly and assembly technique - Accurate interpretation of instructions and drawings in instruction manuals - Solid, safe repair of electric supply cords and plugs - Observance of techniques for replacing: • brushes • overload protection devices • switches
C. Transport and store tools.	- Proper use of blade protection cases - Regular checking of functioning of safety catches and the condition of guards - Systematic use of specialized chests and boxes for transporting tools - Storage of tools in the proper place

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

SPECIFICATIONS OF THE EXPECTED BEHAVIOUR	SPECIFIC PERFORMANCE CRITERIA
D. Do preventive maintenance on a vehicle.	- Proper technique for checking: • wear of belts • air pressure of tires • oil level of crankcase • oil level of automatic transmission • quantity and density of battery fluid - Safe use of battery-boosting cables

SECOND-LEVEL OPERATIONAL OBJECTIVES

IN ORDER TO ACHIEVE THE FIRST-LEVEL OBJECTIVE, THE STUDENTS SHOULD HAVE PREVIOUSLY ATTAINED SECOND-LEVEL OBJECTIVES, SUCH AS:

Before learning how to sharpen hand and power tools used for cutting and shaping (A):

1. Distinguish between the characteristics of the cutting edge of tools.
2. Describe the different files and abrasives used for sharpening.
3. Recognize specialized equipment used for sharpening certain tools.

Before learning how to maintain and repair electric power tools (B):

4. Describe the main risks and dangers associated with using electric tools.
5. Name the different parts comprising most electric tools.
6. Recognize the different ways of connecting electric wires.
7. Recognize the solvents suitable for cleaning the inside of an electric tool.

Before learning how to transport and store tools (C):

8. Recognize how vulnerable electric power tools are to impact, humidity and oxidation.

Before learning how to do preventive maintenance on a vehicle (D):

9. Recognize the importance of doing regular preventive maintenance on vehicles.

MODULE 9: MAINTAINING ELECTRICAL MATERIALS

CODE: 759 398 **Duration: 120 hours**

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

EXPECTED BEHAVIOUR

To demonstrate the required competency, the students must
check and replace electrical material and components
in accordance with the following conditions, criteria and specifications.

CONDITIONS FOR PERFORMANCE EVALUATION

- On the basis of:
  - specific instructions from the teacher on the replacement of various electrical components
  - blackboards and experimental circuit boards
- Using:
  - plans, drawings, sketches and manufacturers' installation specifications
  - proper tools and apparatus
  - relevant reference materials

GENERAL PERFORMANCE CRITERIA

- Observance of occupational health and safety rules
- Proper use of tools and equipment
- Compliance of work with the plan, manufacturers' specifications and the *Québec Electrical Code*
- Observance of the limitations of job responsibilities
- Solid, careful, clean work
- Proper work methods

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

SPECIFICATIONS OF THE EXPECTED BEHAVIOUR	SPECIFIC PERFORMANCE CRITERIA
A. Understand the work to be done.	- Accurate interpretation of work order - Proper checking of consistency between work order and actual situation
B. Read and interpret electrical plans and diagrams.	- Accurate interpretation of symbols - Accurate location of components on the plans - Correct interpretation of information
C. Change electrical components.	- Mechanical solidity of installations - Precision of electrical connections - Proper functioning of installed device - Aesthetic work - Systematic observation of individual and public safety measures - Complete information given to occupants on the dangers of improper use of system
D. Take corrective measures with drinking water and wastewater level warning systems.	- Exact location of circuit components - Proper technique for detecting problems - Safe use of equipment and instruments - Optimal functioning of systems
E. Write reports.	- Accurate description of work done and materials used

SECOND-LEVEL OPERATIONAL OBJECTIVES

IN ORDER TO ACHIEVE THE FIRST-LEVEL OBJECTIVE, THE STUDENTS SHOULD HAVE PREVIOUSLY ATTAINED SECOND-LEVEL OBJECTIVES, SUCH AS:

Before learning how to read and interpret electrical plans and diagrams (B):

1. Distinguish between the sections of a plan that may be useful for electrical work.
2. Recognize the main symbols and conventions used in a plan.

Before learning how to change electrical components (C):

3. Describe the codes and conventions related to the colour of wires.
4. Describe the techniques for fastening different components.
5. Use concepts of circuit analysis.

Before learning how to take corrective measures with drinking water and wastewater level warning systems (D):

6. Describe the techniques for analyzing circuits.
7. Use measuring instruments.
8. Take the necessary precautions to avoid accidents.

MODULE 10: REPAIRING HOME APPLIANCES

CODE: 759 405 **Duration: 75 hours**

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

EXPECTED BEHAVIOUR

To demonstrate the required competency, the students must
repair home appliances
in accordance with the following conditions, criteria and specifications.

CONDITIONS FOR PERFORMANCE EVALUATION

- On the basis of:
  - specific instructions from the teacher
  - home appliances that are out of order
- Using:
  - diagrams
  - manufacturers' parts catalogues
  - proper instruments, parts and tools
  - relevant reference materials

GENERAL PERFORMANCE CRITERIA

- Observance of occupational health and safety rules
- Observance of methods for using equipment and tools
- Accurate interpretation of sketches and manufacturers' manuals
- Conformity of connections with appliance diagrams
- Optimal functioning of appliance
- Quality, solid work

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

SPECIFICATIONS OF THE EXPECTED BEHAVIOUR	SPECIFIC PERFORMANCE CRITERIA
A. Diagnose the causes of problems.	- Proper technique for visual inspection - Accurate interpretation of diagrams - Proper use of measuring instruments - Thorough checking of interrelations between mechanical, electrical and electronic components
B. Repair a refrigerator.	- Proper technique for checking the functioning of the thermostat - Proper technique for replacing the thermostat - Thorough cleaning of condenser
C. Repair a stove.	- Proper checking of fuses - Proper checking of stove top and oven elements, temperature controls and timer - Proper use of testing instruments - Exact location of problem - Proper technique for removing and installing components - Mechanical and electrical cleanliness of wire terminals and connecters installed

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

SPECIFICATIONS OF THE EXPECTED BEHAVIOUR	SPECIFIC PERFORMANCE CRITERIA
D. Repair a clothes washer.	- Exact location of abnormal sounds - Proper technique for visual inspection - Exact location of problem - Proper technique for replacing the pump, motor, electric valves, belt and timer
E. Repair a clothes dryer.	- Meticulous application of checking techniques - Proper technique for replacing the element, belt, motor and timer

SECOND-LEVEL OPERATIONAL OBJECTIVES

IN ORDER TO ACHIEVE THE FIRST-LEVEL OBJECTIVE, THE STUDENTS SHOULD HAVE PREVIOUSLY ATTAINED SECOND-LEVEL OBJECTIVES, SUCH AS:

Before learning how to diagnose the causes of problems (A):

1. Identify the symbol for different components on the appliance diagram.
2. Take the necessary precautions to prevent accidents.
3. Describe the method for analyzing circuits.

Before learning how to repair a refrigerator (B), a stove (C), a clothes washer (D) and a clothes dryer (E):

4. Name the different components of home appliances.
5. Describe how each component works.
6. Name the components that must be operative for each work cycle of the appliance.

MODULE 11: MAINTAINING SECURITY SYSTEMS

CODE: 759 412 **Duration: 30 hours**

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

EXPECTED BEHAVIOUR

To demonstrate the required competency, the students must
maintain security systems
in accordance with the following conditions, criteria and specifications.

CONDITIONS FOR PERFORMANCE EVALUATION

- On the basis of:
  - the teacher's instructions
  - manufacturers' methods for checking various systems
  - failure simulations
- Using:
  - proper equipment, tools and materials
  - relevant reference materials

GENERAL PERFORMANCE CRITERIA

- Observance of occupational health and safety rules
- Observance of methods for using equipment and tools
- Verification of functioning of systems
- Observance of limitations of job responsibilities
- Proper work methods

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

SPECIFICATIONS OF THE EXPECTED BEHAVIOUR	SPECIFIC PERFORMANCE CRITERIA
A. Plan the work.	- Accurate interpretation of manufacturers' system maintenance methods
B. Check alarm systems.	- Proper technique for visual inspection - Proper use of measuring instruments - Proper technique for replacing fire alarm release handles and heat and movement sensors - Proper technique for reactivating alarm systems
C. Check fire protection equipment.	- Exact location of components controlling the automatic sprinkler system - Regular checking of system's water pressure - Proper technique for padlocking valves - Proper technique for checking and replacing fire extinguishers and smoke detectors
D. Check the emergency lighting systems.	- Proper technique for checking and replacing lamps, storage batteries, load circuits and audible alarm devices
E. Check the operating condition of electric generators.	- Proper technique for checking the storage battery's state of charge, the motor's level of oil and gas, and the start circuit

SECOND-LEVEL OPERATIONAL OBJECTIVES

IN ORDER TO ACHIEVE THE FIRST-LEVEL OBJECTIVE, THE STUDENTS SHOULD HAVE PREVIOUSLY ATTAINED SECOND-LEVEL OBJECTIVES, SUCH AS:

Before learning how to check alarm systems (B):

1. Recognize the importance of doing preventive maintenance on systems.
2. Interpret connection diagrams.
3. Locate specific characteristics of the systems in the manufacturers' specifications and manuals.

Before learning how to check fire protection equipment (C):

4. Locate components of the sprinkler system in the appropriate section of the plans.
5. Describe a preventive maintenance procedure.

Before learning how to check the operating condition of electric generators (E):

6. Describe the conditions essential to the functioning of a gas motor.
7. Interpret the rules of occupational health and safety applicable to handling acids.

MODULE 12: WAREHOUSE MANAGEMENT

CODE: 759 423 **Duration: 45 hours**

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

EXPECTED BEHAVIOUR

To demonstrate the required competency, the students must
manage a warehouse
in accordance with the following conditions, criteria and specifications.

CONDITIONS FOR PERFORMANCE EVALUATION

- On the basis of learning situations representative of warehouse management (updating and coding material, quantity estimates)
- Using:
  - the proper materials, tools and products
  - manufacturers' manuals

GENERAL PERFORMANCE CRITERIA

- Observance of occupational health and safety rules
- Use of proper terminology
- Concern for order and cleanliness
- Functional organization of warehouse

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

SPECIFICATIONS OF THE EXPECTED BEHAVIOUR	SPECIFIC PERFORMANCE CRITERIA
A. Plan the work.	- Accurate interpretation of instructions - Relevant evaluation of priorities - Logical sequence for performing tasks
B. Code and inventory materials.	- Thorough, easy-to-consult inventory of parts - Updated list of materials - Consistency between the quantities in the list of materials and the actual stock - Accurate coding of each item
C. Plan and maintain an appropriate supply of required materials, products and equipment.	- Efficient management of stock: • accurate evaluation of needs • accurate evaluation of delivery time frames • relevant estimate of minimum and maximum quantities • complete, relevant list of suppliers • accurate estimate of quantities to order

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

SPECIFICATIONS OF THE EXPECTED BEHAVIOUR	SPECIFIC PERFORMANCE CRITERIA
D. Organize materials and tools.	- Solid construction of storage areas - Correct identification of storage spaces according to the materials - Proper organization of materials according to activity sectors - Safe organization of premises: • WHMIS posting • observance of safety standards for the storage of hazardous products • safe handling of materials • general cleanliness
E. Control access to the premises.	- Effective locking of exits - Regular use of alarm system - Proper application of rules regarding warehouse access

SECOND-LEVEL OPERATIONAL OBJECTIVES

IN ORDER TO ACHIEVE THE FIRST-LEVEL OBJECTIVE, THE STUDENTS SHOULD HAVE PREVIOUSLY ATTAINED SECOND-LEVEL OBJECTIVES, SUCH AS:

Before learning how to plan the work (A):

1. Become aware of the importance of using tools, equipment and materials that are in good working condition, stored well and easily accessible.

Before learning how to code and inventory materials (B):

2. Distinguish between the main methods of keeping inventory.
3. Explain the major categories of information contained in an inventory system.
4. Distinguish between the main systems of measurement and the corresponding units of measure.

Before learning how to plan and maintain an appropriate supply of required materials, products and equipment (C):

5. Become familiar with the shipping lists of materials and equipment for the previous years.
6. Identify the main suppliers and become familiar with their catalogues.

Before learning how to organize materials and tools (D):

7. Describe how a warehouse storage system is organized.

Before learning how to control access to the premises (E):

8. Become aware of the importance of:
   - controlling the removal of materials in order to manage stock effectively;
   - preventing opportunities for vandalism or theft.

MODULE 13: COMMUNICATING IN THE WORKPLACE

CODE: 759 432 **Duration: 30 hours**

FIRST-LEVEL OPERATIONAL OBJECTIVE
SITUATIONAL OBJECTIVE

EXPECTED OUTCOME

By participating in the required activities of the learning context according to the indicated criteria, the students will be able to
communicate in the workplace.

SPECIFICATIONS

During this module, the students will:

- Become familiar with various aspects related to the process and means of communicating in the workplace
- Apply principles and techniques related to verbal and written communication in the workplace.
- Be aware of their strengths and weaknesses with regard to communication.

LEARNING CONTEXT

PHASE 1: **Principles of Communication**

- Learning about the communication process.
- Learning about the factors that influence the communication process.
- Participating in an activity that allows them to become aware of the characteristics of effective interpersonal communication.
- Learning about the means of communication used in the workplace by northern building maintenance technicians.

FIRST-LEVEL OPERATIONAL OBJECTIVE
SITUATIONAL OBJECTIVE

LEARNING CONTEXT

PHASE 2: **Communication Techniques**

- Participating in group activities requiring the application of different communication techniques.
- Participating in activities enabling each of them to identify the essential elements of a technical message.
- Participating, in small groups, in a learning situation presenting the clear and effective transmission of instructions to tenants and occupants.
- Participating in activities involving a verbal explanation of a technical problem to a specialist in the area of plumbing, electricity, training, etc.
- Participating in class discussions on the preceding activities (consistency between message transmitted and received, difficulties encountered, etc.)
- Using role play, in small groups, to illustrate ways of defusing tense situations (tenant or occupant complaints).
- Using the preceding learning situation, in small groups, to prepare a list of the aspects of communication to avoid in a similar situation.
- Participating in learning situations involving the writing of reports for superiors, trainers or colleagues (report of a situation or problem).
- Keeping a log of their observations during the various activities.

PHASE 3: **Evaluation**

- Summarizing their strengths and weaknesses with regard to the way they communicate with colleagues, superiors and tenants.
- Summarizing the skills acquired during this module.
- Finding means of improving their ability to communicate.

FIRST-LEVEL OPERATIONAL OBJECTIVE
SITUATIONAL OBJECTIVE

INSTRUCTIONAL GUIDELINES

The teacher should:

- Create a climate of trust and openness.
- Use extensive role playing and simulation techniques in learning situations representative of the workplace.
- Encourage the exchange of opinions by means of appropriate facilitation techniques.
- Encourage the students to try out new behaviours.
- Ensure that discussions take place in a respectful atmosphere.
- Encourage work in small groups, ensuring that students take turns participating in situations and observing them.
- Encourage and support students experiencing difficulties communicating.
- Help the students evaluate themselves and provide them with the appropriate tools to do so (e.g. questionnaires, analysis checklists).

PARTICIPATION CRITERIA

PHASE 1:

- Participate in the learning situations, following instructions.
- Indicate the communication means used in the workplace by northern building maintenance technicians.

PHASE 2:

- Participate in all activities, following instructions.
- Note their observations of the various activities in their log.

PHASE 3:

- Submit a report containing the following information:
  - at least two strengths and two weaknesses related to the way they communicate with colleagues, superiors and tenants;
  - two skills acquired during the module.

- Indicate at least two ways of improving the way they communicate.

SECOND-LEVEL OPERATIONAL OBJECTIVES

IN ORDER TO ACHIEVE THE FIRST-LEVEL OBJECTIVE, THE STUDENTS SHOULD HAVE PREVIOUSLY ATTAINED SECOND-LEVEL OBJECTIVES, SUCH AS:

Before undertaking the activities of Phase 1:

1. Recognize the importance of communicating effectively in the workplace.
2. Describe a method of noting their observations in their log.

Before undertaking the activities of Phase 2:

3. Define *learning situation*.
4. Define *role play*.
5. Describe the communication means used by northern building maintenance technicians.
6. Distinguish between an argument and an opinion.
7. Explain the basic rules that promote effective communication with tenants and users of public buildings.
8. Explain the basic rules that promote effective communication with a colleague.
9. Explain the means allowing tense situations to be diffused.

MODULE 14: PREVENTIVE MAINTENANCE OF NORTHERN PLUMBING SYSTEMS

CODE: 759 445 **Duration: 75 hours**

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

EXPECTED BEHAVIOUR

To demonstrate the required competency, the students must
do preventive maintenance on northern plumbing systems
in accordance with the following conditions, criteria and specifications.

CONDITIONS FOR PERFORMANCE EVALUATION

- Using:
  - plumbing plans and specifications for northern dwellings
  - specific instructions from the teacher
  - simple problems related to the functioning of northern plumbing systems
- Using:
  - periodic maintenance checklists
  - the proper tools and materials
  - relevant reference materials

GENERAL PERFORMANCE CRITERIA

- Use of proper terminology
- Optimal functioning of system and components
- Observance of limitations of job responsibilities
- Clean, careful work
- Observance of occupational health and safety rules

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

SPECIFICATIONS OF THE EXPECTED BEHAVIOUR	SPECIFIC PERFORMANCE CRITERIA
A. Locate plumbing pipes, devices and accessories on a plan.	- Quick, exact location of plumbing pipes, apparatus and accessories on plans - Careful handling of plans - Accurate location of distribution circuits for hot water, cold water and wastewater
B. Interpret the information in the plumbing section of specifications.	- Clear interpretation of technical information that complements the plan
C. Become aware of the work to be done.	- Accurate interpretation of information on maintenance checklists
D. Do preventive maintenance checks.	- Precise adjustment of pump pressure - Regular change of filters - Systematic check of system components: • water pump • heating cable
E. Clean the drinking water supply system.	- Meticulous cleaning of system components: • drinking water tank • check valve • peripheral equipment - Proper use of decontamination products
F. Write reports.	- Accurate recording of all relevant information

SECOND-LEVEL OPERATIONAL OBJECTIVES

IN ORDER TO ACHIEVE THE FIRST-LEVEL OBJECTIVE, THE STUDENTS SHOULD HAVE PREVIOUSLY ATTAINED SECOND-LEVEL OBJECTIVES, SUCH AS:

Before learning how to locate plumbing piping, devices and accessories on a plan (A):

1. Recognize the ways of representing plumbing system components.
2. Recognize the different types of lines and symbols on a plumbing plan.

Before learning how to do preventive maintenance checks (D):

3. Describe how the various system components interrelate.
4. Recognize the importance of keeping track of preventive maintenance.

Before learning how to clean the drinking water supply system (E):

5. Describe the dangerous consequences of bacteria accumulation in a drinking water tank.

MODULE 15: MAINTAINING NORTHERN PLUMBING SYSTEMS

CODE: 759 458 **Duration: 120 hours**

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

EXPECTED BEHAVIOUR

To demonstrate the required competency, the students must
maintain northern plumbing systems
in accordance with the following conditions, criteria and specifications.

CONDITIONS FOR PERFORMANCE EVALUATION

- On the basis of:
  - specific instructions from the teacher
  - learning situations concerning the maintenance of northern plumbing systems
- Using:
  - the proper tools and materials
  - the necessary personal protective equipment
  - relevant reference materials

GENERAL PERFORMANCE CRITERIA

- Use of proper terminology
- Logic of solutions proposed
- Optimal functioning of system
- Clean, careful work
- Storage of tools and equipment
- Cleanliness of work area
- Observance of installation standards of the *Québec Plumbing Code*
- Observance of occupational health and safety rules

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

SPECIFICATIONS OF THE EXPECTED BEHAVIOUR	SPECIFIC PERFORMANCE CRITERIA
A. Plan the work: - determine the nature of the problems - establish the sequence of the work	- Accurate interpretation of the work order - Accurate diagnosis - Correct selection of corrective measures - Logical sequence of work steps - Thorough planning - Complete selection of required tools, materials and products
B. Replace plumbing system components: - plumbing fixtures - septic tank - water heater - pump - pressurized tank	- Observance of techniques for measuring, cutting, drilling, boring and welding - Proper assembly of pipes - Proper use of hand and power tools - Appropriate selection of materials - Observance of techniques for disassembling and replacing defective components of a plumbing system - Observance of techniques for checking the work

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

SPECIFICATIONS OF THE EXPECTED BEHAVIOUR	SPECIFIC PERFORMANCE CRITERIA
C. Perform tasks of a corrective nature: - cut the water supply - fix a defect - re-connect the water supply - check for leaks	- Proper use of techniques for unblocking drainage pipes - Proper repair of hydropneumatic tank (X-TROL) - Proper repair of broken parts of a faucet - Proper repair of mechanism for flushing a damaged toilet - Observance of technique for disassembling and replacing defective pump components - Proper use of techniques for thawing domestic water supply or wastewater disposal pipes
D. Write reports.	- Accurate description of work done - Accurate recording of any other relevant information

SECOND-LEVEL OPERATIONAL OBJECTIVES

IN ORDER TO ACHIEVE THE FIRST-LEVEL OBJECTIVE, THE STUDENTS SHOULD HAVE PREVIOUSLY ATTAINED SECOND-LEVEL OBJECTIVES, SUCH AS:

Before learning how to replace plumbing system components:
- **plumbing fixture**
- **septic tank**
- **water heater**
- **pump**
- **pressurized tank (B):**

1. Describe the techniques for disassembling system devices.
2. Distinguish between ferrous, non-ferrous and plastic piping.
3. Describe the characteristics of ferrous, non-ferrous and plastic couplings.
4. Recognize the different joint lubricants.
5. Recognize the different solvents and glues for plastic pipes.

Before learning how to perform tasks of a corrective nature:
- **cut the water supply**
- **fix a defect**
- **re-connect the water supply**
- **check for leaks (C):**

6. Explain the dangers in using unblocking devices and products.
7. Recognize the different types of pumps and how they work.

MODULE 16: PREVENTIVE MAINTENANCE OF HEATING SYSTEMS

CODE: 759 466 **Duration: 90 hours**

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

EXPECTED BEHAVIOUR

To demonstrate the required competency, the students must
do preventive maintenance on heating systems
in accordance with the following conditions, criteria and specifications.

CONDITIONS FOR PERFORMANCE EVALUATION

- On the basis of learning situations related to the preventive maintenance of warm-air heating and liquid heating systems
- Using:
  - periodic maintenance checklists
  - the proper tools, equipment and measuring instruments
  - manufacturers' manuals
  - supplier catalogues
  - relevant reference materials

GENERAL PERFORMANCE CRITERIA

- Use of proper terminology
- Observance of occupational health and safety rules
- Optimal functioning of system
- Cleanliness of work area

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

SPECIFICATIONS OF THE EXPECTED BEHAVIOUR	SPECIFIC PERFORMANCE CRITERIA
A. Become aware of the work to be done.	- Accurate interpretation of information on maintenance checklists
B. Do the monthly preventive maintenance.	- Rigorous application of monthly maintenance measures, such as: • motor lubrication • filter change • belt adjustment • fan cleaning • glycol-level check - Proper technique for visual inspection of chimney system - Proper checking of motorized damper - Precise adjustment of the oil burner
C. Do the bi-annual preventive maintenance.	- Rigorous application of bi-annual maintenance checking techniques: • pump pressure • glycol density • motor amperage • condition of combustion chamber • valve watertightness - Complete checking of oil tank - Cleaning of heat exchangers - Adjustment of control components - Precise adjustment of thermostats
D. Do an efficiency test.	- Precise analysis of combustion quality - Proper sequence of test steps

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

SPECIFICATIONS OF THE EXPECTED BEHAVIOUR	SPECIFIC PERFORMANCE CRITERIA
E. Write reports.	- Accurate recording of all relevant information
F. Adjust the inventory.	- Accurate recording of quantities used - Ordering of exact quantities of replacement parts at the right time

SECOND-LEVEL OPERATIONAL OBJECTIVES

IN ORDER TO ACHIEVE THE FIRST-LEVEL OBJECTIVE, THE STUDENTS SHOULD HAVE PREVIOUSLY ATTAINED SECOND-LEVEL OBJECTIVES, SUCH AS:

Before learning how to become aware of the work to be done (A):

1. Recognize the sub-systems related to heat production.
2. Recognize the components of sub-systems related to heat production.
3. Distinguish between the different types of boilers and furnaces.
4. Distinguish between warm-air furnaces and hot-water boilers.
5. List the principles of operation, the characteristics and the role of the components.
6. Describe the role of motorized dampers.

Before learning how to do the monthly (B) and bi-annual preventive maintenance (C):

7. Describe the role of system devices and accessories and how they work.
8. Locate the components and auxiliary parts of the fuel supply system circuit and explain how they work.
9. Explain the principles of combustion.
10. Describe the characteristics of a combustion chamber.
11. Describe the roles of a draft regulator and draft accelerator.
12. Explain the role of a nozzle and how it works.
13. Identify the reasons that may cause an oil burner to operate inefficiently.

Before learning how to do an efficiency test (D):

14. Distinguish between the characteristics of different types of combustion.
15. Describe the dangers caused by carbon monoxide and carbon oxide.
16. Use measuring instruments.

MODULE 17: MAINTAINING FORCED-AIR HEATING SYSTEMS

CODE: 759 477 **Duration: 105 hours**

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

EXPECTED BEHAVIOUR

To demonstrate the required competency, the students must
maintain forced-air heating systems
in accordance with the following conditions, criteria and specifications.

CONDITIONS FOR PERFORMANCE EVALUATION

- On the basis of:
  - specific instructions from the teacher
  - learning situations involving the maintenance of warm-air heating systems
- Using:
  - the proper tools and materials
  - the necessary personal protective equipment
  - relevant reference materials
  - manufacturers' manuals
  - suppliers' catalogues

GENERAL PERFORMANCE CRITERIA

- Use of proper terminology
- Proper use of tools and equipment
- Optimal functioning of system
- Careful, clean, solid work
- Storage of tools and equipment
- Observance of occupational health and safety rules

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

SPECIFICATIONS OF THE EXPECTED BEHAVIOUR	SPECIFIC PERFORMANCE CRITERIA
A. Plan the work: - determine the nature of the work - establish the sequence of the work	- Accurate diagnosis - Logical sequence of steps - Proper selection of tools and instruments - Thorough planning
B. Perform tasks of a corrective nature: - unplug power sources - fix the defect - re-connect the fuel and electricity supply - re-start the system - adjust the devices and accessories	- Observance of techniques for adjusting elements controlling combustion and temperature - Observance of replacement techniques for: • tank hardware • fuel supply line and valve • fuel pump burner • motor • fan • transformer • electrodes • motorized dampers • combustion chamber
C. Do a performance test.	- Proper use of materials for testing - Accurate interpretation of test results
D. Write reports.	- Exact description of work done - Accurate interpretation of all other relevant information
E. Adjust the inventory.	- Accurate recording of quantities used - Ordering of exact quantities of replacement parts at the right time

SECOND-LEVEL OPERATIONAL OBJECTIVES

IN ORDER TO ACHIEVE THE FIRST-LEVEL OBJECTIVE, THE STUDENTS SHOULD HAVE PREVIOUSLY ATTAINED SECOND-LEVEL OBJECTIVES, SUCH AS:

Before learning how to plan the work:
- **determine the nature of the work**
- **establish the sequence of the work (A):**

1. Distinguish between the different types of repairs.
2. Describe the sequence for carrying out a repair.

Before learning how to perform tasks of a corrective nature:
- **unplug power sources**
- **fix the defect**
- **re-connect the fuel and electricity supply**
- **re-start the system**
- **adjust the devices and accessories (B):**

3. Apply concepts of fluid mechanics, electricity and oil combustion.
4. Describe the equipment parts likely to be defective.
5. List the most common causes of breakdowns or problems.

MODULE 18: MAINTAINING LIQUID HEATING SYSTEMS

CODE: 759 488 **Duration: 120 hours**

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

EXPECTED BEHAVIOUR

To demonstrate the required competency, the students must
maintain liquid heating systems
in accordance with the following conditions, criteria and specifications.

CONDITIONS FOR PERFORMANCE EVALUATION

- On the basis of:
  - blackboards and experimental circuit equipment
  - specific instructions from the teacher
  - learning situations involving the maintenance of liquid heating systems
- Using:
  - the proper tools and materials
  - the necessary personal protective equipment
  - relevant reference materials
  - manufacturers' manuals
  - suppliers' catalogues

GENERAL PERFORMANCE CRITERIA

- Use of proper terminology
- Proper use of tools and equipment
- Optimal functioning of system
- Clean, solid work
- Observance of occupational health and safety rules
- Storage of tools
- Cleanliness of premises

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

SPECIFICATIONS OF THE EXPECTED BEHAVIOUR	SPECIFIC PERFORMANCE CRITERIA
A. Plan the work: - determine the nature of the work - establish the sequence of the work	- Accurate interpretation of data in the electrical diagram and manufacturer's manual - Accurate diagnosis - Appropriate selection of corrective measures - Logical sequence of steps - Thorough planning - Proper selection of tools and instruments
B. Perform tasks of a corrective nature: - unplug power sources - fix the defect - re-connect the fuel and electricity supply - re-start the system - adjust the devices and accessories	- Observance of techniques for adjusting elements controlling: • combustion • liquid circulation (pressure, density and pH) • temperature - Observance of technique for replacing: • tank hardware and fuel supply line • valves • burner • fuel pump • motor • transformer (high and low voltage) • electrodes • motorized dampers • electric valves - Observance of technique for disassembling and replacing defective components of the: • circulation pump • pressurized tank

FIRST-LEVEL OPERATIONAL OBJECTIVE
BEHAVIOURAL OBJECTIVE

SPECIFICATIONS OF THE EXPECTED BEHAVIOUR	SPECIFIC PERFORMANCE CRITERIA
C. Write reports.	- Exact description of work done - Accurate interpretation of all other relevant information
D. Adjust the inventory.	- Accurate recording of quantities used - Ordering of exact quantities of replacement parts at the right time

SECOND-LEVEL OPERATIONAL OBJECTIVES

IN ORDER TO ACHIEVE THE FIRST-LEVEL OBJECTIVE, THE STUDENTS SHOULD HAVE PREVIOUSLY ATTAINED SECOND-LEVEL OBJECTIVES, SUCH AS:

Before learning how to plan the work:
- **determine the nature of the work**
- **establish the sequence of the work (A):**

1. Recognize the symbols specific to heating systems.
2. Distinguish between the different types of repairs.

Before learning how to perform tasks of a corrective nature:
- **unplug power sources**
- **fix the defect**
- **re-connect the fuel and electricity supply**
- **re-start the system**
- **adjust the devices and accessories (B):**

3. Apply concepts of fluid mechanics, electricity and oil combustion.
4. Distinguish between the different types of boilers.
5. Distinguish between the different types of liquid circulation systems.
6. Explain the functioning of circulators, motorized valves, anti-gravity valves, air purgers and pressurized tanks.
7. Describe the equipment parts likely to be defective.
8. List the most common causes of breakdowns or problems.

MODULE 19: JOB SEARCH TECHNIQUES

CODE: 759 492 **Duration: 30 hours**

FIRST-LEVEL OPERATIONAL OBJECTIVE
SITUATIONAL OBJECTIVE

EXPECTED OUTCOME

By participating in the required activities of the learning context according to the indicated criteria, the students will be able to
use job search techniques.

SPECIFICATIONS

During this module, the students will:

- Become familiar with the steps involved in planning a job search.
- Gather the information required to write a résumé.
- Apply the principles and techniques related to writing a résumé and a covering letter.
- Become aware of the attitudes and behaviours to adopt during an interview and throughout the job search process.

LEARNING CONTEXT

PHASE 1: **Learning How to Plan a Job Search**

- Learning about the local resources available for a job search.
- Learning about the steps involved in a job search: planning, identifying potential employers, sending job applications, going for interviews, following up applications, etc.
- Establishing a real or hypothetical timetable for each of the steps in the job search.
- Selecting books and pamphlets containing information on the different aspects of a job search.

FIRST-LEVEL OPERATIONAL OBJECTIVE
SITUATIONAL OBJECTIVE

LEARNING CONTEXT

PHASE 2: **Developing the Means for Conducting a Job Search**

- Developing the technical means for a job search (e.g. agenda, index cards, follow-up).
- Identifying the attitudes and behaviour to adopt when preparing a résumé and covering letter.
- Defining the component parts of a résumé and covering letter.
- Identifying attitudes and behaviour to adopt during an interview.
- Participating in mock interviews.

PHASE 3: **Evaluating the Means Selected for the Job Search**

- Recognizing their strengths and weaknesses at each step of the job search and discussing them at a group meeting.
- Evaluating the résumé and covering letter, bearing in mind the essential parts of these two job-search tools and accompanying documents (diploma, reference letters, etc.).

INSTRUCTIONAL GUIDELINES

The teacher should:

- Create a climate that places value on developing high-quality job-search tools.
- Provide students with all the necessary literature to produce the documents required for a job search.
- Promote group discussion.
- Arrange mock interviews.
- Arrange for a representative of an employment center to speak to the students and to provide relevant information and documentation.

FIRST-LEVEL OPERATIONAL OBJECTIVE
SITUATIONAL OBJECTIVE

PARTICIPATION CRITERIA

PHASE 1:

- Examine carefully the proposed documentation.
- Listen carefully to explanations.
- Prepare a realistic timetable including all the steps in a job search.

PHASE 2:

- At a group meeting:
  - discuss the information that should and should not be included in a résumé and covering letter;
  - discuss the attitudes and behaviour to adopt or to avoid when producing a résumé and a covering letter;
  - prepare a résumé and covering letter;
  - prepare for and participate in mock interviews.

PHASE 3:

- At a group meeting:
  - discuss their strengths and weaknesses with respect to each step in the job search;
  - describe the means that can be used to compensate for their weaknesses.

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