Pharmacy Technology (165.A0)

Sector 19 – Health

TECHNICAL PROGRAM

Québec

Coordination and content
Direction des programmes de formation collégiale
Direction générale des affaires collégiale
Secteur du développement et soutien des réseaux

Title of original document
Techniques de pharmacie (165.A0) – Programme d'études techniques

English version
Services linguistiques en anglais
Direction du soutien au réseau éducatif anglophone
Secteur de la diversité, des relations extérieures, des anglophones et des Autochtones

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Ministère de l'Enseignement supérieur

ISBN 978-2-555-05231-4 (PDF)
ISBN 978-2-550-88460-6 (French PDF)

Legal Deposit – Bibliothèque et Archives nationales du Québec, 2026

20-199-02A_w1

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165.A0 Pharmacy Technology

Type of certification:	Diploma of College Studies
Number of credits:	91⅓ credits
Number of periods of instruction:	2820 periods of instruction

General education component:	660	periods of instruction
Program-specific component	2160	periods of instruction

Admission Requirements

To be admitted to the program, a person must meet the general requirements for admission set out in the *College Education Regulations*, as well as the following special requirements:

- Sec IV Environmental Science and Technology or Science and the Environment (Sec IV ETS or SE).

College-Level Programs

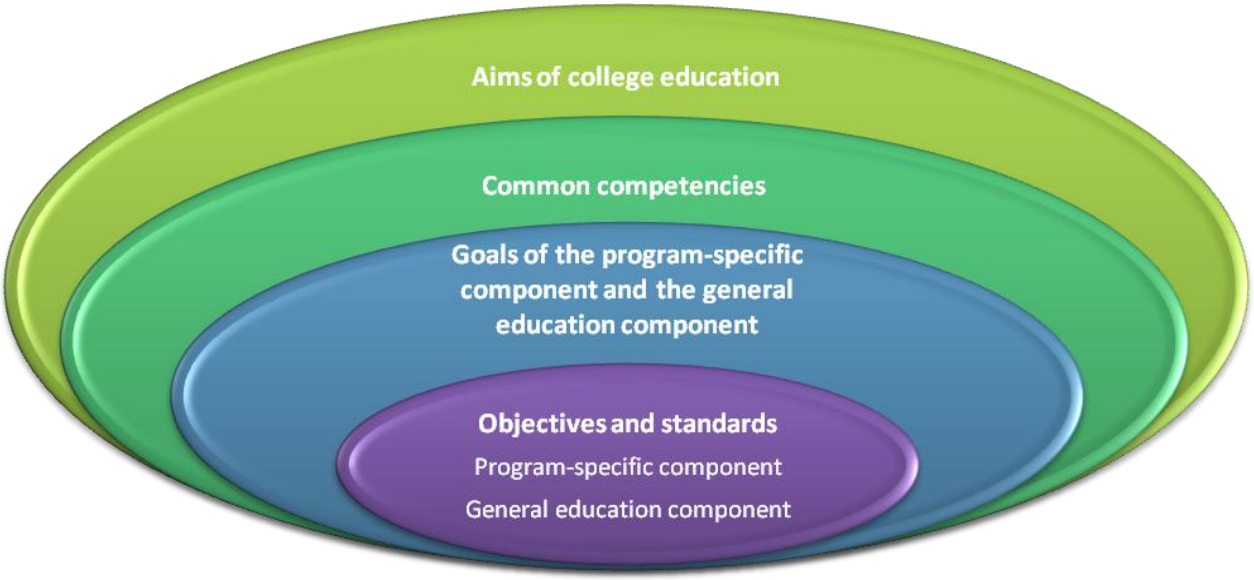
In Québec, college is the next stage after the compulsory years of schooling (elementary and secondary school). College graduates enter the job market directly or proceed to university studies. The Ministère de l'Enseignement supérieur establishes the programs of study, while individual colleges ensure their implementation.

A college-level program provides the frame of reference within which the students acquire designated competencies in order to qualify for a profession or to pursue their studies. For the teachers, the program outlines learning objectives and defines the scope of their application.

The following figure illustrates the relationships among the elements of a college-level program, going from the general to the specific:

- Aims of college education
- Common competencies
- Goals of the program-specific component and the general education component
- Objectives and standards of the program-specific component and the general education component

Figure 1 – Elements of a College-Level Program



Programs leading to the Diploma of College Studies (DCS) include two main components: a general education component and a program-specific component. Both these components contribute to a student's education, as the knowledge, skills and attitudes imparted in one are emphasized and applied in the other, whenever possible. General education is an integral part of each program and, when coupled with the program-specific component as part of an integrated approach, fosters the development of the competencies required by all programs.

All college-level programs are characterized by three educational aims and five common competencies.

Aims of College Education

Educational aims guide the actions of those involved in the students' education. They facilitate the program-based approach by establishing the outcomes expected of students at the end of their college studies.

To educate students to live responsibly in society

At the personal level, students show they are engaged in their learning. They demonstrate rigour and perseverance as well as skills enabling them to analyze, synthesize and carry out research. At the professional level, they draw on their ability to apply their knowledge, skills and attitudes and to adapt to new situations. In the realm of social and civic life, students assume their role as informed and responsible citizens by adopting desirable attitudes and behaviours. They show evidence of open-mindedness and a sense of community in their dealings with others.

To help students integrate cultural knowledge into their studies

Students continue to enhance their personal culture and are able to appreciate various forms of cultural expression. Through their studies, they have become familiar with cultural productions. They can interpret the meaning and assess the value of these productions and are aware of the role they themselves play in the expression of culture. The development of their critical judgment and social conscience and the consolidation of their historical references have broadened their cultural horizons. Students recognize the diversity of social and cultural realities and appreciate the breadth and wealth of Québec's culture. Lastly, they apply their cultural knowledge by making connections among events occurring around them and by being involved in cultural, artistic, sports, technical or scientific activities.

To help students master language as a tool for thought, communication and openness to the world

Students understand and produce various forms of complex discourse in different situations. They are able to read and write independently at an advanced skill level. Their mastery of language allows them to engage in independent reflection, to know where they stand relative to various forms of discourse, and to express themselves in a structured, rational and precise manner. When faced with different communication situations, students are able to express their world view and identity. Language mastery also helps students be receptive to the dissemination of a broad range of knowledge. It allows them to share points of view and improve their communication skills in both the language of instruction and a second language.

Common Competencies of College Education

Common competencies are associated with the aims of college education. They help to ensure students are adequately prepared for personal and professional life.

Solve problems

Students can identify a problem and analyze its elements. They can list and classify possible solutions and implement the one they feel is most effective. They reflect on their approach, assess the appropriateness of the chosen solution and determine whether it can be applied in other situations.

Use creativity

Students discover new possibilities by juxtaposing, combining and reorganizing existing concepts, and by using ideas, strategies and techniques in new ways. Students are open to new ideas and different ways of doing things, while assessing their effectiveness.

Adapt to new situations

When faced with a new situation, students are both open and critical. After analyzing the situation at hand, they identify and test ways of dealing with it. To adapt to a world that is constantly changing, students work in teams and show concern for keeping their knowledge up to date.

Exercise a sense of responsibility

Students assume their role as responsible citizens and act in accordance with socially and democratically desirable attitudes and behaviours. They act ethically and with integrity, exercise critical judgment and are fully engaged, personally, socially and professionally. Independent and organized, they respect their commitments.

Communicate

Students deliver a coherent message adapted to each situation. They are able to listen and to structure their thoughts in order to formulate a clear message. They rely on a variety of communication strategies and use information technologies. They evaluate the impact of their communication and review their strategies, as needed.

Implementation of College-Level Programs

Each college determines the ways in which the educational aims, common competencies, goals, objectives and standards are implemented. This does not mean that students in a college must follow common courses. Each course may contribute to the full or partial achievement of these elements. The important thing is that all of these elements are taken into consideration in one or more courses and that they become specific focuses of teaching and learning, since they have been recognized as essential to the practice of a profession or to the pursuit of university studies in a given discipline.

The Pharmacy Technology Program (165.A0)

The *Pharmacy Technology* program was designed in accordance with the framework for developing technical programs. This approach involves the participation of partners working in the occupational field and in education and considers factors such as training needs, the job situation and the general goals of technical education. The objectives and standards serve as the basis for the definition and evaluation of learning activities, for which the colleges are responsible. By successfully completing this program of study, students acquire not only the entry-level competencies required by the workplace to practise the occupation, but also a range of knowledge, skills and attitudes that will ensure their versatility.

The *Pharmacy Technology* program consists of four components: a program-specific component, a general education component that is common to all programs, a general education component that is specific to each program and a general education component that complements the program.

- The program-specific component consists of 65 credits.
- The general education component that is common to all programs consists of 16⅔ credits:
  - Language of Instruction and Literature: 7⅓ credits
  - Philosophy or Humanities: 4⅓ credits
  - Physical Education: 3 credits
  - Second Language: 2 credits
- The general education component that is specific to the program consists of 6 credits:
  - Language of Instruction and Literature: 2 credits
  - Philosophy or Humanities: 2 credits
  - Second Language: 2 credits
- The complementary general education component, which aims to expose students to subject areas outside their program of study, consists of 4 credits and includes courses in the following areas:
  - Social Sciences
  - Science and Technology
  - Modern Language
  - Mathematics Literacy and Computer Science
  - Art and Aesthetics
  - Contemporary Issues

Students may choose courses only in those areas that are outside their program of study.

Goals of the Program

Program-Specific Component

The goals of the program-specific component of the *Pharmacy Technology (165.A0)* program are:

- To help students develop effectiveness in the practice of a trade or occupation, that is:
  - to teach students to perform roles, functions, tasks and activities associated with the trade or occupation upon entry into the job market
  - to prepare students to progress satisfactorily on the job (which implies having the necessary technical and technological knowledge and skills in such areas as communication, problem solving, decision making, ethics, health and safety)
- To help students integrate into the workforce, that is:
  - to familiarize students with the job market in general and the context surrounding the occupation they have chosen
  - to familiarize students with their rights and responsibilities as workers
- To foster students' personal development and acquisition of occupational knowledge, skills, perceptions and attitudes, that is:
  - to help students develop their autonomy and the desire to learn, and acquire effective work methods
  - to help students understand the principles underlying the techniques and the technology used in the trade or occupation
  - to help students develop self-expression, creativity, initiative and entrepreneurial spirit
  - to help students adopt the attitudes required to successfully practise the trade or occupation, and instill in them a sense of responsibility and a concern for excellence
- To promote job mobility, that is:
  - to help students develop positive attitudes toward change
  - to help students develop the means to manage their careers by familiarizing them with entrepreneurship

Educational Aims

Educational aims in the program-specific component are based on important values and concerns and serve as guidelines for interactions with students. Generally, educational aims focus on important aspects of the students' professional and personal development, such as attitudes, work habits and intellectual skills, which have not been explicitly formulated in the program's goals, objectives and standards.

For the *Pharmacy Technology (165.A0)* program, the educational aims in the program-specific component are as follows:

- To ensure constant vigilance for the safety of the medication circuit
- To adopt a patient-centred approach
- To develop an interest in adapting to techno-scientific and organizational changes

In keeping with the aims of college education, the program-specific component is also intended to educate students to live responsibly in society, to help them integrate cultural knowledge into their studies and, lastly, to help them master language as a tool for thought, communication and openness to the world.

General Education Component Common to All Programs and General Education Component Specific to the Program

Please consult the updated version of the *General Education Components*.

Goals of the Program

The *Pharmacy Technology* program prepares students to become pharmacy technicians.

The function of pharmacy technicians is essentially to perform technical, administrative and clinical pharmaceutical tasks in an optimal manner. In this way, pharmacy technicians contribute to providing quality pharmaceutical services in the technical processing steps of the medication circuit. They also collaborate in the pharmaceutical care provided by pharmacists to meet client needs. In addition, pharmacy technicians perform significant administrative tasks in human resources management.

Under the supervision of or in collaboration with pharmacists, pharmacy technicians perform the following tasks: process prescriptions and requests and dispense drugs; control the supply chain and inventory storage; manage the use of information systems and equipment; implement quality control, risk management and continuous improvement measures; manage the technical staff of the pharmacy; participate in records management; collaborate in patients' drug therapy management, and, lastly, collaborate in clinical studies.

To meet technical, administrative and clinical needs, pharmacy technicians use pharmacy information systems as well as specialized equipment and various technologies to carry out the various steps of the medication circuit assigned to them. They work together and interact with many people daily. Communication skills are therefore essential for interacting professionally and diligently with pharmacists, patients, technical staff, or other professionals. Pharmacy technicians are subject to the applicable regulations and standards of practice published by the relevant professional order.

Pharmacy technicians may work in healthcare facilities and community pharmacies. Healthcare facilities include hospitals, university hospital centres, integrated health and social services centres, and integrated university health and social services centres. In community pharmacy, these individuals work in chain and banner pharmacies, independent pharmacies and compounding pharmacies.

Objectives

Statements of the Competency

Program-Specific Component

00HA Analyze the work function.

00Q0 Develop an integrated view of the human organism.

02AZ Describe the main health problems and diseases.

02BK Identify drug characteristics.

02BL Analyze the use of drugs and their effects on the human organism.

02BM Process mathematical data related to pharmaceutical activities.

02BN Prevent harmful effects on health, safety and the environment.

02BP Use information and telecommunications technologies.

02BQ Use equipment and devices.

02BR Interact in a professional context.

02BS Coordinate drug packaging.

02BT Coordinate the compounding of non-sterile preparations.

02BU Coordinate the compounding of sterile preparations.

02BV Collaborate in the administrative operation of a pharmacy.

02BW Collaborate in quality control and continuous improvement.

02BX Manage the technical staff of the pharmacy.

02BY Control supply chain operations.

02BZ Control activities related to the medication circuit.

02C9 Manage technologies related to the medication circuit.

02CA Collaborate in drug therapy management.

02CB Collaborate in clinical studies.

Grid of Competencies

The grid of competencies provides an overview of a technical program. It brings together all of the components of a program and shows the relationship among the competencies.

The grid of competencies includes:

- the general competencies of the program-specific component, which deal with work-related activities common to various tasks or situations
- the specific competencies, which deal with tasks directly related to the practice of the occupation

The grid of competencies 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 general and a specific competency.

The order in which the competencies are presented reflects the program's design; it does not dictate the course sequence. The grid of competencies is provided for information purposes on.

Grid of competencies																	
Pharmacy Technology 165.A0		Competency number	GENERAL COMPETENCIES														
			Analyze the work function	**Develop an integrated view of the human organism**	**Describe the main health problems and diseases**	**Identify drug characteristics**	**Analyze the use of drugs and their effects on the human**	**Process mathematical data related to pharmaceutical**	**Prevent harmful effects on health, safety and the**	**Use information and telecommunications technologies**	**Use equipment and devices**	**Interact in a professional context**	**Coordinate drug packaging**	**Coordinate the compounding of non-sterile preparations**	**Coordinate the compounding of sterile preparations**	**Collaborate in the administrative operation of a pharmacy**	**Collaborate in quality control and continuous improvement**
Competency number			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
SPECIFIC COMPETENCIES	**Manage the technical staff of the pharmacy**	16	○				○		○	○	○	○	○	○	○	○	○
	Control supply chain operations	17	○			○	○		○	○	○	○	○	○	○	○	○
	Control activities related to the medication circuit	18	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Manage technologies related to the medication circuit	19	○			○	○	○	○	○	○	○	○	○	○	○	○
	Collaborate in drug therapy management	20	○	○	○	○	○	○	○	○	○	○				○	○
	Collaborate in clinical studies	21	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

Program-Specific Component

Code: 00HA	
Objective	**Standard**

Statement of the Competency	**Achievement Context**
Analyze the work function.	• For pharmaceutical services provided in healthcare facilities and community pharmacies • By referring to the organization of the health and social services network • Based on legislation, regulations, standards, practice standards and guidelines • Using recent data on the profession and on pharmacy practice • Using technological tools

	Performance Criteria for the Competency as a Whole
	• Relevance of the information collected • Proper identification of main pharmacy trends

Elements of the Competency	**Performance Criteria**
Describe the organization of pharmaceutical services.	• Appropriate recognition of important moments in the history of pharmacy • Proper recognition of organization of the health network • Appropriate distinction between the structure and organization of healthcare facility pharmacies and community pharmacies • Proper recognition of the connections between healthcare facility pharmacies and community pharmacies • Accurate identification of the roles and responsibilities of pharmacy workers and their collaborators
Describe the profession and its prospects.	• Clear definition of the profession • Accurate recognition of job market entry conditions • Accurate recognition of the importance of training as part of professional practice • Recognition of the importance of ethical conduct and professional ethics • Accurate recognition of employment opportunities

Elements of the Competency	Performance Criteria
Describe the organization of the medication circuit.	• Precise identification of the steps of the medication circuit • Precise description of the organization of the medication circuit • Appropriate distinction between the physical organization of a healthcare facility pharmacy and a community pharmacy
Examine the tasks, operations, skills and behaviours related to the practice of the profession.	• Proper examination of tasks and their respective operations • Appropriate association of the conditions of performance with the requirements for each task • Accurate recognition of expected professional behaviour • Relevant establishment of connections between skills and expected behaviours • Realistic comparison with own skills and behaviours
Examine the legislative and regulatory requirements of the practice of pharmacy.	• Appropriate review of the Québec and Canadian charters of rights and freedoms • Detailed examination of the regulation of pharmacy practice in Québec • Thorough examination of the standards and guidelines of the relevant professional body • Accurate recognition of the boundaries of pharmacy technicians' professional practice
Determine the roles and responsibilities of organizations related to pharmacy practice.	• Accurate identification of the bodies concerned: professional order, associations, groups, public and private insurers, etc. • Appropriate recognition of their respective influence • Appropriate recognition of the role of the pharmaceutical industry in pharmacy practice

Code: 00Q0

Objective

Standard

Statement of the Competency	Achievement Context
Develop an integrated view of the human organism.	• In support of pharmaceutical services • For all systems of the human body • Based on medical and scientific information • Using reference material • Using technological tools

	Performance Criteria for the Competency as a Whole
	• Effective use of reference material and technological tools • Accurate use of terminology

Elements of the Competency	Performance Criteria
Visualize the anatomy of the human body.	• Precise location of body parts • Accurate recognition of the structural organization of the human body by systems • Accurate recognition of the organs and anatomical structures of the human organism • Appropriate distinction between the levels of organization of the human body at the chemical, cellular, tissue, organic and systemic levels • Appropriate recognition of structural relationships between body parts • Relevant identification of anatomical variants based on genetics, gender, morphology, etc.
Describe the normal functioning of human body systems.	• Accurate designation of the function and the overall functioning of systems and their associated organs • Appropriate recognition of the physiological characteristics of systems • Description of the functional connections between systems • Proper identification of chemical and biochemical compounds and reactions essential to the functioning of the organism
Visualize the human body as an organism in search of balance.	• Precise identification of mechanisms contributing to homeostasis • Proper recognition of conditions that promote homeostasis • Accurate recognition of the factors at the source of disturbances in homeostasis

Elements of the Competency	Performance Criteria
Visualize the anatomy of the human body.	• Precise location of body parts • Accurate recognition of the structural organization of the human body by systems • Accurate recognition of the organs and anatomical structures of the human organism • Appropriate distinction between the levels of organization of the human body at the chemical, cellular, tissue, organic and systemic levels • Appropriate recognition of structural relationships between body parts • Relevant identification of anatomical variants based on genetics, gender, morphology, etc.
Describe the normal functioning of human body systems.	• Accurate designation of the function and the overall functioning of systems and their associated organs • Appropriate recognition of the physiological characteristics of systems • Description of the functional connections between systems • Proper identification of chemical and biochemical compounds and reactions essential to the functioning of the organism
Visualize the human body as an organism in search of balance.	• Precise identification of mechanisms contributing to homeostasis • Proper recognition of conditions that promote homeostasis • Accurate recognition of the factors at the source of disturbances in homeostasis
Understand the impact of a biological imbalance on the functioning of the human organism.	• Proper determination of how the imbalance arises • Accurate determination of the physiological processes and systemic reactions involved in the imbalance • Relevant association of physiological or metabolic manifestations with the imbalance

Code: 02AZ	
Objective	**Standard**

Statement of the Competency	**Achievement Context**
Describe the main health problems and diseases.	• In support of pharmaceutical services • For all systems of the human body • For prevalent diseases and conditions requiring pharmacological treatment • Based on clinical, medical and scientific information • Using reference material in English or French • Using technological tools

	Performance Criteria for the Competency as a Whole
	• Effective use of reference material and technological tools • Accurate use of terminology

Elements of the Competency	**Performance Criteria**
Correlate the main health problems and diseases with physiological systems.	• Proper recognition of the etiology and general physiopathological processes of the main diseases affecting systems • Proper recognition of risk factors and preventive measures • Appropriate association of clinical manifestations and laboratory values with health problems and diseases • Proper recognition of the evolving process of the health problem or disease and the possible complications
Relate immunological and infectious disorders to pathological mechanisms.	• Proper recognition of the type of aggressor (bacteria, virus, fungus, etc.) • Proper identification of modes of transmission and preventive measures • Appropriate association of clinical manifestations with immunological and infectious disorders • Proper recognition of the evolving process and possible complications
Recognize the main cancers and their effects on the human organism.	• Proper recognition of prevalent cancers, risk factors and preventive measures • Proper identification of the physiopathological process of the main cancers • Proper recognition of the evolving process

Code: 00Q0

Objective

Standard

Statement of the Competency	Achievement Context
Identify drug characteristics.	• For pharmaceutical services provided in healthcare facilities and community pharmacies • For all types of medication • Using reference material in English or French • Using technological tools

	Performance Criteria for the Competency as a Whole
	• Effective use of reference material and technological tools • Accurate use of terminology

Elements of the Competency	Performance Criteria
Categorize drugs.	• Proper knowledge of drug nomenclature • Accurate distinction between the different types of drug classification • Comprehensive differentiation of forms, routes and modes of drug administration • Rigorous interpretation of terms, abbreviations and acronyms related to drug prescriptions • Accurate distinction between the various drug preservation methods and their effects on the drugs • Accurate distinction between bioequivalence and biosimilarity
Perform an information search.	• Clear identification of information sources (primary, secondary, tertiary) • Proper recognition of the concept of evidence-based information • Accurate determination of the purpose of the information search • Selection of credible sources of information • Relevance of the information collected to the purpose of the search
Identify the pharmacokinetic parameters of drugs.	• Correct identification of pharmacokinetic parameters • Proper identification of the relationship between the pharmacokinetic parameters and the quantitative measurements characterizing drug effect (concentration versus time curve, steady state, dose-response, potency, therapeutic window) • Proper recognition of basic pharmacology concepts

Elements of the Competency	Performance Criteria
Identify the main mechanisms of action of drugs.	• Accurate differentiation between the types of usage of drugs • Proper identification of the main mechanisms of action of drugs • Appropriate association between drug classes and subclasses and mechanisms of action • Appropriate differentiation between non specific drug responses (placebo and nocebo)
Identify the major factors that affect drugs in the organism.	• Accurate identification of physiological and pathological factors that affect drugs • Accurate distinction between intolerances and allergies of various types • Proper recognition of phenomena related to tolerance, dependence and tachyphylaxis • Proper differentiation between the types of drug interactions that may occur

Code: 02BL	
Objective	**Standard**

Statement of the Competency	**Achievement Context**
Analyze the use of drugs and their effects on the human organism.	• For pharmaceutical services provided in healthcare facilities and community pharmacies • For the most prevalent prescription and OTC drugs • For major health problems and prevalent diseases • Based on pharmacotherapeutic classes • Using reference material in English or French • Using technological tools

	Performance Criteria for the Competency as a Whole
	• Effective use of reference material and technological tools • Accurate use of terminology

Elements of the Competency	**Performance Criteria**
Make connections between drugs and their uses.	• Appropriate recognition of the most common physiological or pathological conditions requiring pharmacological treatment • Recognition of the main uses of drug classes and subclasses
Review the main effects of drugs.	• Proper recognition of the usual dosages of the main drugs • Relevant description of the expected effect of the drugs on the health condition • Accurate description of adverse and toxic effects related to the use of the drugs • Proper identification of precautions and contraindications with regard to the use of the drugs • Appropriate identification of major drug interactions
Make connections between the clinical information obtained, the drugs and the patient’s health conditions.	• Proper description of required clinical follow-ups and measurements in accordance with the drugs and the patient's health condition • Proper description of laboratory values in relation to the taking of the drugs and the health condition • Accurate recognition of parameters outside the reference values

Code: 02BM

Objective **Standard**

Statement of the Competency	Achievement Context
Process mathematical data related to pharmaceutical activities.	• For pharmaceutical services provided in healthcare facilities and community pharmacies • Under the supervision of the pharmacist • Based on prescriptions and reports • Using reference material • Using technological tools

	Performance Criteria for the Competency as a Whole
	• Proper selection of the unit of measurement required for the expression of results appropriate to the situation • Critical appraisal of the calculated value in relation to its context

Elements of the Competency	Performance Criteria
Perform conversions between measurement systems.	• Accurate discernment of weight, volume and chemical units of measurement • Accurate determination of equivalences between units of measurement • Accurate interpretation of concentrations expressed as percentages • Accurate and precise conversion of a flow rate into the various units of measurement
Perform pharmaceutical drug calculations.	• Careful selection of the applicable mathematical formula • Accurate application of the proportionality rule • Accurate application of the dilution rule • Accurate application of the alligation method • Accurate application of the aliquot method • Precise calculation of the dosage or flow rate according to different units of measurement (weight, body surface, time, etc.)
Develop mathematical conversion tools for the technical staff.	• Relevance and clarity of the tools developed • Accuracy of calculation results using the tools
Perform calculations related to administrative activities.	• Accurate determination of the retail price by calculating the profit margin • Appropriate estimate of the cost of a product or service • Proper calculation of staffing ratios based on client traffic reports

Elements of the Competency	Performance Criteria
Interpret statistical results.	• Proper identification of parameters related to the statistical approach (variables, sample, scale) • Proper interpretation of general descriptive measurements (mean, median, mode, standard deviation, etc.) • Appropriate recognition of basic measurements in epidemiology (e.g. relative risk) • Proper identification of contextually relevant information

Code: 02BN

Objective

Standard

Statement of the Competency	Achievement Context
Prevent harmful effects on health, safety and the environment.	• For common situations that involve risk • In the pharmacy, care units and off-site services • In collaboration with pharmacy staff, organization managers, other healthcare professionals and patients • Based on legislation, regulations, standards, practice standards and guidelines • Based on directives, procedures and contingency plans • Using personal protective equipment, materials, accessories and products • Using reference material and safety data sheets • Using technological tools

	Performance Criteria for the Competency as a Whole
	• Compliance with the regulations and precepts governing professional practice • Constant vigilance in all matters relating to health and safety • Making sound decisions based on the situation

Elements of the Competency	Performance Criteria
Identify the regulations governing health, safety, hygiene, sanitation and environmental protection.	• Accurate identification of relevant information regarding legislation, regulations and standards • Proper recognition of the rights and obligations of employers and employees • Proper recognition of the consequences that may arise from breaches
Associate risks and hazards with professional practice.	• Proper identification of chemical, physical, biological, ergonomic, psychosocial and safety-related risks and hazards • Proper identification of environmental risks • Proper interpretation of hazardous materials and controlled product information • Precise identification of drugs or products with special features • Appropriate correlation between potential work activities, risks and hazards

Elements of the Competency	Performance Criteria
Associate means of prevention with risks and hazards.	• Recognition of the importance of maintaining physical and psychological balance • Proper identification of ways to reduce stress or increase ability to manage stress • Accurate interpretation of technical information on hazardous materials and controlled products • Appropriate correlation between the procedures and the means of prevention put in place
Ensure the application of infection and contamination control measures.	• Relevant association between infectious processes and contamination risks • Relevant association between drug handling and chemical contamination risks • Strict application of basic practices and additional precautions related to personal hygiene, aseptic measures and the maintenance of work areas
Ensure the implementation of ergonomic measures for the technical staff of the pharmacy.	• Layout of the work environment respecting the application of ergonomic principles • Promotion of postures and work methods that limit the risk of injuries and accidents
Apply measures related to an emergency or crisis.	• Proper application of emergency protocols • Appropriate participation in the development of contingency plans in crises • Proper application of first-aid techniques • Effective collaboration with the relevant authorities • Thoughtful feedback after any incident/accident

Code: 02BP	
Objective	**Standard**

Statement of the Competency	Achievement Context

Use information and telecommunications technologies.	• For pharmaceutical services provided in healthcare facilities and community pharmacies
	• Based on legislation, regulations, standards, practice standards and guidelines
	• Based on established policies and procedures
	• Using reference material in English or French
	• Using technological tools, in particular:
	  ◦ Information systems used in pharmacy
	  ◦ Software integrated with pharmaceutical equipment
	  ◦ Office automation software
	  ◦ Related applications (clinical, administrative, decision support tools, telepractice, etc.)

	Performance Criteria for the Competency as a Whole
	• Compliance with the regulations and precepts governing professional practice • Compliance with computer security rules and authorized access • Effective use of documentation • Accurate recognition of the consequences of computer system malfunction • Accurate use of terminology

Elements of the Competency	Performance Criteria
Identify information systems.	• Accurate description of information systems and their uses • Appropriate distinction between systems used in healthcare facilities and in community pharmacies
Manage a computer workstation.	• Functional customization of the work environment • Careful identification of the websites useful to the practice • Efficient management of directories and files • Effective use of computerized means of communication

Elements of the Competency	Performance Criteria
Use office automation software functionality.	• Careful choice of software according to the tasks to be performed • Structuring of coherent databases according to the objective pursued • Structuring of clear and relevant tables, charts and graphs • Structuring of clear and relevant presentations
Use the functionality of information systems in the pharmacy.	• Proper identification of software functionality • Appropriate differentiation between the various application modules • Optimal use of the various application modules
Use the functionality of software related to equipment and devices.	• Proper identification of software functionality • Appropriate differentiation between the various application modules • Optimal use of the various application modules • Proper use of applications related to connected health devices
Use related software or applications.	• Proper use of related software or applications • Proper use of decision support tools

Code: 02BQ	
Objective	**Standard**

Statement of the Competency	Achievement Context
Use equipment and devices.	• For pharmaceutical services provided in healthcare facilities and community pharmacies • In a controlled environment • Based on legislation, regulations, standards, practice standards and guidelines • Based on policies and procedures • Using reference material in English or French • Using personal protective equipment • Using technological tools

	Performance Criteria for the Competency as a Whole
	• Compliance with the regulations and precepts governing professional practice • Accurate recognition of the consequences of equipment malfunction • Accurate use of terminology

Elements of the Competency	Performance Criteria
Identify equipment and devices.	• Accurate description of equipment, devices and their uses • Appropriate recognition of the benefits and limitations of equipment and devices • Proper identification of equipment and devices
Use the methods for receiving and processing prescriptions.	• Proper use of equipment • Proper application of equipment maintenance procedures • Proper recording of information in logs
Use equipment for the packaging, compounding, storing and dispensing of drugs.	• Proper use of equipment • Accurate identification of equipment maintenance procedures • Proper application of equipment maintenance and calibration procedures • Proper recording of information in logs
Operate small devices or instruments related to therapy monitoring by the patient.	• Proper description of small devices and instruments • Methodical and proper handling of small devices and instruments • Verification of the efficiency of the link between the connected devices and the pharmacy • Appropriate follow-up on the maintenance and calibration of small devices

Code: 02BR	
Objective	**Standard**

Statement of the Competency	Achievement Context
Interact in a professional context.	• In various professional situations • For all types of verbal or written communication • With patients, caregivers, pharmacy staff, healthcare professionals and external partners • Based on legislation, regulations, standards, practice standards and guidelines • Based on policies and procedures • Using reference and background material • Using technological tools

	Performance Criteria for the Competency as a Whole
	• Compliance with the regulations and precepts governing professional practice • Respect for the roles, responsibilities and expertise of other healthcare providers • Communication adapted to the audience • Adoption of professional attitudes and behaviours • Accurate use of terminology

Elements of the Competency	Performance Criteria
Communicate in a professional manner.	• Proper application of the principles and techniques of verbal and non-verbal communication and active listening • Description of the various types of audiences • Adoption of a socially and culturally appropriate relational approach • Optimal use of customer service strategies • Proper recognition of the person's situations of physical, psychological and emotional difficulties • Proper application of positive feedback concepts
Draft professional documents or documents related to the regulatory framework.	• Clear distinction between the types of documents required in pharmacy • Precise determination of the type of information to be transmitted • Collection and synthesizing of relevant information • Adherence to recognized rules of writing • Drafting of documents in the required format

Elements of the Competency	Performance Criteria
Work in intra- and inter-disciplinary teams.	• Accurate recognition of one's leadership style • Clear demonstration of openness, flexibility and responsiveness to team members • Appropriate contribution to decision making and problem solving • Respect for decisions made by the team • Appropriate assertion of competence, when relevant
Carry out conflict management and prevention.	• Cooperation with a view to reaching a common understanding of the situation • Appropriate consultation with resource persons when required • Active search for a consensual solution • Effective participation in the implementation of consensual solutions • Rigorous application of the introspection process throughout

Code: 02BS	
Objective	**Standard**

Statement of the Competency	Achievement Context
Coordinate drug packaging.	• For pharmaceutical services provided in healthcare facilities and community pharmacies • Under the supervision of a pharmacist • In collaboration with the technical staff • Under controlled and secure conditions • Based on prescriptions, requests or work lists • Based on legislation, regulations, standards, practice standards and guidelines • Using established policies and procedures • Using personal protective equipment and safety data sheets • Using the required equipment, devices, instruments and supplies • Using reference material in English or French and in logs • Using technological tools

	Performance Criteria for the Competency as a Whole
	• Compliance with the regulations and precepts governing professional practice • Effective use of reference material and technological tools • Accurate use of terminology

Elements of the Competency	Performance Criteria
Describe packaging methods.	• Accurate identification of the advantages and disadvantages of packaging methods • Accurate identification of specific drug precautions • Recognition of the alignment of the mode of packaging with the specificities of the drug • Precise identification of drug packaging steps
Supervise packaging activities.	• Mastery of handling techniques • Strict supervision of workflow • Strict supervision of application of procedures • Accurate recognition of the consequences of an error

Elements of the Competency	Performance Criteria
Ensure compliance of drug packaging.	• Verification of the conformity of the labelling • Careful verification of additional information • Verification of the compliance of the beyond-use dates and the preservation methods • Verification that the packaged drug matches the pharmacological record, request, or work list • Rectification of any discrepancies • Accurate recognition of the consequences of an error
Supervise the maintenance and calibration of packaging equipment.	• Careful selection of equipment cleaning methods • Careful verification of the frequency and methods of cleaning and maintenance of equipment • Careful verification of the calibration of the equipment
Ensure that the information is recorded.	• Methodical verification of information in logs • Meticulous verification of the compliance of the documents required for traceability purposes • Proper archiving of documentation

Code: 02BT	
Objective	**Standard**

Statement of the Competency	**Achievement Context**
Coordinate the compounding of non-sterile preparations.	• For pharmaceutical services provided in healthcare facilities and community pharmacies • For the compounding of hazardous and non-hazardous drugs • Under the supervision of the pharmacist • In collaboration with the technical staff • Under controlled and secure conditions • Based on prescriptions, requests or work lists • Based on legislation, regulations, standards, practice standards and guidelines • Using established policies, procedures and master formulas • Using personal protective equipment and safety data sheets • Using equipment, devices, instruments and supplies • Using reference material in English or French and in logs • Using technological tools

	Performance Criteria for the Competency as a Whole
	• Compliance with the regulations and precepts governing professional practice • Respect for drug specificities • Effective use of reference material and technological tools • Accurate use of terminology

Elements of the Competency	**Performance Criteria**
Ensure the application of the regulatory framework.	• Precise identification of the requirements of the regulatory framework • Accurate categorization of non-sterile preparations • Verification of the adequacy of the requirements for the various categories of non-sterile preparations

Elements of the Competency	Performance Criteria
Write master formulas.	• Accurate interpretation of physical, chemical and microbiological compatibility data • Accuracy of calculations • Accurate identification of critical compounding steps • Careful selection of methods for verifying intermediate steps • Detailed drafting of master formulas • Obtaining of approval from the pharmacist
Supervise non-sterile compounding activities.	• Mastery of compounding techniques • Strict supervision of workflow • Strict supervision of application of procedures • Accurate recognition of the consequences of an error
Verify conformity of the preparation.	• Strict application of independent double-checking of intermediate compounding steps • Strict application of independent double-checking of the final preparation • Verification of labelling compliance according to the master formula and prescription, where applicable • Verification of the concordance of the non-sterile preparation with the pharmacological record, the request or the work list • Compliance with storage conditions • Accurate recognition of the consequences of an error
Supervise the maintenance and calibration of equipment.	• Careful selection of cleaning methods for work areas, equipment, devices and materials used • Meticulous checking of cleaning and maintenance frequencies and methods • Careful verification of the calibration of the equipment
Ensure that the information is recorded.	• Methodical verification of information in the various logs and in patient records • Meticulous verification of the conformity of all the documents required for traceability purposes • Proper archiving of documentation

Code: 02BU	
Objective	**Standard**

Statement of the Competency	**Achievement Context**
Coordinate the compounding of sterile preparations.	• For pharmaceutical services provided in healthcare facilities and community pharmacies • For the compounding of non-hazardous and hazardous drugs • Under the supervision of the pharmacist • In collaboration with the technical staff • Under controlled and secure conditions • Based on prescriptions, requests or work lists • Based on legislation, regulations, standards, practice standards and guidelines • Using established policies, procedures and compounding protocols • Using personal protective equipment and safety data sheets • Using the required equipment, devices, instruments and supplies • Using reference material in English or French and in logs • Using technological tools

	Performance Criteria for the Competency as a Whole
	• Compliance with the regulations and precepts governing professional practice • Respect for drug specificities • Effective use of reference material and technological tools • Accurate use of terminology

Elements of the Competency	**Performance Criteria**
Ensure the application of the regulatory framework.	• Precise identification of the requirements of the regulatory framework • Accurate distinction between hazardous and non hazardous sterile preparations • Verification of the alignment of the conditions required with the categories of sterile preparations • Accurate identification of risk levels of sterile preparations

Elements of the Competency	Performance Criteria
Draft sterile compounding protocols.	• Accurate interpretation of the physical, chemical and microbiological compatibility data collected • Accuracy of calculations • Accurate identification of critical compounding steps • Careful selection of critical verification steps • Writing in accordance with protocols • Obtaining of approval from the pharmacist
Oversee the compounding of sterile preparations.	• Mastery of compounding techniques • Strict supervision of workflow • Strict supervision of application of procedures • Accurate recognition of the consequences of an error
Verify conformity of the preparation.	• Strict application of independent double-checking of intermediate compounding steps • Strict application of independent double-checking of the final preparation • Verification of the compliance of the labelling according to the compounding protocol • Verification of concordance of the sterile preparation with the pharmacological record, the request, or the work list • Compliance with storage conditions • Accurate recognition of the consequences of an error
Supervise the maintenance and calibration of equipment.	• Careful selection of cleaning methods for work areas, equipment, appliances and materials used • Meticulous checking of cleaning and maintenance frequencies and methods • Careful verification of the calibration of the equipment
Ensure that the information is recorded.	• Methodical verification of information in the various logs and in patient records • Meticulous verification of the conformity of all the documents required for traceability purposes • Proper archiving of documentation

Code: 02BV	
Objective	**Standard**

Statement of the Competency	**Achievement Context**
Collaborate in the administrative operation of a pharmacy.	• For pharmaceutical services provided in healthcare facilities and community pharmacies • Under the supervision of the pharmacist • In collaboration with the administrative and technical staff of the pharmacy • Based on legislation, regulations, standards, practice standards and guidelines • Based on established policies and procedures • Using reference material • Using technological tools

	Performance Criteria for the Competency as a Whole
	• Compliance with the regulations and precepts governing professional practice • Compliance with policies and procedures • Effective use of reference material and technological tools • Adoption of professional attitudes and behaviours

Elements of the Competency	**Performance Criteria**
Contribute to the management of pharmacy resources.	• Appropriate application of management techniques • Accurate application of change management strategies • Proper application of project management techniques
Review the administrative operations of community pharmacies and pharmacies in healthcare facilities.	• Accurate identification of the way drugs and supplies are acquired in different practice settings (agreements, authorized drug lists, etc.) • Description of the various drug access programs (compassionate, special access, free, exception patient, etc.) • Accurate identification of financing methods, revenue sources and expense items in various practice settings • Accurate description of pharmacy design parameters and associated standards in various practice settings

Elements of the Competency	Performance Criteria
Support community pharmacy billing operations.	• Correct understanding of billing parameters • Accurate identification of insurance programs • Accurate description of the specifics of the public drug plan • Proper identification of pharmaceutical procedures, their conditions of application and their methods of claim • Effective handling of complex claims • Appropriate support for reconciliation of statements of account
Participate in records management.	• Methodical filing and archiving of information according to established procedures and schedule • Methodical purging of documents according to the established schedule • Secure destruction of documents
Participate in promoting pharmaceutical services and care in the community.	• Appropriate collaboration in health promotion activities • Appropriate collaboration in activities to promote pharmaceutical services and care • Appropriate collaboration in the development of partnerships

Code: 02BW

Objective

Standard

Statement of the Competency	Achievement Context
Collaborate in quality control and continuous improvement.	• For pharmaceutical services provided in healthcare facilities and community pharmacies • For processes related to the medication circuit • Under the supervision of the pharmacist • In collaboration with the administrative and technical staff of the pharmacy • In collaboration with other offices or departments of the institution, where applicable • Based on legislation, regulations, standards, practice standards and guidelines • Based on established policies and procedures • Using databases, logs and reports • Using reference material • Using technological tools

	Performance Criteria for the Competency as a Whole
	• Compliance with the regulations and precepts governing professional practice • Effective use of reference material and technological tools • Accuracy of data interpretation • Clear and methodical presentation of overall results • Adoption of professional attitudes and behaviours

Elements of the Competency	Performance Criteria
Implement quality control methods.	• Proper recognition of the general principles of quality assurance and quality control programs • Proper identification of the critical steps requiring quality control • Accurate determination of quality control methods • Proper implementation of traceability records • Complete recording of indicators • Careful resolution of non-conformities

Elements of the Competency	Performance Criteria
Contribute to risk management.	• Careful determination of risk factors • Methodical audit of the completion of event reports • Detailed analysis of event reports • Careful determination of preventive and corrective measures • Proper implementation of preventive and corrective measures • Adoption of an objective attitude when an event occurs
Contribute to continuous improvement activities.	• Proper recognition of various continuous improvement methods • Careful and relevant application of continuous improvement tools and methods • Methodical follow-up of the determined and implemented improvement solutions • Proper recognition of one's role on continuous improvement committees for the medication circuit
Contribute to accreditation or inspection activities.	• Proper recognition of accreditation bodies and their requirements • Relevant contribution to preparatory activities for inspection or accreditation visits • Meticulous follow-up on improvement plans after inspection or approval visits
Measure performance.	• Proper identification of indicators • Accurate and complete recording of identified indicators • Performance of relevant audits
Update procedures.	• Compliant drafting of procedures • Periodic review of procedures • Proper dissemination of procedures

Code: 02BX	
Objective	**Standard**

Statement of the Competency	Achievement Context
Manage the technical staff of the pharmacy.	• For pharmaceutical services provided in healthcare facilities and community pharmacies • For permanent or probationary employees and interns • In collaboration with the pharmacist • Based on legislation, regulations, standards, practice standards and guidelines • Based on established policies and procedures • Based on collective agreements or work agreements, where applicable • Based on predefined performance indicators • Using reference material • Using administrative documents such as grids, worksheets and various forms • Using technological tools

	Performance Criteria for the Competency as a Whole
	• Compliance with the regulations and precepts governing professional practice • Compliance with collective agreements or work agreements • Effective use of administrative documents, reference materials and technological tools • Communication adapted to the audience • Adoption of professional attitudes and behaviours • Relevant contribution to problem solving and decision making • Remaining within one's field of competence

Elements of the Competency	Performance Criteria
Participate in the hiring process.	• Good forecasting of personnel movements • Realistic determination of required needs • Relevant collaboration in the preparation of selection interviews • Appropriate participation in selection interviews

Elements of the Competency	Performance Criteria
Take charge of the onboarding and integration of the technical staff.	• Adaptation of the orientation program to the needs of the setting and the person recruited • Clear presentation of the organization's mission and values • Accurate presentation of relevant organizational policies and procedures • Proper integration of the person into the work team • Methodical follow-up of the orientation period
Structure work organization.	• Determination of an effective work process • Precise description of tasks and workstations • Reasonable division of work
Manage schedules.	• Respect for the availability and work limits of employees • Alignment of scheduled technical human resources with operational and budget needs • Fair distribution of tasks and shifts among employees according to assigned positions
Assess the performance of technical staff.	• Accurate determination of performance indicators • Proper recording of observations • Appropriate feedback to staff • Inclusion of relevant suggestions in improvement plans • Meticulous follow-up of improvement plans • Thoughtful application of communication techniques when giving positive or negative feedback
Mobilize employees.	• Proper application of mobilization and leadership techniques • Communication adapted to the situation • Regular facilitation of meetings and scrums • Regular dissemination of performance indicators • Appropriate solicitation of staff for participation in projects
Coordinate training and evaluation activities.	• Accurate determination of the training needs of technical staff • Proper planning of training and evaluation activities • Accurate recording of training and evaluation activities • Adherence to the evaluation schedule
Carry out on-the-job development activities.	• Sound determination of training objectives • Careful selection of content and presentation tools • Determination of training adapted to employee needs • Satisfactory participation in evaluation activities set forth in the regulatory framework • Accurate assessment of the employee's acquired competencies

Code: 02BY	
Objective	**Standard**

Statement of the Competency	**Achievement Context**
Control supply chain operations.	• For pharmaceutical services provided in healthcare facilities and community pharmacies • For all medications and supplies • Under the supervision of the pharmacist • In collaboration with pharmacy, supply and accounting staff, where applicable • In collaboration with external partners (purchasing groups, distributors, suppliers, etc.) • Based on legislation, regulations, standards, practice standards and guidelines • Based on established directives, policies and procedures • Based on established budget rules • Using databases • Using reference material • Using technological tools

	Performance Criteria for the Competency as a Whole
	• Compliance with the regulations and precepts governing professional practice • Effective use of technology tools and reference materials • Respect for drug specificities • Communication adapted to the audience • Adoption of professional attitudes and behaviours • Remaining within one's field of competence

Elements of the Competency	**Performance Criteria**
Describe inventory management.	• Accurate identification of parameters related to the supply chain of drugs and supplies • Precise identification of the various storage locations
Control the supply of medications and supplies.	• Methodical updating of procurement software databases • Sound analysis of consumption reports • Appropriate adjustment to established minimum and maximum quantities • Effective handling of supply difficulties • Strict application of the budget rules

Elements of the Competency	Performance Criteria
Control reception.	• Sound determination of procedures • Regular verification of the application of procedures • Effective follow-up on discrepancies in the quality and quantity control of drugs and supplies
Control the storage and transportation conditions for drugs and supplies.	• Sound determination of procedures • Regular verification of the application of procedures • Proper allocation of identification and storage arrangements for drugs requiring it • Adapted intervention when storage and security parameters change • Rigorous application of the contingency plan when storage or safety parameters fail • Implementation of means to ensure the safety and traceability of drug deliveries • Methodical verification of the information recorded in the various logs
Control inventory.	• Rigorous tracking of inventories • Rigorous supervision of reserves • Rigorous analysis of variances • Effective implementation of measures to minimize variances • Methodical verification of the information recorded in the various logs
Monitor returns and recalls of drugs and supplies.	• Sound determination of procedures • Proper supervision of activities related to supplier returns and associated credit claims • Accurate identification of the various risk classifications associated with recalls • Proper supervision of recall activities • Methodical verification of the information recorded in the various logs
Control the destruction of drugs and biomedical waste.	• Sound determination of procedures • Regular verification of the application of procedures • Methodical supervision of the destruction of drugs according to their specificities • Methodical verification of the information recorded in the various logs

Code: 02BZ	
Objective	**Standard**

Statement of the Competency	Achievement Context
Control activities related to the medication circuit.	• For pharmaceutical services provided in healthcare facilities and community pharmacies • For the following activities: processing prescriptions, compounding and dispensing drugs • Under the supervision of the pharmacist • In collaboration with technical staff, healthcare professionals and patients • Under controlled and secure conditions • Based on legislation, regulations, standards, practice standards and guidelines • Based on prescriptions, requests or work lists • Based on established policies, procedures and protocols • Using reference material in English or French • Using reports and logs • Using technological tools

	Performance Criteria for the Competency as a Whole
	• Compliance with the regulations and precepts governing professional practice • Effective use of reference material and technological tools • Communication adapted to the audience • Adoption of professional attitudes and behaviours • Remaining within one's field of competence

Elements of the Competency	Performance Criteria
Coordinate technical activities.	• Sound selection of priorities • Accurate determination of bottlenecks • Sound adjustments in the case of situations requiring modifications

Elements of the Competency	Performance Criteria
Process prescriptions.	• Compliance with prescription processing times according to established criteria • Rigorous verification of the concordance of the data entered with the prescription and the established standards • Rigorous validation of calculations in relation to the prescription • Appropriate participation in the resolution of prescription issues • Adapted use of decision support tools • Appropriate referral to the pharmacist
Compound and dispense drugs.	• Sound integration of technological means of verification into the processes • Sound integration of independent double-checking into processes • Rigorous analysis of predefined reports and logs • Accurate determination of fluctuations and irregularities • Relevant adjustments to the processes according to the elements identified • Verification of the alignment of actual environmental conditions with the applicable standards
Ensure quality of services.	• Sound integration of quality control measures • Sound integration of verification measures • Rigorous analysis of periodic quality indicator reports • Relevant adjustment of processes to meet established criteria • Responsive handling of complaints related to the quality of services
Process data related to health and safety measures for staff.	• Detailed analysis of statistics, incident reports and work accident reports • Accurate identification of harmful or risky situations • Appropriate adjustment of environmental conditions • Strict application of safe medication handling procedures

Code: 02C9	
Objective	**Standard**

Statement of the Competency	Achievement Context
Manage technologies related to the medication circuit.	• For pharmaceutical services provided in healthcare facilities and community pharmacies • For various computer systems and applications • For various items of equipment and devices • In a controlled environment, if required • In collaboration with pharmacists, pharmacy technical staff, external vendors, and medical engineering and IT departments, where applicable • Based on legislation, regulations, standards, practice standards and guidelines • Based on established policies and procedures • Using reference material in English or French • Using logs • Using technological tools

	Performance Criteria for the Competency as a Whole
	• Compliance with the regulations and precepts governing professional practice • Accurate recognition of system, software and equipment architecture • Communication adapted to the audience • Adoption of professional attitudes and behaviours • Remaining within one's field of competence

Elements of the Competency	Performance Criteria
Optimize information systems and equipment software	• Accurate description of the interfaces between pharmacy systems, software and applications • Correct configuration of systems and software • Methodical and meticulous updating of databases • Methodical planning of system upgrades • Updating systems, software and applications in accordance with vendor recommendations

Elements of the Competency	Performance Criteria
Integrate new functionalities.	• Sound determination of improvement needs • Application of rigorous tests during the integration of new functionalities • Information or rigorous training provided to the personnel concerned • Systematic monitoring of technical and technological developments
Mitigate technology malfunctions.	• Meticulous monitoring of service calls • Rigorous determination of contingency measures in case of system or equipment failures • Effective implementation of a contingency plan
Ensure the maintenance, calibration, and certification of equipment and facilities.	• Establishment of clear and precise procedures for regular maintenance • Effective supervision of the application of procedures • Proper planning and monitoring of preventive maintenance and calibration of equipment requiring it • Compliant monitoring of the certification of the equipment and installations requiring it • Regular verification of the recording of information in logs
Apply computer security rules.	• Proper control of digital identities and access • Accurate application of backup procedures • Accurate detection of irregularities related to security rules • Proper monitoring of mitigation or eradication measures

Code: 02CA	
Objective	**Standard**

Statement of the Competency	Achievement Context
Collaborate in drug therapy management.	• For pharmaceutical services provided in healthcare facilities and community pharmacies • Under the supervision of the pharmacist • In collaboration with healthcare professionals, technical staff, patients and caregivers • As a member of an interdisciplinary team • Under conditions of confidentiality • Based on legislation, regulations, standards, practice standards and guidelines • Based on established policies and procedures • Based on management plans prepared by the pharmacist • Based on patient records and logs • Using medication and supplies • Using reference material in English or French • Using technological tools

	Performance Criteria for the Competency as a Whole
	• Compliance with the regulations and precepts governing professional practice • Critical analysis of information • Obtaining the patient's consent • Communication adapted to the audience • Adoption of professional attitudes and behaviours • Effective and appropriate use of reference materials and technology tools • Remaining within one's field of competence

Elements of the Competency	Performance Criteria
Assist in the collection of patient information.	• Effective application of interview techniques • Efficient collection of complementary data • Appropriate initiation of medication reconciliation (adherence, identification of discrepancies, etc.) • Clear and accurate recording of information

Elements of the Competency	Performance Criteria
Compile laboratory values and clinical measurements.	• Careful selection of laboratory values and clinical measurements • Proper correlation of the values obtained with the effect of the drug, where applicable • Accurate recording of data • Appropriate communication to the pharmacist of results outside the reference values
Participate in the management plan.	• Proper application of the patient's management plan • Methodical performance of relevant clinical measurements or tests • Sound detection of problems with the management plan • Appropriate communication with the pharmacist, where applicable • Providing relevant information to the patient regarding medications or programs • Detailed recording of own interventions
Collaborate with healthcare professionals.	• Satisfactory response to questions from healthcare providers • Conformity of information received and transmitted when transferring prescriptions between pharmacies, according to the established conditions • Proper referral of the patient to other healthcare professionals, where applicable • Effective participation in interdisciplinary team meetings, where applicable
Ensure the production of information materials.	• Production of relevant and complete summaries of pharmacological records • Production of patient-friendly information materials • Meticulous verification of documents produced by technical staff for use by caregivers or patients
Teach patients to use equipment, devices and accessories.	• Effective demonstration of the use of the equipment, device, or accessory • Compliance with hygiene and asepsis measures • Appropriate response to the patient’s questions • Sound assessment of the technique and of the patient’s understanding • Precise recording of the procedure and of the patient’s understanding

Elements of the Competency	Performance Criteria
Apply medication administration techniques.	• Accurate recognition of the precautions required for each route of drug administration • Compliance with hygiene and asepsis measures • Correct selection of required supplies • Strict application of drug administration techniques • Intervention adapted to unusual clinical manifestations • Precise recording of the procedure in the patient's medication record or in the logs, if required
Apply sampling techniques.	• Accurate recognition of the precautions required for each type of sampling • Compliance with hygiene and asepsis measures • Correct selection of required supplies • Strict application of sampling techniques • Proper identification of the sample, if necessary • Precise recording of the procedure in the patient's medication record or in the logs, if required • Compliance with preservation and transport conditions, if required

Code: 02CB	
Objective	**Standard**

Statement of the Competency	Achievement Context
Collaborate in clinical studies.	• For pharmaceutical services provided in healthcare facilities and community pharmacies • Under the supervision of the pharmacist • For investigational drugs • In collaboration with health professionals involved in clinical research • Under controlled and secure conditions • Based on research protocols • Based on legislation, regulations, standards, practice standards and guidelines • Based on established policies and procedures • Using reference material in English or French and administrative documents (logs, forms, etc.) • Using technological tools

	Performance Criteria for the Competency as a Whole
	• Compliance with the regulations and precepts governing professional practice • Communication adapted to the audience • Adoption of professional attitudes and behaviours • Effective use of reference material and technological tools • Remaining within one's field of competence

Elements of the Competency	Performance Criteria
Recognize concepts related to clinical studies.	• Appropriate identification of the clinical phases in pharmaceutical research • Appropriate identification of research design specifications • Proper identification of the components of a research protocol • Appropriate recognition of the role of a research ethics board

Elements of the Competency	Performance Criteria
Address the technical aspects of a research protocol.	• Rigorous synthesis of the technical aspects of the research protocol • Accurate forecasting of foreseeable technical problems with the protocol • Relevant contribution to the prevention or resolution of technical problems • Compliant drafting of procedures • Proper dissemination of procedures
Control the supply and storage of investigational drugs.	• Drafting of detailed procedures • Proper dissemination of procedures • Maintaining an adequate inventory of investigational drugs • Drafting of reports in accordance with research requirements (e.g. environmental conditions) • Sound management of storage condition failures
Participate in the implementation of the research protocol.	• Compliance with procedures • Accurate identification of inclusion and exclusion criteria • Obtaining patient consent, if required • Complete and accurate preparation of patient handouts • Meticulous recording of information in the logs
Verify compliance of documentation.	• Methodical verification of information in research logs • Preparation of reports in accordance with research requirements • Appropriate collaboration in audits • Compliance with study closure procedures

Additional Information

Vocabulary Used in Technical Programs

Program

A program is an integrated set of learning activities leading to the achievement of education objectives based on set standards (*College Education Regulations,* s. 1). All college programs include a general education component common to all programs; a general education component adapted to the specific program; a complementary general education component; and a program-specific component (*College Education Regulations,* s. 6).

Competency

In the program-specific component of a technical program, a competency is defined as the ability to act, succeed and evolve in order to adequately perform tasks or work-related activities, based on an organized body of knowledge (including elements of knowledge, skills in a variety of fields, perceptions, attitudes, etc.) (*Élaboration des programmes d'études techniques*, *Cadre général – Cadre technique 2002*, p. 15).

Objective

An objective is defined as the competency, skills or knowledge to be acquired or mastered (*College Education Regulations,* s. 1). Each objective is formulated in terms of a competency and includes a statement of the competency and its elements. The achievement of objectives and respect for the standards ensure the acquisition or mastery of the college-level general education competencies.

Statement of the Competency

In the program-specific component of a technical program, the statement of the competency is the result of an analysis of the needs of the job situation, the general goals of technical training and (in some cases) other factors. In the general education components, it is the result of an analysis of the needs of general education.

Elements of the Competency

In the program-specific component of a technical program, the elements of the competency include only what is necessary in order to understand and master the competency. They refer to the major steps involved in performing a task or to the main components of the competency.

In the general education components, the elements of an objective, formulated in terms of a competency, specify the main aspects of the competency.

Periods of instruction

A period of instruction is a unit of measurement for calculating the breakdown of teaching time, i.e. the length of time a student spends under a teacher's supervision, in a class or a laboratory or during a practicum.

Standard

A standard is defined as the level of performance at which an objective is considered to be achieved (*College Education Regulations,* s. 1). In the program-specific component of a technical program, it is composed of an achievement context and performance criteria.

Performance Criteria

In the program-specific component of a technical program of studies, the performance criteria define the requirements for recognition of attainment of each of the elements of the competency and, consequently, of the competency itself. The performance criteria are based on entry-level requirements in the labour market. Each competency element calls for at least one performance criterion.

In the general education component, the performance criteria define the requirements for recognizing the standard.

In both components, all criteria must be met for the objective to be achieved.

Achievement Context

In the program-specific component of a technical program, the achievement context corresponds to implementation of the competency upon entry into the labour market. The context defines neither the learning situation nor the evaluation situation.

Learning Activities

In the program-specific component of a technical program, the learning activities are classes (or labs, workshops, seminars, practicums or other educational activities) designed to ensure the attainment of the targeted objectives and standards. Colleges are entirely responsible for defining the learning activities and applying the program-based approach.

In the general education components, the elements of the learning activities that may be determined in whole or in part by the Minister are the field of study, the discipline(s), the weightings, the number of contact hours, the number of credits and any details deemed essential.

Glossary for the Program-Specific Component

The *Pharmacy Technology* program has a glossary to facilitate the understanding of certain terms used in the formulation of the objectives and standards.

The main sources of information used were extracted and translated from the documentation published by the Ordre des pharmaciens du Québec.

Accident	An action or situation where a risk event occurs which has or could have consequences for the state of health or welfare of the user, a staff member, a professional involved or a third person.
Adverse effect	An effect not intended for the therapeutic purpose for which the drug is used.
Beyond-use date (BUD)	Date after which the product can no longer be used and is determined from the date when the preparation is compounded. It corresponds to the date of the end of use by the patient.
Clinical measurement	Data on physical condition obtained through techniques or devices with monitors to monitor the effect of drug therapy on the patient's health.
Container-content verification (CCV)	The act of verifying that a drug matches the name on its container label.
Cytotoxic	The property of a substance or drug to have a poisonous effect on a living cell; that interferes with or prevents the functioning of cells.
Drug	Any substance or mixture of substances that may be used: for the diagnosis, treatment, mitigation, or prevention of a disease, disorder, abnormal physical or mental state, or its symptoms, in humans or animals; or to restore, correct, or modify organic functions in humans or animals.
Drug compounding	Drug compounding is the combination or mixture of two or more ingredients to produce a final preparation in a form suitable for use by the patient, in which, in most cases, at least one ingredient is pharmacologically active.
Drug interaction	The alteration of the effect obtained or expected from a drug due to the concomitant use of another drug or substance such as a natural health product or food.
Drug therapy	All pharmacological substances or means used to prevent, combat or relieve disease.
Event	A situation or fact that caused or could have caused harm to a patient's health (error accident or incident).
Practice guides	Documents issued by the Ordre des pharmaciens du Québec to guide the professional practice of pharmacists; they explain or clarify, in whole or in part, the laws and regulations governing the practice of pharmacy in Québec.

Guidelines	Documents from the Ordre des pharmaciens du Québec that aim to clarify the professional conduct expected of the pharmacist in relation to a specific clinical or professional situation.
Hazardous drug	A drug for which human or animal research indicates that exposure may result in cancer, developmental or reproductive toxicity, or organ damage. Drugs are considered hazardous when they entail risks for the worker due to their effects. A list of hazardous drugs is included in the recommendations of the NIOSH (National Institute for Occupational Safety and Health, a US federal agency).
Incident	An action or situation that does not result in any consequence to the health or well-being of a patient, staff member, relevant professional, or third party, but which has an unusual outcome and which, on other occasions, could result in consequences.
Independent double check (IDC)	A process in which a second healthcare professional conducts an independent verification. The independence of the verification is based on the fact that the first professional does not give the results of their check to the second professional.
Information and telecommunications technologies (ITTs)	A set of technologies resulting from the convergence of computer science and advanced multimedia and telecommunication techniques that have enabled the emergence of more efficient means of communication, by improving the processing, storage, dissemination and exchange of information.
Management plan	All the elements that enable the pharmacist to monitor the patient's drug therapy in a comprehensive manner and to support the patient in this process.
Master formula	All the information and instructions required for compounding a non-sterile preparation.
Medication administration record (MAR)	A paper or electronic tool for recording medications administered to a patient.
Medication circuit	The entire process for which the pharmacist is responsible, from the receipt of the prescription to the delivery of the drug to the patient or to the person who is to administer it or to the administration of the drug by the pharmacist within the meaning of subparagraph 9 of the second paragraph of section 17 of the *Pharmacy Act* (R.S.Q., chapter P-10).
Medication reconciliation (MedRec)	Medication reconciliation is a formal process consisting of three steps: gathering information to develop a Best Possible Medication History (BPMH); making a comparison between the prescriptions on file and the BPMH; and reconciling discrepancies with the prescriber.
Personal protective equipment (PPE)	Equipment that individually protects a worker from exposure to physical, biological, or chemical hazards.

Pharmaceutical care	All the acts that the pharmacist performs for a patient in order to improve their quality of life by achieving pharmacotherapeutic objectives of a preventive, curative, or palliative nature. Pharmaceutical care involves a process that includes an assessment of needs, the development of a plan that incorporates the goals agreed upon with the patient and the monitoring of that plan. During this process, the pharmacist must identify, resolve and, where appropriate, prevent problems related to the patient's drug therapy.
Pharmaceutical or pharmacological profile	A list that includes the drugs recorded in a patient's chart by the patient's community pharmacy or pharmacies, or the pharmacy department of an institution. It provides a minimum of three months of prescription history and includes allergies, intolerances, unused prescription medication, patient adherence and any other information necessary for the continuity of care.
Pharmaceutical services	All activities performed by a pharmacist or a person under their responsibility to support the pharmaceutical care process. Pharmaceutical services can be provided to meet the needs of patients either directly or indirectly. They include activities related to the medication circuit, support activities for other professionals, care organizations or government authorities.
Pharmacokinetics	The science that studies what becomes of the active ingredient and its derivatives in the body, from its absorption to its elimination over time.
Pharmacology	The science that deals with the characteristics, effects, and use of drugs and their interactions with the living organism.
Prescription	The authorization of a health professional authorized by law to provide a person or group of persons with a drug, treatment, examination or care; the prescription may be for an individual or a group.
Recording	Recording of any information influencing the drug therapy evaluation of patient records.
Side effect	An effect that is undesired in terms of the therapeutic objective of the use of a given drug.
Standards of practice	Documents specifying the expectations of the Ordre des pharmaciens du Québec regarding the current and future practice of pharmacists. The statements that make up the document form a representative framework for the provision of quality, safe and optimal pharmaceutical services by pharmacists practising in Québec.
Traceability	Ability to find, for a given object, the trace of each step of its design, manufacture and dispensing as well as the origin of its components. Traceability firstly allows quality control to be ensured for the entire production circuit of a good, whatever it is.

Harmonization

The Ministère de l'Éducation et de l'Enseignement supérieur harmonizes its vocational and technical programs by establishing similarities and continuity between secondary- and college-level programs within a particular sector or between sectors, in order to avoid overlap in program offerings, recognize prior learning and facilitate the students' progress.

Harmonization establishes consistency between training programs and is especially important in ensuring that the tasks of a trade or occupation are clearly identified and described. Harmonization makes it possible to identify tasks requiring competencies that are common to more than one program. Even if there are no common competencies, training programs are still harmonized.

Harmonization is said to be "inter-level" when it focuses on training programs at different levels, "intra-level" when it focuses on programs within the same educational level, and "inter-sector" when carried out between programs in various sectors.

An important aspect of harmonization is that it allows the common features of competencies to be identified and updated as needed. Common competencies are those that are shared by more than one program; once acquired in one program, they can be recognized as having been acquired in another. Competencies with exactly the same statement and elements are said to be identical. Common competencies that are not identical but have enough similarities to be of equal value are said to be equivalent.

Harmonization of the *Pharmacy Technology* program has resulted in identifying competencies that are shared with other programs. Detailed information on the harmonization of this program and its results are presented in the document entitled *Pharmacy Technology Harmonization Tables (165.AO).*

Occupational Health and Safety Hazards

This section expands on the risks associated with the competencies in the *Pharmacy Technology* program.

The table below, "Sources and Levels of Risk for Each Competency," links competencies with the six sources of risk listed in the following typology. It also indicates whether the risk level is high or low. These levels of risk are provided for information purposes only since they vary depending on the operations carried out and the achievement context. The table serves as a guide for teachers to planning progressive learning activities, a way of organizing their teaching in compliance with occupational health and safety in the workplace.

Typology of occupational health and safety in the workplace with a list of dangers and hazardous situations:

- Chemical hazards or dangers:
- Form of substance (solid, liquid, aerosol, gas, etc.) and exposure (inhalation, absorption through the skin, ingestion, etc.)
- Physical hazards or dangers:
- Electrical hazards
- Thermal hazards
- Noise
- Vibration
- Other physical hazards

Biological hazards or dangers:

- Form of substance (dust, mist, fluid, etc.) and exposure (inhalation, absorption through the skin, ingestion, cuts, etc.)
- Ergonomic hazards or dangers:
- Constrained postures
- Excessive effort
- Repetitive movements

Safety hazards or dangers:

- Hazards related to general mechanical phenomena
- Hazards related to moving parts, tools or vehicles
- Risk of falling (workers and objects)
- Hazards linked to confined spaces
- Fire or explosion hazards
- Violence in the workplace

Psychosocial hazards or dangers:

- Factors associated with the nature of the work
- Factors related to the organization of the work
- Social factors

Sources and levels of risk for each competency							
NUMBER OF THE COMPETENCE	Pharmacy Technology	Chemical hazards or dangers	Physical hazards or dangers	Biological hazards or dangers	Ergonomic hazards or dangers	Psychosocial hazards or dangers	Safety hazards or dangers
	STATEMENT OF THE COMPETENCY	1	2	3	4	5	6
1	Analyze the work function						
2	Develop an integrated view of the human organism						
3	Describe the main problems of health and diseases						
4	Identify drug characteristics						
5	Analyze the use of drugs and their effects on the human organism						
6	Process mathematical data related to pharmaceutical activities						
7	Prevent harmful effects on health, safety and the environment	○	○	○	○	○	○
8	Use information and telecommunications technologies				○	○	
9	Use equipment and devices		○		○	○	
10	Interact in a professional context					○	○
11	Coordinate drug packaging	●	●	●	●	●	●
12	Coordinate the compounding of non-sterile preparations	●	●	●	●	●	●
13	Coordinate the compounding of sterile preparations	●	●	●	●	●	●
14	Collaborate in the administrative operation of a pharmacy					○	
15	Collaborate in quality control and continuous improvement					○	
16	Manage the technical staff of the pharmacy				○	○	○
17	Control supply chain operations	○	○	○	○	○	○
18	Control activities related to the medication circuit	○	○	○	○	○	○
19	Manage technologies related to the medication circuit	○	○	○	○	○	○
20	Collaborate in drug therapy management	○	○	○	○	○	○
21	Collaborate in clinical studies	○	○	○	○	○	○

Risk levels

Risk levels are indicated according to their frequency, duration or intensity, and not according to the severity of their effects on personal health and safety.

Low risk: ○ High risk: ●

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