3D Animation and Computer-Generated Imagery

Training Sector

13

Communications and Documentation

Québec ⊞

Technical Training Program

574.B0

3D Animation and Computer-Generated Imagery

Training Sector

13

Communications and Documentation

Type of certification: Diploma of College Studies

Number of credits: 91 2/3

Total duration: 2 700 hours of instruction

General education components:	660	hours of instruction
Program-specific component:	2 040	hours of instruction

Prerequisites: - None

ACKNOWLEDGMENTS

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INTRODUCTION TO THE PROGRAM

The *3D Animation and Computer-Generated Imagery* program is in keeping with the aims and orientations of technical education that guide the Direction générale de la formation professionnelle et technique. It has been designed in accordance with the framework for developing technical programs, which requires participation by people working in the field and in the education community.

This program is based on competencies, formulated in terms of objectives and standards. It was designed using an approach that takes into account training needs, the job analysis and the general goals of technical education, and it serves as the basis for the definition and evaluation of learning activities. In addition, it lends itself to the application of the program-based approach.

The *3D Animation and Computer-Generated Imagery* program includes a general education component common to all programs (16 2/3 credits), a general education component adapted to this program (6 credits), a complementary general education component (4 credits) and a program-specific component of 65 credits.

This document has two parts. Part One presents an overview of the program, and Part Two describes the objectives and standards for the general education components and the program-specific component.

Program

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

Competency

In the program-specific component of a technical program: an integrated set of cognitive and psychomotor skills and socioaffective behaviours that enable a student to exercise a role or function, perform a task or carry out an activity at entry level on the job market (*Cadre technique d'élaboration de la partie ministérielle des programmes d'études techniques,* p. 3).

Objective

The competency, skills or knowledge to be acquired or mastered (*College Education Regulations,* section 1).

Statement of the competency

In the program-specific component of a technical program, the statement of the competency is the result of the job analysis, the general goals of technical education and, in certain cases, other determinants. It consists of an action verb and a complement. It must be clear and unequivocal.

In the general education components, the statement of the competency is the result of an analysis of the needs of general education.

Elements of the competency

In the program-specific component of a technical program, the elements of the competency include only what is necessary in order to understand the competency. They specify the major steps in exercising the competency or the main aspects of the competency.

In the general education components, the elements of the objective, formulated in terms of a competency, specify the main aspects of the competency. They include only what is necessary in order to understand and attain the competency.

Standard

The level of performance at which an objective is considered to be achieved (*College Education Regulations,* section 1).

Achievement context

In the program-specific component of a technical program, the achievement context corresponds to the situation in which the competency is exercised at entry level on the job market. The achievement context does not specify the context for learning or evaluation.

Performance criteria

In the program-specific component of a technical program, the performance criteria define requirements by which to judge the attainment of each element of the competency and consequently of the competency itself. The performance criteria are based on the requirements at entry level on the job market. The performance criteria are not the evaluation instrument but, rather, they serve as a reference for the development of the evaluation instrument. Each element of the competency requires at least one performance criterion.

In the general education components, the performance criteria define the requirements for recognition of the attainment of the standard. All the criteria must be respected for the objective to be recognized as having been attained.

Learning activities

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

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

PART ONE

GOALS OF THE PROGRAM

The *3D Animation and Computer-Generated Imagery* program prepares students for careers in 3D animation and computer-generated imagery (CGI). Graduates of the program will find employment primarily in computer animation studios, television studios and in companies specialized in multimedia production, electronic gaming, postproduction and special effects. They may also work for industrial design firms and software producers, or in a variety of areas such as medicine, geomatics, aeronautics and high fashion.

Technicians in 3D animation and CGI must be able to analyze the characteristics of a given project. They must be able to produce a prototype of the animation, model graphic elements (e.g. characters, objects and environment), apply textures and colours, arrange lighting, animate the graphic elements and fine-tune the final rendering. They may also create digital visual effects and composite images.

The aim of the *3D Animation and Computer-Generated Imagery* program is to reconcile two training requirements, namely versatility and specialization. Versatility is ensured through the acquisition of general culture and basic training in art and film analysis, drawing, sculpture, the use of research and image acquisition tools, the use of image processing and animation software, set design and storyboarding. Specialization, which is needed to enter the job market, is ensured through the acquisition of specific competencies related to 3D production, that is, the ability to design, model and animate graphic elements.

In accordance with the general goals of technical education, the aims of the program-specific component of the *3D Animation and Computer-Generated Imagery* program are to:

▪ enable students to acquire competence in the practice of the occupation, correctly performing the tasks and activities of the occupation at a level acceptable for entry into the job market
▪ help students integrate into professional life by giving them a knowledge of the job market in general and of the specific context of the occupation
▪ foster the students' personal growth and encourage continuing professional development
▪ provide for the future job mobility of students by giving them, in particular, the tools they will need to plan their careers, in particular by introducing them to entrepreneurship

The *3D Animation and Computer-Generated Imagery* program enables students to achieve the objectives of the general education component common to all programs, the general education component adapted to this program and the complementary general education component.

GOALS OF GENERAL EDUCATION

In Québec, 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 it places greater emphasis on the cultural content of education and leads directly to the job market or to university. The college system meets current needs with respect to technical and pre-university education. It allows students to further their education without 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.

General education is an integral part of every program and comprises three components: a component common to all programs, a component adapted to the particular program and a complementary component. The aim of general education is to provide students with a common cultural core, to help them learn and develop generic skills, and to foster desirable attitudes. Its purpose is to educate students as individuals, to prepare them for their role as responsible members of society and to enable them to share in the common cultural heritage.

Common cultural core

The common cultural core comprises 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 another language, primarily French or English
➢ openness to the world and to cultural diversity
➢ appreciation of the riches of our cultural heritage through awareness of the accomplishments of human civilization
➢ the ability to relate to major currents in the history of human thought
➢ the ability to think independently and critically
➢ personal and social ethics
➢ knowledge concerning 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 to the analysis of situations

➢ the ability to apply what they have learned to decision making
➢ work methods
➢ the ability to reflect on what they have learned

Desirable attitudes

The common cultural core and generic skills help students to acquire and develop the following attitudes:

➢ autonomy
➢ a critical sense
➢ awareness of their responsibilities toward themselves and others
➢ open-mindedness
➢ creativity
➢ openness to the world

These aims apply to the three general education components:

➢ General education component common to all programs, which is allotted 16 2/3 credits distributed as follows:

  ➢ language of instruction and literature: 7 1/3 credits
  ➢ humanities or *philosophie*: 4 1/3 credits
  ➢ physical education: 3 credits
  ➢ second language: 2 credits

➢ General education component adapted to programs, which introduces tasks or learning situations that are relevant to the program-specific component of a program. The breakdown of credits, for a total of 6, is as follows:

  ➢ language of instruction and literature: 2 credits
  ➢ humanities or *philosophie*: 2 credits
  ➢ second language: 2 credits

➢ Complementary general education component, which provides students with learning activities chosen to balance their training and complement 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 knowledge and skills acquired in the general education components should be emphasized and, whenever possible, applied in the program-specific component, and vice versa. Thus, general education and the program-specific component of a program enhance each other as they contribute to the students' overall education.

Each college-level institution must provide general education through learning activities that are consistent with its educational project, in keeping with the aims, subject areas and ministerial guidelines provided.

The objectives and standards in the general education components were developed according to the provisions of the *College Education Regulations* (R.S.Q., c. C-29, s. 18; 1993, c. 25, s. 11). Revised Edition, October 2001.

EDUCATIONAL INTENTIONS OF GENERAL EDUCATION

The educational intentions describe how each field of studies in the common, adapted and complementary components of general education contributes to achieving the goals of general education. For the common and adapted components, the educational intentions include:

➢ a general statement of the role of each field of studies
➢ the principles underlying this role
➢ outcome objectives defining (in terms of knowledge, skills and attitudes) the contribution of each field to the achievement of the goals of general education
➢ 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.

PROGRAM OBJECTIVES

GENERAL EDUCATION COMPONENT 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.
or
000A   Communiquer en français avec une certaine aisance.
or
000B   Communiquer avec aisance en français.
or
000C   Traiter d'un sujet culturel et littéraire.

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 COMPONENT ADAPTED TO THIS PROGRAM

(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 d'études.

or

000Q   Communiquer en français dans un champ d'études particulier.

or

000R   Communiquer avec aisance en français dans un champ d'études particulier.

or

000S   Disserter en français sur un sujet lié au champ d'études.

COMPLEMENTARY GENERAL EDUCATION COMPONENT

(4 credits)

000V   To estimate the contribution of the social sciences to an understanding of contemporary issues.

000W   To analyze one of the major problems of our time using one or more social scientific approaches.

000X   To explain the general nature of science and technology and some of the major contemporary scientific or technological issues.

000Y   To resolve a simple problem by applying the basic scientific method.

000Z   To communicate with limited skill in a modern language.

0010   To communicate on familiar topics in a modern language.

0067   To communicate with relative ease in a modern language.

0011   To recognize the role of mathematics or informatics in contemporary society.

0012   To use various mathematical or computer concepts, procedures and tools for common tasks.

0013   To consider various forms of art produced by aesthetic practices.

0014   To produce a work of art.

PROGRAM-SPECIFIC COMPONENT

(65 credits)

0250   To analyze the job function.

0251   To work with major trends in visual and graphic arts.

0252   To analyze a production.

0253   To draw a character and its environment.

0254   To acquire images.

0255   To produce a concept sketch.

0256   To process digital images.

0257   To shape a model.

0258   To stage a scene.

0259   To design environments.

025A   To design characters.

025B   To develop a storyboard.

025C   To assemble media elements.

025D   To produce computer-generated images.

025E   To model props.

025F   To model sets.

025G   To model characters.

025H   To represent movements in three dimensions.

025J   To animate characters.

025K   To create digital visual effects.

025L   To produce a 3D animation film.

025M   To prepare to enter the work force.

PART TWO

OBJECTIVES AND STANDARDS – GENERAL EDUCATION COMPONENT COMMON TO ALL PROGRAMs

GENERAL EDUCATION COMPONENT COMMON TO ALL PROGRAMS: CODE: 0004 LANGUAGE OF INSTRUCTION AND LITERATURE		
OBJECTIVE		STANDARD
Statement of the Competency To analyze and produce various forms of discourse.		
Elements of the Competency		**Performance Criteria**
1	To identify the characteristics and functions of the components of discourse.	1.1 Accurate explanation of the denotation of words.
		1.2 Adequate recognition of the appropriate connotation of words.
		1.3 Accurate definition of the characteristics and function of each component.
2	To determine the organization of facts and arguments of a given discourse.	2.1 Clear and accurate recognition of the main idea and structure.
		2.2 Clear presentation of the strategies employed to develop an argument or thesis.
3	To prepare ideas and strategies for a projected discourse.	3.1 Appropriate identification of topics and ideas.
		3.2 Adequate gathering of pertinent information.
		3.3 Clear formulation of a thesis.
		3.4 Coherent ordering of supporting material.
4	To formulate a discourse.	4.1 Appropriate choice of tone and diction.
		4.2 Correct development of sentences.
		4.3 Clear and coherent development of paragraphs.
		4.4 Formulation of a 750-word discourse.
5	To edit the discourse.	5.1 Thorough revision of form and content.
LEARNING ACTIVITIES		
Discipline: English **Weighting:** 2-2-4, 1-3-4 **Credits:** 2 2/3		

GENERAL EDUCATION COMPONENT COMMON TO ALL PROGRAMS: CODE: 0005
LANGUAGE OF INSTRUCTION AND LITERATURE

OBJECTIVE	STANDARD
Statement of the Competency To apply a critical approach to literary genres. **Elements of the Competency** 1 To distinguish genres of literary discourse. 2 To recognize the use of literary conventions within a specific genre. 3 To situate a discourse within its historical and literary period. 4 To explicate a discourse representative of a literary genre.	**Performance Criteria** 1.1 Clear recognition of the formal characteristics of a literary genre. 2.1 Accurate recognition of the figurative communication of meaning. 2.2 Adequate explanation of the effects of significant literary and rhetorical devices. 3.1 Appropriate recognition of the relationship of a text to its period. 4.1 Selective use of appropriate terminology. 4.2 Effective presentation of a 1000-word integrated response to a text.

LEARNING ACTIVITIES

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

GENERAL EDUCATION COMPONENT COMMON TO ALL PROGRAMS: CODE: 0006
LANGUAGE OF INSTRUCTION AND LITERATURE

OBJECTIVE	STANDARD
Statement of the Competency To apply a critical approach to a literary theme.	
Elements of the Competency	**Performance Criteria**
1 To recognize the treatment of a theme within a literary text.	1.1 Clear recognition of elements within the text which define and reinforce a theme and its development. 1.2 Adequate demonstration of the effects of significant literary and rhetorical devices.
2 To situate a literary text within its cultural context.	2.1 Appropriate recognition of a text as an expression of cultural context. 2.2 Adequate demonstration of the effects of significant literary and rhetorical devices.
3 To detect the value system inherent in a literary text.	3.1 Appropriate identification of expression (explicit/implicit) of a value system in a text.
4 To explicate a text from a thematic perspective.	4.1 Selective use of an appropriate terminology. 4.2 Effective presentation of a 1000-word integrated response to a text.

LEARNING ACTIVITIES

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

GENERAL EDUCATION COMPONENT COMMON TO ALL PROGRAMS: HUMANITIES	
	CODE: 00B2

OBJECTIVE	STANDARD
Statement of the Competency To apply a logical analytical process to how knowledge is organized and used.	
Elements of the Competency	**Performance Criteria**
1 To recognize the basic elements of a field of knowledge.	1.1 Appropriate description of the basic elements. 1.2 Appropriate use of terminology relevant to fields of knowledge.
2 To define the modes of organization and utilization of a field of knowledge.	2.1 Adequate definition of the dimensions, limits, and uses of fields of knowledge.
3 To situate a field of knowledge within its historical context.	3.1 Accurate identification of the main components in the historical development of fields of knowledge. 3.2 Accurate description of the effects of historical development and societal milieu on the limitations and uses of a field of knowledge.
4 To organize the main components into coherent patterns.	4.1 Coherent organization of the main components.
5 To produce a synthesis of the main components.	5.1 Appropriate analysis of the components. 5.2 Coherent synthesis of the main components. 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.

LEARNING ACTIVITIES

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

GENERAL EDUCATION COMPONENT COMMON TO ALL PROGRAMS: HUMANITIES
CODE: 000G

OBJECTIVE	STANDARD
Statement of the Competency To apply a critical thought process to world-views.	
Elements of the Competency	**Performance Criteria**
1 To describe world-views.	1.1 Accurate description of a society or group with a distinctive world-view.
	1.2 Appropriate use of terminology relevant to these societies or groups.
2 To explain the major ideas, values, and implications of a world-view.	2.1 Adequate explanation of the salient components of a world-view.
3 To organize the ideas, values and experiences of a world-view into coherent patterns.	3.1 Coherent organization of ideas about a world-view.
	3.2 Appropriate expression, including a significant individual written component, of an analysis of the context, importance, and implications of world-views.
4 To compare world-views.	4.1 Comparative analysis of these world-views.
	4.2 Appropriate inclusion of central elements, relationships, and organizational principles of the societies or groups in the analysis.

LEARNING ACTIVITIES

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

FORMATION GÉNÉRALE COMMUNE : LANGUE SECONDE (NIVEAU I) CODE : 0017	
OBJECTIF	STANDARD
Énoncé de la compétence Appliquer les notions de base de la communication en français courant.	
Éléments	**Critères de performance**
1 Dégager le sens d'un message oral simple.	1.1 Repérage précis des difficultés de compréhension du message.
	1.2 Utilisation pertinente des techniques d'écoute choisies.
	1.3 Distinction précise du sens général et des idées essentielles du message.
	1.4 Description précise du sens général et des idées essentielles du message.
2 Émettre un message oral simple.	2.1 Repérage précis des difficultés d'expression.
	2.2 Utilisation pertinente des techniques d'expression orales choisies.
	2.3 Emploi pertinent du vocabulaire courant.
	2.4 Expression intelligible du propos.
3 Dégager le sens d'un texte.	3.1 Repérage précis des difficultés de compréhension du texte.
	3.2 Utilisation pertinente des techniques de lecture choisies.
	3.3 Distinction claire des principaux éléments du texte.
	3.4 Description précise du sens général et des idées essentielles d'un texte de 500 mots.
4 Rédiger un texte simple.	4.1 Repérage précis des difficultés d'écriture.
	4.2 Utilisation pertinente des techniques d'écriture choisies.
	4.3 Emploi pertinent du vocabulaire courant.
	4.4 Formulation claire et cohérente d'un texte de 100 mots.
ACTIVITÉS D'APPRENTISSAGE	

Discipline :   Français, langue seconde
Pondération :   2-1-3
Unités :   2

FORMATION GÉNÉRALE COMMUNE : LANGUE SECONDE (NIVEAU II) CODE : 000A	
OBJECTIF	STANDARD

Énoncé de la compétence

Communiquer en français avec une certaine aisance.

Éléments	**Critères de performance**
1 Interpréter un texte oral simple de trois minutes en français courant.	1.1 Distinction claire des principaux éléments du texte oral.
	1.2 Explication précise du sens des mots dans le texte.
	1.3 Repérage précis des idées et des sujets traités dans le texte.
2 Produire un texte oral planifié de cinq minutes en français courant.	2.1 Emploi pertinent du vocabulaire courant.
	2.2 Respect du niveau de langue, du code grammatical et des règles de la prononciation.
	2.3 Formulation claire et cohérente du propos.
3 Interpréter un texte écrit en français courant.	3.1 Distinction claire des principaux éléments du texte.
	3.2 Explication précise du sens des mots dans le texte.
	3.3 Repérage précis des idées principales et de la structure d'un texte de 700 à 1000 mots.
4 Rédiger un texte simple en français courant.	4.1 Respect du code grammatical et orthographique.
	4.2 Utilisation judicieuse des principaux éléments du corpus.
	4.3 Formulation claire et cohérente des phrases.
	4.4 Articulation cohérente des paragraphes.
	4.5 Rédaction d'un texte de 200 mots.

ACTIVITÉS D'APPRENTISSAGE

Discipline :　　　　Français, langue seconde
Pondération :　　　2-1-3
Unités :　　　　　　2

FORMATION GÉNÉRALE COMMUNE : LANGUE SECONDE (NIVEAU III) CODE : 000B	
OBJECTIF	STANDARD

Énoncé de la compétence

Communiquer avec aisance en français.

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

ACTIVITÉS D'APPRENTISSAGE

Discipline :   Français, langue seconde
Pondération :   2-1-3
Unités :   2

FORMATION GÉNÉRALE COMMUNE : LANGUE SECONDE (NIVEAU IV) CODE : 000C	
OBJECTIF	STANDARD

OBJECTIF	STANDARD
Énoncé de la compétence Traiter d'un sujet culturel et littéraire. **Éléments** 1 Analyser un texte culturel ou littéraire. 2 Rédiger un texte sur un sujet culturel ou littéraire.	 **Critères de performance** 1.1 Formulation personnelle des éléments principaux du texte. 1.2 Inventaire des thèmes principaux. 1.3 Relevé d'indices qui permettent de situer le texte dans son contexte socioculturel et historique. 1.4 Repérage des valeurs véhiculées. 1.5 Repérage juste de la structure du texte. 1.6 Articulation claire d'un point de vue personnel. 2.1 Respect du sujet. 2.2 Respect du code grammatical et orthographique. 2.3 Adaptation au lecteur ou à la lectrice. 2.4 Utilisation judicieuse des principaux éléments du corpus. 2.5 Formulation claire et cohérente d'un texte de 500 mots. 2.6 Articulation claire d'un point de vue personnel.

ACTIVITÉS D'APPRENTISSAGE
Discipline :   Français, langue seconde **Pondération :**   3-0-3 **Unités :**   2

GENERAL EDUCATION COMPONENT COMMON TO ALL PROGRAMS: PHYSICAL EDUCATION	
	CODE: 0064

OBJECTIVE	STANDARD

Statement of the Competency

To establish the role that being physically active plays amongst the lifestyle behaviours which promote health.

Elements of the Competency	**Performance Criteria**
1 To establish the relationship between one's lifestyle and one's health.	1.1 Proper use of documentation.
	1.2 Appropriate relationships between the main lifestyle behaviours and their impact on health.
2 To be physically active in a manner which promotes health.	2.1 Observance of the rules involved in the physical activity, including safety guidelines.
	2.2 Respect of one's abilities when practising physical activities.
3 To recognize one's needs, abilities, and motivational factors with respect to being physically active on a regular basis.	3.1 Appropriate use of the physical quantitative and qualitative data.
	3.2 Statement of one's main physical needs and abilities.
	3.3 Statement of one's main motivational factors with respect to being physically active on a regular basis.
4 To propose physical activities which promote health.	4.1 Appropriate and justified choice of physical activities according to one's needs, abilities, and motivational factors.

LEARNING ACTIVITIES

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

GENERAL EDUCATION COMPONENT COMMON TO ALL PROGRAMS: PHYSICAL EDUCATION	
	CODE: 0065

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

LEARNING ACTIVITIES
Discipline: Physical Education **Weighting:**   0-2-1 **Credits:**   1

GENERAL EDUCATION COMPONENT COMMON TO ALL PROGRAMS: PHYSICAL EDUCATION	
	CODE: 0066

OBJECTIVE	STANDARD
Statement of the Competency To demonstrate one's responsibility for being physically active in a manner which promotes health.	
Elements of the Competency	**Performance Criteria**
1 To combine effective practice with a health promotional approach to physical activity.	1.1 Integration of effective practice with factors which promote health in the practice of a physical activity.
2 To manage a personal physical activity program.	2.1 Statement of one's priorities according to the needs, abilities, and motivational factors with respect to being active on a regular basis.
	2.2 Proper formulation of objectives to achieve in one's personal program.
	2.3 Appropriate choice of activity or activities for one's personal program.
	2.4 Appropriate planning of how the activity or activities in the personal program are carried out.
	2.5 Appropriate choice of criteria to measure program objective attainment.
	2.6 Periodic statement of the time invested and the activities carried out during the program.
	2.7 Meaningful interpretation of the progress achieved and difficulties experienced during the activity.
	2.8 Appropriate and periodic adjustment of objectives or action plan.

LEARNING ACTIVITIES

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

OBJECTIVES AND STANDARDS – GENERAL EDUCATION COMPONENT ADAPTED TO THIS PROGRAM

GENERAL EDUCATION COMPONENT ADAPTED TO THIS PROGRAM: CODE: 000L LANGUAGE OF INSTRUCTION AND LITERATURE	
OBJECTIVE	STANDARD

OBJECTIVE	STANDARD
Statement of the Competency To communicate in the forms of discourse appropriate to one or more fields of study.	
Elements of the Competency	**Performance Criteria**
1 To identify the forms of discourse appropriate to given fields of study.	1.1 Accurate recognition of specialized vocabulary and conventions.
	1.2 Accurate recognition of the characteristics of the form of discourse.
2 To recognize the discursive frameworks appropriate to given fields of study.	2.1 Clear and accurate recognition of the main ideas and structure.
	2.2 Appropriate distinction between fact and argument.
3 To formulate a discourse.	3.1 Appropriate choice of tone and diction.
	3.2 Correctly developed sentences.
	3.3 Clearly and coherently developed paragraphs.
	3.4 Appropriate use of program-related communication strategies.
	3.5 Formulation of a 1000-word discourse.
	3.6 Thorough revision of form and content.

LEARNING ACTIVITIES
Discipline: English **Total Contact Hours:** 60 **Credits:**   2

GENERAL EDUCATION COMPONENT ADAPTED TO THIS PROGRAM: HUMANITIES	
CODE: 000U	
OBJECTIVE	**STANDARD**

Statement of the Competency

To apply a critical thought process to ethical issues relevant to the field of study.

Elements of the Competency	**Performance Criteria**
1 To situate significant ethical issues, in appropriate world-views and fields of knowledge.	1.1 Accurate recognition of the basic elements of ethical issues.
	1.2 Appropriate use of relevant terminology.
	1.3 Adequate identification of the main linkages with world-views and fields of knowledge.
2 To explain the major ideas, values, and social implication of ethical issues.	2.1 Adequate description of the salient components of the issues.
3 To organize the ethical questions and their implications into coherent patterns.	3.1 Coherent organization of the ethical questions and their implications.
	3.2 Appropriate expression, including a significant individual written component, of an analysis of the context, importance and implications of the issues.
4 To debate the ethical issues.	4.1 Adequate development of substantiated argumentation including context and diverse points of view.
	4.2 Clear articulation of an individual point of view.

LEARNING ACTIVITIES

Discipline: Humanities
Total Contact Hours: 45
Credits: 2

FORMATION GÉNÉRALE PROPRE : LANGUE SECONDE (NIVEAU I)	CODE : 0018
OBJECTIF	STANDARD

Énoncé de la compétence

Appliquer des notions fondamentales de la communication en français, liées à un champ d'études.

Éléments	**Critères de performance**
1 Dégager le sens d'un message oral simple lié à un champ d'études.	1.1 Repérage précis des difficultés de compréhension du message.
	1.2 Distinction juste des caractéristiques du message.
	1.3 Repérage juste du vocabulaire spécialisé.
	1.4 Utilisation pertinente des techniques d'écoute choisies.
	1.5 Distinction claire des principaux éléments du message.
	1.6 Description précise du sens général et des idées essentielles du message.
2 Dégager le sens et les caractéristiques d'un texte lié à un champ d'études.	2.1 Repérage précis des difficultés de compréhension du texte.
	2.2 Distinction juste des caractéristiques du texte.
	2.3 Repérage précis du vocabulaire spécialisé.
	2.4 Utilisation pertinente des techniques de lectures choisies.
	2.5 Distinction claire des principaux éléments du texte.
	2.6 Description précise du sens général et des idées essentielles du texte.
3 Émettre un message oral simple lié à un champ d'études.	3.1 Repérage précis des difficultés d'expression orale.
	3.2 Utilisation pertinente des techniques d'expression orale choisies.
	3.3 Utilisation pertinente du vocabulaire courant et spécialisé.
	3.4 Expression intelligible du propos.
4 Rédiger un court texte lié à un champ d'études.	4.1 Repérage précis des difficultés d'écrire.
	4.2 Utilisation pertinente des techniques d'écriture choisies.
	4.3 Utilisation pertinente du vocabulaire courant et spécialisé.
	4.4 Formulation claire et cohérente du texte.

ACTIVITÉS D'APPRENTISSAGE	
Discipline :	Français, langue seconde
Nombre d'heures-contact :	45
Nombre d'unités :	2

FORMATION GÉNÉRALE PROPRE : LANGUE SECONDE (NIVEAU II)	CODE : 000Q

OBJECTIF	STANDARD

Énoncé de la compétence

Communiquer en français dans un champ d'études particulier.

Éléments

1 Distinguer les types de textes propres au champ d'études.

2 Interpréter des textes représentatifs du champ d'études.

3 Utiliser des techniques de production de textes appropriées au champ d'études.

Critères de performance

1.1 Distinction précise des caractéristiques formelles de chacun des principaux types de textes et des conventions utilisées.

2.1 Distinction claire des principaux éléments du texte.

2.2 Interprétation claire du vocabulaire spécialisé.

2.3 Repérage précis des idées et des sujets traités.

2.4 Utilisation pertinente des techniques de lecture et d'écoute.

3.1 Emploi pertinent du vocabulaire spécialisé et des conventions.

3.2 Respect du niveau de langue et du code grammatical.

3.3 Formulation claire et cohérente du propos.

3.4 Utilisation pertinente des techniques d'expression.

ACTIVITÉS D'APPRENTISSAGE

Discipline : Français, langue seconde
Nombre d'heures-contact : 45
Nombre d'unités : 2

FORMATION GÉNÉRALE PROPRE : LANGUE SECONDE (NIVEAU III)	CODE : 000R

OBJECTIF	STANDARD

Énoncé de la compétence

Communiquer avec aisance en français dans un champ d'études particulier.

Éléments	**Critères de performance**
1 Commenter des textes propres au champ d'études.	1.1 Distinction précise des caractéristiques formelles des principaux types de textes et des conventions utilisées.
	1.2 Explication précise du sens des mots dans le texte.
	1.3 Repérage précis de la structure du texte.
	1.4 Reformulation juste des idées principales et secondaires, des faits et des opinions.
	1.5 Emploi juste du vocabulaire spécialisé.
2 Produire un texte sur un sujet lié au champ d'études.	2.1 Respect du sujet.
	2.2 Emploi pertinent du vocabulaire spécialisé et des conventions.
	2.3 Respect du niveau de langue et du code grammatical.
	2.4 Formulation claire et cohérente du propos.
	2.5 Agencement pertinent des idées.
	2.6 Adéquation entre forme et fond.

ACTIVITÉS D'APPRENTISSAGE

Discipline : Français, langue seconde
Nombre d'heures-contact : 45
Nombre d'unités : 2

FORMATION GÉNÉRALE PROPRE : LANGUE SECONDE (NIVEAU IV)	CODE : 000S

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

ACTIVITÉS D'APPRENTISSAGE

Discipline : Français, langue seconde
Nombre d'heures-contact : 45
Nombre d'unités : 2

OBJECTIVES AND STANDARDS – COMPLEMENTARY GENERAL EDUCATION COMPONENT

COMPLEMENTARY GENERAL EDUCATION COMPONENT: SOCIAL SCIENCES
CODE: 000V

OBJECTIVE	STANDARD
Statement of the Competency	**Achievement Context**
To estimate the contribution of the social sciences to an understanding of contemporary issues.	• Students will work alone. • They will write an essay of approximately 750 words on the contribution of the social sciences to an understanding of contemporary issues. • Documents and data from the field of social sciences may be used.
Elements of the Competency	**Performance Criteria**
1 Recognize the focus of one or more of the social sciences and their main approaches.	1.1 Formulation of the focus specific to one or more of the social sciences. 1.2 Description of the main approaches used in the social sciences.
2 Identify some of the issues currently under study in the social sciences.	2.1 Association of issues with the pertinent areas of research in the social sciences.
3 Demonstrate the contribution of one or more of the social sciences to an understanding of contemporary issues.	3.1 Presentation of contemporary issues by emphasizing the interpretation of the social sciences. 3.2 Illustration of the interaction between certain social changes and the contribution of the social sciences.

LEARNING ACTIVITIES

Number of student-contact hours: 45
Number of credits: 2

COMPLEMENTARY GENERAL EDUCATION COMPONENT: SOCIAL SCIENCES	
	CODE: 000W

OBJECTIVE	STANDARD
Statement of the Competency	**Achievement Context**
To analyze one of the major problems of our time using one or more social scientific approaches.	• Students will work alone. • They will write an essay of approximately 750 words on a topic related to human existence. • Reference materials from the field of social sciences may be used.
Elements of the Competency	**Performance Criteria**
1 Formulate a problem using one or more social scientific approaches.	1.1 Presentation of the background to the problem. 1.2 Use of appropriate concepts and language. 1.3 Brief description of individual, collective, spatiotemporal and cultural aspects of the problem.
2 Deal with an issue using one or more social scientific approaches.	2.1 Clear formulation of an issue. 2.2 Selection of pertinent reference materials. 2.3 Brief description of historical, experimental and survey methods.
3 Draw conclusions.	3.1 Appropriate use of the selected method. 3.2 Determination of appropriate evaluation criteria. 3.3 Identification of strengths and weaknesses of the conclusions.

LEARNING ACTIVITIES

Number of student-contact hours: 45
Number of credits: 2

COMPLEMENTARY GENERAL EDUCATION COMPONENT: SCIENCE AND TECHNOLOGY	CODE: 000X
OBJECTIVE	STANDARD

OBJECTIVE	STANDARD
Statement of the Competency To explain the general nature of science and technology and some of the major contemporary scientific or technological issues.	**Achievement Context** • Students will work alone. • They will use a written commentary on a scientific discovery or technological development. • They will write an essay of approximately 750 words.
Elements of the Competency	**Performance Criteria**
1 Describe the standard scientific mode of thought and method.	1.1 Brief description of the essential characteristics of the scientific mode of thought, including quantification and demonstration. 1.2 Organized list and brief description of the essential characteristics of the main steps in the standard scientific method.
2 Demonstrate how science and technology are complementary.	2.1 Definition of terms and description of the primary ways in which science, techniques and technology are interrelated: logical and temporal connections, and mutual contributions.
3 Explain the context and the stages related to several scientific and technological discoveries.	3.1 Pertinent and coherent explanation of the relationship between the determining contexts related to several scientific and technological discoveries. 3.2 List of the main stages of scientific and technological discoveries.
4 Deduce different consequences and questions resulting from certain recent scientific and technological developments.	4.1 Brief description of important consequences (of different types) and the current major challenges resulting from several scientific and technological discoveries. 4.2 Formulation of relevant questions and credibility of responses to the questions formulated.

LEARNING ACTIVITIES

Number of student-contact hours: 45
Number of credits: 2

COMPLEMENTARY GENERAL EDUCATION COMPONENT: SCIENCE AND TECHNOLOGY	CODE: 000Y
OBJECTIVE	STANDARD

Statement of the Competency

To resolve a simple problem by applying the basic scientific method.

Achievement Context

- Students will work alone or in groups.
- They will be given a scientific and technological problem that is not complex and that can be resolved by applying the standard scientific method.
- Common scientific instruments and reference materials (written or other) may be used.

Elements of the Competency

1 Describe the main steps of the standard scientific method.

2 Formulate a hypothesis designed to solve a simple scientific and technological problem.

3 Verify a hypothesis by applying the fundamental principles of the basic experimental method.

Performance Criteria

1.1 Organized list and brief description of the characteristics of the steps of the standard scientific method.

2.1 Clear, precise description of the problem.

2.2 Observance of the principles for formulating a hypothesis (observable and measurable nature of data, credibility, etc.).

3.1 Pertinence, reliability and validity of the experimental method used.

3.2 Observance of established experimental method.

3.3 Appropriate choice and use of instruments.

3.4 Clear, satisfactory presentation of results.

3.5 Validity of the connections established between the hypothesis, the verification and the conclusion.

LEARNING ACTIVITIES

Number of student-contact hours: 45
Number of credits: 2

COMPLEMENTARY GENERAL EDUCATION COMPONENT: MODERN LANGUAGES	CODE: 000Z
OBJECTIVE	STANDARD

Statement of the Competency

To communicate with limited skill* in a modern language.

(*This refers to the limited use of language structures, grammar and vocabulary. This limitation varies depending on the complexity of the modern language.)

Achievement Context

For modern languages that use the Latin alphabet, students will:
- have a conversation that includes at least 8 lines of dialogue
- write a text consisting of at least 8 sentences

For modern languages that use a writing system other than the Latin alphabet, students will:
- have a conversation that includes at least 6 lines of dialogue
- write a text consisting of at least 6 sentences

Students will be exposed to learning situations on familiar themes. Reference materials may be used.

Elements of the Competency

1 Understand the meaning of a verbal message.

2 Understand the meaning of a written message.

3 Express a simple message verbally.

4 Write a text on a given subject.

Performance Criteria

The acquisition of a modern language requires an awareness of the culture of the people who use the language.

1.1 Accurate identification of words and idiomatic expressions.
1.2 Clear recognition of the general meaning of simple messages.
1.3 Logical connection between the various elements of the message.

2.1 Accurate identification of words and idiomatic expressions.
2.2 Clear recognition of the general meaning of simple messages.
2.3 Logical connection between the various elements of the message.

3.1 Appropriate use of language structures in main and coordinate clauses.
3.2 Appropriate application of grammar rules.
3.3 Use of verbs in the present indicative.
3.4 Appropriate use of basic vocabulary and idiomatic expressions.
3.5 Understandable pronunciation.
3.6 Coherent sequence of simple sentences.
3.7 Spontaneous and coherent sequence of sentences during a conversation.

4.1 Appropriate use of language structures in main and coordinate clauses.
4.2 Appropriate application of basic grammar rules.
4.3 Use of verbs in the present indicative.
4.4 Appropriate use of basic vocabulary and idiomatic expressions.
4.5 Coherent sequence of simple sentences.
4.6 Acceptable application of graphic rules for writing systems other than the Latin alphabet.

LEARNING ACTIVITIES

Number of student-contact hours: 45
Number of credits: 2

COMPLEMENTARY GENERAL EDUCATION COMPONENT: MODERN LANGUAGES	CODE: 0010
OBJECTIVE	STANDARD

Statement of the Competency

To communicate on familiar topics in a modern language.

Achievement Context

- Students will have a conversation that includes at least 15 lines of dialogue.
- They will write a text consisting of at least 20 sentences for Latin-alphabet languages.
- They will write a text consisting of at least 10 sentences for languages not using the Latin alphabet.
- Students will be exposed to:
  - common situations in everyday life
  - simple topics from everyday life
- Reference materials may be used.

Elements of the Competency

1 Understand the meaning of a verbal message.

Performance Criteria

The acquisition of a modern language requires an awareness of the culture of the people who use the language.

1.1 Accurate identification of words and idiomatic expressions.
1.2 Clear recognition of the general meaning and essential ideas of messages of average complexity.
1.3 Logical connection between the various elements of the message.

2 Understand the meaning of a written message.

2.1 Accurate identification of words and idiomatic expressions.
2.2 Clear recognition of the general meaning and essential ideas of messages of average complexity.
2.3 Logical connection between the various elements of the message.

3 Express a simple message verbally, using sentences of average complexity.

3.1 Appropriate use of language structures in main or subordinate clauses.
3.2 Appropriate application of grammar rules.
3.3 Use of verbs in the present indicative.
3.4 Appropriate use of enriched basic vocabulary and idiomatic expressions.
3.5 Understandable pronunciation.
3.6 Coherent sequence of sentences of average complexity.
3.7 Conversation

4 Write a text on a given subject, using sentences of average complexity.

4.1 Appropriate use of language structures in main or subordinate clauses.
4.2 Appropriate application of grammar rules.
4.3 Use of verbs in the present and past indicative.
4.4 Appropriate use of enriched basic vocabulary and idiomatic expressions.
4.5 Coherent sequence of sentences of average complexity.
4.6 Acceptable application of graphic rules for writing systems other than the Latin alphabet.

LEARNING ACTIVITIES

Number of student-contact hours: 45
Number of credits: 2

COMPLEMENTARY GENERAL EDUCATION COMPONENT: MODERN LANGUAGES CODE: 0067	
OBJECTIVE	**STANDARD**
Statement of the Competency To communicate with relative ease in a modern language.	**Achievement Context** • Students will work alone. • They will have a conversation that includes at least 20 lines of dialogue. • They will write a text of medium length (at least 25 sentences for Latin-alphabet languages and 15 sentences for other languages). • They will use documents of a sociocultural nature. Reference materials for the written text may be used.
Elements of the Competency 1 Understand the meaning of a verbal message in everyday language.	**Performance Criteria** The acquisition of a modern language requires an awareness of the culture of the people who use the language. 1.1 Accurate explanation of the general meaning and essential ideas of the message. 1.2 Clear identification of structural elements of the language.
2 Understand the meaning of a text of average complexity.	2.1 Accurate explanation of the general meaning and essential ideas of the text. 2.2 Clear identification of structural elements of the language.
3 Have a conversation on a subject.	3.1 Appropriate use of the structural elements of the language according to the message to be expressed. 3.2 Appropriate use of everyday vocabulary. 3.3 Accurate pronunciation and intonation. 3.4 Normal flow in a conversation in everyday language. 3.5 Coherence of the message expressed. 3.6 Pertinent responses to questions.
4 Write a text of average complexity.	4.1 Appropriate use of the structural elements of the language according to the text to be written. 4.2 Accurate vocabulary. 4.3 Coherence of the text as a whole. 4.4 Observance of presentation and writing rules applicable to the text.
LEARNING ACTIVITIES	
Number of student-contact hours: 45 **Number of credits:** 2	

COMPLEMENTARY GENERAL EDUCATION COMPONENT: MATHEMATICS LITERACY AND COMPUTER SCIENCE	CODE: 0011
OBJECTIVE	STANDARD

OBJECTIVE	STANDARD
Statement of the Competency To recognize the role of mathematics or informatics in contemporary society.	**Achievement Context** • Students will work alone. • They will write an essay of approximately 750 words, using numerous concrete examples that they themselves will have selected.
Elements of the Competency	**Performance Criteria**
1 Demonstrate the acquisition of basic general knowledge of mathematics or informatics.	1.1 Identification of basic notions and concepts. 1.2 Identification of main branches of mathematics or informatics. 1.3 Appropriate use of terminology.
2 Describe the evolution of mathematics or informatics.	2.1 Descriptive summary of several major phases.
3 Recognize the contribution of mathematics or informatics to the development of other areas of knowledge.	3.1 Demonstration of the existence of important contributions, using concrete examples.
4 Illustrate the diversity of mathematical or informatics applications.	4.1 Presentation of a range of applications in various areas of human activity, using concrete examples.
5 Evaluate the impact of mathematics or informatics on individuals and organizations.	5.1 Identification of several major influences. 5.2 Explanation of the way in which mathematics or informatics have changed certain human and organizational realities. 5.3 Recognition of the advantages and disadvantages of these influences.

LEARNING ACTIVITIES

Number of student-contact hours: 45
Number of credits: 2

COMPLEMENTARY GENERAL EDUCATION COMPENENT:	
MATHEMATICS LITERACY AND COMPUTER SCIENCE	CODE: 0012

OBJECTIVE	STANDARD
Statement of the Competency	**Achievement Context**
To use various mathematical or computer concepts, procedures and tools for common tasks.	• Students will work alone. • They will carry out a task or solve a problem based on everyday needs. • Familiar tools and reference materials may be used.
Elements of the Competency	**Performance Criteria**
1 Demonstrate the acquisition of basic functional knowledge in mathematics or informatics.	1.1 Brief definition of concepts. 1.2 Correct execution of basic operations. 1.3 Appropriate use of terminology.
2 Select mathematical or computer tools and procedures on the basis of specific needs.	2.1 List of numerous possibilities available with mathematical and computer tools and procedures. 2.2 Analysis of concrete situations and recognition of the usefulness of mathematical or computer tools and procedures. 2.3 Appropriate choice according to needs.
3 Use mathematical or computer tools and procedures to carry out tasks and solve problems.	3.1 Planned, methodical process. 3.2 Correct use of tools and procedures. 3.3 Satisfactory results, given the context. 3.4 Appropriate use of terminology specific to a tool or procedure.
4 Interpret the quantitative data or results obtained using mathematical or computer tools and procedures.	4.1 Accurate interpretation, given the context. 4.2 Clear, precise formulation of the interpretation.

LEARNING ACTIVITIES

Number of student-contact hours: 45
Number of credits: 2

COMPLEMENTARY GENERAL EDUCATION COMPONENT: ART AND AESTHETICS	CODE: 0013
OBJECTIVE	STANDARD

OBJECTIVE	STANDARD
Statement of the Competency To consider various forms of art produced by aesthetic practices.	**Achievement Context** • Students will work alone. • They will use a specified work of art and write a commentary of approximately 750 words.
Elements of the Competency	**Performance Criteria**
1 Develop an appreciation for the dynamics of the imagination in art.	1.1 Precise explanation of a creative process connected to the construction of an imaginary universe.
2 Describe art movements.	2.1 Descriptive list of the main characteristics of three art movements from different eras, including a modern movement.
3 Give a commentary on a work of art.	3.1 Coherent organization of observations, including identification of four fundamental elements of form and structure related to the language used as well as a justified description of the meaning of the work of art.

LEARNING ACTIVITIES

Number of student-contact hours: 45
Number of credits: 2

COMPLEMENTARY GENERAL EDUCATION COMPONENT: ART AND AESTHETICS	CODE: 0014
OBJECTIVE	STANDARD

OBJECTIVE	STANDARD
Statement of the Competency To produce a work of art.	**Achievement Context** • Working alone. • In the context of a practical exercise. • In a context of creation or interpretation. • Based on the language and techniques specific to the medium selected.
Elements of the Competency	**Performance Criteria**
1 Recognize the primary forms of expression of an artistic medium.	1.1 Identification of specific features: originality, essential qualities, means of communication, styles, genres.
2 Use the medium.	2.1 Personal, coherent use of elements of language. 2.2 Satisfactory application of artistic techniques. 2.3 Observance of the requirements of the method of production.

LEARNING ACTIVITIES

Number of student-contact hours: 45
Number of credits: 2

OBJECTIVES AND STANDARDS – PROGRAM-SPECIFIC COMPONENT

CODE: 0250	

OBJECTIVE	STANDARD
Statement of the Competency	**Achievement Context**
To analyze the job function.	• Working alone • During research projects, corporate visits, conferences, trade shows, exhibits, etc. • Using recent data on the practice of the occupation and on businesses in the sector
Elements of the Competency	**Performance Criteria**
1. Describe the occupation and its employment conditions.	1.1 Relevant information gathered 1.2 Thorough examination of the general characteristics of the occupation and its employment conditions 1.3 Identification of opportunities to start a business or work independently 1.4 Identification of different types of work done in 3D animation and CGI 1.5 Identification of businesses in 3D animation and CGI 1.6 Identification of possible career paths 1.7 Accurate description of the role and responsibilities of those working in film production and new media
2. Examine the tasks and activities of the occupation.	2.1 Adequate examination of activities, the conditions under which they are performed, and the criteria for each task 2.2 Accurate determination of the relative importance of each task 2.3 Connection established between the steps in the production process and occupation-related tasks
3. Examine the skills and behaviours required to practise the occupation.	3.1 Relevant connections established between skills and behaviours and the various occupation-related tasks 3.2 Identification of the attitudes conducive to teamwork 3.3 Identification of the rules and regulations governing the occupation

CODE: 0250	
4. Examine trends in 3D animation and CGI.	4.1 Accurate profile of the industry 4.2 Accurate determination of the factors affecting industry trends

CODE:	0251

OBJECTIVE	STANDARD
Statement of the Competency	**Achievement Context**
To work with major trends in visual and graphic arts.	• Working alone • In order to research and develop a visual concept for a creative project • Using 2D works of art (e.g. paintings, prints, watercolours, or any other 2D medium or mode of expression), 3D works of art (e.g. sculptures, installations), applied art forms (e.g. advertising, design, fashion), sites and facilities (e.g. architectural and landscape projects) • Using catalogues, audio-visual productions, museum and site visits, and print or electronic reference materials
Elements of the Competency	**Performance Criteria**
1. Establish connections between a work of art and the context in which it was created.	1.1 Identification of various trends in visual and graphic arts 1.2 Identification of the sociocultural values that existed when the work was created 1.3 Accurate assessment of the diversity of art outside its historical context
2. Analyze the pictorial or spatial language of a work of art.	2.1 Accurate determination of the plastic qualities of a work of art 2.2 Accurate identification of the symbolism or message of a work of art 2.3 Relevant connections established between the message or symbolism of a work of art and the artist's intentions 2.4 Appropriate use of iconographic analysis methods 2.5 Clear distinction of the main subjective factors affecting the way a work of art is perceived
3. Determine the techniques used to produce a work of art.	3.1 Identification of the media used to produce a work of art 3.2 Identification of the technical processes used to produce a work of art 3.3 Relevant connections established between the technical processes used and the pictorial or spatial organization of a work of art

CODE: 0251	
4. Develop a visual concept for a creative project.	4.1 Thorough search for conceptual elements 4.2 Originality of concept 4.3 Consistency of artistic process 4.4 Clear presentation of the concept

CODE:	0252

OBJECTIVE	STANDARD
Statement of the Competency	**Achievement Context**
To analyze a production.	• Working alone • In order to research and develop a 3D graphics project • Based on different categories of works: films, 2D and 3D animation films (analog and digital), advertising films, video games, new media • Using scripts, audio-visual equipment, and print or electronic reference materials
Elements of the Competency	**Performance Criteria**
1. Situate the production in its context.	1.1 Identification of the category, genre and school associated with the work 1.2 Accurate description of the geographical, historical and sociocultural context surrounding the production 1.3 Appropriate determination of the impact of the work on the film and new media industry
2. Analyze the narrative structure and aesthetic qualities of the production.	2.1 Identification of the aesthetic qualities of the production 2.2 Accurate identification of the narrative elements 2.3 Relevant connections established between a production's narrative elements and the mode of visual expression 2.4 Relevant connections established between a production's narrative elements and sound processing 2.5 Relevant connections established between the characters' personality and the actors' performance 2.6 Appropriate use of film analysis techniques
3. Analyze the technical aspect of the production.	3.1 Identification of the limits of each distribution medium 3.2 Accurate association of tools and production techniques 3.3 Accurate determination of the impact of budget and time constraints on the creative process 3.4 Identification of the role and responsibilities of each member of the production team

CODE: 0252	
4. Plan how to develop a scenario for a project.	4.1 Accurate description of the steps involved in developing a scenario
	4.2 Appropriate analysis of the structure of the scenario
	4.3 Identification of logical connections between the action, the setting and the circumstances of the story

CODE: 0253	

OBJECTIVE	STANDARD
Statement of the Competency	**Achievement Context**
To draw a character and its environment.	• Working alone • Under the supervision of the director • For a 3D graphics project • Based on a subject (e.g. real or fictitious person or animal, live model, still life), information about the subject, a particular visual style and instructions • Using drawing and painting materials (different monochromatic and polychromatic media), print or electronic reference materials (e.g. anatomy plates, drawing manuals)
Elements of the Competency	**Performance Criteria**
1. Draw a live model.	1.1 Correct proportions 1.2 Balanced shapes 1.3 Accurate representation 1.4 Precise linework 1.5 Quality of the details 1.6 Harmonious rendering of volumes and colours 1.7 Proper use of the medium
2. Draw an imaginary character.	2.1 Original concept 2.2 Aesthetic quality of the representation 2.3 Compliance with the assigned theme 2.4 Quality of the pose and attitude in accordance with the representation style 2.5 Precise linework 2.6 Proper use of the medium
3. Depict a character's expressions.	3.1 Accurate facial expression 3.2 Accurate body language 3.3 Conformity with the character's personality 3.4 Compliance with prescribed references 3.5 Proper use of the medium

CODE: 0253	
4. Draw the environment for a character.	4.1 Quality of the composition 4.2 Character correctly integrated into the environment 4.3 Compliance with rules of perspective 4.4 Accurate representation 4.5 Precise linework 4.6 Quality of the details 4.7 Harmonious rendering of volumes and colours 4.8 Proper use of the medium
5. Simplify the character representation.	5.1 Accurate representation of the subject's basic shape and characteristics 5.2 Clean, precise linework 5.3 Compliance with prescribed references 5.4 Proper use of the medium

CODE: 0254	

OBJECTIVE	STANDARD
Statement of the Competency	**Achievement Context**
To acquire images.	• Working alone • Under the supervision of the director or administrator • For a 3D graphics project • In order to research and develop a subject • Based on an idea or sketches, guidelines, distribution standards, copyright laws and legislation governing the industry • Using a computer and peripherals, image acquisition tools (e.g. camera, video camera, scanner) and print or electronic reference materials
Elements of the Competency	**Performance Criteria**
1. Search for images.	1.1 Appropriate search method 1.2 Thorough search 1.3 Compliance with instructions 1.4 Compliance with copyright laws 1.5 Proper application of search method 1.6 Proper use of computer equipment
2. Photograph a subject.	2.1 Choice of subject appropriate to the project 2.2 Appropriate choice of camera angle 2.3 Proper adjustment of lighting 2.4 Balanced composition and colours 2.5 Observance of techniques for using a camera
3. Film a subject.	3.1 Choice of subject appropriate to the project 3.2 Appropriate choice of camera angle 3.3 Proper adjustment of lighting 3.4 Balanced composition and colours 3.5 Observance of techniques for using a video camera

CODE:	0254

4. Scan images.	4.1 Appropriate resolution for the type of distribution medium
	4.2 Appropriate scanning method
	4.3 Appropriate image file format
	4.4 Consideration of copyright laws limiting the use of images
	4.5 Proper use of scanning equipment and software
5. Inventory images.	5.1 Appropriate image file format
	5.2 Proper filing of image files
	5.3 Rigorous application of filing method for image sequences

CODE: 0255	

OBJECTIVE	STANDARD
Statement of the Competency	**Achievement Context**
To produce a concept sketch.	• Working alone • Under the supervision of the producer • For a 3D graphics project • Based on a historical and geographical context, presentation standards, guidelines, copyright laws, professional ethics and ergonomic rules • Using a computer and peripherals, image acquisition tools (e.g. camera, video camera, scanner) and print or electronic reference materials
Elements of the Competency	**Performance Criteria**
1. Analyze the context.	1.1 Accurate interpretation of contextual elements 1.2 Appropriate association of a style to the contextual elements
2. Search for visual elements.	2.1 Thorough search 2.2 Appropriate choice of images for the subject 2.3 Accurate sources 2.4 Methodical filing of images 2.5 Compliance with copyright laws
3. Produce preliminary sketches.	3.1 Presentation of a varied sample of relevant, original sketches 3.2 Clear sketches 3.3 Appropriate use of the preliminary research results 3.4 Proper application of ergonomic rules
4. Have one's sketches approved.	4.1 Identification of all comments or instructions from persons in charge of production 4.2 Adoption of a respectful, professional attitude

CODE: 0255	
5. Produce an illustration.	5.1 Appropriate choice and use of the presentation support and medium 5.2 Harmonious rendering of volumes and colours 5.3 Accurate representation 5.4 Precise linework 5.5 Quality of the details 5.6 Clean illustration 5.7 Compliance with presentation standards
6. Present the illustration.	6.1 Clear, accurate explanations 6.2 Attentiveness to comments from persons in charge of production 6.3 Notes taken on the modifications suggested 6.4 Thorough modification of the illustration based on the improvements suggested 6.5 Compliance with rules of professional ethics

CODE:	0256

OBJECTIVE	STANDARD
Statement of the Competency	**Achievement Context**
To process digital images.	• Working alone • Under the supervision of the artistic director • For a 3D graphics project • Based on static and animated digital images, distribution standards, instructions and ergonomic rules • Using a computer and peripherals and image processing software
Elements of the Competency	**Performance Criteria**
1. Prepare images for processing.	1.1 Appropriate image processing method for the project's distribution format and aesthetic qualities 1.2 Methodical filing of digital source image
2. Process images.	2.1 Appropriate choice of image processing filters and algorithms 2.2 Proper setup of automation 2.3 Optimal use of image processing software 2.4 Thorough verification of the quality of the finished image 2.5 Rigorous correction of processing errors 2.6 Proper application of ergonomic rules
3. Adapt images according to the montage.	3.1 Accurate use of scale in accordance with the distribution medium 3.2 Accurate colour calibration 3.3 Methodical backup of images in a format suitable for the montage
4. Store one's work.	4.1 Proper filing, in accordance with established method 4.2 Proper application of backup method established for the storage medium

CODE: 0257

OBJECTIVE	STANDARD
Statement of the Competency	**Achievement Context**
To shape a model.	• Working alone
	• Under the supervision of the artistic director
	• For a 3D graphics project
	• Based on sketches, photos, plans, live models and instructions
	• Using modelling, sculpting or drawing materials
Elements of the Competency	**Performance Criteria**
1. Interpret the visual reference.	1.1 Careful analysis of the shapes
	1.2 Appropriate point of view for the representation
	1.3 Accurate determination of the model's functional or expressive characteristics
2. Choose the modelling technique.	2.1 Appropriate choice of medium in accordance with modelling and animation parameters
	2.2 Appropriate choice of modelling tools in accordance with the medium used
3. Shape a prop.	3.1 Appropriate choice of representation scale
	3.2 Observance of dimensions and proportions
	3.3 Thorough representation of the prop's functions in accordance with scanning, modelling and animation requirements
	3.4 Conformity with the representational style
	3.5 Proper application of shaping technique suitable for the medium used
4. Shape a character.	4.1 Appropriate choice of representation scale
	4.2 Observance of dimensions and proportions
	4.3 Thorough representation of the character's functions in accordance with scanning, modelling and animation requirements
	4.4 Conformity with the representational style
	4.5 Proper application of shaping technique suitable for the medium used

CODE: 0258	

OBJECTIVE	STANDARD
Statement of the Competency	**Achievement Context**
To stage a scene.	• Working alone • Under the supervision of the artistic director • For a 3D graphics project • Based on a written text (e.g. script, synopsis or scene), technical instructions and specifications concerning the scenic space, as well as copyright laws • Using a computer and peripherals, drawing and model-making materials, image processing software, image acquisition tools (e.g. camera, video camera, scanner) and print or electronic reference materials
Elements of the Competency	**Performance Criteria**
1. Analyze the project data.	1.1 Relevant connections established between the set, the mood and the action 1.2 Accurate interpretation of the writer's and the art director's intentions
2. Determine the set design.	2.1 Appropriate choice of visual treatment, in accordance with the subject 2.2 Appropriate choice of materials and textures, in accordance with the desired visual rendering 2.3 Proper consideration of viewpoints 2.4 Creative use of props based on their specific functions 2.5 Optimal use of the scenic space 2.6 Harmonious ornamentation
3. Build a maquette of the set.	3.1 Accurate determination of the model's scale 3.2 Clear, accurate drawing of the model layout 3.3 Appropriate choice of building materials for the model 3.4 Placement of props and characters conforms to instructions given 3.5 Appropriate location of lighting sources 3.6 Carefully constructed model

4. Build a virtual model of the set.	4.1 Appropriate choice of reference sources in accordance with the set design
	4.2 Coherent image montage
	4.3 Aesthetic quality of processed images
	4.4 Quality of the finished image
	4.5 Proper use of image processing software and computer equipment
	4.6 Proper use of image acquisition and research tools
	4.7 Compliance with copyright laws

CODE:	0259

OBJECTIVE	STANDARD
Statement of the Competency	**Achievement Context**
To design environments.	• Working alone or in a team • Under the supervision of the artistic director • For a 3D graphics project • Based on a script, a production design, instructions, professional ethics and ergonomic rules • Using a computer and peripherals, drawing materials, image processing software, image acquisition tools (e.g. camera, video camera, scanner) and print or electronic reference materials
Elements of the Competency	**Performance Criteria**
1. Analyze the request.	1.1 Accurate interpretation of the action's historical and geographical context 1.2 Identification of location where the action takes place 1.3 Identification of themes to be represented and of the symbolism associated with the settings 1.4 Complete list of environment elements 1.5 Relevant connections established between the action and the environment elements 1.6 Gathering of all relevant information regarding the action's historical and geographical context
2. Produce sketches of the environment.	2.1 Clear, relevant sketches 2.2 Varied, original sketches 2.3 Harmonious use of colours 2.4 Balanced composition 2.5 Compliance with rules of perspective 2.6 Conformity with the script and production design

CODE: 0259	
3. Produce matte paintings.	3.1 Accurate determination of different frames
	3.2 Correct processing of set elements
	− tracing and scanning
	− colorization
	− pasting
	− application of filters
	− modifications and retouching
	3.3 Careful placement of lighting effects and cast shadows
	3.4 Harmonious integration of image layers
	3.5 Proper application of ergonomic rules
4. Present matte paintings.	4.1 Clear, accurate explanations
	4.2 Attentiveness to comments from the person in charge of artistic direction
	4.3 Detailed notes taken on the modifications suggested
	4.4 Thorough modification of the set based on the improvements suggested
	4.5 Demonstration of respect and cooperation towards team members
	4.6 Compliance with rules of professional ethics

CODE:	025A

OBJECTIVE	STANDARD
Statement of the Competency	**Achievement Context**
To design characters.	• Working alone or in a team • Under the supervision of the artistic director or producer • For a 3D graphics project • Based on a script, a production design, instructions, professional ethics and ergonomic rules • Using a computer and peripherals, drawing and modelling materials, image processing software, image acquisition tools (e.g. camera, video camera, scanner) and visual references (images, photos)
Elements of the Competency	**Performance Criteria**
1. Analyze the characters.	1.1 Relevant connections established between the characters and the action 1.2 Accurate interpretation of the characters' physical and psychological traits 1.3 Gathering of all relevant information regarding characters

2. Produce 2D preliminary sketches.	2.1 Effective use of research elements
	2.2 Clear, relevant preliminary sketches of:
	   − anatomical models
	   − hands
	   − facial expressions
	   − poses and attitudes
	2.3 Varied, original sketches
	2.4 Conformity with the script
	2.5 Conformity with the production design

CODE: 025A	
3. Build thumbnail models.	3.1 Appropriate choice of representation scale
	3.2 Appropriate choice of modelling technique
	3.3 Accurate representation of poses and expressions in accordance with preliminary sketches
	3.4 Correct proportions
	3.5 Quality of the modelling
	3.6 Conformity with the production design
	3.7 Compliance with work methods
	3.8 Proper application of ergonomic rules
4. Produce character sketches for production.	4.1 Sketches rigorously assembled
	4.2 Uniform sketches
	4.3 Clean, clear sketches
5. Present the sketches and models to the production team.	5.1 Clear, solid arguments regarding the choice of representation
	5.2 Attentiveness to comments from persons in charge of artistic direction and production
	5.3 Detailed notes taken on the modifications suggested
	5.4 Thorough modification of sketches and models based on the improvements suggested
	5.5 Demonstration of respect and cooperation towards team members
	5.6 Compliance with rules of professional ethics

CODE: 025B	

OBJECTIVE	STANDARD
Statement of the Competency	**Achievement Context**
To develop a storyboard.	• Working alone • Under the supervision of the producer • For a 3D graphics project • Based on a script, graphic and cinematographic standards, technical parameters and instructions • Using drawing materials and visual references (images, photos)
Elements of the Competency	**Performance Criteria**
1. Analyze the script.	1.1 Complete, accurate determination of the story's setting, context and characters 1.2 Thorough use of checklist for analyzing the action in each scene
2. Determine the visual format/style of the story.	2.1 Gathering of all content elements 2.2 Choice of relevant visual format/style in accordance with production requirements
3. Break down the action into frames.	3.1 Conformity with the script 3.2 Accurate sketches of settings and movements 3.3 Complete, accurate breakdown of the script for each scene 3.4 Execution of a meaningful sketch for each frame 3.5 Clean, clear, simple drawings for each frame 3.6 Original, varied frames
4. Assemble the frames of the storyboard.	4.1 Uniformity, pace and sequencing of the assembled sketches 4.2 Inclusion of all technical data on each frame 4.3 Compliance with current standards and established technical parameters

CODE: 025C	

OBJECTIVE	STANDARD
Statement of the Competency	**Achievement Context**
To assemble media elements.	• Working alone • Under the supervision of the artistic director • For a 3D graphics project • Based on a script and storyboard, analog and digital media, presentation and distribution standards, instructions and ergonomic rules • Using a computer and peripherals, image processing, editing or nonlinear editing software, image acquisition tools (e.g. camera, video camera, scanner) and print or electronic reference materials (e.g. software manuals)
Elements of the Competency	**Performance Criteria**
1. Analyze the script and storyboard.	1.1 Accurate interpretation of the story 1.2 Accurate assessment of the duration and pace of the story 1.3 Accurate identification of correspondence and reutilization of frames 1.4 Accurate assessment of technical constraints related to assembly
2. Process media elements.	2.1 Gathering of all elements to be scanned/ digitized 2.2 Quality of the scanning/digitization 2.3 Appropriate choice of file formats 2.4 Methodical filing in accordance with established standards 2.5 Proper use of scanning/digitization equipment and software 2.6 Proper application of processing technique

CODE: 025C	
3. Perform editing and nonlinear editing operations on media.	3.1 Accurate animatics editing
	3.2 Appropriate choice of elements to be assembled
	3.3 Quality of sequencing and pace based on the storyboard and the recommendations of the artistic director
	3.4 Careful integration of audio segments
	3.5 Aesthetic quality of the finished images
	3.6 Appropriate image resolution in accordance with the type of media and the distribution and evaluation standards
	3.7 Proper use of editing equipment and software
	3.8 Correct application of editing and nonlinear editing techniques
4. Composite image layers.	4.1 Appropriate choice of elements to be assembled
	4.2 Appropriate choice of integration technique
	4.3 Quality of the integration of image layers
	4.4 Quality of the rendered image layers
	4.5 Quality of the finished images
	4.6 Appropriate image resolution in accordance with the type of media and the distribution standards or presentation constraints
	4.7 Proper use of compositing equipment and software
	4.8 Correct application of compositing technique
	4.9 Correct application of ergonomic rules
5. Record the edited product on a distribution medium.	5.1 Suitable image calibration in accordance with the distribution medium
	5.2 Quality of the sound mixing and rerecording
	5.3 Compliance with video recording standards
	5.4 Proper use of audiovisual equipment and transfer software
6. Store media.	6.1 Proper filing of edited elements
	6.2 Storage of all edited elements
	6.3 Methodical storage of the final edited product
	6.4 Thoroughly cleaned work disks

CODE: 025D	

OBJECTIVE	STANDARD
Statement of the Competency	**Achievement Context**
To produce computer-generated images.	• Working alone • Under the supervision of the technical and artistic directors • For a 3D graphics project • Based on geometric shapes, polyhedra and curves, quality standards, instructions, a schedule and ergonomic rules • Using a computer and peripherals, 3D modelling software, 3D scanners/digitizers, computer graphics algorithms and visual references (e.g. images, photos)
Elements of the Competency	**Performance Criteria**
1. Prepare the construction of the model.	1.1 Accurate transposition of the structure's shapes onto a work diagram 1.2 Appropriate choice of scale 1.3 Creation of a work directory in accordance with the production method
2. Model the structure.	2.1 Appropriate choice of representational style 2.2 Appropriate choice of modelling technique in accordance with subsequent manipulations 2.3 Optimal construction of polygons 2.4 Ingenious use of modelling technique 2.5 Accurate construction of the model in accordance with subsequent views
3. Manipulate the structure.	3.1 Suitable choice of manipulation technique for the structure 3.2 Flexibility of the model 3.3 Precise, simple handling of structural elements 3.4 Ingenious use of manipulation technique 3.5 Accurate determination of control points
4. Assign materials to the structure.	4.1 Accurate creation of materials for the model in accordance with the desired rendering 4.2 Appropriate choice of materials for the model 4.3 Accurate calibration of material parameters for each model

CODE: 025D	
5. Place the objects in a scene.	5.1 Quality of the visual composition of the scene 5.2 Proper positioning of light sources for the scene 5.3 Appropriate framing of the subject 5.4 General quality of the mood of the scene
6. Render images.	6.1 Accurate calibration of rendering parameters 6.2 Appropriate ray tracing levels 6.3 Appropriate type of antialiasing applied to the image 6.4 Appropriate choice of resolution and format for the finished image 6.5 Rigorous division of the scene and renderings into elements to be assembled during compositing 6.6 Suitable duration of image rendering 6.7 Proper application of ergonomic rules
7. Check the quality of the rendering.	7.1 Thorough verification in accordance with quality criteria for finished images 7.2 Appropriate choice of correction method based on image quality, the number of images to correct and the delivery schedule 7.3 Accurate correction of the finished image 7.4 Appropriate choice of presentation medium for the finished image 7.5 Compliance with the established schedule and work methods

CODE: 025E	

OBJECTIVE	STANDARD
Statement of the Competency	**Achievement Context**
To model props.	- Working alone or in a team - Under the supervision of the artistic director - For a 3D graphics and a media compositing project - Based on a script, a storyboard, 2D and 3D visual references, quality standards, work methods, a schedule, professional ethics and ergonomic rules - Using a computer and peripherals, drawing materials, image processing software, 3D modelling software, image acquisition tools (e.g. camera, video camera, scanner), measuring instruments and basic geometric shapes
Elements of the Competency	**Performance Criteria**
1. Prepare the prop modelling.	1.1 Accurate transposition of the prop's shape within a workspace.
	1.2 Accurate identification of the prop's dimensions
	1.3 Appropriate choice of scale
	1.4 Accurate transposition of measurements in accordance with the scale
	1.5 Appropriate choice of representational style
	1.6 Accurate interpretation of visual references, script and storyboard
	1.7 Creation of a work directory in conformity with the production method

CODE: 025E	
2. Generate the models.	2.1 Relevant modelling technique in accordance with the model's subsequent animation
	2.2 Suitable flexibility of the model in accordance with subsequent manipulations and animation
	2.3 Accurate determination of model components
	2.4 Conformity with the design and proportions of the visual reference
	2.5 Optimization of model components in accordance with the type of distribution medium and interactivity constraints
	2.6 Appropriate assignment of model manipulation tools
	2.7 Homogeneity of the model in relation to the design of other set elements
3. Create a hierarchy of the models.	3.1 Accurate hierarchy for the prop and its components
	3.2 Construction of logical links between model components
	3.3 Effectiveness of model manipulation tools
	3.4 Flexible manipulation of the model and its components
4. Acquire and process textures.	4.1 Rigorous construction of prop materials in accordance with the visual reference and the finished image rendering
	4.2 Acquisition of appropriate textures in accordance with visual references
	4.3 Proper processing of textures to project onto the 3D model
5. Apply textures.	5.1 Appropriate texture mapping method onto the 3D prop
	5.2 Careful texture application in accordance with the visual reference and the representation style
	5.3 Proper application of ergonomic rules

CODE: 025E	
6. Prepare images of models for approval.	6.1 Thorough testing of lighting and mood effects in accordance with the script and storyboard 6.2 Optimal adjustment of materials and textures based on different lighting effects 6.3 Appropriate choice of views 6.4 Appropriate calibration of rendering parameters 6.5 Aesthetic quality of image rendering
7. Store models and rendered images.	7.1 Methodical filing of model components in accordance with the production method 7.2 Storage of all scene elements, the final model and its components 7.3 Compliance with the established schedule and work methods 7.4 Compliance with rules of professional ethics

CODE:	025F

OBJECTIVE	STANDARD
Statement of the Competency	**Achievement Context**
To model sets.	• Working alone or in a team • Under the supervision of the artistic director • For a 3D graphics and a media compositing project • Based on a script, a storyboard, 2D and 3D visual references, quality standards, work methods, a schedule, professional ethics and ergonomic rules • Using a computer and peripherals, drawing materials, image processing software, 3D modelling software, image acquisition tools (e.g. camera, video camera, scanner), measuring instruments and basic geometric shapes
Elements of the Competency	**Performance Criteria**
1. Interpret reference sources.	1.1 Accurate interpretation of building plans 1.2 Accurate interpretation of visual references: photos, sketches and models 1.3 Accurate interpretation of the script and storyboard
2. Prepare the set modelling.	2.1 Appropriate choice of scale 2.2 Accurate transposition of set elements onto a work diagram 2.3 Accurate identification of the set's dimensions 2.4 Accurate transposition of measurements in accordance with the scale 2.5 Appropriate choice of representational style 2.6 Creation of a work directory in conformity with the production method

CODE: 025F	
3. Generate the set models.	3.1 Relevant choice of set modelling technique in accordance with the subsequent animation
	3.2 Suitable flexibility of the model in accordance with subsequent manipulations and animation
	3.3 Accurate determination of set elements
	3.4 Conformity with the proportions of the visual references
	3.5 Optimization of set elements in accordance with the type of distribution medium and interactivity constraints
	3.6 Appropriate assignment of manipulation tools
	3.7 Conformity with the production design
4. Create a hierarchy for the sets.	4.1 Accurate hierarchy of the set elements
	4.2 Construction of logical links between set elements
	4.3 Effectiveness of manipulation tools
	4.4 Flexible manipulation of the set and its elements
5. Decorate the sets.	5.1 Rigorous construction of materials for each set element, in accordance with the visual reference and the finished image rendering
	5.2 Appropriate resolution of textures to be scanned
	5.3 Proper processing of textures to project onto the 3D model
	5.4 Appropriate texture mapping method onto each set element
	5.5 Accurate adjustment of mapping coordinates in accordance with applied textures and lighting sources
	5.6 Careful application of textures on each set element in accordance with the visual reference and the representational style

CODE: 025F	
6. Set up the scene.	6.1 Appropriate scale for subsequent scenes
	6.2 Effective use of space, in accordance with the action, look and subsequent camera movements
	6.3 Careful placement of set elements, in accordance with the subsequent scenes
	6.4 Careful placement of lighting and mood effects
	6.5 Proper calibration of cast shadows
	6.6 Thorough testing of the scene in accordance with scene constraints
	6.7 Proper application of ergonomic rules
7. Prepare images of models for approval.	7.1 Thorough testing of lighting and mood effects in accordance with the script and storyboard
	7.2 Optimal adjustment of materials and textures based on different set lighting effects
	7.3 Appropriate choice of views
	7.4 Appropriate calibration of rendering parameters
	7.5 Aesthetic quality of image rendering
8. Store models and rendered images.	8.1 Methodical filing of model components in accordance with the production method
	8.2 Storage of all scene elements, the final set and its components
	8.3 Compliance with the established schedule and work methods
	8.4 Compliance with rules of professional ethics

CODE: 025G	

OBJECTIVE	STANDARD
Statement of the Competency	**Achievement Context**
To model characters.	• Working alone • Under the supervision of the animation studio director or the director • For a 3D graphics and a media integration project • Based on a script, a storyboard, character sketches and models, 2D and 3D visual references, quality standards, work methods, a schedule, professional ethics and ergonomic rules • Using a computer and peripherals, image processing software, 3D modelling software, 2D and 3D scanners/digitizers, measuring instruments and basic geometric shapes
Elements of the Competency	**Performance Criteria**
1. Analyze the synopsis.	1.1 Accurate interpretation of the synopsis: sketches, photos, scale models 1.2 Identification of extreme facial expressions and gestures for each character, in accordance with animation constraints
2. Determine the model parameters for the characters.	2.1 Appropriate choice of components to model and texture 2.2 Accurate determination of movement limits in accordance with the character design 2.3 Appropriate modelling technique for each character component
3. Build anatomical models of the characters.	3.1 Appropriate choice of scale 3.2 Accurate determination of work angles 3.3 Precise modelling of character components
4. Create the hierarchical structure of the characters.	4.1 Accurate skeleton construction 4.2 Proper integration of the skeleton into the hierarchical structure of 3D models 4.3 Accurate determination of the movement limits for each part of the skeleton: scale, rotation, translation

CODE: 025G	
5. Apply bones to different characters.	5.1 Accurate determination of weighting values assigned to polygon vertices
	5.2 Proper application of physical properties to the models
	5.3 Rigorous assignment of motion control parameters to different components: direction, rotation, orientation, etc.
6. Model character expressions.	6.1 Accurate model of extreme facial expressions and body poses
	6.2 Accurate modelling of lip-synch targets
7. Texture characters.	7.1 Determination of the physical properties of materials and textures: opacity, reflection, refraction, luminosity, roughness
	7.2 Appropriate choice of textures to apply to each character component
	7.3 Proper application of texture projection to all character components
	7.4 Conformity with the production design
	7.5 Compliance with distribution standards
	7.6 Proper application of ergonomic rules
8. Check the quality of the model in terms of production.	8.1 Thorough testing of lighting and mood effects on the models
	8.2 Careful adjustment of characters' colour tones and details, based on rough staging
	8.3 Rigorous standardization of the characters' style with other elements
9. Render characters.	9.1 Accurate rendering parameters
	9.2 Compliance with presentation standards and schedule
	9.3 Thorough verification of rendered image
	9.4 Compliance with the established schedule and work methods
	9.5 Compliance with rules of professional ethics

CODE: 025H	

OBJECTIVE	STANDARD
Statement of the Competency	**Achievement Context**
To represent movements in three dimensions.	• Working alone • Under the supervision of the artistic director • For a 3D graphics project • Based on instructions regarding the type of movement to generate, a script, a storyboard, modelled subjects, basic animation principles and ergonomic rules • Using a computer and peripherals, 3D animation software, analog and digital media, a chronometer and visual references
Elements of the Competency	**Performance Criteria**
1. Analyze the movements to be represented.	1.1 Accurate interpretation of the production design 1.2 Accurate determination of the duration and frame rate of the animation 1.3 Identification of contact and interaction zones of modelled subjects 1.4 Identification of animation limits for each element 1.5 Conformity with the script and storyboard
2. Insert models into a 3D scene.	2.1 Accurate scaling of models in accordance with the scene 2.2 Accurate starting position and orientation of each model to be animated
3. Assign control points to models.	3.1 Appropriate animation method for the action 3.2 Proper application of control points to the models' hierarchical structure 3.3 Methodical backup of the default scene prior to animation

CODE: 025H	
4. Set animation keys.	4.1 Proper assignment of key to each element to be animated
	4.2 Proper creation of a set of key poses for each animation and each model
	4.3 Optimal application of 3D animation techniques:
	– transformation
	– deformation
	– kinematics
	– dynamics
	– rotoscoping
	– motion capture and scanning/digitization
	– constraints with respect to other objects
	– mathematical calculations and logical links
	4.4 Proper use of different 3D animation software functions
	4.5 Proper application of ergonomic rules
5. Manage in-between motion.	5.1 Rigorous manipulation of animation curves on models
	5.2 Methodical adjustment of models' hierarchy
	5.3 Precise adjustment of key poses
	5.4 Fluid, precise movements
6. Control the models' interactions.	6.1 Precise synchronization of movements of models and related elements
	6.2 Thorough detection of collision, interpenetration and contact
	6.3 Compliance with basic animation principles
7. Test the animation in real time.	7.1 Optimal method for viewing image sequencing in real time, based on the limits of the equipment
	7.2 Thorough verification of the quality of the movements of the models
	7.3 Thorough modification of imperfections

CODE:	025J

OBJECTIVE	STANDARD
Statement of the Competency	**Achievement Context**
To animate characters.	• Working alone • Under the supervision of the director or stage director • For a 3D graphics and a media integration project • Based on a script, a storyboard, modelled subjects, a 3D character, a set and props, a soundtrack, 2D and 3D visual references, professional ethics and ergonomic rules • Using a computer and peripherals, 3D animation software, 2D and 3D scanners/ digitizers, audio-visual equipment, a chronometer, and print or electronic reference materials
Elements of the Competency	**Performance Criteria**
1. Analyze information about the characters.	1.1 Relevant connections established between the visual references, the script, the storyboard and the action 1.2 Accurate determination of each character's role, based on his or her personality and the visual references 1.3 Conformity with the script and storyboard

2. Acquire and process elements for the animation.	2.1 Careful scanning of reference images used to animate:
	   – rotoscope images
	   – environment images
	   – images of model sheets
	   – benchmarks for synchronization
	2.2 Careful scanning/digitization of animated textures
	2.3 Careful digital recording of dialogues and soundtrack
	2.4 Compliance with established identification and filing method

CODE: 025J	
3. Prepare the character animation.	3.1 Accurate determination of the timing and duration of each scene
	3.2 Appropriate animation technique for each character, based on his or her personality, action and interpretation style
	3.3 Accurate determination of key poses and secondary poses
	3.4 Creation of a set of key poses and lip-synchs for each animated body part of a character
4. Place characters in a 3D scene.	4.1 Accurate scaling of each character in the 3D scene
	4.2 Accurate starting position and orientation of characters for each 3D scene to be animated
	4.3 Accurate identification of the limits of animation for each character
	4.4 Accurate identification of zones of contact between the characters and the environment elements
5. Generate the character animation.	5.1 Accurate determination of key frames for each character's body parts
	5.2 Thorough management of in-between frames
6. Synchronize animation and sound.	6.1 Accurate synchronization of movements, models and sound
	6.2 Accurate synchronization of lip-synching and dialogue
7. Stage the characters' actions.	7.1 Optimal use of lighting sources
	7.2 Appropriate framing, in accordance with the storyboard, action and background sequence
	7.3 Thorough verification of the animation, in accordance with the lighting and framing of each background
	7.4 Proper application of ergonomic rules

CODE: 025J	
8. Check the quality of the animation.	8.1 Thorough testing of the rendering in low resolution 8.2 Thorough adjustment of animations requiring corrections 8.3 Choice of optimal presentation technique, in accordance with approval frequency and the image rendering speed 8.4 Quality of the image rendering 8.5 Accurate identification and backup of animation files in a suitable format 8.6 Compliance with presentation standards established by the organization 8.7 Compliance with the schedule 8.8 Compliance with rules of professional ethics

CODE: 025K	

OBJECTIVE	STANDARD
Statement of the Competency	**Achievement Context**
To create digital visual effects.	• Working alone or in a team • Under the supervision of the director • In collaboration with the person in charge of photography direction and the different trades involved in traditional special effects • For a 3D graphics and a media compositing project • Based on a script, a soundtrack, 2D and 3D visual references (static or animated), 3D models, professional ethics and ergonomic rules • Using a computer and peripherals, drawing materials, 3D animation software, particle animation software, image acquisition tools (camera, video camera, scanner, tape recorder), audio-visual equipment, a chronometer, and print or electronic reference materials
Elements of the Competency	**Performance Criteria**
1. Plan the artistic and technical process involved in creating the effects.	1.1 Attentive reading of the script 1.2 Active participation in production meetings 1.3 Choice of artistic process that meets production requirements 1.4 Appropriate choice of production techniques for the visual effects 1.5 Production of a clear, precise storyboard 1.6 Active listening, attentiveness, respectful attitude towards artistic director's comments 1.7 Conformity with the script
2. Search for and scan visual references.	2.1 Appropriate choice of visual references 2.2 Proper scanning and identification of visual references 2.3 Methodical filing of visual references

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3. Provide support to the director and camera crew during the production of visual effects.	3.1 Complete list of materials needed to shoot the visual effects
	3.2 Detailed list of shooting sequence in view of subsequent assembly
	3.3 Sustained assistance during shooting in order to meet postproduction requirements
	3.4 Attentive, thorough viewing of stills
	3.5 Effective, respectful collaboration with persons in charge of production, photography direction and postproduction during processing of finished images
	3.6 Appropriate use of time and stress management techniques
4. Manage shoot-related elements.	4.1 Accurate identification of visual effects shots on the scene list
	4.2 Proper scanning and identification of visual effects shots
	4.3 Methodical filing of visual effects shots
5. Model and animate 3D models.	5.1 Proper use of rotoscoping
	5.2 Appropriate modelling technique for the desired effect
	5.3 Appropriate viewpoint of the virtual camera
	5.4 Complete modelling of the components of the desired effect
	5.5 Thorough construction of the models' hierarchy
	5.6 Precise animation of models in accordance with rotoscopic images
	5.7 Proper application of ergonomic rules
6. Model and animate particles.	6.1 Appropriate choice of emitting sources
	6.2 Accurate determination of the physical properties of particles
	6.3 Thorough establishment of links between particles and scene objects
	6.4 Accurate assignment of animation parameters to the different particles
	6.5 Thorough testing of rendering

CODE: 025K	
7. Perform motion tracking.	7.1 Accurate determination of markers' position on the visual reference 7.2 Accurate determination of markers' tolerance 7.3 Correct execution of motion tracking 7.4 Thorough correction of coordinate interpretation errors 7.5 Thorough application of model animation to 3D tracking
8. Integrate visual effects into composites.	8.1 Thorough testing of image layers integration 8.2 Correct execution of compositing 8.3 Appropriate processing of finished images 8.4 Quality of finished images in accordance with the distribution medium 8.5 Proper synchronization of soundtrack 8.6 Compliance with rules of professional ethics

CODE:	025L

OBJECTIVE	STANDARD
Statement of the Competency	**Achievement Context**
To produce a 3D animation film.	• Working alone
	• Under the supervision of producers
	• In collaboration with actors and film editors
	• For a 3D production
	• Based on distribution parameters, instructions regarding the genre and target audience, a budget, a work schedule, quality standards, work methods, and professional ethics
	• Using a computer and peripherals, drawing and modelling materials, audio-visual documents, image acquisition tools (e.g. camera, video camera, scanner), 3D animation software, editing and image processing software, 2D and 3D scanners/digitizers, a chronometer, and print or electronic reference materials
Elements of the Competency	**Performance Criteria**
1. Write a script.	1.1 Compliance with standards governing script structure and presentation
	1.2 Inclusion of all elements related to characters, setting and action
	1.3 Proper grammar and spelling
	1.4 Original subject
2. Plan the project.	2.1 Establishment of a detailed production schedule
	2.2 Accurate interpretation of the script in terms of direction
	2.3 Thorough breakdown of each scene
	2.4 Appropriate choice of production techniques
3. Design the visual aspect of the project.	3.1 Carefully drawn production sketches
	3.2 Production of a complete model pack
	3.3 Precise drawings of the settings
	3.4 Production of a detailed storyboard
	3.5 Compliance with budget and schedule
4. Record dialogues for the film.	4.1 Thorough recording of all dialogues
	4.2 Proper use of recording materials
	4.3 Effective, smooth communication with actors

CODE: 025L	

5. Create the scene.	5.1 Proper modelling of all scene elements
	5.2 Thorough positioning of elements in each scene
	5.3 Careful, consistent scene continuity
	5.4 Animation of all scene elements
	5.5 Precise synchronization of dialogues and animation
6. Produce the render.	6.1 Proper division of set elements into layers for assembly
	6.2 Thorough testing of rendering
	6.3 Accurate assignment of rendering parameters
	6.4 Compliance with distribution standards
7. Perform postproduction operations.	7.1 Methodical filing of images for each shot
	7.2 Careful execution of nonlinear editing, based on dialogues
	7.3 Meticulous soundtrack integration
	7.4 Correct insertion of subtitles and credits
	7.5 Thorough verification of the quality of the editing
	7.6 Thorough transfer of the edited product onto the distribution medium
	7.7 Effective, respectful collaboration with the editor
	7.8 Compliance with rules of professional ethics

CODE: 025M	

OBJECTIVE	STANDARD
Statement of the Competency	**Achievement Context**
To prepare to enter the work force.	• Working alone • Using magazines, newspapers and job banks • Using models of job search materials, dictionaries, grammar books and other reference tools
Elements of the Competency	**Performance Criteria**
1. Draw up a personal inventory of skills.	1.1 Identification of personal strengths, weaknesses and limitations 1.2 Highlighting of personal and professional achievements 1.3 Preparation of a portfolio representative of one's skills and competencies
2. Explore the job market in 3D animation and computer-generated imagery.	2.1 Use of relevant information sources 2.2 Demonstration of shrewdness, imagination and drive 2.3 Consideration of the hiring rules of the companies considered 2.4 Establishment of contacts with company representatives 2.5 Gathering of relevant information 2.6 Compilation of a list of potential employers and leads to follow
3. Produce a cover letter and a résumé.	3.1 Compliance with presentation standards 3.2 Correct spelling and grammar 3.3 Inclusion of essential information 3.4 Relevance of the cover letter and résumé with respect to the position considered

4. Participate in an interview.	4.1 Gathering of information about the company prior to the interview
	4.2 Compliance with rules of politeness and courtesy
	4.3 Convincing show of interest in the position and ability to meet requirements
	4.4 Concern for one's personal image
	4.5 Effective communication with the interviewer
	4.6 Appropriate portfolio presentation
	4.7 Stress management
5. Follow up on potential leads.	5.1 Use of effective means of obtaining feedback from potential employers
	5.2 Appropriate post-interview follow-up
6. Develop strategies to keep one's job.	6.1 Identification of effective methods of:
	− compensating for limitations and overcoming weaknesses
	− diversifying one's skills
	6.2 Identification of effective methods of:
	− understanding employer expectations
	− verifying employer satisfaction
7. Analyze professional development possibilities.	7.1 Determination of realistic career goals for the short and medium term
	7.2 Analysis of professional development opportunities within and outside the company
	7.3 Accurate assessment of one's entrepreneurial abilities and goals

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 program 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

1) 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

The two sets of objectives and standards aim to familiarize students with the social sciences and their particular approach to the human condition.

The first set supports learning activities that allow students to look at one or more of the social sciences in relation to major contemporary issues: subjects studied in the social sciences; contribution of the social sciences to an understanding of contemporary issues; issues facing the social sciences in the future.

The second set supports learning activities in the social sciences that allow students to rigorously analyze one of the major problems of our time, using one or more social scientific approaches.

Science and Technology

In science and technology, the educational intention is to present science and technology as a specific approach to reality, in order to familiarize students with this field of knowledge. This general intention can take several forms, such as helping students gain experience with the scientific method or study 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 using the scientific method.

Modern Languages

The three sets of objectives and standards in modern languages introduce students to the basic language structures and vocabulary of a third language while making them aware of the culture of the people who speak the language.

Some modern languages use different structures and writing systems. The three sets have been developed in accordance with this fact. The degree of competency acquisition will therefore vary according to how distant the language is from the structure of our own language or system of thought. Furthermore, awareness of the culture of the people using a modern language does not figure as an element of competency, since learning a modern language implies acquiring an awareness of its culture.

Mathematics Literacy and Computer Science

In mathematics literacy and computer science, the two sets of objectives and standards are based on the educational intention of developing mathematical and computer culture.

The educational intention of the first set is to lead students to consider the place, role and evolution of these knowledges and tools in our society and to describe their different uses. It consists of general education about the language of mathematics or computers, and does not include specialized training.

The second set targets the understanding and use of the language of mathematics or computers for everyday purposes. This intention refers mainly to the concepts, tools and general uses of mathematical or computer language in daily life.
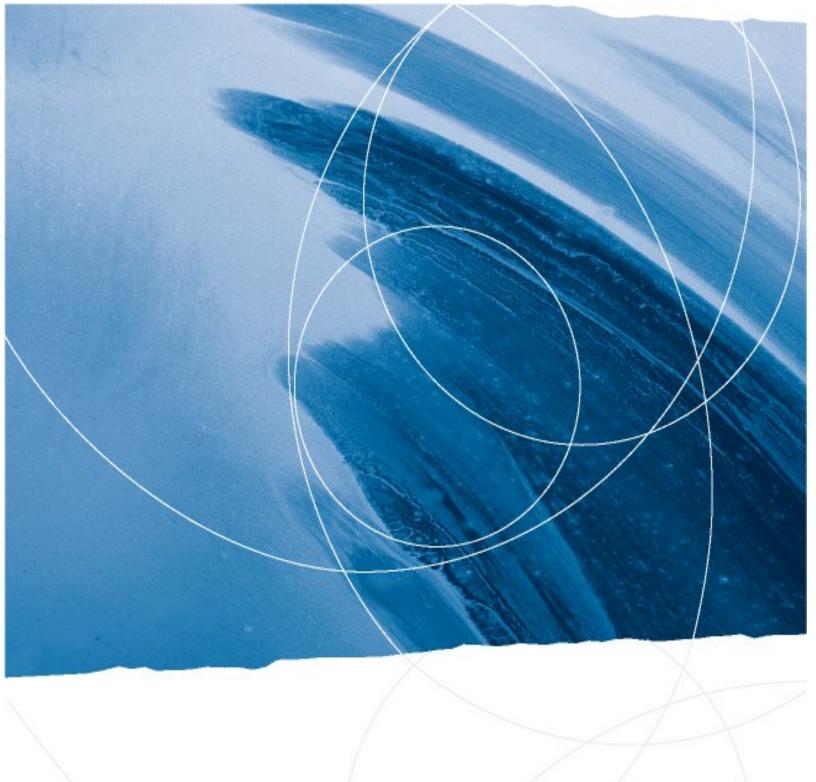
Since the objectives and standards for the field of mathematics literacy and computer science are of a general nature, they can be used to define various learning activities that foster development of competencies in mathematics or computer science, or in a combination of these two areas.

Art and Aesthetics

In art and aesthetics, the educational intention is to allow students to acquire general cultural knowledge by exploring various forms of art in one or more artistic fields. This basic education is intended to develop an artistic sensibility through exposure to works of art or experimentation in an artistic medium. Furthermore, it aims to teach the fundamental elements of the language of art and to enable students to make connections between those elements.

In the context of the first set of objectives and standards, students are introduced to works of art from contemporary culture and from other periods. This allows them to develop an appreciation for the dynamics of the imagination in art and to learn methods of analyzing artistic production.

In the context of the second set, students engage in creative or interpretive activities in a given artistic medium. As well, students are introduced to artistic works in that medium so that they may learn to recognize its primary forms of expression.

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