

# ***ARTS AND SCIENCES***

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***PRE-UNIVERSITY PROGRAM  
700.A0***



## Identification du programme

**Titre du programme :** Sciences, lettres et arts

**Numéro du programme :** 700.A0

**Type de sanction :** Diplôme d'études collégiales

**Conditions particulières d'admission :** Mathématique 536  
Physique 534  
Chimie 534

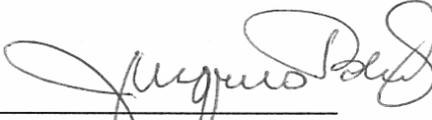
**Nombre d'unités :** 59 1/3

— formation générale : 21 1/3 ou 22 2/3  
— formation spécifique : 36 2/3 ou 38  
— dont au moins : 12 en Sciences de la nature  
8 en Sciences humaines  
4 en Arts  
8 en Mathématique

**Nombre d'heures-contact totales :** 1 575

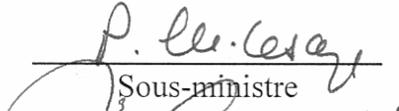
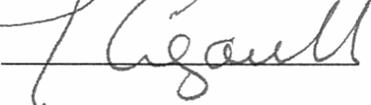
— formation générale : 525 ou 570  
— formation spécifique : 1 005 ou 1 050

Recommandations

  
\_\_\_\_\_  
Sous-ministre adjoint

2000.10.31  
Date

Approbation du ministre

  
\_\_\_\_\_  
Sous-ministre  


00.11.04  
Date  
00 11 23  
Date

## Identification of the Program

<b>Program title:</b>	Arts and Sciences
<b>Program number:</b>	700.A0
<b>Type of certification:</b>	Diploma of College Studies
<b>Prerequisites:</b>	Mathematics 536 Physics 534 Chemistry 534
<b>Number of credits:</b>	59 1/3
— General education component:	21 1/3 or 22 2/3
— Specific program component:	36 2/3 or 38
— with at least:	12 in Science 8 in Social Science 4 in Arts 8 in Mathematics
<b>Total hours of instruction:</b>	1 575
— General education component:	525 or 570
— Specific program component:	1 005 or 1 050

## Décision relative à la modification d'un programme d'études préuniversitaires

### IDENTIFICATION DU PROGRAMME

Titre et numéro du programme : Sciences, lettres et arts (700.A0)

Type de sanction : Diplôme d'études collégiales

Nombre total d'unités allouées pour le programme : 59 1/3

Nombre d'heures-contact allouées pour le programme : 1 575

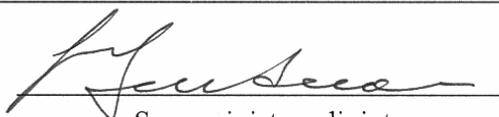
#### Modifications proposées :

- ajouter les tableaux d'équivalences entre le programme Sciences, lettres et arts (700.A0) et les programmes Sciences de la nature (200.B0), Sciences humaines (300.A0), Histoire et civilisation (700.B0), Arts plastiques (510.A0) et la formation générale complémentaire;
- ajouter le tableau d'équivalences entre la formation générale commune du régime 3 et celle du régime 2.

Session et année d'entrée en vigueur : Automne 2001

### APPROBATION

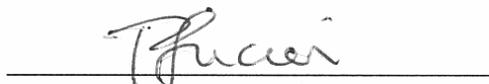
Recommandations :



Sous-ministre adjoint  
Enseignement supérieur

19/11/03

Date



Sous-ministre

03.11.24

Date

Approbation du ministre :



03.11.27

Date



Ministère de l'Éducation,  
du Loisir et du Sport

**Décision relative à la modification  
d'un programme d'études préuniversitaires**

**IDENTIFICATION DU PROGRAMME**

Titre et numéro du programme : Sciences, lettres et arts (700.A0)

Type de sanction : Diplôme d'études collégiales

Nombre total d'unités allouées pour le programme : 59 1/3

Nombre d'heures-contact allouées pour le programme : 1 575

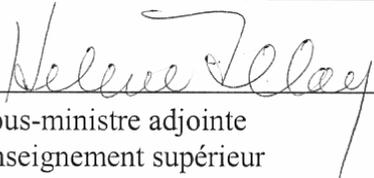
Modification proposée :

- Mise à jour du tableau d'équivalences entre le programme *Sciences, lettres et arts (700.A0)* et le programme *Histoire et civilisation (700.B0)*.

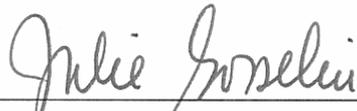
Session et année d'entrée en vigueur : Automne 2001

**APPROBATION**

Recommandations :

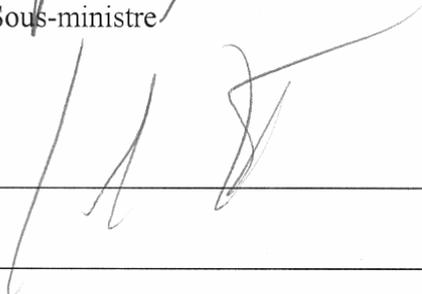
  
Sous-ministre adjointe  
Enseignement supérieur

19 fev. 06  
Date

  
Sous-ministre

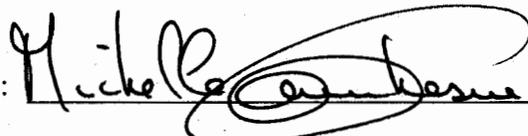
06.02.24.  
Date

Approbation du ministre :



06.03.24  
Date

**Décision relative à la modification  
des conditions particulières d'admission  
pour certains programmes d'études préuniversitaires**

Type de sanction :	Diplômes d'études collégiales
Modifications proposées :	Modifier, pour les programmes concernés, les conditions particulières d'admission pour celles apparaissant à l'annexe.
Session et année d'entrée en vigueur :	Automne 2010
<b>APPROBATION DES PROGRAMMES</b>	
Recommandations :	
 Sous-ministre adjointe Enseignement supérieur	<u>09/12/08</u> Date
 Sous-ministre	<u>2008.12.29</u> Date
Approbation de la ministre :	 <u>2009/01/20</u> Date

Annexe

**NOUVELLES CONDITIONS PARTICULIÈRES D'ADMISSION  
POUR LES PROGRAMMES D'ÉTUDES PRÉUNIVERSITAIRES  
À COMPTER DE L'AUTOMNE 2010**

No	Titre du programme	Préalable actuel	Préalable A-2010
			La légende au bas de la liste donne la signification des abréviations
200.B0	Sciences de la nature	Mathématique 536 Physique 534 Chimie 534	TS ou SN 5 <sup>e</sup> Physique 5 <sup>e</sup> Chimie 5 <sup>e</sup>
200.C0	Sciences informatiques et mathématiques	Mathématique 536 Physique 534 Chimie 534	TS ou SN 5 <sup>e</sup> Physique 5 <sup>e</sup> Chimie 5 <sup>e</sup>
300.A0	Sciences humaines	Mathématique 526 ou Mathématique 536 (pour les objectifs 022X, 022Y et 022Z)	TS ou SN 5 <sup>e</sup> (pour les objectifs 022X, 022Y et 022Z)
501.A0	Musique	Musique 534	Musique 5 <sup>e</sup>
700.A0	Sciences, lettres et arts	Mathématique 536 Physique 534 Chimie 534	TS ou SN 5 <sup>e</sup> Physique 5 <sup>e</sup> Chimie 5 <sup>e</sup>
700.B0	Histoire et civilisation	Mathématique 526 ou Mathématique 536 (pour les objectifs 022X, 022Y et 022Z)	TS ou SN 5 <sup>e</sup> (pour les objectifs 022X, 022Y et 022Z)

**Signification des abréviations des nouveaux cours préalables**

**Mathématique**

TS 5<sup>e</sup> Mathématique, séquence Technico-sciences de la 5<sup>e</sup> secondaire (064506)

SN 5<sup>e</sup> Mathématique, séquence Sciences naturelles de la 5<sup>e</sup> secondaire (065506)

**Science et technologie**

Chimie 5<sup>e</sup> Chimie de la 5<sup>e</sup> secondaire (051504)

Physique 5<sup>e</sup> Physique de la 5<sup>e</sup> secondaire (053504)

**Arts**

Musique 5<sup>e</sup> Musique, formation obligatoire de la 5<sup>e</sup> secondaire (169502)

## ACKNOWLEDGMENTS

The development of this program was made possible by the close cooperation of colleges and universities.

The Direction de l'enseignement collégial of the Ministère de l'Éducation would like to thank the members of the Advisory Committee for General Education, the Expanded Steering Committee for the Follow-up and Coordination of Field Testing Projects for the Sciences, Arts and Mathematics Program, and the Advisory Committee for the Pre-University Arts and Sciences Program for their part in developing this program. Many people—academic deans, teachers, university representatives—have participated in the work of these committees over the past few years.

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André Carrier, teacher, Cégep de Lévis-Lauzon  
Gaston Côté, Ministère de l'Éducation  
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Bruce Wallace, Ministère de l'Éducation

Members of the Advisory Committee for the Pre-University Arts and Sciences Program:

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Raymond Boulanger, teacher, Collège Laflèche  
Suzanne Fauteux, coordinator of cycle one professional development and continuing education, Université de Montréal  
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Jacques Raynauld, teacher, École des Hautes Études Commerciales  
Jacques Richard, academic dean, Collège Jean-de-Brébeuf  
Micheline Roy, academic dean, Cégep de Sherbrooke  
Nicole Vigeant, academic dean, Cégep de Rimouski

## HARMONIZATION

**Source program : *Science***

**Target program : *Arts and sciences***

A student who has achieved one or more of the objectives of the *Science* program can obtain credit for the equivalent objective or objectives of the *Arts and sciences* program after enrolling in that program.

<b>Science (200.B0)</b>		<b>Arts and sciences (700.A0)</b>
00UN To apply the methods of differential calculus to the study of functions and problem solving.	➔ 1	01Y1 To solve problems using differential calculus.
00UP To apply the methods of integral calculus to the study of functions and problem solving.	➔	01Y2 To solve problems using integral calculus.
00UQ To apply the methods of linear algebra and vector geometry to problem solving.	➔ 2	01Y4 To solve problems using linear algebra and vector geometry.
00UK To analyze the organization, functioning and diversity of living beings. ----- 00XU To analyze the structure and functioning of multicelled organisms in terms of homeostasis and from an evolutionary perspective.	➔	01Y5 To analyze the structural and functional relationships that characterize living organisms as they evolve in their environment.
00UL To analyze chemical and physical changes in matter using concepts associated with the structure of atoms and molecules.	➔ 3	01Y6 To solve problems associated with chemical changes in matter.
00XV To solve simple problems in organic chemistry. ----- 00UM To analyze the properties of solutions and reactions in solutions.	➔	01YH To analyze the mechanisms of reactions.
00UR To analyze various situations and phenomena in physics using the basic principles of classical mechanics.	➔	01Y7 To interpret natural phenomena using models from mechanical physics.
00US To analyze various situations and phenomena in physics using the basic laws of electricity and magnetism.	➔	01YF To interpret natural phenomena using the laws of electricity and magnetism.
00UT To analyze various situations or phenomena associated with waves, optics and modern physics using basic principles.	➔	01YG To interpret natural phenomena using optics, wave physics and modern physics.

<sup>1</sup> 00UN → 01Y1 : L'Hospital's Rule omitted in 00UN.

<sup>2</sup> 00UQ → 01Y4 : Demonstration of properties omitted in 01Y4.

<sup>2</sup> 00UQ → 01Y4 : Complex numbers omitted in 00UQ.

<sup>3</sup> 00UL → 01Y6 : Organic compounds, classes and nomenclature, basic reduction and oxidation (redux) omitted in 00UL.

**Source program : *Social science***

**Target program : *Arts and sciences***

A student who has achieved one or more of the objectives of the *Social science* program can obtain credit for the equivalent objective or objectives of the *Arts and sciences* program after enrolling in that program.

<b>Social science (300.A0)</b>		<b>Arts and sciences (700.A0)</b>
022W To apply advanced statistical tools, based on the probability theory, to decision making in contexts of study in the field of Social Science.	➔	01Y3 To analyze phenomena using the statistical method.
022L To recognize, from a historical perspective, the fundamental characteristics of Western civilization. ----- 022Q To apply the scientific approach used in the field of Social Science to empirical research.	➔	01Y8 To show the importance of historical heritage in the development of Western civilization.
022K To explain the foundations of human behaviour and mental processes. ----- 022Q To apply the scientific approach used in the field of Social Science to empirical research.	➔	01Y9 To consider the influence of individual and social factors on human behaviour.

**Source program : *Liberal arts***

**Target program : *Arts and sciences***

A student who has achieved one or more of the objectives of the *Liberal arts* program can obtain credit for the equivalent objective or objectives of the *Arts and sciences* program after enrolling in that program.

<b>Liberal arts (700.B0)</b>		<b>Arts and sciences (700.A0)</b>
032D To demonstrate the importance and the extent of the contribution of ancient civilization to the development of the Western world. ----- 032E To analyze the historical development of the postclassical western world (from the 6 <sup>th</sup> to the 20 <sup>th</sup> century).	➔	01Y8 To show the importance of historical heritage in the development of Western civilization.
032H To analyze art and artistic achievement as a cultural reality in the history of Western civilization.	➔	01YC To interpret works of art from different periods.
022W To apply advanced statistical tools, based on the probability theory, to decision making in contexts of study in the field of Social Science.	➔	01Y3 To analyze phenomena using the statistical method.

**Source program : *Fine arts***

**Target program : *Arts and sciences***

A student who has achieved one or more of the objectives of the *Fine arts* program can obtain credit for the equivalent objective or objectives of the *Arts and sciences* program after enrolling in that program.

<b>Fine arts (510.A0)</b>		<b>Arts and sciences (700.A0)</b>
0164 To characterize the elements of visual language.	➔	01YD To create two- and three-dimensional works.
0169 To interpret art works by placing them in their original context.	➔	01YC To interpret works of art from different periods.

**Source program : *Complementary general education***

**Target program : *Arts and sciences***

A student who has achieved one or more of the objectives of the general education component can obtain credit for the equivalent objective or objectives of the *Arts and sciences* program after enrolling in that program.

<b>Complementary general education</b>		<b>Arts and sciences (700.A0)</b>
000Z To communicate with limited skill in a modern language.	➔	01YM To communicate at a rudimentary level in a modern language.
0010 To communicate on familiar topics in a modern language.	➔	01YN To communicate on familiar subjects in a modern language.
0067 To communicate with relative ease in a modern language.	➔	01YP To communicate with a certain degree of ease in a modern language.

**Source program : *General education common to all programs (Regulation 2)***

**Target program : *General education common to all programs (Regulation 3)***

A student who has achieved one or more of the objectives of the general education component under Regulation 2 can obtain credit for the equivalent objective or objectives of the general education component under Regulation 3.

<b>General education common to all programs (Regulation 2)</b>		<b>General education common to all programs (Regulation 3)</b>
000D Traiter d'une question philosophique de façon rationnelle.	➔	00B1 Traiter d'une question philosophique de façon rationnelle.
000H Se situer en regard de l'activité physique.	➔	0064 To establish the role that being physically active plays amongst the lifestyle behaviours which promote health.
000J Pratiquer l'activité physique de façon autonome.	➔	0065 To improve one's effectiveness when practicing a physical activity.
000F To apply a logical analytical process to how knowledge is organized and used.	➔	00B2 To apply a logical analytical process to how knowledge is organized and used.



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## INTRODUCTION TO THE PROGRAM

The Arts and Sciences Program is a pre-university program aimed at all those who wish to explore an expanded range of knowledge—in science, mathematics, the social sciences, the creative arts and the humanities—and to acquire the basic learning and skills that such studies provide. This program combines the humanistic and scientific approaches, and is as much at home in contemporary culture as in a context where the implementation of learning strategies facilitates the establishment of links between these fields. It also emphasizes each person's ability to take charge of his or her learning process, and to become more autonomous and more capable of using formal analysis in different situations. The program's broad scope fosters the acquisition of comprehensive general knowledge, thereby giving students the background required for almost all university programs.\*

Another original feature of the program is the relationship it establishes among the various subjects, in order to attain the objectives that have been set and develop the competencies that are targeted. It also stands out for its enrichment of the objectives and standards in the language of instruction, literature and philosophy. Finally, this program is intended for all those who have a strong interest in intellectual work and the potential to do well in college.

This program was designed in keeping with the commitments made to the universities in the early stages of field testing, and in accordance with the framework for the development of pre-university programs of the Direction des programmes d'études et de la recherche. This framework:

- harmonizes pre-university programs with university-level programs
- encourages the program approach
- fosters a type of education centred on mastery of learning, using a competency-based approach
- fosters a type of education that contributes to the overall development of the person

This framework requires participation by partners from the colleges and universities. Indeed, the development of pre-university programs in terms of objectives and standards is carried out with the cooperation of advisory committees composed of university representatives and academic deans and teachers in colleges.

The Arts and Sciences Program includes a general education component that is common to all college programs, a general education component that is adapted to the program and a specific program component. The program does not, however, have any complementary general education components since the corresponding educational goals and intentions are adequately covered by the diversity of its fields of knowledge.

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\* With the exception of fine arts, music and dance.

Moreover, since students registered in the Arts and Sciences Program pursue only two of the general education objectives in physical education, colleges will adapt their educational projects accordingly, along with the expected results set out in the appendix.

This document has two parts. The first part presents an overview of the program, and the second part describes the objectives and standards for general education and specific education.

## **VOCABULARY USED**

### **Program**

A program is an integrated set of learning activities leading to the achievement of educational objectives based on set standards (*College Education Regulations*, section 1).

### **Aim**

The aim of pre-university programs is to prepare students for university through training emphasizing the integration of general and specific education and the transfer of learning. The aim must also reflect the requirements of an educational continuum oriented toward success in university.

### **General Goals**

The general goals of pre-university programs guide the development of each program by indicating outcomes that should result in consistency, integration and the transfer of learning. By facilitating the coordination of the educational intent of general education with that of specific education, the general goals clarify the aim of the program, which is for the students to acquire skills essential for success in university.

### **Competencies**

In pre-university education, competencies are based on knowledge, skills, attitudes and so on, whose acquisition or mastery is necessary for success in specific fields in university.

### **Objectives**

The objectives of pre-university programs determine the results expected of the students. It is by attaining objectives and standards that the students acquire or master the competencies specific to the college level that are necessary to pursue university studies in particular fields.

When pre-university programs are developed and presented by the Ministère, each objective is formulated in terms of a competency and includes a statement of the competency and its elements.

## **Statement of the competency**

The statement of the competency is the result of an analysis of the needs of general education and those of university education.

## **Elements**

The elements of the objective, formulated in terms of a competency, specify its essential components. They include only what is necessary in order to understand and achieve the competency.

## **Standard**

The standard is the level of performance at which an objective is considered to be achieved (*College Education Regulations*, section 1). It is by attaining objectives and standards that the students acquire or master the competencies specific to the college level that are necessary to pursue university studies in particular fields.

## **Performance criteria**

The performance criteria define the requirements for recognition of the attainment of the objective. All the criteria must be respected for the objective to be attained.

## **Learning activities**

The aspects of learning activities which the minister can determine in whole or in part are the field of studies, the discipline or disciplines, the course weighting, the number of contact hours, the number of course credits, and such specific indications as are deemed essential.

***PART ONE:***  
***OVERVIEW***





## **THE AIM OF THE PROGRAM**

The Arts and Sciences Program is intended to give students a comprehensive education that will equip them to enter all university programs.\*

## **GENERAL GOALS OF THE PROGRAM**

The general goals of the program are to enable students:

- to situate and connect the characteristics of the subjects studied
- to assimilate concepts and work methods required to study in the various fields of knowledge
- to use intellectual work methods and study techniques
- to use information and communications technologies (ICT)
- to communicate clearly and correctly
- to take charge of their own personal and social development

Each college determines the ways in which the general goals of the program are taken into consideration. These goals may be expressed using the vocabulary and logic of each discipline selected by the institution for the implementation of the program. Moreover, each course may contribute to the full or partial attainment of one or more of these goals. What is important is that all the goals be represented in one or more courses, and that they become specific focuses of teaching and learning, because they are recognized as essential to university studies and the Diploma of College Studies in Arts and Sciences must attest to their achievement.

## **EXPLANATION OF THE GENERAL GOALS OF THE PROGRAM**

Each general goal is explained as follows.

### **To situate and connect the characteristics of the subjects studied**

To situate and connect the subjects and phenomena studied in different fields of knowledge, students must not only be familiar with the key concepts, laws and principles that characterize these fields but must be able to:

- establish links among the theories, approaches and methodologies specific to the various subjects by situating them in their historical, social, cultural, scientific, literary and artistic contexts

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\* With the exception of fine arts, music and dance.

- understand the scope and limits of the scientific approach as a way of constructing knowledge
- recognize the contributions of science, technology, literature and the arts to the development of society

In each course, the choice of learning activities must reflect a constant concern for opening the way to other fields of knowledge.

### **To assimilate concepts and work methods required to study in the various fields of knowledge**

Assimilation—which is not an end in itself—must take place in the context of analysis, research, creation, discussion, verification, criticism and stocktaking with respect to the works, phenomena and problems dealt with in the program. All of the courses must focus on this goal, to enable students to:

- discuss questions and themes spanning several subjects
- analyze, assess and criticize works, texts and theses
- solve problems
- analyze phenomena using approaches from different disciplines
- conduct research and carry out projects pertaining to situations, problems or issues by drawing on several fields of knowledge

### **To use intellectual work methods and study techniques**

To ensure that students master the work methods required to pursue university studies, the program must focus explicitly on the development of a certain number of practical skills. The work methods used must contribute to the integration of the various fields of knowledge and to the establishment of links among them. For these reasons, students must learn to:

- manage their time
- develop good note-taking habits
- apply effective reading techniques
- apply summarizing techniques
- carry out documentary research
- adopt good lab-work practices.

### **To use information and communications technologies (ICT)**

The students must acquire the ability to choose and use the technological resources placed at their disposal:

- various types of information processing software, such as word processing, data processing and learning software
- various data retrieval, documentation and communication systems (Internet, intranet, etc.)

### **To communicate clearly and correctly**

Mastery of written and spoken language is essential for the clear expression of ideas. All the courses in the program must contribute to the development of the following capacities:

- to present an argument, analysis, commentary, process, result or work in the appropriate form
- to draft social, literary and scientific texts
- to express oneself effectively in presentations or discussions in small or large groups

With respect to second language studies, the emphasis will be on the development of reading skills.

### **To take charge of their own personal and social development**

Aside from strictly academic learning, the program must provide students with concrete opportunities to participate in their own education and to become personally involved in their development. Throughout their studies, they must:

- add to their stock of cultural knowledge
- express their interest in culture, science, social science, the creative arts and literature
- be concerned with the ethical impact of science and technology on individuals and societies
- know how to conduct themselves in society
- make physical activity a part of their lifestyle in order to stay healthy
- demonstrate autonomy and a commitment to the successful pursuit of university studies

## **THE GOALS OF GENERAL EDUCATION**

In Quebec, college is the next stage after the compulsory years of schooling (elementary and secondary school) during which students acquire basic knowledge and skills. It represents a major crossroads in that there is greater emphasis on the cultural aspect of academic subjects and leads students directly to the labour market or to university. The college system is responsive to current needs with respect to technical and pre-university education. It allows students to further their education without, however, narrowing their options, since they may switch from one type of program to the other. Finally, it provides students with a well-rounded, balanced education.

Each college program features a general education component that is common to all programs, one that is adapted to the specific field of study, and one that is complementary. The goals of general education are to provide students with a common cultural core, to help them learn and develop generic skills, and to foster desirable attitudes. The desired outcomes are to educate students, to prepare them for their role as responsible members of society and to enable them to share in the common cultural heritage.

### **The common cultural core**

Transmission of the common cultural core is aimed at allowing students to develop or acquire the following:

- mastery of the language of instruction as a tool for communication and reflection, and mastery of the basic rules of rational thought, discourse and argumentation;
- the ability to communicate in other languages, primarily French or English;
- openness to the world and to cultural diversity;
- appreciation of the riches of their cultural heritage through familiarization with the accomplishments of human civilization;
- the ability to situate themselves with respect to the major schools of thought;
- the ability to think critically, independently and reflectively;
- personal and social ethics;
- mastery of knowledge relevant to the development of physical and intellectual well-being;
- awareness of the need to develop habits conducive to good health.

## Generic skills

General education allows students to acquire and develop the following generic skills:

- conceptualization, analysis and synthesis;
- coherent reasoning;
- critical judgment;
- articulate expression;
- the ability to apply what they have learned in analyzing situations;
- the ability to apply what they have learned in determining appropriate action;
- mastery of work methods;
- the ability to reflect on what they have learned.

## Desirable attitudes

Cultural literacy and generic skills help students to acquire and develop the following attitudes:

- autonomy;
- a critical sense;
- awareness of their responsibilities toward themselves and others;
- openmindedness;
- creativity;
- openness to the world.

These outcomes apply to the three general education components<sup>\*</sup>, more specifically:

- General education common to all programs<sup>\*\*</sup>, which is allotted 16 2/3 credits distributed as follows:
  - language of instruction and literature: 7 1/3 credits;
  - philosophy or humanities: 4 1/3 credits;
  - physical education: 3 credits;
  - second language: 2 credits.
- General education adapted to programs, which introduces tasks or learning situations that are relevant to the field of study. The breakdown of credits, for a total of 6, is as follows:
  - language of instruction and literature: 2 credits;
  - philosophy or humanities: 2 credits;
  - second language: 2 credits.

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<sup>\*</sup> In the Arts and Sciences program, there is two components in general education.

<sup>\*\*</sup> In the Arts and Sciences program, the total number of credits in the general education component common to all programs may vary. It may be 15 1/3 or 16 2/3 credits, distributed as follows:

- language of instruction and literature: 7 1/3 credits
- philosophy or humanities: 4 or 4 1/3 credits
- physical education: 2 or 3 credits
- second language: 2 credits

- Complementary general education <sup>\*\*\*</sup>, which allows students to complete their training with learning activities chosen with a view to achieving balance and complementarity in relation to the program-specific component. Students may choose courses for a total of 4 credits in the following areas:
  - social sciences;
  - science and technology;
  - modern languages;
  - mathematics literacy and computer science;
  - art and aesthetics.

The general and the specific education components are designed to contribute to students' education in an integrative fashion. In other words, the knowledge and skills transmitted in one component are reinforced and, whenever possible, reapplied in the other.

Each college-level institution must provide such general education through learning activities that are consistent with its educational project, within the framework of the stated outcomes, the given subject areas and ministerial guidelines.

All the sets of objectives and standards in the general education component are developed in keeping with the provisions of the *College Education Regulations* (R.S.Q., c. C-29, s. 18; 1993, c. 25, s. 11). Revised Edition, August 1998.

## **EDUCATIONAL INTENTIONS OF GENERAL EDUCATION**

The educational intentions explain in detail the contribution of each field of studies included in the three components of general education (common to all programs, adapted to programmes or complementary) to the achievement of the goals of general education. For the first two components, the educational intentions include a general statement of the role of each field of studies, the principles which underlie this role, the contribution of each field, in the form of outcome objectives, to the achievement of the goals of general education in terms of knowledge, abilities and attitudes, and an explanation of the sequence of objectives and standards.

The full text of the educational intentions may be found at the end of this document.

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<sup>\*\*\*</sup> In the Arts and Sciences program, the complementary general education is assumed by the specific education.

## **LIST OF PROGRAM OBJECTIVES**

### **GENERAL EDUCATION COMMON TO ALL PROGRAMS: 16 2/3 credits**

- 0004 To analyze and produce various forms of discourse.
- 0005 To apply a critical approach to literary genres.
- 0006 To apply a critical approach to a literary theme.
- 00B2 To apply a logical analytical process to how knowledge is organized and used.
- 000G To apply a critical thought process to world views.
- 0017 Appliquer les notions de base de la communication en français courant.  
ou
- 000A Communiquer en français avec une certaine aisance.  
ou
- 000B Communiquer avec aisance en français.  
ou
- 000C Traiter d'un sujet culturel et littéraire.

*The college must ensure that the student is able to pursue at least two of the three physical education objectives:*

- 0064 To establish the role that being physically active plays amongst the lifestyle behaviours which promote health.
- 0065 To improve one's effectiveness when practising a physical activity.
- 0066 To demonstrate one's responsibility for being physically active in a manner which promotes health.

### **GENERAL EDUCATION ADAPTED TO PROGRAMS: 6 credits**

- 000L To communicate in the forms of discourse appropriate to one or more fields of study.
- 000U To apply a critical thought process to ethical issues relevant to the field of study.
- 0018 Appliquer des notions fondamentales de la communication en français, liées à un champ  
ou d'études.
- 000Q Communiquer en français dans un champ d'études particulier.  
ou
- 000R Communiquer avec aisance en français dans un champ d'études particulier.  
ou
- 000S Dissserter en français sur un sujet lié au champ d'études.

**SPECIFIC PROGRAM COMPONENT: 36 2/3 or 38 credits**

**Objectives and standards common to all students in the program**

- 01Y0 To assess the contribution of works of literature and philosophy to human experience
- 01Y1 To solve problems using differential calculus.
- 01Y2 To solve problems using integral calculus.
- 01Y3 To analyze phenomena using the statistical method.
- 01Y4 To solve problems using linear algebra and vector geometry.
- 01Y5 To analyze the structural and functional relationships that characterize living organisms as they evolve in their environment.
- 01Y6 To solve problems associated with chemical changes in matter.
- 01Y7 To interpret natural phenomena using models from mechanical physics.
- 01Y8 To show the importance of historical heritage in the development of Western civilization.
- 01Y9 To consider the influence of individual and social factors on human behaviour.
- 01YA To make a judgment of fact on the dynamics of social change.
- 01YB To deal with current questions associated with the international economy and politics.
- 01YC To interpret works of art from different periods.
- 01YD To create two- and three-dimensional art works.
- 01YE To demonstrate their integration of the learning in the Arts and Sciences program.

**At least three objectives and standards from the objectives given below must be chosen. Two of these objectives and standards must be from Science, while the other may come from Social Science or from Creative Arts and Literature.**

01YF To interpret natural phenomena using the laws of electricity and magnetism.

01YG To interpret natural phenomena using optics, wave physics and modern physics.

01YH To analyze the mechanisms of reactions.

01YJ To analyze, from an evolutionary perspective, the adaptation of multicellular organisms to their environment.

01YK To create a work of art.

01YL To discuss major problems of our time using more than one approach from the social sciences.

01YM To communicate at a rudimentary level in a modern language.

01YN To communicate on familiar subjects in a modern language.

01YP To communicate with a certain degree of ease in a modern language.







*SECOND PART*

**PROGRAM OBJECTIVES AND STANDARDS**



**GENERAL EDUCATION COMMON TO ALL PROGRAMS**



OBJECTIVE	STANDARD
<p><b>Statement of the competency</b></p> <p>To analyze and produce various forms of discourse.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. To identify the characteristics and functions of the components of discourse.</li> <li>2. To determine the organization of facts and arguments of a given discourse.</li> <li>3. To prepare ideas and strategies for a projected discourse.</li> <li>4. To formulate a discourse.</li> <li>5. To edit the discourse.</li> </ol>	<p><b>Performance criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Accurate explanation of the denotation of words.</li> <li>1.2 Adequate recognition of the appropriate connotation of words.</li> <li>1.3 Accurate definition of the characteristics and function of each component.</li> <li>2.1 Clear and accurate recognition of the main idea and structure.</li> <li>2.2 Clear presentation of the strategies employed to develop an argument or thesis.</li> <li>3.1 Appropriate identification of topics and ideas.</li> <li>3.2 Adequate gathering of pertinent information.</li> <li>3.3 Clear formulation of a thesis.</li> <li>3.4 Coherent ordering of supporting material.</li> <li>4.1 Appropriate choice of tone and diction.</li> <li>4.2 Correct development of sentences.</li> <li>4.3 Clear and coherent development of paragraphs.</li> <li>4.4 Formulation of a 750-word discourse.</li> <li>5.1 Thorough revision of form and content.</li> </ol>
<p><b>LEARNING ACTIVITIES</b></p>	
<p><b>Discipline:</b> English  <b>Weighting:</b> 2-2-4, 1-3-4  <b>Credits:</b> 2 2/3</p>	

OBJECTIVE	STANDARD
<p><b>Statement of the competency</b></p> <p>To apply a critical approach to literary genres.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. To distinguish genres of literary discourse.</li> <li>2. To recognize the use of literary conventions within a specific genre.</li> <li>3. To situate a discourse within its historical and literary period.</li> <li>4. To explicate a discourse representative of a literary genre.</li> </ol>	<p><b>Performance criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Clear recognition of the formal characteristics of a literary genre.</li> <li>2.1 Accurate recognition of the figurative communication of meaning.</li> <li>2.2 Adequate explanation of the effects of significant literary and rhetorical devices.</li> <li>3.1 Appropriate recognition of the relationship of a text to its period.</li> <li>4.1 Selective use of appropriate terminology.</li> <li>4.2 Effective presentation of a 1000-word integrated response to a text.</li> </ol>

LEARNING ACTIVITIES

**Discipline:** English  
**Weighting:** 2-2-3  
**Credits:** 2 1/3

OBJECTIVE	STANDARD
<p><b>Statement of the competency</b></p> <p>To apply a critical approach to a literary theme.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. To recognize the treatment of a theme within a literary text.</li> <li>2. To situate a literary text within its cultural context.</li> <li>3. To detect the value system inherent in a literary text.</li> <li>4. To explicate a text from a thematic perspective.</li> </ol>	<p><b>Performance criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Clear recognition of elements within the text which define and reinforce a theme and its development.</li> <li>1.2 Adequate demonstration of the effects of significant literary and rhetorical devices.</li> <li>2.1 Appropriate recognition of a text as an expression of cultural context.</li> <li>2.2 Adequate demonstration of the effects of significant literary and rhetorical devices.</li> <li>3.1 Appropriate identification of expression (explicit/implicit) of a value system in a text.</li> <li>4.1 Selective use of an appropriate terminology.</li> <li>4.2 Effective presentation of a 1000-word integrated response to a text.</li> </ol>

LEARNING ACTIVITIES

**Discipline:** English  
**Weighting:** 2-2-3  
**Credits:** 2 1/3

OBJECTIVE	STANDARD
<p><b>Statement of the competency</b></p> <p>To apply a logical analytical process to how knowledge is organized and used.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. To recognize the basic elements of a field of knowledge.</li> <li>2. To define the modes of organization and utilization of a field of knowledge.</li> <li>3. To situate a field of knowledge within its historical context.</li> <li>4. To organize the main components into coherent patterns.</li> <li>5. To produce a synthesis of the main components.</li> </ol>	<p><b>Performance criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Appropriate description of the basic elements.</li> <li>1.2 Appropriate use of terminology relevant to fields of knowledge.</li> <li>2.1 Adequate definition of the dimensions, limits, and uses of fields of knowledge.</li> <li>3.1 Accurate identification of the main components in the historical development of fields of knowledge.</li> <li>3.2 Accurate description of the effects of historical development and societal milieu on the limitations and uses of a field of knowledge.</li> <li>4.1 Coherent organization of the main components.</li> <li>5.1 Appropriate analysis of the components.</li> <li>5.2 Coherent synthesis of the main components.</li> <li>5.3 Appropriate expression, including a significant individual written component, of an analysis of the context, importance and implications of the organization and uses of knowledge.</li> </ol>

LEARNING ACTIVITIES

**Discipline:** Humanities  
**Weighting:** 3-1-3  
**Credits:** 2 1/3

OBJECTIVE	STANDARD
<p><b>Statement of the competency</b></p> <p>To apply a critical thought process to world views.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. To describe world views.</li> <li>2. To explain the major ideas, values, and implications of a world view.</li> <li>3. To organize the ideas, values and experiences of a world view into coherent patterns.</li> <li>4. To compare world views.</li> </ol>	<p><b>Performance criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Accurate description of a society or group with a distinctive world view.</li> <li>1.2 Appropriate use of terminology relevant to these societies or groups.</li> <li>2.1 Adequate explanation of the salient components of a world view.</li> <li>3.1 Coherent organization of ideas about a world view.</li> <li>3.2 Appropriate expression, including a significant individual written component, of an analysis of the context, importance, and implications of world views.</li> <li>4.1 Comparative analysis of these world views.</li> <li>4.2 Appropriate inclusion of central elements, relationships, and organizational principles of the societies or groups in the analysis.</li> </ol>

LEARNING ACTIVITIES

**Discipline:** Humanities  
**Weighting:** 3-0-3  
**Credits:** 2

OBJECTIF	STANDARD
<p><b>Énoncé de la compétence</b></p> <p>Appliquer les notions de base de la communication en français courant.</p> <p><b>Éléments</b></p> <p>1. Dégager le sens d'un message oral simple.</p> <p>2. Émettre un message oral simple.</p> <p>3. Dégager le sens d'un texte.</p> <p>4. Rédiger un texte simple.</p>	<p><b>Critères de performance</b></p> <p>1.1 Repérage précis des difficultés de compréhension du message.</p> <p>1.2 Utilisation pertinente des techniques d'écoute choisies.</p> <p>1.3 Distinction précise du sens général et des idées essentielles du message.</p> <p>1.4 Description précise du sens général et des idées essentielles du message.</p> <p>2.1 Repérage précis des difficultés d'expression.</p> <p>2.2 Utilisation pertinente des techniques d'expression orales choisies.</p> <p>2.3 Emploi pertinent du vocabulaire courant.</p> <p>2.4 Expression intelligible du propos.</p> <p>3.1 Repérage précis des difficultés de compréhension du texte.</p> <p>3.2 Utilisation pertinente des techniques de lecture choisies.</p> <p>3.3 Distinction claire des principaux éléments du texte.</p> <p>3.4 Description précise du sens général et des idées essentielles d'un texte de 500 mots.</p> <p>4.1 Repérage précis des difficultés d'écriture.</p> <p>4.2 Utilisation pertinente des techniques d'écriture choisies.</p> <p>4.3 Emploi pertinent du vocabulaire courant.</p> <p>4.4 Formulation claire et cohérente d'un texte de 100 mots.</p>
<b>ACTIVITÉS D'APPRENTISSAGE</b>	
<p><b>Discipline:</b></p> <p><b>Pondération:</b></p> <p><b>Unités:</b></p>	<p>Français, langue seconde</p> <p>2-1-3</p> <p>2</p>

OBJECTIF	STANDARD
<p><b>Énoncé de la compétence</b></p> <p>Communiquer en français avec une certaine aisance.</p> <p><b>Éléments</b></p> <ol style="list-style-type: none"> <li>1. Interpréter un texte oral simple de trois minutes en français courant.</li> <li>2. Produire un texte oral planifié de cinq minutes en français courant.</li> <li>3. Interpréter un texte écrit en français courant.</li> <li>4. Rédiger un texte simple en français courant.</li> </ol>	<p><b>Critères de performance</b></p> <ol style="list-style-type: none"> <li>1.1 Distinction claire des principaux éléments du texte oral.</li> <li>1.2 Explication précise du sens des mots dans le texte.</li> <li>1.3 Repérage précis des idées et des sujets traités dans le texte.</li> <li>2.1 Emploi pertinent du vocabulaire courant.</li> <li>2.2 Respect du niveau de langue, du code grammatical et des règles de la prononciation.</li> <li>2.3 Formulation claire et cohérente du propos.</li> <li>3.1 Distinction claire des principaux éléments du texte.</li> <li>3.2 Explication précise du sens des mots dans le texte.</li> <li>3.3 Repérage précis des idées principales et de la structure d'un texte de 700 à 1000 mots.</li> <li>4.1 Respect du code grammatical et orthographique.</li> <li>4.2 Utilisation judicieuse des principaux éléments du corpus.</li> <li>4.3 Formulation claire et cohérente des phrases.</li> <li>4.4 Articulation cohérente des paragraphes.</li> <li>4.5 Rédaction d'un texte de 200 mots.</li> </ol>
<b>ACTIVITÉS D'APPRENTISSAGE</b>	
<p><b>Discipline:</b> <b>Pondération:</b> <b>Unités:</b></p>	<p>Français, langue seconde 2-1-3 2</p>

OBJECTIF	STANDARD
<p><b>Énoncé de la compétence</b></p> <p>Communiquer avec aisance en français.</p> <p><b>Éléments</b></p> <p>1. Produire un texte oral planifié de cinq minutes de complexité moyenne.</p> <p>2. Commenter un texte écrit de complexité moyenne.</p> <p>3. Rédiger un texte de complexité moyenne.</p>	<p><b>Critères de performance</b></p> <p>1.1 Emploi pertinent du vocabulaire courant.</p> <p>1.2 Adaptation à l'interlocuteur ou à l'interlocutrice.</p> <p>1.3 Respect du niveau de langue, du code grammatical et des règles de la prononciation.</p> <p>1.4 Formulation claire et cohérente du propos.</p> <p>1.5 Agencement pertinent des idées.</p> <p>2.1 Distinction claire des principaux éléments d'un texte comprenant entre 2 500 et 3 000 mots.</p> <p>2.2 Explication précise du sens des mots dans le texte.</p> <p>2.3 Distinction précise des idées principales et secondaires, des faits et des opinions.</p> <p>2.4 Formulation d'éléments implicites.</p> <p>3.1 Respect du code grammatical et orthographique.</p> <p>3.2 Adaptation au lecteur ou à la lectrice.</p> <p>3.3 Utilisation judicieuse des principaux éléments du corpus.</p> <p>3.4 Formulation claire et cohérente des phrases, dont au moins trois sont complexes.</p> <p>3.5 Articulation cohérente des paragraphes.</p> <p>3.6 Rédaction d'un texte de 350 mots.</p>
<b>ACTIVITÉS D'APPRENTISSAGE</b>	
<p><b>Discipline:</b> Français, langue seconde</p> <p><b>Pondération:</b> 2-1-3</p> <p><b>Unités:</b> 2</p>	

FORMATION GÉNÉRALE COMMUNE: LANGUE SECONDE (NIVEAU IV)		CODE: 000C
OBJECTIF	STANDARD	
<p><b>Énoncé de la compétence</b></p> <p>Traiter d'un sujet culturel et littéraire.</p> <p><b>Éléments</b></p> <p>1. Analyser un texte culturel ou littéraire.</p> <p>2. Rédiger un texte sur un sujet culturel ou littéraire.</p>	<p><b>Critères de performance</b></p> <p>1.1 Formulation personnelle des éléments principaux du texte.</p> <p>1.2 Inventaire des thèmes principaux.</p> <p>1.3 Relevé d'indices qui permettent de situer le texte dans son contexte socioculturel et historique.</p> <p>1.4 Repérage des valeurs véhiculées.</p> <p>1.5 Repérage juste de la structure du texte.</p> <p>1.6 Articulation claire d'un point de vue personnel.</p> <p>2.1 Respect du sujet.</p> <p>2.2 Respect du code grammatical et orthographique.</p> <p>2.3 Adaptation au lecteur ou à la lectrice.</p> <p>2.4 Utilisation judicieuse des principaux éléments du corpus.</p> <p>2.5 Formulation claire et cohérente d'un texte de 500 mots.</p> <p>2.6 Articulation claire d'un point de vue personnel.</p>	
<b>ACTIVITÉS D'APPRENTISSAGE</b>		
<p><b>Discipline:</b></p> <p><b>Pondération:</b></p> <p><b>Unités:</b></p>	<p>Français, langue seconde</p> <p>3-0-3</p> <p>2</p>	



With regard to the Arts and Sciences program, the college must ensure that the student is able to pursue at least two of the three physical education objectives. The college may also offer all three.\*

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\* With regard to the Arts and Sciences pre-university program, in accordance with section 13 of the General and Vocational Colleges Act and with respect to section 7, the Minister authorizes the option of offering the program with a total of two (2) credits in physical education.



OBJECTIVE	STANDARD
<p><b>Statement of the competency</b></p> <p>To establish the role that being physically active plays amongst the lifestyle behaviours which promote health.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. To establish the relationship between one's lifestyle and one's health.</li> <li>2. To be physically active in a manner which promotes health.</li> <li>3. To recognize one's needs, abilities, and motivational factors with respect to being physically active on a regular basis.</li> <li>4. To propose physical activities which promote health.</li> </ol>	<p><b>Performance criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Proper use of documentation.</li> <li>1.2 Appropriate relationships between the main lifestyle behaviours and their impact on health.</li> <li>2.1 Observance of the rules involved in the physical activity, including safety guidelines.</li> <li>2.2 Respect of one's abilities when practising physical activities.</li> <li>3.1 Appropriate use of the physical quantitative and qualitative data.</li> <li>3.2 Statement of one's main physical needs and abilities.</li> <li>3.3 Statement of one's main motivational factors with respect to being physically active on a regular basis.</li> <li>4.1 Appropriate and justified choice of physical activities according to one's needs, abilities, and motivational factors.</li> </ol>

LEARNING ACTIVITIES

**Discipline:** Physical Education  
**Weighting:** 1-1-1  
**Credits:** 1

OBJECTIVE	STANDARD
<p><b>Statement of the competency</b></p> <p>To improve one's effectiveness when practising a physical activity.</p> <p><b>Element</b></p> <p>1. To use a process designed to improve one's effectiveness in the practice of a physical activity.</p>	<p><b>Performance criteria</b></p> <p>1.1 Initial assessment of one's abilities and attitudes when practising a physical activity.</p> <p>1.2 Statement of one's expectations and needs with respect to one's ability to practise the activity.</p> <p>1.3 Appropriate formulation of personal objectives.</p> <p>1.4 Statement of the means to achieve one's objectives.</p> <p>1.5 Observance of the rules involved in the physical activity, including safety guidelines.</p> <p>1.6 Periodic evaluation of one's abilities and attitudes when practising a physical activity.</p> <p>1.7 Meaningful interpretation of the progress achieved and the difficulties experienced during the activity.</p> <p>1.8 Pertinent and periodic adjustments of objectives or action plan.</p> <p>1.9 Appreciable improvement of the motor skills required by the activity.</p>

LEARNING ACTIVITIES

<p><b>Discipline:</b> <b>Weighting:</b> <b>Credits:</b></p>	<p>Physical Education 0-2-1 1</p>
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OBJECTIVE	STANDARD
<p><b>Statement of the competency</b></p> <p>To demonstrate one’s responsibility for being physically active in a manner which promotes health.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. To combine effective practice with a health promotional approach to physical activity.</li> <li>2. To manage a personal physical activity program.</li> </ol>	<p><b>Performance criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Integration of effective practice with factors which promote health in the practice of a physical activity.</li> <li>2.1 Statement of one’s priorities according to the needs abilities, and motivational factors with respect to being active on a regular basis.</li> <li>2.2 Proper formulation of objectives to achieve in one’s personal program.</li> <li>2.3 Appropriate choice of activity or activities for one’s personal program.</li> <li>2.4 Appropriate planning of how the activity or activities in the personal program are carried out.</li> <li>2.5 Appropriate choice of criteria to measure program objective attainment.</li> <li>2.6 Periodic statement of the time invested and the activities carried out during the program.</li> <li>2.7 Meaningful interpretation of the progress achieved and difficulties experienced during the activity.</li> <li>2.8 Appropriate and periodic adjustment of objectives or action plan.</li> </ol>

LEARNING ACTIVITIES

**Discipline:** Physical Education  
**Weighting:** 1-1-1  
**Credits:** 1



**GENERAL EDUCATION ADAPTED TO PROGRAM**



OBJECTIVE	STANDARD
<p><b>Statement of the competency</b></p> <p>To communicate in the forms of discourse appropriate to one or more fields of study.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. To identify the forms of discourse appropriate to given fields of study.</li> <li>2. To recognize the discursive frameworks appropriate to given fields of study.</li> <li>3. To formulate a discourse.</li> </ol>	<p><b>Performance criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Accurate recognition of specialized vocabulary and conventions.</li> <li>1.2 Accurate recognition of the characteristics of the form of discourse.</li> <li>2.1 Clear and accurate recognition of the main ideas and structure.</li> <li>2.2 Appropriate distinction between fact and argument.</li> <li>3.1 Appropriate choice of tone and diction.</li> <li>3.2 Correctly developed sentences.</li> <li>3.3 Clearly and coherently developed paragraphs.</li> <li>3.4 Appropriate use of program-related communication strategies.</li> <li>3.5 Formulation of a 1000-word discourse.</li> <li>3.6 Thorough revision of form and content.</li> </ol>
<p>LEARNING ACTIVITIES</p>	
<p><b>Discipline:</b> English</p> <p><b>Number of student-contact hours:</b> 60</p> <p><b>Credits:</b> 2</p>	

OBJECTIVE	STANDARD
<p><b>Statement of the competency</b></p> <p>To apply a critical thought process to ethical issues relevant to the field of study.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. To situate significant ethical issues, in appropriate world views and fields of knowledge.</li> <li>2. To explain the major ideas, values, and social implication of ethical issues.</li> <li>3. To organize the ethical questions and their implications into coherent patterns.</li> <li>4. To debate the ethical issues.</li> </ol>	<p><b>Performance criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Accurate recognition of the basic elements of ethical issues.</li> <li>1.2 Appropriate use of relevant terminology.</li> <li>1.3 Adequate identification of the main linkages with world views and fields of knowledge.</li> <li>2.1 Adequate description of the salient components of the issues.</li> <li>3.1 Coherent organization of the ethical questions and their implications.</li> <li>3.2 Appropriate expression, including a significant individual written component, of an analysis of the context, importance and implications of the issues.</li> <li>4.1 Adequate development of substantiated argumentation including context and diverse points of view.</li> <li>4.2 Clear articulation of an individual point of view.</li> </ol>
<b>LEARNING ACTIVITIES</b>	
<p><b>Discipline:</b> Humanities</p> <p><b>Number of student-contact hours:</b> 45</p> <p><b>Credits:</b> 2</p>	

OBJECTIF	STANDARD
<p><b>Énoncé de la compétence</b></p> <p>Appliquer des notions fondamentales de la communication en français, liées à un champ d'études.</p> <p><b>Éléments</b></p> <ol style="list-style-type: none"> <li>1. Dégager le sens d'un message oral simple lié à un champ d'études.</li> <li>2. Dégager le sens et les caractéristiques d'un texte lié à un champ d'études.</li> <li>3. Émettre un message oral simple lié à un champ d'études.</li> <li>4. Rédiger un court texte lié à un champ d'études.</li> </ol>	<p><b>Critères de performance</b></p> <ol style="list-style-type: none"> <li>1.1 Repérage précis des difficultés de compréhension du message.</li> <li>1.2 Distinction juste des caractéristiques du message.</li> <li>1.3 Repérage juste du vocabulaire spécialisé.</li> <li>1.4 Utilisation pertinente des techniques d'écoute choisies.</li> <li>1.5 Distinction claire des principaux éléments du message.</li> <li>1.6 Description précise du sens général et des idées essentielles du message.</li> <li>2.1 Repérage précis des difficultés de compréhension du texte.</li> <li>2.2 Distinction juste des caractéristiques du texte.</li> <li>2.3 Repérage précis du vocabulaire spécialisé.</li> <li>2.4 Utilisation pertinente des techniques de lectures choisies.</li> <li>2.5 Distinction claire des principaux éléments du texte.</li> <li>2.6 Description précise du sens général et des idées essentielles du texte.</li> <li>3.1 Repérage précis des difficultés d'expression orale.</li> <li>3.2 Utilisation pertinente des techniques d'expression orale choisies.</li> <li>3.3 Utilisation pertinente du vocabulaire courant et spécialisé.</li> <li>3.4 Expression intelligible du propos.</li> <li>4.1 Repérage précis des difficultés d'écrire.</li> <li>4.2 Utilisation pertinente des techniques d'écriture choisies.</li> <li>4.3 Utilisation pertinente du vocabulaire courant et spécialisé.</li> <li>4.4 Formulation claire et cohérente du texte.</li> </ol>
<b>ACTIVITÉS D'APPRENTISSAGE</b>	
<p><b>Discipline:</b></p> <p><b>Nombre d'heures-contact:</b></p> <p><b>Nombre d'unités:</b></p>	<p>Français, langue seconde</p> <p>45</p> <p>2</p>

OBJECTIF	STANDARD
<p><b>Énoncé de la compétence</b></p> <p>Communiquer en français dans un champ d'études particulier.</p> <p><b>Éléments</b></p> <ol style="list-style-type: none"> <li>1. Distinguer les types de textes propres au champ d'études.</li> <li>2. Interpréter des textes représentatifs du champ d'études.</li> <li>3. Utiliser des techniques de production de textes appropriées au champ d'études.</li> </ol>	<p><b>Critères de performance</b></p> <ol style="list-style-type: none"> <li>1.1 Distinction précise des caractéristiques formelles de chacun des principaux types de textes et des conventions utilisées.</li> <li>2.1 Distinction claire des principaux éléments du texte.</li> <li>2.2 Interprétation claire du vocabulaire spécialisé.</li> <li>2.3 Repérage précis des idées et des sujets traités.</li> <li>2.4 Utilisation pertinente des techniques de lecture et d'écoute.</li> <li>3.1 Emploi pertinent du vocabulaire spécialisé et des conventions.</li> <li>3.2 Respect du niveau de langue et du code grammatical.</li> <li>3.3 Formulation claire et cohérente du propos.</li> <li>3.4 Utilisation pertinente des techniques d'expression.</li> </ol>
<b>ACTIVITÉS D'APPRENTISSAGE</b>	
<p><b>Discipline:</b>  <b>Nombre d'heures-contact:</b>  <b>Nombre d'unités:</b></p>	<p>Français, langue seconde  45  2</p>

FORMATION GÉNÉRALE PROPRE: LANGUE SECONDE (NIVEAU III)		CODE: 000R
OBJECTIF	STANDARD	
<p><b>Énoncé de la compétence</b></p> <p>Communiquer avec aisance en français dans un champ d'études particulier.</p> <p><b>Éléments</b></p> <p>1. Commenter des textes propres au champ d'études.</p> <p>2. Produire un texte sur un sujet lié au champ d'études.</p>	<p><b>Critères de performance</b></p> <p>1.1 Distinction précise des caractéristiques formelles des principaux types de textes et des conventions utilisées.</p> <p>1.2 Explication précise du sens des mots dans le texte.</p> <p>1.3 Repérage précis de la structure du texte.</p> <p>1.4 Reformulation juste des idées principales et secondaires, des faits et des opinions.</p> <p>1.5 Emploi juste du vocabulaire spécialisé.</p> <p>2.1 Respect du sujet.</p> <p>2.2 Emploi pertinent du vocabulaire spécialisé et des conventions.</p> <p>2.3 Respect du niveau de langue et du code grammatical.</p> <p>2.4 Formulation claire et cohérente du propos.</p> <p>2.5 Agencement pertinent des idées.</p> <p>2.6 Adéquation entre forme et fond.</p>	
<b>ACTIVITÉS D'APPRENTISSAGE</b>		
<p><b>Discipline:</b></p> <p><b>Nombre d'heures-contact:</b></p> <p><b>Nombre d'unités:</b></p>	<p>Français, langue seconde</p> <p>45</p> <p>2</p>	

OBJECTIF	STANDARD
<p><b>Énoncé de la compétence</b></p> <p>Dissserter en français sur un sujet lié au champ d'études.</p> <p><b>Éléments</b></p> <p>1. Analyser un texte lié au champ d'études.</p> <p>2. Rédiger un texte sur un sujet lié au champ d'études.</p>	<p><b>Critères de performance</b></p> <p>1.1 Distinction précise des caractéristiques formelles des types particuliers de textes.</p> <p>1.2 Formulation personnelle des éléments principaux.</p> <p>1.3 Inventaire des thèmes principaux.</p> <p>1.4 Repérage juste de la structure du texte.</p> <p>1.5 Relevé d'indices qui permettent de situer le texte dans son contexte.</p> <p>1.6 Articulation claire d'un point de vue personnel, s'il y a lieu.</p> <p>1.7 Association juste des éléments du texte au sujet traité.</p> <p>2.1 Respect du sujet.</p> <p>2.2 Emploi pertinent du vocabulaire spécialisé et des conventions.</p> <p>2.3 Choix judicieux des principaux éléments du corpus en fonction du type de texte.</p> <p>2.4 Formulation claire et cohérente du texte.</p> <p>2.5 Respect du code grammatical et orthographique.</p> <p>2.6 Articulation claire d'un point de vue personnel, s'il y a lieu.</p>
<b>ACTIVITÉS D'APPRENTISSAGE</b>	
<p><b>Discipline:</b></p> <p><b>Nombre d'heures-contact:</b></p> <p><b>Nombre d'unités:</b></p>	<p>Français, langue seconde</p> <p>45</p> <p>2</p>

***SPECIFIC PROGRAM COMPONENT***



***OBJECTIVES AND STANDARDS COMMON  
TO ALL STUDENTS***



OBJECTIVE	STANDARD
<p><b>Statement of the Competency</b></p> <p>To assess the contribution of works of literature and philosophy to human experience.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. Establish the historical continuity of works.</li>   <li>2. Recognize influences shared by literary and philosophical works.</li>   <li>3. Show how philosophy and literature interact with the development of science and art.</li>   <li>4. Discuss the contribution of literary and philosophical works to human experience.</li> </ol>	<p><b>Achievement Context</b></p> <p>Within the context of the set of learning activities that foster attainment of the seven objectives and standards in the language of instruction and literature and philosophy.</p> <p><b>Performance Criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Reading of fourteen key works in literature and six in philosophy.</li> <li>1.2 Placement of the work in the context of a period or movement.</li> <li>1.3 Determination of the role and importance of the work in the history of literature and philosophy.</li>   <li>2.1 Identification of the significant elements shared by the literary and philosophical works being compared.</li> <li>2.2 Characterization of the philosophical and literary elements of a given work.</li> <li>2.3 Explanation of the influence on their period exerted by the works being compared.</li>   <li>3.1 Relevant linking of literary and philosophical works with scientific and artistic achievements.</li> <li>3.2 Comparison of these fields of knowledge in terms of their methods, subjects, limits and purposes.</li>   <li>4.1 Description of the human experience conveyed by the work.</li> <li>4.2 Criticism of the current relevance of the work.</li> <li>4.3 Comparison or contrast of works and authors.</li> <li>4.4 Writing of texts on the literary works (at least 800, 900 and 1000 words) and on the philosophical works (at least 1000, 1100 and 1200 words).</li> <li>4.5 Oral presentations.</li> </ol>

OBJECTIVE	STANDARD
<p><b>Statement of the Competency</b></p> <p>To solve problems using differential calculus.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. Represent the problem as a real function in one variable.</li> <li>2. Apply differential calculus in solving the problem.</li> <li>3. Evaluate the results obtained in terms of the problem to be solved.</li> <li>4. Explain the problem-solving process.</li> </ol>	<p><b>Achievement Context</b></p> <p>Working alone.</p> <p><b>Performance Criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Clear description of relevant variables.</li> <li>1.2 Precise formulation of the function.</li> <li>1.3 Appropriate graph of the function.</li> <li>2.1 Appropriate use of the concepts of limit and derivative.</li> <li>2.2 Relevant choice of the rules and techniques for calculating limits and derivatives.</li> <li>2.3 Correct application of the rules and techniques for calculating limits and derivatives.</li> <li>2.4 Algebraic operations in accordance with the rules.</li> <li>2.5 Accuracy of calculations.</li> <li>3.1 Correct interpretation of results.</li> <li>3.2 Clear and precise formulation of the interpretation.</li> <li>3.3 Assessment of the likelihood of the results.</li> <li>4.1 Rigorous presentation of the process.</li> <li>4.2 Explanation of the steps in the process.</li> <li>4.3 Use of appropriate terminology.</li> </ol>
<b>LEARNING ACTIVITIES</b>	
<p><b>Discipline:</b> Mathematics</p> <p><b>Weighting:</b> 2-2-2</p> <p><b>Number of credits:</b> 2</p> <p><b>Specific indications:</b></p> <p>Functions: algebraic, exponential, logarithmic, trigonometric and inverse trigonometric.</p> <p>Limit: intuitive approach, properties, calculation of limits, continuity, asymptotes.</p> <p>Derivative: geometric interpretation, definition, common rules and techniques, differentiation of composite functions and implicit differentiation.</p> <p>Study of the first and second derivative: growth and extrema of a function, concavity and points of inflection.</p> <p>Applications: Newtonian method, study of curves, Hospital's rule, optimization problems, variation rate.</p>	

OBJECTIVE	STANDARD
<p><b>Statement of the Competency</b></p> <p>To solve problems using integral calculus.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. Represent the problem in the form of a model.</li> <li>2. Apply appropriate integral calculus in solving the problem.</li> <li>3. Evaluate the results obtained in terms of the problem to be solved.</li> <li>4. Explain the problem-solving process.</li> </ol>	<p><b>Achievement Context</b></p> <p>Working alone.</p> <p><b>Performance Criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Exact formulation of the function, integral or series.</li> <li>1.2 Appropriate graph of the situation.</li> <li>2.1 Appropriate use of the concepts of integral and series.</li> <li>2.2 Appropriate choice and correct application of integration rules and techniques.</li> <li>2.3 Appropriate use of the techniques for analyzing sequences and series.</li> <li>2.4 Algebraic operations in accordance with the rules.</li> <li>2.5 Accuracy of calculations.</li> <li>3.1 Correct interpretation of results.</li> <li>3.2 Clear and precise formulation of the interpretation.</li> <li>3.3 Assessment of the likelihood of the results.</li> <li>4.1 Rigorous presentation of the process.</li> <li>4.2 Explanation of the steps in the process.</li> <li>4.3 Use of appropriate terminology.</li> </ol>
<b>LEARNING ACTIVITIES</b>	
<p><b>Discipline:</b> Mathematics</p> <p><b>Weighting:</b> 2-2-2</p> <p><b>Number of credits:</b> 2</p> <p><b>Specific indications:</b></p> <p>Indefinite integral: primitive, properties, common integration rules and techniques, differential equations with separable variables.</p> <p>Definite integral: definition, properties, fundamental theorem of differential and integral calculus.</p> <p>Applications: calculation of area and volume, improper integrals.</p> <p>Series: definition, properties, convergence of numeric series and power series, Taylor and Maclaurin series.</p>	

OBJECTIVE	STANDARD
<p><b>Statement of the Competency</b></p> <p>To analyze phenomena using the statistical method.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. Choose the statistical analysis techniques in accordance with the phenomenon or phenomena being studied.</li> <li>2. Describe the characteristics of the phenomenon or phenomena being studied.</li> <li>3. Calculate the probability of events.</li> <li>4. Deduce the characteristics of the population on the basis of sample data.</li> <li>5. Interpret the results.</li> </ol>	<p><b>Achievement Context</b></p> <p>Using:</p> <ul style="list-style-type: none"> <li>➤ a graphic display calculator</li> <li>➤ data processing software</li> <li>➤ statistical tables and formulae</li> <li>➤ series of real data</li> </ul> <p><b>Performance Criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Identification of the quantitative characteristics required for statistical analysis.</li> <li>1.2 Accurate designation of the target population and the relevant variables.</li> <li>1.3 Appropriate choice of statistical analysis techniques.</li> <li>2.1 Proper organization of data in tables and graphs.</li> <li>2.2 Precise calculation of the measurements of central tendency, position, dispersion and association.</li> <li>3.1 Recognition of situations involving chance.</li> <li>3.2 Appropriate use of counting algorithms: permutations, arrangements, combinations.</li> <li>3.3 Correct calculation of the probability of an event.</li> <li>3.4 Accuracy of the probability distribution of a discrete random variable.</li> <li>3.5 Precise calculation of the mathematical expectation and variance.</li> <li>3.6 Appropriate use of probability models: binomials, Poisson, normal, Student, khi-square.</li> <li>4.1 Proper choice of sampling method.</li> <li>4.2 Appropriate use of the concepts of estimation and hypothesis testing.</li> <li>4.3 Accurate estimation of the population parameters.</li> <li>4.4 Rigorous application of a hypothesis test.</li> <li>5.1 Correct interpretation of the statistical analysis results.</li> <li>5.2 Clear and precise formulation of the interpretation.</li> <li>5.3 Appropriate use of the terminology.</li> </ol>

OBJECTIVE	STANDARD
<p><b>Statement of the Competency</b></p> <p>To solve problems using linear algebra and vector geometry.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. Represent a problem as a matrix or vector model.</li>   <li>2. Apply matrix and vector calculus to solve a problem.</li>   <li>3. Evaluate the results obtained in terms of the problem to be solved.</li>   <li>4. Explain the problem-solving process.</li> </ol>	<p><b>Achievement Context</b></p> <p>Working alone.</p> <p><b>Performance Criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Accurate translation of the problem into vectors or matrices.</li> <li>1.2 Accurate matrix representation of the system of linear equations.</li> <li>1.3 Accurate graph of the vectors in the plane and in space.</li> <li>1.4 Appropriate representation of a complex number.</li>   <li>2.1 Appropriate use of the concepts of matrix and vector.</li> <li>2.2 Correct performance of matrix or vector operations.</li> <li>2.3 Appropriate use of the properties of matrices and vectors.</li> <li>2.4 Accurate solution of a system of linear equations.</li> <li>2.5 Accurate formulation of the equation for geometric loci.</li> <li>2.6 Accurate representation of geometric loci.</li> <li>2.7 Correct application of operations on complex numbers.</li> <li>2.8 Algebraic operations in accordance with the rules.</li> <li>2.9 Accurate calculations.</li>   <li>3.1 Correct interpretation of the results.</li> <li>3.2 Clear and precise formulation of the interpretation.</li> <li>3.3 Assessment of the likelihood of the results.</li>   <li>4.1 Rigorous presentation of the process.</li> <li>4.2 Explanation of the steps in the process.</li> <li>4.3 Use of the appropriate terminology.</li> </ol>

## LEARNING ACTIVITIES

**Discipline:** Mathematics  
**Weighting:** 2-2-2  
**Number of credits:** 2

**Specific indications:**

Matrices and determinants: definitions, properties, operations, applications, demonstrations.  
Gauss-Jordan, Cramer and inverse matrix methods for solving systems of linear equations.  
Geometric and algebraic vectors: definition, representation, properties, operations, applications, demonstrations.  
Vector products: scalar, vector, mixed.  
Vector space: reference, basis, dimension, linear combination, linear independence.  
Studies of geometric loci: straight line in  $\mathbb{R}^2$  and  $\mathbb{R}^3$ , plane in  $\mathbb{R}^3$ , relative positions, intersections, calculations of distances and angles.  
Complex numbers: representations (algebraic, vector, trigonometric, polar), operations, properties, theorems.

OBJECTIVE	STANDARD
<p><b>Statement of the Competency</b></p> <p>To analyze the structural and functional relationships that characterize living organisms as they evolve in their environment.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. Describe emerging structural and functional characteristics of living organisms, in accordance with their level of organization.</li> <li>2. Establish a systematic overview of the basic cellular processes found in living organisms.</li> <li>3. Explain the evolution toward greater complexity of living organisms within an ecosystem.</li> <li>4. Analyze the regulating principles governing the survival of single- and multi-cell organisms.</li> <li>5. Verify experimentally physicochemical phenomena found in living organisms.</li> </ol>	<p><b>Achievement Context</b></p> <p>Working alone. Working in teams in the laboratory. Using software. Doing written work, or laboratory work leading to a written report.</p> <p><b>Performance Criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Precise description of levels of organization.</li> <li>1.2 Accurate relating of emerging components and structures, in accordance with the development of more complex life forms.</li> <li>2.1 Appropriate description of the organization of the structures and functions that define cell dynamics.</li> <li>2.2 Clear differentiation of the various energy metabolisms in accordance with the evolution of the living organisms.</li> <li>2.3 Correct interpretation of the role of genetic regulation in cell development.</li> <li>3.1 Supported differentiation of some models of evolution.</li> <li>3.2 Clear identification of the impact of biological, environmental and social factors on the levels of organization of the living organisms.</li> <li>3.3 Identification of ethical issues concerning living organisms in the development of science and technology.</li> <li>4.1 Appropriate identification of the processes regulating the various levels of organization in living organisms.</li> <li>4.2 Appropriate identification of the processes of intracellular and intercellular communication.</li> <li>4.3 Accurate relating of regulation and survival mechanisms in living organisms.</li> <li>5.5 Systematic observation of specimens and phenomena.</li> <li>5.5 Use of experimental techniques in biology.</li> <li>5.5 Accurate relating of a hypothesis to its validation through observation or experiment.</li> <li>5.5 Correct presentation of the results in a report.</li> </ol>
<b>LEARNING ACTIVITIES</b>	
<p><b>Discipline:</b> Biology</p> <p><b>Weighting:</b> 3-2-3</p> <p><b>Number of credits:</b> 2 2/3</p> <p><b>Specific indications:</b> Diversity of living organisms and their general characteristics. Levels of organization. Evolutionary perspective. Organization at the molecular level. Characteristics and functions of inorganic and organic molecules in living organisms. Organization at the cellular level. Prokaryotes and eukaryotes. Description of cellular morphology: the plasma membrane, cytoplasmic organisms and nucleus. Physiology of the cell: cells and energy (photosynthesis, respiration, fermentation, chemosynthesis); information coding (DNA and coding, product synthesis). DNA replication and cell division. Cell differentiation. Evolutionary perspective. Organization at the level of the organism. Homeostasis in a given system. Organization at the level of the ecosystem. Examples of homeostasis. Environmental management. Evolutionary perspective.</p>	

OBJECTIVE	STANDARD
<p><b>Statement of the Competency</b> To solve problems associated with chemical changes in matter.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>Analyze properties of elements using a probability model.</li> <li>Predict the electronic structure of molecules.</li> <li>Perform quantitative analyses of chemical changes.</li> <li>Predict interactions in the condensed phases of matter.</li> <li>Experiment with chemical changes.</li> </ol>	<p><b>Achievement Context</b></p> <p>Working alone. Using:</p> <ul style="list-style-type: none"> <li>➤ the periodic table</li> <li>➤ software</li> </ul> <p>Working in the laboratory, with a safe operating procedure. Writing a report.</p> <p><b>Performance Criteria</b></p> <ol style="list-style-type: none"> <li>Proper use of the vocabulary of chemistry.</li> <li>Accurate interpretation of the spectrum of the hydrogen atom.</li> <li>Showing of the bases of quantum mechanics.</li> <li>Accurate interpretation of the four quantum numbers.</li> <li>Correct setting up of the periodic table.</li> <li>Accurate modelling of the atomic structures.</li> <li>Exact representation of the molecular structures.</li> <li>Description of the formation of the covalent bond.</li> <li>Correct identification of types of covalent bonds.</li> <li>Appropriate two- or three-dimensional representation of organic molecules.</li> <li>Correct application of basic models of the covalent bond.</li> <li>Correct identification of the nature of a chemical equation.</li> <li>Appropriate formulation of a reaction.</li> <li>Proper application of weighting rules.</li> <li>Proper application of nomenclature rules.</li> <li>Proper application of the concept of equilibrium.</li> <li>Proper application of oxidation reduction laws.</li> <li>Correct identification of intermolecular attractions.</li> <li>Accurate evaluation of the energy of intermolecular attractions.</li> <li>Appropriate relating to the physical properties of compounds.</li> <li>Adherence to a scientific procedure, experimental protocol and basic laboratory techniques.</li> <li>Proper use of experimental measurements.</li> <li>Experiment report in keeping with standards.</li> </ol>
<b>LEARNING ACTIVITIES</b>	
<p><b>Discipline:</b> Chemistry</p> <p><b>Weighting:</b> 3-2-3</p> <p><b>Number of credits:</b> 2 2/3</p> <p><b>Specific indications:</b> Atomic structure and properties of the elements. Atomic model, probability model (quantum numbers, orbitals, atomic spectra, configuration); periodic properties (ionization energy, electronic affinity, atomic and ionic radius, electro-negativity); periodic table. Chemical bonds and molecular structures. Covalent, ionic, metallic and coordinate bonds. Molecular structures: Lewis structures, hybridation, Gillespie model, resonance. Molecular interactions: polarity, Van der Waals bonds, hydrogen bonds, states of matter, solubility. Inorganic and organic compounds: classes and nomenclature. Chemical reactions. Qualitative aspects: substitution and oxidation-reduction reactions; equation and equilibrium. Quantitative aspects (stoichiometry): molar mass, mole, limiting reagent; law of gases; solution concentration. Basic technical aspects: measurement, separation and isolating techniques; simple syntheses.</p>	

OBJECTIVE	STANDARD
<p><b>Statement of the Competency</b></p> <p>To interpret natural phenomena using models from mechanical physics.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. Describe the phenomenon.</li> <li>2. Represent the phenomenon in the form of a model.</li> <li>3. Solve problems associated with the phenomenon.</li> <li>4. Verify the accuracy of the proposed models.</li> </ol>	<p><b>Achievement Context</b></p> <p>Working alone. Working in teams in the laboratory. Using software. Working on a simple problem. Doing written work, or laboratory work leading to a written report.</p> <p><b>Performance Criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Appropriate use of the terminology.</li> <li>1.2 Clear representation of the phenomenon being studied.</li> <li>1.3 Identification of observable aspects.</li> <li>1.4 Establishment of relationships between the physical parameters and the causes of motion.</li> <li>2.1 Identification of relevant variables.</li> <li>2.2 Appropriate choice of the principles or laws of physics.</li> <li>2.3 Rigorous application of the principles or laws of physics.</li> <li>2.4 Construction of a rigorous mathematical solution.</li> <li>2.5 Plausible prediction of change in the phenomenon.</li> <li>2.6 Evaluation of the limit of the model.</li> <li>3.1 Clear representation of the situation.</li> <li>3.2 Development of a rigorous mathematical solution.</li> <li>3.3 Accurate mathematical and graphic representation.</li> <li>3.4 Precise application of the mathematical tools.</li> <li>3.5 Assessment of the likelihood of the results.</li> <li>4.1 Clear identification of the goal of the experiment.</li> <li>4.2 Adherence to protocol and experimental techniques.</li> <li>4.3 Correct use of the laboratory material.</li> <li>4.4 Systematic presentation of data, calculations and results.</li> <li>4.5 Estimation and rigorous calculation of uncertainties.</li> <li>4.6 Correct interpretation of results.</li> <li>4.7 Production of a scientific report.</li> </ol>
<b>LEARNING ACTIVITIES</b>	
<p><b>Discipline:</b> Physics  <b>Weighting:</b> 3-2-3  <b>Number of credits:</b> 2 2/3</p> <p><b>Specific indications:</b></p> <p>One- and two-dimensional kinematics: uniformly accelerated motion, circular motion, projectiles, relative speeds and relative accelerations.  Dynamics: Newtonian laws, inertia, forces, action-reaction, inertial and non-inertial systems, friction.  Principles of conservation: work, kinetic energy, strength, potential gravitational and elastic energy, quantity of movement.</p>	

OBJECTIVE	STANDARD
<p><b>Statement of the Competency</b></p> <p>To show the importance of historical heritage in the development of Western civilization.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. Describe the enduring economic, political, social, cultural and ideological components of Western civilization.</li> <li>2. Situate features characteristic of Western civilization in time and space.</li> <li>3. Explain structures and ideologies characteristic of Western civilization.</li> <li>4. Write a research paper on a phenomenon showing continuity and rupture in Western civilization.</li> </ol>	<p><b>Achievement Context</b></p> <p>Working with a specific subject. Using all relevant documentation.</p> <p><b>Performance Criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Relevant selection of information.</li> <li>1.2 Accurate characterization of the components.</li> <li>1.3 Appropriate contextualization of the heritage.</li> <li>2.1 Precise description of the spatial and temporal context.</li> <li>2.2 Accurate placement of the heritage in its context.</li> <li>3.1 Accurate characterization of structures and ideologies.</li> <li>3.2 Establishment of clear and relevant links between structures and ideologies, on the one hand, and historical events, on the other.</li> <li>3.3 Clear and logical description of the historical heritage.</li> <li>4.1 Definition of the research topic.</li> <li>4.2 Relevant selection of studies on the topic.</li> <li>4.3 Proper classification of works.</li> <li>4.4 Recognition of the value of documentary sources.</li> <li>4.5 Clear and precise formulation of the research question.</li> <li>4.6 Relevant synthesis of information.</li> </ol>

OBJECTIVE	STANDARD
<p><b>Statement of the Competency</b></p> <p>To consider the influence of individual and social factors on human behaviour.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. Describe the main approaches in explaining human behaviour and mental processes.</li> <li>2. Characterize personal development and mental health.</li> <li>3. Explain behaviours by referring to biopsychosocial factors.</li> <li>4. To relate individual behaviours to effects of group-individual interaction.</li> <li>5. Verify experimentally a hypothesis about human behaviour.</li> </ol>	<p><b>Achievement Context</b></p> <p>Working on a specific situation. Using relevant documentation.</p> <p><b>Performance Criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Clear differentiation of the main approaches used in psychology.</li> <li>1.2. Proper use of concepts and vocabulary.</li> <li>2.1 Accurate sequence of steps.</li> <li>2.2 Relevant description of the processes.</li> <li>3.1 Appropriate use of the concepts selected.</li> <li>3.2 Establishment of accurate links between facts and explanatory factors.</li> <li>3.3 Precise and exhaustive description of the phenomenon being studied.</li> <li>4.1 Accurate description of the influence of social factors on human behaviour.</li> <li>5.1 Precise formulation of a research question.</li> <li>5.2 Clear and precise definition of a research objective.</li> <li>5.3 Formulation of a relevant and operational hypothesis.</li> <li>5.4 Preparation of a measuring instrument with a view to testing the hypothesis.</li> <li>5.5 Brief analysis of the results in relation to the hypothesis.</li> </ol>

OBJECTIVE	STANDARD
<p><b>Statement of the Competency</b></p> <p>To make a judgment of fact on the dynamics of social change.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. Describe social facts underlying the phenomenon being studied.</li> <li>2. Explain social facts, taking into account cultural and structural factors as well as the meaning of the actions of individuals and social groups.</li> <li>3. Review the results.</li> <li>4. Write an analysis of a contemporary social phenomenon.</li> </ol>	<p><b>Achievement Context</b></p> <p>Working with a specific problem and a hypothesis. Using all relevant documentation.</p> <p><b>Performance Criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Identification of the key elements in the context of social relationships.</li> <li>1.2 Listing of the main types of social behaviour.</li> <li>1.3 Listing of the social agents involved.</li> <li>2.1 Appropriate use of the concepts selected.</li> <li>2.2 Explicit justification of the theoretical framework.</li> <li>2.3 Establishment of accurate links between facts, explanatory factors and meanings.</li> <li>2.4 Precise and exhaustive description of the phenomenon being studied.</li> <li>3.1 Anticipation of social trends.</li> <li>3.2 Position consistent with analysis of the situation.</li> <li>4.1 Collection or use of relevant data.</li> <li>4.2 Organization of data in keeping with plan of the inquiry.</li> <li>4.3 Exhaustive examination of relationships among variables.</li> <li>4.4 Evaluation of the hypothesis and research parameters.</li> <li>4.5 Writing of the analysis in accordance with a descriptive, explanatory or comprehensive plan.</li> </ol>

OBJECTIVE	STANDARD
<p><b>Statement of the Competency</b></p> <p>To deal with current questions associated with the international economy and politics.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. Situate, in time and space, international relations in their political and economic contexts.</li> <li>2. Characterize global political-economic spaces.</li> <li>3. Analyze the process of economic globalization and the strategies employed by the main economic players.</li> <li>4. Write an essay on the political and economic dimensions of a current international situation.</li> </ol>	<p><b>Achievement Context</b></p> <p>Working on a given subject. Using all relevant documentation.</p> <p><b>Performance Criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Relevant choice of information.</li> <li>1.2 Accurate, appropriate chronology of the international relations being studied.</li> <li>1.3 Precise description of international political and economic relations.</li> <li>2.1 Use of indicators relevant to the geopolitical space being studied.</li> <li>2.2 Accurate contextualization of the geopolitical space being studied.</li> <li>3.1 Relevant choice and proper use of concepts.</li> <li>3.2 Accurate characterization of the economic processes, strategies and actors.</li> <li>3.3 Establishment of clear and relevant links between the processes and the strategies of economic actors.</li> <li>3.4 Accurate formulation of the issues associated with economic globalization.</li> <li>4.1 Adherence to the topic of the essay.</li> <li>4.2 Appropriate use of concepts.</li> <li>4.3 Use of appropriate arguments.</li> <li>4.4 Justification of critical viewpoint.</li> </ol>

OBJECTIVE	STANDARD
<p><b>Statement of the Competency</b></p> <p>To interpret works of art from different periods.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. Recognize the essential elements of the work.</li> <li>2. Situate the work within the context of its own art movement.</li> <li>3. Relate art works to other works in the fields of literary, scientific, technological and humanistic knowledge.</li> <li>4. Comment on art works from different art movements and time periods.</li> </ol>	<p><b>Achievement Context</b></p> <p>Working alone. Based on national and international works (or parts thereof) from different periods.</p> <p><b>Performance Criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Accurate identification of means of expression, genres, procedures and tools taken into consideration when analyzing a work of art.</li> <li>1.2 Adequate recognition of the similarities and differences of languages.</li> <li>2.1 Characterization of the most memorable art movements and historical periods.</li> <li>2.2 Accurate comparison of the formal and iconographic characteristics of the various art movements.</li> <li>2.3 Relation of the work to the specific characteristics of the art movement.</li> <li>3.1 Accurate distinction between the concepts of synchrony and diachrony.</li> <li>3.2 Relevant linking of art works with achievements in other fields of knowledge.</li> <li>4.1 Relevant information search and analysis.</li> <li>4.2 Relation of works to their sociohistorical context.</li> <li>4.3 Analysis of the stylistic and thematic characteristics of the works.</li> <li>4.4 Correct interpretation of their meaning.</li> </ol>

OBJECTIVE	STANDARD
<p><b>Statement of the Competency</b> To create two- and three-dimensional works.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. Recognize the elements of visual language.</li> <li>2. Explore spatial representation techniques.</li> <li>3. Apply techniques and modes of spatial representation.</li> <li>4. Justify the choice of technique in relation to the content of the work.</li> </ol>	<p><b>Achievement Context</b> Working on a given subject. Using appropriate materials, tools, equipment and supports. Within the context of an exhibition or a public presentation.</p> <p><b>Performance Criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Differentiation of the visual qualities associated with space, form, matter and colour.</li> <li>1.2 Association of the visual qualities of space, form, matter and colour with the work to be produced.</li> <li>1.3 Use of descriptive terminology.</li> <li>2.1 Characterization of the techniques employed in creating works of art.</li> <li>2.2 Safe handling of the tools and equipment.</li> <li>2.3 Adherence to the sequence of steps to be taken in accordance with the techniques and procedures selected.</li> <li>3.1 Appropriate use of two- and three-dimensional spatial techniques.</li> <li>3.2 Creative use of the materials and supports.</li> <li>3.3 Appropriate use of the tools and equipment.</li> <li>4.1 Establishment of relevant links between the idea or concept and the solution adopted.</li> <li>4.2 Active participation in the critical analysis of the work.</li> <li>4.3 Demonstration of openness to criticism.</li> <li>4.4 Indication of the historical and artistic contexts of the creative process.</li> </ol>

OBJECTIVE	STANDARD
<p><b>Statement of the Competency</b> To demonstrate their integration of the learning in the Arts and Sciences program.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. Become aware of what they have learned.</li> <li>2. Apply what they have learned in new situations.</li> <li>3. Carry out an original project that integrates what they have learned.</li> <li>4. Evaluate their process of integration.</li> </ol>	<p><b>Achievement Context</b> In the context of an individual or group project. During a public presentation.</p> <p><b>Performance Criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Meaningful summary of what they have learned.</li> <li>2.1 Appropriate choice of learning in accordance with the achievement contexts.</li> <li>2.2 Appropriate application of learning.</li> <li>3.1 Adequate integration of subjects in the three fields of knowledge.</li> <li>3.2 Reference to the appropriate historical or theoretical context.</li> <li>3.3 Novelty of the situation.</li> <li>3.4 Indication of links between the project and their personal, social and professional objectives.</li> <li>3.5 Consideration of project constraints.</li> <li>3.6 Communication of relevant information on the outcome of the project.</li> <li>4.1 Precise description of the process used in their integration project.</li> <li>4.2 Indication of the learning considered important in solving problems encountered in carrying out the project.</li> <li>4.3 Appropriate analysis of the strengths and weaknesses of the project.</li> <li>4.4 Appropriate indication of repercussions of the project.</li> </ol>



***ELECTIVE OBJECTIVES AND STANDARDS \****

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\* Two must be in Science, while one must be either in Social Sciences or Creative Arts and Literature.



OBJECTIVE	STANDARD
<p><b>Statement of the Competency</b></p> <p>To interpret natural phenomena using the laws of electricity and magnetism.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. Describe the phenomenon.</li> <li>2. Create a model to represent the phenomenon.</li> <li>3. Solve problems associated with the phenomenon.</li> <li>4. Verify models experimentally.</li> </ol>	<p><b>Achievement Context</b></p> <p>Working alone.  Working in teams in the laboratory.  Using software.  Working on a simple problem.  Doing written work, or laboratory work leading to a written report.</p> <p><b>Performance Criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Appropriate use of the terminology.</li> <li>1.2 Clear outline of the phenomenon being studied.</li> <li>1.3 Identification of the observable aspects.</li> <li>1.4 Establishment of relationships between the physical parameters and the causes of the phenomenon.</li> <li>2.1 Identification of the relevant variables.</li> <li>2.2 Appropriate choice of the principles or laws of physics.</li> <li>2.3 Rigorous application of the principles or laws of physics.</li> <li>2.4 Construction of a rigorous mathematical solution.</li> <li>2.5 Plausible prediction of change in the phenomenon.</li> <li>2.6 Evaluation of the limits of the model.</li> <li>3.1 Clear representation of the situation.</li> <li>3.2 Development of a rigorous mathematical solution.</li> <li>3.3 Correct mathematical and graphic representation.</li> <li>3.4 Accurate application of mathematical tools.</li> <li>3.5 Assessment of the likelihood of the results.</li> <li>4.1 Clear identification of the goal of the experiment.</li> <li>4.2 Adherence to experimental protocol and techniques.</li> <li>4.3 Correct use of the laboratory material.</li> <li>4.4 Systematic presentation of data, calculations and results.</li> <li>4.5 Estimation and rigorous calculation of uncertainties.</li> <li>4.6 Correct interpretation of results.</li> <li>4.7 Production of a scientific report.</li> </ol>

OBJECTIVE	STANDARD
<p><b>Statement of the Competency</b></p> <p>To interpret natural phenomena using optics, wave physics and modern physics.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. Describe the phenomenon.</li> <li>2. Create a model to represent the phenomenon.</li> <li>3. Solve problems associated with the phenomenon.</li> <li>4. Verify models experimentally.</li> </ol>	<p><b>Achievement Context</b></p> <p>Working alone.  Working in teams in the laboratory.  Using software.  Working on a simple problem.  Doing written work, or laboratory work leading to a written report.</p> <p><b>Performance Criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Appropriate use of the terminology.</li> <li>1.2 Clear outline of the phenomenon being studied.</li> <li>1.3 Identification of the observable aspects.</li> <li>1.4 Establishment of relationships between the physical parameters and the causes of the phenomenon.</li> <li>2.1 Identification of the relevant variables.</li> <li>2.2 Appropriate choice of the principles or laws of physics.</li> <li>2.3 Rigorous application of the principles or laws of physics.</li> <li>2.4 Construction of a rigorous mathematical solution.</li> <li>2.5 Plausible prediction of change in the phenomenon.</li> <li>2.6 Evaluation of the limits of the model.</li> <li>3.1 Clear representation of the situation.</li> <li>3.2 Development of a rigorous mathematical solution .</li> <li>3.3 Correct mathematical and graphic representation.</li> <li>3.4 Accurate application of mathematical tools.</li> <li>3.5 Assessment of the likelihood of the results..</li> <li>4.1 Clear identification of the goal of the experiment.</li> <li>4.2 Adherence to experimental protocol and techniques.</li> <li>4.3 Correct use of the laboratory material.</li> <li>4.4 Systematic presentation of data, calculations and results.</li> <li>4.5 Estimation and rigorous calculation of uncertainties.</li> <li>4.6 Correct interpretation of results.</li> <li>4.7 Production of a scientific report.</li> </ol>

OBJECTIVE	STANDARD
<p><b>Statement of the Competency</b></p> <p>To analyze the mechanisms of reactions.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. Describe aspects of solubilization, kinetics and the state of equilibrium of a chemical phenomenon.</li> <li>2. Analyze the three-dimensional structures of organic compounds.</li> <li>3. Analyze the reactivity of the main organic functions.</li> <li>4. Test reactivity mechanisms.</li> </ol>	<p><b>Achievement Context</b></p> <p>Working alone. Using the periodic table and software. Following a safe operating procedure in the laboratory. Writing a report.</p> <p><b>Performance Criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Appropriate use of the principles of solubilization.</li> <li>1.2 Proper application of the laws of reaction time.</li> <li>1.3 Accurate interpretation of the laws of chemical equilibrium.</li> <li>2.1 Clear differentiation between different types of isomerisms.</li> <li>2.2 Appropriate designation of simple polyfunctional compounds.</li> <li>2.3 Correct noting of instrumental methods used to determine the structure of organic compounds.</li> <li>3.1 Correct relation of the structure and reactivity of organic compounds.</li> <li>3.2 Accurate description of the main classes of organic reactions.</li> <li>3.3 Precise determination of the main electronic effects.</li> <li>3.4 Proper application of the main types of reaction mechanisms.</li> <li>3.5 Correct relation of the organic functions and chemical transformations in living organisms.</li> <li>4.1 Adherence to a scientific procedure and experimental protocol.</li> <li>4.2 Mastery of the techniques of organic analysis.</li> <li>4.3 Proper use of experimental methods.</li> <li>4.4 Experiment report consistent with standards.</li> </ol>

OBJECTIVE	STANDARD
<p><b>Statement of the Competency</b></p> <p>To analyze, from an evolutionary perspective, the adaptation of multicellular organisms to their environment.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. Apply systematic analysis to the physiological processes of organisms.</li> <li>2. Explain the regulatory processes that ensure the autonomy of organisms.</li> <li>3. Demonstrate the contribution of the theory of evolution to the understanding of the variability of life forms.</li> <li>4. Analyze the influence of abiotic and biotic factors on the physiology of organisms.</li> <li>5. Verify experimentally certain phenomena associated with multicellular organisms' adaptation to their environment.</li> </ol>	<p><b>Achievement Context</b></p> <p>Working alone.  Working in teams in the laboratory.  Using software.  Doing written work, or laboratory work leading to a written report.</p> <p><b>Performance Criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Accurate description of the structures and functions of an organism's subsystems.</li> <li>2.1 Descriptive explanation of regulatory behaviours in terms of internal and external variables.</li> <li>2.2 Accurate description of certain reproductive processes.</li> <li>3.1 Detailed interpretation of the environment's influence on the evolution of life forms.</li> <li>4.1 Recognition of interactions between organisms and ecosystems.</li> <li>4.2 Precise determination of the limits of physiological adaptability.</li> <li>5.1 Adherence to experimental protocol.</li> <li>5.2 Appropriate relation of a hypothesis to its validation through either observation or experimentation.</li> <li>5.3 Proper presentation of a report on the results obtained and on their interpretation.</li> </ol>

OBJECTIVE	STANDARD
<p><b>Statement of the Competency</b> To create a work of art.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. Recognize the main means of expression specific to two or more artistic disciplines.</li> <li>2. Use techniques, procedures and languages with a view to creating or interpreting a work of art.</li> </ol>	<p><b>Achievement Context</b> Working alone or in groups. Doing a practical exercise. In a situation involving creation or interpretation.</p> <p><b>Performance Criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Identification of the specifics: originality, essential qualities, means of communication, styles, genres.</li> <li>2.1 Personal and consistent use of the elements of the language.</li> <li>2.2 Appropriate application of art techniques.</li> <li>2.3 Adherence to the requirements of the medium.</li> </ol>

OBJECTIVE	STANDARD
<p><b>Statement of the Competency</b></p> <p>To discuss major problems of our time using more than one approach from the social sciences.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. State a problem.</li>   <li>2. Analyze the problem.</li>   <li>3. Draw conclusions.</li> </ol>	<p><b>Achievement Context</b></p> <p>Based on documentation from several of the social sciences.</p> <p><b>Performance Criteria</b></p> <ol style="list-style-type: none"> <li>1.1 Use of the appropriate concepts and language.</li> <li>1.2 Explicit justification of the theoretical framework.</li> <li>1.3 Clear statement of a question.</li>   <li>2.1 Selection of relevant data from documents.</li> <li>2.2 Description of the individual, collective, spatio-temporal and cultural dimensions of the problem.</li> <li>2.3 Establishment of clear and relevant links.</li> <li>2.4 Accurate statement of the issues.</li>   <li>3.1 Determination of the appropriate assessment criteria.</li> <li>3.2 Recognition of the strengths and weaknesses of the conclusions.</li> <li>3.3 Broadening of the question under analysis.</li> </ol>

OBJECTIVE	STANDARD
<p><b>Statement of the Competency</b></p> <p>To communicate at a rudimentary level in a modern language.<sup>1</sup></p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. Grasp the meaning of an oral message.</li> <li>2. Grasp the meaning of a written message.</li> <li>3. Explain a simple message orally.</li> <li>4. Write a text on a given topic.</li> </ol> <p>_____</p> <p><sup>1</sup>“Rudimentary” refers to the limited use of linguistic structures, grammatical codes and vocabulary. This limitation varies in accordance with the problems posed by some modern languages.</p>	<p><b>Achievement Context</b></p> <p>For modern languages that use the Roman alphabet:</p> <ul style="list-style-type: none"> <li>- during a conversation involving a minimum of eight responses</li> <li>- in a written communication comprising a minimum of eight sentences</li> </ul> <p>For modern languages that use a system of writing other than the Roman alphabet:</p> <ul style="list-style-type: none"> <li>- during a conversation involving a minimum of six responses</li> <li>- in a written communication comprising a minimum of six sentences</li> </ul> <p>In simulation activities on familiar topics. Using reference tools.</p> <p><b>Performance Criteria</b></p> <p>The acquisition of a modern language requires awareness of the culture of those who use the language.</p> <ol style="list-style-type: none"> <li>1.1 Correct identification of idiomatic words and expressions.</li> <li>1.2 Explicit recognition of the general meaning of simple messages.</li> <li>1.3 Logical linking of the elements of the message.</li> <li>2.1 Correct identification of idiomatic words and expressions.</li> <li>2.2 Explicit recognition of the general meaning of simple messages.</li> <li>2.3 Logical linking of the elements of the message.</li> <li>3.1 Correct use of language structures in main and subordinate clauses.</li> <li>3.2 Appropriate application of the grammatical rules.</li> <li>3.3 Correct use of verbs in the present indicative.</li> <li>3.4 Appropriate use of basic vocabulary and idiomatic expressions.</li> <li>3.5 Intelligible pronunciation.</li> <li>3.6 Logical linking of a series of simple sentences.</li> <li>3.7 Spontaneous and logical linking of sentences in a dialogue.</li> <li>4.1 Appropriate use of language structures in main and subordinate clauses.</li> <li>4.2 Appropriate application of the basic rules of grammar.</li> <li>4.3 Use of verbs in the present indicative.</li> <li>4.4 Appropriate use of basic vocabulary and idiomatic expressions.</li> <li>4.5 Logical linking of a series of simple sentences.</li> <li>4.6 Acceptable application of the typographic rules for systems of writing other than the Roman alphabet.</li> </ol>

OBJECTIVE	STANDARD
<p><b>Statement of the Competency</b></p> <p>To communicate on familiar subjects in a modern language.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. Grasp the meaning of an oral message.</li> <li>2. Grasp the meaning of a written message.</li> <li>3. Express a simple message orally using moderately complex sentences.</li> <li>4. Write a text on a given subject using moderately complex sentences.</li> </ol>	<p><b>Achievement Context</b></p> <p>During a conversation involving a minimum of 15 responses.  In a written communication comprising a minimum of 20 sentences for languages that use the Roman alphabet.  In a written communication comprising a minimum of 10 sentences for languages that use a system of writing other than the Roman alphabet.  Based on:  - ordinary daily life situations  - simple subjects taken from daily life  Using reference tools.</p> <p><b>Performance Criteria</b></p> <p>The acquisition of a modern language requires awareness of the culture of those who use it.</p> <ol style="list-style-type: none"> <li>1.1 Correct identification of idiomatic words and expressions.</li> <li>1.2 Explicit recognition of the general meaning and essential ideas of messages of medium complexity.</li> <li>1.3 Logical linking of the elements of the message.</li> <li>2.1 Correct identification of idiomatic words and expressions.</li> <li>2.2 Explicit recognition of the general meaning and essential ideas of messages of medium complexity.</li> <li>2.3 Logical linking of the elements of the message.</li> <li>3.1 Appropriate use of language structures in main or subordinate clauses.</li> <li>3.2 Appropriate application of the grammatical rules.</li> <li>3.3 Correct use of verbs in the present indicative.</li> <li>3.4 Appropriate use of an enriched basic vocabulary and idiomatic expressions.</li> <li>3.5 Intelligible pronunciation.</li> <li>3.6 Logical linking of a series of moderately complex sentences.</li> <li>3.7 Dialogue.</li> <li>4.1 Appropriate use of language structures in main or subordinate clauses.</li> <li>4.2 Appropriate application of the grammatical rules.</li> <li>4.3 Correct use of verbs in the present and past indicative.</li> <li>4.4 Appropriate use of an enriched basic vocabulary and idiomatic expressions.</li> <li>4.5 Logical linking of a series of moderately complex sentences.</li> <li>4.6 Acceptable application of the writing rules for systems other than the Roman alphabet.</li> </ol>

OBJECTIVE	STANDARD
<p><b>Statement of the Competency</b></p> <p>To communicate with a certain degree of ease in a modern language.</p> <p><b>Elements</b></p> <ol style="list-style-type: none"> <li>1. Elucidate the meaning of an oral message in current language.</li> <li>2. Elucidate the meaning of a moderately complex text.</li> <li>3. Discuss a subject.</li> <li>4. Write a text of moderate complexity.</li> </ol>	<p><b>Achievement Context</b></p> <p>Working alone.  During a verbal exchange involving a minimum of 20 responses.  During the writing of a moderately long text (a minimum of 25 sentences for languages that use the Roman alphabet, and a minimum of 15 sentences for other languages).  Based on sociocultural documents.  Using reference works in the case of written communication.</p> <p><b>Performance Criteria</b></p> <p>The acquisition of a modern language requires awareness of the culture of those who use it.</p> <ol style="list-style-type: none"> <li>1.1 Accurate explanation of the general meaning and essential ideas of the message.</li> <li>1.2 Clear differentiation of the structural features of the language.</li> <li>2.1 Accurate explanation of the general meaning and essential ideas of the text.</li> <li>2.2 Clear differentiation of the structural features of the language.</li> <li>3.1 Appropriate use of the structural features of the language in accordance with the message to be conveyed.</li> <li>3.2 Appropriate use of current vocabulary.</li> <li>3.3 Proper pronunciation and intonation.</li> <li>3.4 Moderate pace in a dialogue conducted in a current language.</li> <li>3.5 Coherence of the message.</li> <li>3.6 Relevant answers to questions.</li> <li>4.1 Appropriate use of the structural features of the language in accordance with the text to be written.</li> <li>4.2 Accuracy of vocabulary.</li> <li>4.3 Overall coherence of the text.</li> <li>4.4 Adherence to the rules governing the presentation and writing of the text.</li> </ol>



**APPENDIX :**

*EDUCATIONAL INTENTIONS OF GENERAL EDUCATION*



# **EDUCATIONAL INTENTIONS OF GENERAL EDUCATION**

## **GENERAL EDUCATION COMMON TO ALL PROGRAMS AND GENERAL EDUCATION ADAPTED TO PROGRAMS**

### **English, Language of Instruction and Literature**

#### **General education common to all programs**

The three sets of objectives and standards in English, Language of Instruction and Literature, pursue two general goals : mastery of the language of instruction and exploration of the riches of the literary heritage. Achievement of these goals is intended to bring the students to a college level of proficiency in the areas of reading, writing, listening and speaking. Building on the skills developed by students on completion of secondary school, the English programme places a marked emphasis on written production and reading comprehension while at the same time consolidating listening and speaking skills.

The mastery of language skills will be achieved through regular and ongoing observance of the rules of correct writing and speaking and the production of texts supported by reading and the study of literature. Students will also be encouraged to develop an appreciation of literature by becoming acquainted with a number of significant literary works representative of various genres and periods and expressing a variety of literary themes. Both the aesthetic and cultural value of these texts and their formal aspects will be the objects of study.

All students entering college will begin their English studies with an introductory set of objectives and standards. This set has two possible formats. While both provide a range of reading, writing and literary activities, one includes additional reinforcement of reading and writing skills.

#### **General education adapted to programs**

The set of objectives and standards for English, Language of Instruction and Literature, is placed in the context of general education and is a complement to the general education common to all programs. Students will develop the skills required in order to communicate in the forms of discourse appropriate to their field of study.

## **Outcome objectives**

Students who have achieved the general education objectives in English, Language of Instruction and Literature, will be able to :

- Demonstrate a college level of proficiency in the areas of reading, writing, listening and speaking.
- Develop their own ideas into arguments and theses, organize them and edit their work.
- Understand basic vocabulary and terminology used when discussing literature.
- Analyze literary works.

## **HUMANITIES**

Humanities, as part of the core curriculum, is intended to promote personal and social development and to give students a foundation that will help them understand their roles in contemporary society as members of the labour force, citizens, and individuals. The three sets of objectives and standards in Humanities propose common frameworks for understanding the experiences, ideas and values of humankind and their diversity. They are aimed at developing critical thinking, reinforcing the ancillary skills involved in careful reading, organized writing, and well-developed oral presentations, and, where appropriate, improving media and computer literacy. Once students have mastered the three-stage process of analysis, synthesis and evaluation, they will be able to reflect in an informed manner and to communicate what they have learned in an organized and coherent fashion.

### **Principles**

- 1) Humanities constitutes a thematic, multidisciplinary, at times transdisciplinary, exploration of humankind, including its accomplishments, failures, abilities, creations, ideas, and values.
- 2) Humanities helps students to recognize, define and classify information and provides them with common frameworks for diverse methods of analyzing, synthesizing and evaluating conceptions of society, knowledge and values.
- 3) Humanities aims to prepare students for common civic responsibilities and the exercise of rights.
- 4) Humanities pursues the general goal of developing critical thought, valuing it, and recognizing its limitations.

## **Outcome objectives**

Students who have achieved the general education objectives in Humanities will be able to :

- Describe, explain and organize main elements, ideas, values and implications of a world view in a coherent fashion.
- Compare world views.
- Recognize the basic elements in a specific example of the organization, transmission, and use of knowledge.
- Define the dimensions, limits, and uses of knowledge in appropriate historical contexts.
- Identify, organize and synthesize the salient elements of a particular example of knowledge.
- Situate important ethical and social issues in their appropriate historical and intellectual contexts.
- Explain, analyze and debate ethical issues in a personal and professional context.

## **Sequence of objectives and standards**

The first two sets of objectives and standards in Humanities, which are part of the general education component common to all programs, develop similar skills in a recursive fashion.

In the first set, the emphasis is on how knowledge is defined, acquired, classified, transmitted, and applied. Students examine both messages and media to identify the strengths and limitations of each. Students learn to situate knowledge in a social, historical and personal context, a skill they will need in order to become lifelong learners.

The second set focuses on how individuals, groups, societies or nations organize ideas, perceptions and values into explanatory patterns. Students explore major ideas and value systems by which diverse individuals, groups, societies or nations seek to explain the world and their place in it.

The third set, which is part of the general education component adapted to programs is aimed at deepening and reinforcing the critical thinking skills developed in the first two sets. It is, therefore, sequenced so that students can build on the critical skills, knowledge and insights developed in the first two sets. By situating these issues in their appropriate world view and knowledge contexts, students develop a critical and autonomous approach to ethical values in general and to the values involved in their own fields of interest in particular. This final set also provides students with an opportunity to consolidate personal and social values.

## **FRANÇAIS, LANGUE SECONDE**

L'enseignement du français, langue seconde, contribue à la formation fondamentale de la personne, en même temps qu'il a pour objet de lui permettre de communiquer efficacement avec ses concitoyens et concitoyennes.

### **Principes**

La maîtrise du français, langue seconde, est essentielle pour quiconque veut participer pleinement à la vie de la société québécoise, dont le français est la langue officielle. En conséquence, la formation générale en français, langue seconde, a pour finalité de rendre les étudiants et les étudiantes aptes à utiliser de façon efficace les moyens dont dispose la langue pour communiquer en société. À cette fin, ils devront acquérir des connaissances en vue de les déployer dans les formes de discours qu'il leur faudra pratiquer.

- 1) À leur arrivée au collégial, les étudiants et les étudiantes ont déjà acquis des compétences dans les quatre habiletés langagières, à savoir : parler, lire, écouter et écrire, mais sont, de façon générale, plus compétents en matière d'expression orale. En conséquence, la formation porte sur le développement des quatre habiletés langagières tout en mettant l'accent sur la lecture et l'écriture.
- 2) En tant que partie intégrante de la formation générale, le français, langue seconde, contribue au développement de la pensée critique et de l'expression structurée.

### **Résultats attendus**

Tout étudiant ou toute étudiante qui a atteint les objectifs de formation générale en français, langue seconde, pourra, selon son niveau de compétence, montrer :

- sur le plan des connaissances, qu'il ou elle :
  - sait faire une présentation orale structurée;
  - connaît les différentes formes du discours;
  - connaît les différentes techniques de lecture et d'écriture;
- sur le plan des habiletés, qu'il ou elle :
  - est capable de questionner, d'analyser, de juger, et d'argumenter en français;
  - est apte à entretenir des rapports sociaux et à partager la vie culturelle du Québec;
  - est apte à établir, à poursuivre et à pratiquer des rapports professionnels en français;
- sur le plan des attitudes, qu'il ou elle :
  - fait preuve d'ouverture par rapport aux différents aspects de la culture québécoise;
  - a conscience des différences et des similitudes entre sa culture d'origine et la culture québécoise francophone;
  - a la préparation voulue pour s'insérer dans la vie sociale et économique.

## **Séquence des objectifs et des standards**

Pour répondre aux divers besoins d'apprentissage des étudiants et des étudiantes du collégial, les ensembles en français, langue seconde, sont répartis selon quatre niveaux. Chacun de ces niveaux permet d'amener les étudiants et les étudiantes à interpréter et à produire des textes de plus ou moins grande complexité.

La formation générale en français, langue seconde, comporte deux ensembles prévus en séquence. Le premier, qui fait partie de la formation générale commune à tous les programmes, a pour objet de consolider les connaissances linguistiques déjà acquises et de les développer pour amener les étudiants et les étudiantes à communiquer de façon plus précise sur le plan tant du vocabulaire et de la syntaxe que de l'organisation textuelle.

Le second ensemble, qui fait partie de la formation générale propre aux programmes, s'appuie sur les acquis développés dans le premier ensemble en les enrichissant d'éléments de compétence liés aux champs d'études de l'étudiant ou de l'étudiante. On cherche à développer la précision de l'expression dans des situations de communication particulières qui relèvent du champ d'études de l'étudiant ou de l'étudiante.

## **PHYSICAL EDUCATION**

Physical Education, as part of the core curriculum, is aimed at promoting the development of the whole person and at encouraging students to acquire responsible behaviours with respect to their health and quality of life.

### **Principles**

- 1) Physical Education introduces students to different ways of being physically active with a view to making them aware that they are responsible for their health. Students learn concepts and acquire knowledge drawn from the literature and methodically apply them to physical activities apt to lead them to adopt behaviours characteristic of a healthy lifestyle.
- 2) Physical Education enables students to improve their proficiency in an activity and, in doing so, serves to increase their motivation and perseverance to remain physically active, and makes them aware of the contributing factors. To this end, students use a learning process designed to enhance their aptitudes for a given physical activity (i.e., their skills and attitudes).
- 3) Physical Education contributes to making students responsible for assuming responsibility for their health through the maintenance and improvement of their physical fitness and through the sensible practice of physical activity. Students learn to combine being physically active in an effective manner with factors which promote health.
- 4) Physical Education makes students aware of the importance of sharing the knowledge they have acquired. The pleasure and sense of well-being students get out of Physical Education classes motivate them to encourage others to be physically active and to adopt healthy behaviours.

## Outcome objectives

Students who have achieved the general education objectives in Physical Education will be able to demonstrate :

- their knowledge of :
  - The relationship between physical activity, lifestyle and health based on the findings of scientific research.
  - The scientific principles for improving or maintaining one's fitness.
  - Ways to assess their abilities and needs with respect to activities which can enhance their health.
  - The rules, techniques and conditions involved in different types of physical activity.
  - A method for setting goals.
  - The factors which facilitate making physical activity part of one's lifestyle.
  
- their ability to :
  - Choose physical activities on the basis of their motivation, abilities and needs.
  - Establish relationships between lifestyle and health.
  - Apply the rules, techniques and conditions involved in different types of physical activity.
  - Set goals that are realistic, measurable, challenging, and situated within a specific time frame.
  - Improve their mastery of the basic techniques, tactics and strategies associated with sports, outdoor and expression-oriented activities.
  - Use their creative and communication skills, particularly in group activities.
  - Evaluate their skills, their attitudes and their progress with respect to different forms of physical activity.
  - Maintain or increase their physical activity level and fitness level on their own.
  - Manage a personal physical activity program and assume responsibility in the organization of physical activities.
  
- their capacity to (i.e., their attitudes):
  - Recognize the importance of taking charge of their health.
  - Be aware of the need to evaluate and respect their abilities and how the activity is to be carried out, before initiating the activity.
  - Foster self-confidence, self-control, respect for others and cooperation, through the knowledge they have acquired and through participation in physical activity.
  - Respect the environment in which the activities are held.
  - Appreciate the aesthetic and play value of physical activity.
  - Promote a balanced and active lifestyle as a social value.

## **Sequence of objectives and standards**

The three sets of objectives and standards in Physical Education are designed in a learning sequence. The first two are prerequisites for the third.

The first set focuses on the relationship between good health and physical activity as related to a healthy lifestyle. Students are required to try one or more activities and to relate them to their abilities, needs, motivation, lifestyle and knowledge of health promotion. This enables them to make an appropriate and justified choice of physical activities.

The second set looks at the improvement of effectiveness through the use of a goal-oriented approach in a sport, outdoor or expression-oriented activity. After an initial assessment, students are called upon to evaluate their abilities and attitudes with respect to a physical activity, to set goals, and to interpret their progress.

The third set is aimed at bringing students to integrate physical activity into their lifestyle, more particularly through more effective management of factors which facilitate such an integration. During contact-hours with the teacher, students apply the knowledge they have acquired in the first two sets. This is done through the safe and effective practice of physical activity and through the development, realization and evaluation of a personal physical activity program, which students follow and validate under their teacher's supervision. The hours allotted for personal work enable students to complete their personal program.

## **COMPLEMENTARY GENERAL EDUCATION**

### **Social sciences**

In the field of Social Sciences, students meet the two sets of objectives and standards by learning to view the social sciences as a specific approach to the study of human existence.

The first set of objectives and standards gives rise to learning activities designed to enable students to assess the contribution of one or more of the social sciences to our understanding of major contemporary issues: the focus of the social sciences, the contribution of the social sciences to an understanding of contemporary issues, future questions which the social sciences will be called upon to examine.

The second set of objectives and standards gives rise to learning activities designed to enable students to rigorously analyze one of the major problems of our time using one or more social scientific approaches.

## **SCIENCE AND TECHNOLOGY**

In the field of Science and Technology, the educational goal is to present science and technology as a specific approach to the study of reality, by introducing students to this area of knowledge. This general goal may cover various aspects of this field, primarily experimentation with methodological instruments and the study of the evolution, challenges and consequences of scientific and technological discoveries.

The first set of objectives and standards emphasizes the general nature and scope of science and technology.

The second set emphasizes experimentation with the scientific method.

## **MODERN LANGUAGES**

Students meet the three sets of objectives and standards for Modern Languages by learning the basic structures and vocabulary of a third language, while becoming sensitized to the culture of the people who speak this language.

Some modern languages use different structures and different writing systems. The three sets of objectives and standards have been developed to take this into account. The degree of competency acquired therefore varies, depending on how far removed these languages are from our own language structure and thought process. Awareness of the culture of the people who speak a modern language is not considered an element of the competency because learning a modern language necessitates awareness of the culture.

## **MATHEMATICS LITERACY AND COMPUTER SCIENCE**

In the field of Mathematics Literacy and Computer Science, the two sets of objectives and standards are based on the educational goal of developing a mathematics and informatics culture.

Students meet the first set of objectives and standards by studying the place, role and evolution of mathematics and informatics and their tools in our society and by describing their different applications. This is a general approach to mathematics literacy and informatics and is not geared to providing students with specific training.

Students meet the second set of objectives and standards by developing their capacity to understand and use mathematics and informatics in order to perform common tasks. More specifically, this set covers related concepts and tools and the general applications of mathematics and informatics in everyday life.

The general approach to the objectives and standards makes it possible to define numerous learning activities intended to promote the development of a mathematics- or informatics-based competency, or a combination of these two areas.

## **ART AND AESTHETICS**

In Art and Aesthetics, the educational goal is to provide students with a general knowledge by exploring various forms of art, in one or more artistic fields. This basic education allows students to develop aesthetic awareness through exposure to works and experimentation with an artistic medium. In addition, students acquire the basic elements of artistic language and the ability to establish connections between the elements of this language.

Students meet the first set of objectives and standards by studying works of contemporary art and art from other eras. In so doing, they learn to develop an appreciation for the dynamics of the imagination in art and become familiar with the methods of analyzing works of art.

Students meet the second set of objectives and standards by undertaking creative or interpretative activities that involve using an artistic medium. Students also come into contact with works created through this medium so as to learn to recognize the main forms of expression.