

3D Production and Image Synthesis (574.C0)

College program

Sector 13 – Communications and Documentation

College Education Program

This document was produced by the Ministère de l'Enseignement supérieur
using gender-neutral language.

Citing this document

Québec. Ministère de l'Enseignement supérieur. *3D Production and Image Synthesis*. Québec City: Ministère de l'Enseignement supérieur, 2023.

Coordination and content

Direction générale des affaires collégiales
Direction des programmes de formation collégiale
Secteur du développement et du soutien des réseaux

Title of original document

Production 3D et synthèse d'images (574.C0) - Programme d'études techniques

English version

Services linguistiques en anglais
Direction du soutien au réseau éducatif anglophone
Ministère de l'Éducation

Additional information

General information
Direction des communications
Ministère de l'Enseignement supérieur
1035, rue De La Chevrotière, 21^e étage
Québec (Québec) G1R 5A5
Telephone: 418 643-7095
Toll-free: 1 866 747-6626

© Gouvernement du Québec
Ministère de l'Enseignement supérieur

ISBN 978-2-555-04902-4 (PDF)
ISBN 978-2-550-95304-3 (French PDF)

Table of Contents

College-Level Programs.....	2
Aims of College Education.....	3
Common Competencies of College Education.....	4
Implementation of College-Level Programs	4
The <i>3D Production and Image Synthesis</i> Program (574.C0)	5
Goals of the Program	6
Program-Specific Component.....	6
Educational Aims.....	7
General Education Component Common to All Programs and General Education Component Specific to the Program	7
Complementary General Education Component.....	11
Goals of the Program-Specific Component.....	12
Objectives	13
Statements of the Competency	13
Grid of Competencies	16
Program-Specific Component.....	18
General Education Component Common to All Programs and General Education Component Specific to the Program	69
Complementary General Education Component.....	87
Additional Information	102
Vocabulary Used in Technical Programs	102
Glossary for the Program-Specific Component.....	104
Harmonization	107
Occupational Health and Safety Hazards	108

574.C0**3D Production and Image Synthesis**

Year of approval: 2023

Type of certification: Diploma of College Studies**Number of credits:** 91 $\frac{2}{3}$ credits**Number of periods of instruction:** 2 700 periods of instruction

General education component: 26 $\frac{2}{3}$ credits
660 periods of instructionProgram-specific component: 65 credits
2 040 periods of instruction

- 16 compulsory objectives and standards from 40 to 45 credits
- from 5 to 9 optional objectives and standards from 20 to 25 credits

Admission Requirements:

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

- None

College-Level Programs

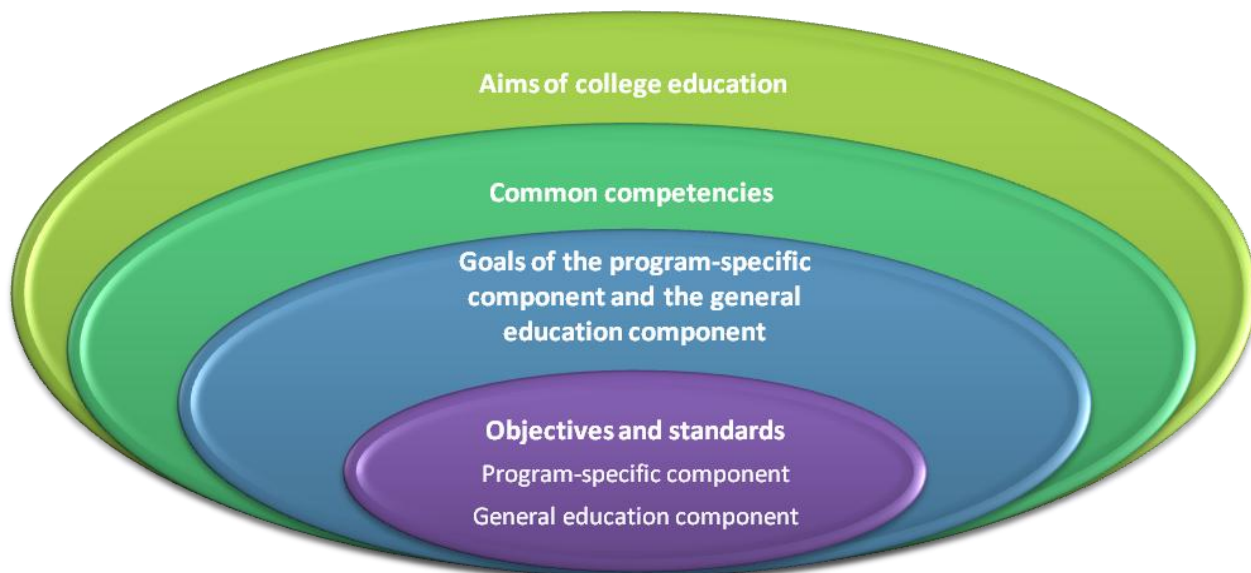
In Québec, college is the next stage after the compulsory years of schooling (elementary and secondary school). College graduates enter the labour market directly or proceed to university studies. The Ministère de l'Enseignement supérieur establishes the programs of study, while individual colleges ensure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

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

Figure 1 illustrates the relationships among the elements of a college-level program, going from the general to the specific:

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

Figure 1 – Elements of a College-Level Program



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

Aims of College Education

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

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

To educate students to live responsibly in society

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

To help students integrate cultural knowledge into their studies

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

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

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

Common Competencies of College Education

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

Solve problems

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

Use creativity

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

Adapt to new situations

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

Exercise a sense of responsibility

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

Communicate

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

Implementation of College-Level Programs

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

The *3D Production and Image Synthesis* Program (574.C0)

The *3D Production and Image Synthesis* program was designed in accordance with the framework for developing technical programs. This approach involves the participation of partners working in the occupational field and in education, and takes into account training needs, the job analysis and the general goals of technical education. The objectives and standards serve as the basis for the definition and evaluation of learning activities, for which the colleges are responsible. By successfully completing this program of study, students acquire not only the entry-level competencies required by the workplace to practise the occupation, but also a range of knowledge, skills and attitudes that will ensure their versatility.

The *3D Production and Image Synthesis* program includes four components: a program-specific component, a general education component that is common to all programs, a general education component that is specific to each program, and a general education component that complements the program.

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

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

Goals of the Program

Program-Specific Component

The goals of the program-specific component of the *3D Production and Image Synthesis* program are based on the general goals of vocational and technical training. These goals are:

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

Educational Aims

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

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

The educational aims of the program-specific content of the *3D Production and Image Synthesis* program are intended to help students develop the following abilities:

- to work collaboratively and under supervision
- to work in an organized, rigorous, meticulous and careful manner
- to adapt to the production context
- to respond to the unforeseen
- to exercise their critical judgment
- to communicate appropriately with other workers on the project or with the production team
- to share their knowledge
- to improve and develop their work techniques
- to manage their stress

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

The general education components that are common to all programs and specific to the program contribute to the development of twelve competencies associated with the three aims of college education:

- for the aim *To educate students to live responsibly in society*:
 - Demonstrate independence and creativity in thought and action
 - Demonstrate rational, critical and ethical thinking
 - Develop strategies that promote reflection on their knowledge and actions
 - Pursue the development of a healthy and active lifestyle
 - Assume their social responsibilities
- for the aim *To help students integrate cultural knowledge into their studies*:
 - Recognize the influence of culture and lifestyle on the practice of physical activity and sports
 - Recognize the influence of the media, sciences or technology on culture and lifestyle
 - Analyze works in philosophy or the humanities emanating from different historical periods and movements
 - Appreciate literary and non-literary works of other artistic expressions emanating from different historical periods and movements

- for the aim *To help students master language as a tool for thought, communication and openness to the world*:
 - Improve communication in the second language
 - Master the basic rules of discourse and argumentation
 - Refine oral and written communication in the language of instruction

English, Language of Instruction and Literature

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

- will be able to demonstrate their knowledge of the following:
 - the basic vocabulary and terminology used when discussing literary works
 - ways to apply an independent analytical approach to literary genres
 - ways to apply an independent analytical approach to literary themes
 - the appreciation of literary and non-literary works or other artistic expressions of different historical periods and movements
 - ways to identify the socio-cultural and historical context of different periods and movements
 - ways to refine oral and written communication in the language of instruction
- will be able to demonstrate their ability to do the following:
 - read, write, listen and speak at a college level of proficiency
 - develop their own ideas in arguments and theses
 - organize their arguments and theses in a discourse and edit their work
 - produce and analyze various styles of discourse
 - communicate in the styles of discourse appropriate to one or more fields of study
- will be encouraged to develop the following attitudes:
 - independence, individuality, and open-mindedness in thought and action
 - an appreciation of literature and other artistic works from different periods
 - a recognition of the role of media within a society and its culture
 - an awareness of strategies that foster self-reflective practice in their learning and actions
 - critical and ethical thought

Humanities

Humanities constitutes a thematic, multidisciplinary and, at times, transdisciplinary exploration of humankind, including its accomplishments, failures, abilities, creations, ideas and values. Students who have achieved the general education objectives in humanities

- will be able to demonstrate their knowledge of the following:
 - the main concepts, limits and uses of a form of knowledge including significant historical reference points
 - the main concepts, limits and uses of a world view
 - the nature and organization of the basic elements of an ethical question
 - methods for coherent integration of concepts and the formulation and synthesis of ideas
 - the importance and practice of adequately substantiated argumentation, written and oral

- will be able to demonstrate their ability to do the following:
 - describe, explain and organize the 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
 - recognize forms of creativity and original thought
 - 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
 - utilize the multiple strategies of critical thinking
- will be encouraged to develop the following attitudes:
 - openness to diversity and pluralism
 - awareness of the limits of knowledge claims, world views and ethical perspectives
 - respect for the points of view of others
 - empathy and acceptance of others
 - concern for global issues
 - determination to continue learning

French as a Second Language

Students who have achieved the general education objectives in French as a Second Language:

- will be able to demonstrate their knowledge of the following:
 - different reading techniques
 - the formal elements needed to produce a structured text, both orally and in writing
 - different forms of discourse and their specific uses
- will be able to demonstrate their ability to do the following:
 - question, analyze, judge and defend an argument in French
 - reflect on their knowledge and actions notably by revising their written productions
 - maintain social relationships and share in the cultural life of Québec
 - establish and maintain work-related relationships in French
- will be encouraged to develop the following attitudes of:
 - openness to the various aspects of Québec culture
 - recognition and promotion of creativity
 - readiness to participate in social and economic life

Physical Education

Students who have achieved the general education objectives in physical education:

- will be able to demonstrate their knowledge of the following:
 - notions and concepts based on the findings of scientific research and how to apply them methodically to physical or sporting activities
 - the relationship between lifestyle, physical activity, physical fitness and health
 - ways to evaluate their own abilities and needs with respect to activities that can enhance their health and fitness
 - the rules, techniques and conditions involved in different types of physical or sporting activity
 - the main socio-cultural determinants of physical activity and a healthy lifestyle
- will be able to demonstrate their ability to do the following:
 - give an initial account of their abilities, attitudes and needs
 - choose physical activities on the basis of their motivation, their ability to adapt to effort and their need for change
 - apply the rules and techniques of a certain number of physical activities with a view to practising them sufficiently on a regular basis
 - set goals that are realistic, measurable, challenging and situated within a specific time frame
 - improve their mastery of basic techniques and strategies associated with physical activities
 - evaluate their skills, attitudes and progress in order to adapt their means or objectives in their practice of physical activities
 - autonomously maintain or increase their physical activity and fitness levels in order to develop a healthy and active lifestyle
 - use their creativity in physical activities
 - express their choice of activities in a clear and reasoned manner
- will be encouraged to develop the following attitudes:
 - awareness of the importance of regular and sufficient physical activity in order to improve their fitness
 - awareness of the factors that encourage them to practise physical activity more often
 - awareness of the importance of evaluating and respecting their ability to adapt to effort, as well as an awareness of the conditions necessary to carry out a physical activity program, before committing to it
 - self-confidence, self-control, cooperation, respect and understanding, through knowledge and through the practice of a physical activity
 - respect for ethical behaviour when participating in a sport or a physical activity
 - respect for individual and cultural differences as well as for the environment in which the sport or physical activity takes place
 - appreciation for the aesthetic value of physical activity as well as the opportunities for enjoyment it provides
 - readiness to adopt the values of discipline, effort, consistency and perseverance
 - readiness to promote, as a social value, the regular and sufficient practice of physical activity

Complementary General Education Component

Social Sciences

The goal of this subject area is to help students view the social sciences as a specific approach to the study of human existence. This goal may cover various aspects, including the study of the specific contribution of the social sciences to an understanding of contemporary issues and the application of approaches from the social sciences.

Science and Technology

The goal of this subject area is to present science and technology as a specific approach to the study of reality, by introducing students to this area of knowledge. This goal may cover various aspects, including the study of the general nature of science and technology and contemporary scientific or technological issues as well as the application of the scientific method.

Modern Language

The goal of this subject area is to introduce students to the basic structures and vocabulary of a third language and help them develop an awareness of the culture of its native speakers.

Mathematics Literacy and Computer Science

The goal of this subject area is to highlight a culture of mathematics and computer science. This goal may cover various aspects, including the study of the role of mathematics or computers in contemporary society as well as the use of mathematical or computer concepts, procedures and tools.

Art and Aesthetics

The goal of this subject area is to provide students with a cultural awareness by exploring various forms of art and to help students develop an aesthetic awareness. This goal may cover various aspects, including an appreciation of different art forms and the production of a work of art.

Contemporary Issues

This subject area focuses on current, transdisciplinary issues. The concept of transdisciplinarity refers to a type of approach that addresses a contemporary issue from the perspective of different disciplines and areas of knowledge, beyond a mere juxtaposition of the subjects studied.

Goals of the Program-Specific Component

The *3D Production and Image Synthesis* program prepares students to become artists specializing in 3D production. These artists are involved in the digital creation or finishing of synthesized images within the framework of various visual production projects. They work mainly in companies in the video-game, animated films, visual effects, and digital and immersive experiences sectors. They also work for companies with visual communication needs. Their assignments vary depending on their area of expertise and the contracts that the company has signed.

Furthermore, depending on the company, the work of artists specializing in 3D production is connected to one or more of the following project activities: setting up the components of a scene (characters, props, decor, actions, visual effects, lighting, cameras), creating models (characters, creatures, props, decor), materials and textures, control systems, visual effects, lighting or animation of components, fine-tuning final renderings, composing images.

Every day, 3D production artists work in synergy with members of various other departments, in both French and English. Everyone works together to make the project a success by sharing information, ideas and constructive criticism, and by ensuring the artistic and technical quality of their creations. To do so, they use computerized equipment and applications that are specific to their activities. This requires them to keep their artistic and technical competencies up to date given new trends in the industry and the speed of technological change.

Objectives

Statements of the Competency

Program-Specific Component

The *3D Production and Image Synthesis* program has a total of 40 competencies presented in the form of objectives and standards; 16 of these competencies are compulsory. There are 24 optional competencies from which students can select 5 to 9.

The objectives and standards of the compulsory competencies cover significant dimensions of the profession and meet the criteria of adaptability and versatility, thus enabling graduates to transfer their knowledge and skills in a variety of work settings. They also aim to ensure that the training is comparable from one educational institution to another and ensure equity among the students.

The following competencies are compulsory and the credits earned for this training block vary from 40 to 45:

- 02LN Adopt professional conduct.
- 02LP Use information technologies.
- 02LQ Use a research and problem-solving strategy.
- 02LR Contribute to implementing the artistic direction.
- 02LS Collaborate in the organization and implementation of the production plan.
- 02LT Animate the components of a scene.
- 02LU Generate the images.
- 02LV Process the images.
- 02LW Model the props.
- 02LX Reproduce the materials and textures.
- 02LY Create control systems.
- 02LZ Stage the components of the plan.
- 02M0 Create the lighting.
- 02M1 Create the dynamic visual effects.
- 02M2 Composite the images.
- 02M3 Participate in the improvement of work processes.

The objectives and standards of the optional competencies are aimed at developing great flexibility and career mobility in a specific field of expertise. They complement the block of compulsory competencies while focusing on advancement or development in a specific field or tasks. The block of optional competencies also offers educational institutions the possibility of developing one or more niche fields of expertise in order to respond to the needs of the local, regional or provincial workforce.

In addition to the compulsory competencies, the educational institution selects five to nine optional competencies, and the credits earned for this training block vary from 20 to 25:

02M4 Automate the operations.
02M5 Develop models of environments.
02M6 Develop models of creatures.
02M7 Develop models of characters.
02M8 Reconstitute the models.
02M9 Lay out the stage space.
02MA Create the scenography of the action.
02MB Fine-tune the visual communication.
02MC Develop materials and textures.
02MD Harmonize the appearance of surfaces.
02ME Perfect the control systems.
02MF Do motion capture and data assignment.
02MG Animate a character.
02MH Recreate the engineering of movements.
02MJ Develop animated sequences.
02MK Reconstitute the shapes and movements.
02ML Skin models.
02MM Simulate the effects of fluids.
02MN Simulate crowd effects.
02MP Create stage lighting and storytelling lighting.
02MQ Reconstitute the lighting.
02MR Composite the stereoscopic images.
02MS Embed a subject in a sequence of images.
02MT Develop the decors.

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

16⅔ credits and 420 periods of instruction, 6 credits and 150 periods of instruction

English, Language of Instruction and Literature

- 4EA0 Analyze and produce various forms of discourse
- 4EA1 Apply an analytical approach to literary genres
- 4EA2 Apply an analytical approach to a literary theme
- 4EAP Communicate in the forms of discourse appropriate to one or more fields of study

Humanities

- 4HU0 Apply a logical analytical process to how knowledge is organized and used
- 4HU1 Apply a critical thought process to world views
- 4HUP Apply a critical thought process to ethical issues relevant to the field of study

French as a Second Language

One objective to be met from the following:

- 4SF0 Apply basic concepts for communicating in standard French
- 4SF1 Communicate in standard French with some ease
- 4SF2 Communicate with ease in standard French
- 4SF3 Explore a cultural and literary topic

One objective to be met from the following:

- 4SFP Apply basic concepts for communicating in French in relation to the student's field of study
- 4SFQ Communicate in French on topics related to the student's field of study
- 4SFR Communicate with ease in French on topics related to the student's field of study
- 4SFS Produce a text in French on a topic related to the student's field of study

Physical Education

- 4EP0 Analyze one's physical activity from the standpoint of a healthy lifestyle
- 4EP1 Improve one's effectiveness when practising a physical activity
- 4EP2 Demonstrate one's ability to assume responsibility for maintaining a healthy lifestyle through the continued practice of physical activity

Complementary General Education Component

4 credits, 90 periods of instruction

Two objectives to be met from the following, in subject areas outside the student's program of study:

- 000V Estimate the contribution of the social sciences to an understanding of contemporary issues
- 000W Analyze one of the major problems of our time using one or more social scientific approaches
- 000X Explain the general nature of science and technology and some of the major contemporary scientific or technological issues
- 000Y Resolve a simple problem by applying the basic scientific method
- 000Z Communicate with limited skill in a modern language
- 0010 Communicate on familiar topics in a modern language
- 0067 Communicate with relative ease in a modern language
- 0011 Recognize the role of mathematics or computer science in contemporary society
- 0012 Use various mathematical or computer science concepts, procedures and tools for common tasks
- 0013 Consider various forms of art produced according to aesthetic practices
- 0014 Produce a work of art
- 021L Consider contemporary issues from a transdisciplinary perspective
- 021M Explore a contemporary issue from a transdisciplinary perspective

Grid of Competencies

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

The grid of competencies includes:

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

The grid of competencies shows the relationship between the general competencies on the horizontal axis and the specific competencies on the vertical axis. The symbol (○) indicates a correlation between a general and a specific competency.

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

GRID OF COMPETENCIES									
3D Production and Computer Generated Imagery (CGI)	Competency number	GENERAL COMPETENCIES							
		Adopt professional conduct.	Use information technologies.	Apply a research and problem-solving strategy.	Contribute to implementing the artistic direction.	Collaborate in the organization and implementation of the production project.	Generate images.	Process images.	Participate in improving work processes.
SPECIFIC COMPETENCIES									
Competency number		1	2	3	4	5	7	8	16
Animate scene components.	6	0	0	0	0	0			
Model props.	9	0	0	0	0	0	0	0	
Create materials and textures.	10	0	0	0	0	0	0	0	
Create control systems.	11	0	0	0	0	0	0	0	
Lay out the scene components.	12	0	0	0	0	0	0	0	
Create lighting.	13	0	0	0	0	0	0	0	
Create the dynamic visual effects.	14	0	0	0	0	0	0	0	
Composite images.	15	0	0	0	0	0	0	0	

Program-Specific Component

Code: 02LN

Objective

Standard

Statement of the Competency	Achievement Context
Adopt professional conduct.	• In all fields of expertise • In all situations associated with professional activities • Individually • Referring to: ◦ recent information about the practice setting and the profession ◦ current laws, regulations, standards and institutional policies ◦ legal documents • Using: ◦ information technologies ◦ verbal, written and visual communication ◦ communication codes ◦ time and priority management techniques

Performance Criteria for the Competency as a Whole
• Realistic assessment of the quality of their professional interactions • Efficient management of their time and priorities

Elements of the Competency	Performance Criteria
1. Explore the profession and its practice settings.	• Satisfactory characterization of workplaces associated with the practice of the profession • Accurate recognition of the legal framework for practising the profession • Accurate recognition of the tasks and working conditions associated with practising the profession • Satisfactory characterization of professional conducts
2. Work on a team.	• Respect for people, roles, responsibilities and operating rules • Adapted communication • Constant contribution to maintaining a good work climate • Polished presentation of their professional profile and accomplishments • Respectful sharing of ideas and constructive criticism
3. Intervene in delicate situations.	• Correct interpretation of the situation • Correct assessment of actions to be taken • Appropriate interventions for the situation • Sensible recourse to someone else, if applicable

Objective**Standard**

Statement of the Competency	Achievement Context
Use information technologies.	• In all fields of expertise • To manage their work environment • Individually • Referring to the legal framework for practising the profession • Using: - o information technologies - o best ergonomic practices - o references
Performance Criteria for the Competency as a Whole	
• Professional conduct adapted to the situation	
Elements of the Competency	Performance Criteria
1. Characterize the computer tools.	• Correct identification of components of the equipment • In-depth knowledge of the differences between computer applications
2. Regulate the work environment.	• Appropriate control of annoyances in the surroundings • Proper adjustment of workstation • Adapted customization of the software interface • Proper application of best ergonomic practices
3. Manage the computerized data.	• Detailed characterization of data • Methodical classification of files • Appropriate versioning of files • Methodical application of procedures for uploading and archiving files
4. Manage tool performance.	• Examination of tool performance with regard to the tasks to be performed • Accurate analysis of tool performance • Configuration of the equipment and applications in accordance with the tasks to be performed or tool updates • Prudent recourse to the technical support team, if applicable

Objective**Standard**

Statement of the Competency	Achievement Context
Use a research and problem-solving strategy.	• In all fields of expertise • Searching for information and references as well as solutions to problems on the artistic, storytelling, technological and technical levels • Individually • Referring to the legal framework for practising the profession • Using: ◦ information technologies ◦ production documents ◦ research and creativity techniques ◦ references
Performance Criteria for the Competency as a Whole	
• Professional conduct adapted to the situation	
Elements of the Competency	Performance Criteria
1. Define the subject of the research and/or the problem.	• Accurate identification of needs and constraints • Accurate recognition of the problem
2. Gather information.	• Detailed exploration of sources of inspiration and/or information • Satisfactory identification of possible causes of the problem • Full gathering of existing information
3. Analyze the information.	• Relevance of the information gathered • Methodical categorization • Meticulous examination • Detailed characterization • Coherent prioritization
4. Test possible actions or solutions.	• Accurate determination of possible actions or solutions • Efficient testing of possible actions or solutions • Accurate analysis of results
5. Implement the results of the testing.	• Appropriate recommendation of actions or solutions • Methodical use of the actions or solutions selected • Detailed monitoring of results

Objective**Standard**

Statement of the Competency	Achievement Context
Contribute to implementing the artistic direction.	• In all fields of expertise • In order to respect the artistic direction in their work • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions ◦ elements of visual language ◦ colour theory ◦ design principles ◦ the artistic characteristics of works • Using: ◦ information technologies ◦ narrative codes ◦ creativity techniques ◦ a research strategy ◦ references
Performance Criteria for the Competency as a Whole	
• Professional conduct adapted to the situation • Informed application of artistic principles and rules	
Elements of the Competency	Performance Criteria
1. Characterize the artistic information related to the project.	• Adapted application of the research strategy • Correct identification of information that is representative of and distinctly characteristic of the artistic direction • Meticulous examination of the information
2. Test the artistic possibilities.	• Adapted implementation of creativity techniques • Correct use of elements of visual language
3. Improve the artistic aspects of their production.	• Accurate comparison of their achievements and the artistic direction • Satisfactory resolution of problems

Objective**Standard**

Statement of the Competency	Achievement Context
Collaborate in the organization and implementation of the production plan.	• In all fields of expertise • To determine the key steps and monitoring of the progress of the work on the project • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions ◦ production processes ◦ the technical characteristics of the digital production • Using: ◦ information technologies ◦ checklists ◦ management methods ◦ a research strategy ◦ references
Performance Criteria for the Competency as a Whole	
• Professional conduct adapted to the situation	
Elements of the Competency	Performance Criteria
1. Determine the technical impacts of the plan on the production.	• Adapted application of the research strategy • Identification of the production process in accordance with the activity sector, the field of expertise and the type of project • Classification of technical information by field of expertise • Correct characterization of the technical aspects and impacts
2. Structure the work.	• Complete list of tasks to be carried out • Compliant choice of production methods • Rough estimate of production times • Coherent scheduling of operations
3. Monitor their production.	• Prioritization of tasks in accordance with the established deadlines • Appropriate use of checklists • Satisfactory resolution of problems

Objective**Standard**

Statement of the Competency	Achievement Context
Animate the components of a scene.	• For all types of movement in a scene • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions ◦ the principles of animation ◦ the laws of physics • Using: ◦ information technologies ◦ control systems ◦ creativity techniques ◦ animation techniques ◦ references • Based on: ◦ components of the scene ◦ control tools and/or systems
Performance Criteria for the Competency as a Whole	
	• Professional conduct adapted to the situation • Respect for the artistic and technical direction • Effective use of information technologies
Elements of the Competency	Performance Criteria
1. Establish an implementation plan.	• Complete listing of the needs and constraints associated with the animation • Thorough analysis of information and references • Satisfactory recognition of the phases and characteristics of each movement • Sensible choice of the animation strategy
2. Plan the animation.	• Correct identification of the moment of each pose • Correct determination of the visual characteristics of each pose
3. Produce the animation keys.	• Precise positioning and orientation of each element • Respect for the trajectory • Methodical adjustment of other parameters • Organized saving of the animation keys

Elements of the Competency	Performance Criteria
4. Adjust the dynamic of the movements.	• Precise control of the duration of movements • Effective use of the curve manager • Satisfactory reproduction of the characteristics of each movement • Relevant addition of intermediate animation keys
5. Deliver the animations.	• Evaluation of animations in accordance with established standards • Adapted corrective measures, if applicable • Compliant uploading and archiving of animations

Objective**Standard**

Statement of the Competency	Achievement Context
Generate the images.	• In all fields of expertise • For the capturing and rendering of images for reference, previsualization or production • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions ◦ the technical characteristics of cameras ◦ the artistic and technical characteristics of images • Using: ◦ information technologies ◦ real and virtual cameras ◦ props ◦ creativity techniques ◦ coding techniques ◦ techniques for manipulating cameras ◦ references

	Performance Criteria for the Competency as a Whole
	• Professional conduct adapted to the situation • Respect for the artistic and technical direction • Effective use of information technologies

Elements of the Competency	Performance Criteria
1. Establish an implementation plan.	• Complete list of needs and constraints associated with the images to be produced • In-depth analysis of information, images and references • Precise identification of the subject • Coherent establishment of the point of view • Sensible choice of the image-generation strategy
2. Control the camera and props.	• Effective adjustment of props • Correct framing of the subject • Meticulous composition of the image • Correct configuration of the camera • Careful execution of movements

Elements of the Competency	Performance Criteria
3. Save the images.	• Optimization of parameters in accordance with the required visual quality • Capture of images in accordance with the needs • Optimization of rendering times • Creation of batches of renderings in accordance with the needs
4. Assemble a video sequence.	• Complete gathering of images • Informed positioning of images on the timeline • Proper connection between the levels • Relevant addition of transitions, if applicable • Addition of a matching soundtrack, if applicable
5. Deliver the images.	• Evaluation of images in accordance with established standards • Adapted corrective measures, if applicable • Compliant uploading and archiving of images

Objective**Standard**

Statement of the Competency	Achievement Context
Process the images.	• In all fields of expertise • For previsualization or production images • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions • Using: ◦ information technologies ◦ colour spaces ◦ creativity techniques ◦ image processing techniques ◦ references • Based on fixed and animated images
Performance Criteria for the Competency as a Whole	
• Professional conduct adapted to the situation • Respect for the artistic and technical direction • Effective use of information technologies	
Elements of the Competency	Performance Criteria
1. Establish an implementation plan.	• Complete listing of needs and constraints associated with the images to be processed • In-depth analysis of information, images and references • Precise identification of the processing to be done • Sensible choice of the image-processing strategy
2. Modify the format of images.	• Exact reframing of the image • Correct conversion of the colour space • Correct transcoding of the image
3. Adjust the colour of images.	• Correct determination of the dynamic range • Careful correction of the colour
4. Isolate an element.	• Meticulous production of mattes • Appropriate use of masks
5. Apply transformations to images or to their components.	• Relevance of the transformations • Efficient execution of techniques • Careful application of filters and effects
6. Deliver the images.	• Evaluation of images in accordance with established standards • Adapted corrective measures, if applicable • Compliant uploading and archiving of images

Objective**Standard**

Statement of the Competency	Achievement Context
Model the props.	• For all types of props • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions • Using: ◦ information technologies ◦ creativity techniques ◦ modelling techniques ◦ references
	Performance Criteria for the Competency as a Whole
	• Professional conduct adapted to the situation • Respect for the artistic and technical direction • Effective use of information technologies
Elements of the Competency	Performance Criteria
1. Establish an implementation plan.	• Complete listing of needs and constraints associated with the modelling • Thorough analysis of information and references • Accurate determination of the characteristics of each volume • Sensible choice of modelling strategy
2. Generate the components of the model.	• Precise positioning of references in the area of modelling • Careful use of modelling techniques • Exact transposition of references into volumes • Meticulous refining of volumes • Satisfactory management of smoothing groups
3. Assemble the components of the model.	• Precise adjustment of components • Logical grouping of components
4. Manage the topology.	• Satisfactory adjustment of polygons, segments and summits • Conversion of the resolution, depending on needs

Elements of the Competency	Performance Criteria
5. Map the VE coordinates.	• Optimal setting of seams • Compliant use of volumes in 2D objects • Satisfactory management of VE boards
6. Deliver the models.	• Evaluation of the models in accordance with established standards • Adapted corrective measures, if applicable • Meticulous finalization of models • Compliant uploading and archiving of models

Objective**Standard**

Statement of the Competency	Achievement Context
Reproduce the materials and textures.	- For all types of real materials and textures - Under the supervision of the person in charge - Referring to: - the legal framework for practising the profession - production documents and verbal instructions - Using: - information technologies - existing shaders - creativity techniques - production techniques for materials and textures - references - Based on: - components of the project - digital images
Performance Criteria for the Competency as a Whole	
	- Professional conduct adapted to the situation - Respect for the artistic and technical direction - Effective use of information technologies
Elements of the Competency	Performance Criteria
1. Establish an implementation plan.	- Complete list of needs and constraints associated with surfaces - Thorough analysis of information and references - Correct determination of the visual characteristics of materials and textures - Sensible choice of surfacing strategy
2. Perfect the mapping of VE coordinates.	- Meticulous examination of the mapping - Exhaustive correction of problems
3. Establish the materials and textures.	- Appropriate management of the tree structure - Credible imitation of the visual characteristics of materials - Careful application of textures - Relevance of details - Overall harmonization of the appearance of surfaces
4. Deliver the materials and textures.	- Evaluation of materials and textures in accordance with established standards - Adapted corrective measures, if applicable - Compliant uploading and archiving of the texture model, its materials and its textures

Objective**Standard**

Statement of the Competency	Achievement Context
Create control systems.	• For controlling the movements of the components of a scene • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions ◦ the structure of models • Using: ◦ information technologies ◦ creativity techniques ◦ a test protocol ◦ references • Based on: ◦ components of a project ◦ control tools
Performance Criteria for the Competency as a Whole	
	• Professional conduct adapted to the situation • Respect for the artistic and technical direction • Effective use of information technologies
Elements of the Competency	Performance Criteria
1. Establish an implementation plan.	• Complete list of needs and constraints associated with surfaces • Thorough analysis of information and references • Exhaustive analysis of the structure of the model and its props • Sensible choice of the production strategy
2. Integrate the control tools into the systems.	• Precise adjustment of the pivot points of the model • Complete generation of control tools • Meticulous configuration of control tools • Ranking of control tools in accordance with the structure of the systems • Meticulous updating of the ergonomics of systems

Elements of the Competency	Performance Criteria
3. Manage the distortions of the model.	• Satisfactory connection of the model to the control tools • Meticulous adjustment of distortions
4. Deliver the control systems.	• Compliance with the test protocol • Evaluation of the control systems in accordance with the established standards • Adapted corrective measures, if applicable • Compliant uploading and archiving of control systems

Objective**Standard**

Statement of the Competency	Achievement Context
Stage the components of the plan.	• For drafting the staging of the components of a 3D scene • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions • Using: ◦ information technologies ◦ narrative codes ◦ creativity techniques ◦ references • Based on components of the project
Performance Criteria for the Competency as a Whole	
• Professional conduct adapted to the situation • Effective use of information technologies	
Elements of the Competency	Performance Criteria
1. Establish an implementation plan.	• Complete list of needs and constraints associated with the staging • Thorough analysis of information and references • Sensible choice of the staging strategy
2. Draft the staging.	• Sensible organization of the stage space • Functional set-up of the initial lighting • Careful staging of components • Adapted management of space and time for actions and events • Careful positioning of cameras
3. Confirm the staging.	• Evaluation of the staging in accordance with the storytelling and technical direction • Adapted corrective measures, if applicable
4. Share the staging.	• Compliant uploading and archiving of the staging • Compliant sharing of the staging with the other departments

Objective**Standard**

Statement of the Competency	Achievement Context
Create the lighting.	• For the lighting for a 3D scene • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions • Using: ◦ information technologies ◦ creativity techniques ◦ lighting techniques ◦ references • Based on the staging
Performance Criteria for the Competency as a Whole	
• Professional conduct adapted to the situation • Respect for the artistic and technical direction • Effective use of information technologies	
Elements of the Competency	Performance Criteria
1. Establish an implementation plan.	• Complete list of needs and constraints associated with the lighting • Thorough analysis of information and references • Sensible choice of the lighting strategy
2. Light the subject.	• Correct enhancing of volumes and materials • Appropriate creation of depth between the subject and the background
3. Light the surroundings.	• Correct enhancement of elements in the environment • Appropriate creation of physical phenomena associated with light • Believable representation of the time of day and phenomena
4. Manage the shadows.	• Sensible positioning of shadows • Consistency in the creation of the penumbra • Meticulous control of the density • Appropriate adjustment of the colour
5. Deliver the lighting.	• Evaluation of the lighting in accordance with established standards • Adapted corrective measures, if applicable • Careful production of renderings • Compliant uploading and archiving of lighting and renderings

Objective**Standard**

Statement of the Competency	Achievement Context
Create the dynamic visual effects.	• For producing simulations and particle effects • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents ◦ the properties of the material ◦ the laws of physics • Using: ◦ information technologies ◦ creativity techniques ◦ simulation and creation of particle effects techniques ◦ references • Based on the staging
Performance Criteria for the Competency as a Whole	
• Professional conduct adapted to the situation • Respect for the artistic and technical direction • Effective use of information technologies	
Elements of the Competency	Performance Criteria
1. Establish an implementation plan.	• Complete list of needs and constraints associated with effects • Thorough analysis of information and references • Accurate identification of the properties of the materials involved in the effects • Sensible choice of production strategy
2. Represent the properties of components.	• Realistic imitation of properties that are not characteristic of the material • Faithful simulation of physical and chemical properties of materials
3. Control forces and movements.	• Proper matching of the intensity and direction of forces to the needs • Consistent determination of the trajectory and speed of movements
4. Control collisions.	• Accurate detection of collisions • Logical outcome of collisions
5. Deliver the effects.	• Evaluation of effects in accordance with established standards • Adapted corrective measures, if applicable • Careful production of renderings • Compliant uploading and archiving of effects and renderings

Objective**Standard**

Statement of the Competency	Achievement Context
Composite the images.	- For the stitching of synthesized images - Under the supervision of the person in charge - Referring to: - the legal framework for practising the profession - production documents and verbal instructions - Using: - information technologies - creativity techniques - compositing techniques - references - Based on: - rendering images and their layers - the staging
Performance Criteria for the Competency as a Whole	
- Professional conduct adapted to the situation - Respect for the artistic and technical direction - Effective use of information technologies	
Elements of the Competency	Performance Criteria
1. Establish an implementation plan.	- Complete list of needs and constraints associated with the compositing - Thorough analysis of information and references - Sensible choice of the compositing strategy
2. Assemble the images.	- Efficient management of images and layers - Correct use of the blend mode - Appropriate management of the alpha channel
3. Integrate the additional elements.	- Relevant addition of: - project components - atmospheric and physical phenomena - lighting effects - Believability of additions
4. Adjust the images.	- Logical parameterizing of the intensity or opacity - Careful processing of the colour - Sensible use of masks - Meticulous harmonization of the artistic and technical characteristics
5. Reproduce the visual characteristics of the camera.	- Careful control of types of blurring, luminosity and saturation - Faithful parameterizing of distortions, deformations and digital noise - Believability of echoes and bloomings

Elements of the Competency	Performance Criteria
6. Deliver the images.	• Evaluation of images in accordance with established standards • Adapted corrective measures, if applicable • Careful production of renderings • Compliant uploading and archiving of images and renderings

Objective**Standard**

Statement of the Competency	Achievement Context
Participate in the improvement of work processes.	- In all fields of expertise - To improve productivity - Under the supervision of the person in charge - Referring to: - the legal framework for practising the profession - established standards - the needs related to the project - Using: - information technologies - creativity techniques - script editing techniques - a research strategy - references
Performance Criteria for the Competency as a Whole	
- Professional conduct adapted to the situation - Respect for the artistic and technical direction - Effective use of information technologies	
Elements of the Competency	Performance Criteria
1. Examine their performance.	- Regular analysis of their productivity - Accurate establishment of needs for improvement
2. Carry out watch activities.	- Relevant survey of innovations and new developments related to the field of expertise or the task to be carried out - Accurate identification of the currents and trends in the profession
3. Propose innovations to be integrated.	- Targeted testing of scripts, plug-ins, software programs or other innovations - Detailed analysis of the performance associated with each innovation - Accurate identification of the impacts on their production - Detailed presentation of the chosen innovations
4. Improve their work processes.	- Sensible fragmentation of work - Adapted automation of recurring operations - Effective restructuring of operations - Informed use of scripts and plug-ins

Optional Competencies

Code: 02M4

Objective

Standard

Statement of the Competency	Achievement Context
Automate the operations.	- In all fields of expertise - For the automation of recurrent or time-consuming operations - Under the supervision of the person in charge - Referring to: - the legal framework for practising the profession - programming principles - Using - information technologies - a research strategy - a programming language - Focused on recurrent or time-consuming operations

Performance Criteria for the Competency as a Whole
Respect for the procedures and special characteristics of the language

Elements of the Competency	Performance Criteria
1. Propose solutions.	- Accurate identification of needs for automation - In-depth analysis of needs and constraints - Relevance of solutions
2. Structure the algorithm.	- Detailed development of the plan - Accurate determination of constants and variables
3. Code the algorithm.	- Accurate definition of constants and variables - Precise coding of instructions - Careful incorporation of execution conditions and loops - Comprehensive debugging
4. Create a user interface.	- Appropriate choice of graphic elements for the display and input - Appropriate ergonomics for the graphic elements - Correct parameterizing of graphic elements - Comprehensive debugging
5. Finalize the algorithm.	- Sensible addition of annotations - Meaningful enrichment of the solution
6. Contribute to the implementation of the solution.	- Methodical preparation for the implementation of the solution - Appropriate technical support

Objective**Standard**

Statement of the Competency	Achievement Context
Develop models of environments.	• For the creation of models of all types of environments • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions ◦ the production mandate • Using: ◦ information technologies ◦ narrative codes ◦ creativity techniques ◦ references • Based on the staging
Performance Criteria for the Competency as a Whole	
	• Compliance with the production mandate • Meaningful enrichment of models • Believability of models • Harmonious balancing of the aesthetic, storytelling and technical aspects
Elements of the Competency	Performance Criteria
1. Carry out the implementation plan.	• Clear confirmation of the production aim • Correct establishment of the structure of the operations • Proper monitoring of the progress of the operations
2. Add details to the land.	• Logical addition of geological elements • Accurate representation of erosion • Logical transitions between the different areas of the land
3. Manage the built environment.	• Faithful representation of architectural characteristics • Cohesive structuring of architectural elements • Respect for proportions
4. Create the plant life.	• Faithful representation of the morphological elements • Cohesive structuring of components • Respect for proportions
5. Finalize the models.	• Sensible addition of details and information • Careful upgrading of the appearance and topology

Objective**Standard**

Statement of the Competency	Achievement Context
Develop models of creatures.	• For the creation of real or fantasy creatures • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions ◦ the production mandate • Using: ◦ information technologies ◦ narrative codes ◦ creativity techniques ◦ references
Performance Criteria for the Competency as a Whole	
	• Compliance with the production mandate • Meaningful enrichment of models • Believability of models • Harmonious balancing of the aesthetic, storytelling and technical aspects
Elements of the Competency	Performance Criteria
1. Carry out the implementation plan.	• Clear confirmation of the production aim • Correct establishment of the structure of the operations • Proper monitoring of the progress of the operations
2. Create the morphological model.	• Faithful representation of the characteristics of the creature • Cohesive structuring of external body parts and organs • Respect for proportions
3. Create the anatomical model.	• Faithful representation of the musculoskeletal system • Cohesive structuring of organic tissues • Respect for proportions
4. Finalize the models.	• Sensible addition of details and props • Careful upgrading of the appearance and topology

Objective**Standard**

Statement of the Competency	Achievement Context
Develop models of characters.	• For the creation of realistic or fantasy characters • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions ◦ the production mandate • Using: ◦ information technologies ◦ narrative codes ◦ creativity techniques ◦ references • Based on banks of computerized models and images
Performance Criteria for the Competency as a Whole	
	• Compliance with the production mandate • Meaningful enrichment of models • Believability of models • Harmonious balancing of the aesthetic, storytelling and technical aspects
Elements of the Competency	Performance Criteria
1. Carry out the implementation plan.	• Clear confirmation of the production aim • Correct establishment of the structure of the operations • Proper monitoring of the progress of the operations
2. Structure the models.	• Models structured in accordance with needs • Respect for the morphology of the characters
3. Fine-tune the appearance of the models.	• Meticulous adjustment of volumes • Faithful representation of the characteristics of the subjects
4. Finalize the characters.	• Sensible addition of details and props • Careful placement of a deformable topology • Preparation adapted for the creation of control systems

Objective**Standard**

Statement of the Competency	Achievement Context
Reconstitute the models.	• For the reproduction of all types of models • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions ◦ the production mandate • Using: ◦ information technologies ◦ narrative codes ◦ creativity techniques ◦ references • Based on: ◦ scanning and photogrammetry data ◦ images and videos

	Performance Criteria for the Competency as a Whole
	• Compliance with the production mandate • Completeness of models • Harmonious balancing of the aesthetic, storytelling and technical aspects

Elements of the Competency	Performance Criteria
1. Carry out the implementation plan.	• Clear confirmation of the production aim • Correct establishment of the structure of the operations • Proper monitoring of the progress of the operations
2. Scan the images and control points.	• Optimal localizing of control points on the images • Continuity of the grounding • Meticulous verification of data
3. Recreate the volumes.	• Meticulous cleaning of data • Meticulous transcoding of the point cloud to surfaces • Complete correction of imperfections in the transcoding
4. Finalize the models.	• Careful upgrading of the appearance and topology • Optimal projection of images on the surfaces

Objective**Standard**

Statement of the Competency	Achievement Context
Lay out the stage space.	• For the placement of final elements and the finalizing of the natural, rural, urban and interior spaces • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions ◦ the production mandate ◦ the characteristics of the environments and inhabitants • Using: ◦ information technologies ◦ narrative codes ◦ creativity techniques ◦ references • Based on: ◦ the staging ◦ banks of scanned models, textures, animations and images
Performance Criteria for the Competency as a Whole	
	• Compliance with the production mandate • Meaningful enrichment of the stage space • Believability of the layout of the stage space • Harmonious balancing of the aesthetic, storytelling and technical aspects
Elements of the Competency	Performance Criteria
1. Carry out the implementation plan.	• Clear confirmation of the production aim • Correct establishment of the structure of the operations • Proper monitoring of the progress of the operations
2. Stage the natural space.	• Compliant production of land and sky • Coherent positioning of natural bodies of water and waterways • Careful addition of the background

Elements of the Competency	Performance Criteria
3. Stage the rural and urban spaces.	• Coherent positioning of architectural elements • Knowledgeable setting of traffic lanes • Respect for dimensions and proportions
4. Populate the space.	• Coherency of species • Distribution of individuals in accordance with the space • Appropriate diversity with regard to stages of life
5. Furnish the space.	• Coherency of furniture and props • Distribution of furniture and props in accordance with the space • Appropriate diversity
6. Finalize the layout.	• Sensible addition of control points and storytelling elements • Knowledgeable representation of the passage of time

Objective**Standard**

Statement of the Competency	Achievement Context
Create the scenography of the action.	• For the unfolding of events • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions ◦ the production mandate • Using: ◦ information technologies ◦ narrative codes ◦ creativity techniques ◦ references • Based on: ◦ the staging ◦ banks of scanned models, textures, animations and images

	Performance Criteria for the Competency as a Whole
	• Compliance with the production mandate • Meaningful enrichment of the visual and storytelling aspects of the action • Believability of the action • Harmonious balancing of the aesthetic, storytelling and technical aspects

Elements of the Competency	Performance Criteria
1. Carry out the implementation plan.	• Clear confirmation of the production aim • Correct establishment of the structure of the operations • Proper monitoring of the progress of the operations
2. Develop the chain of events.	• Precise clipping of components of the action • Relevant choice of elements of the environment that have an impact on the action • Correct establishment of the chronology
3. Localize the components of the action.	• Appropriate positioning in space and time
4. Upgrade the movements.	• Correct establishment of trajectories • Coherent adjustment of the speed
5. Control the chain of events.	• Logical interaction among the events • Precise adjustment of the tempo
6. Finalize the scenography.	• Sensible addition of details and elements • Careful harmonization of components of the action

Objective**Standard**

Statement of the Competency	Achievement Context
Fine-tune the visual communication.	- For improving the transmission of information and the intelligibility of the storytelling - Under the supervision of the person in charge - Referring to: - the legal framework for practising the profession - production documents and verbal instructions - the production mandate - Using: - information technologies - communicative and narrative codes - creativity techniques - references - Based on: - the staging - banks of scanned models, textures, animations and images

	Performance Criteria for the Competency as a Whole
	- Compliance with the production mandate - Meaningful enrichment of the storytelling - Believability of the storytelling - Harmonious balancing of the aesthetic, storytelling and technical aspects

Elements of the Competency	Performance Criteria
1. Carry out the implementation plan.	- Clear confirmation of the production aim - Correct establishment of the structure of the operations - Proper monitoring of the progress of the operations
2. Adjust the ambience.	Faithful representation of the characters' psychological states and the atmosphere
3. Carry out the spatiotemporal location.	- Knowledgeable determination of visual indicators and cues - Careful implementation
4. Direct attention.	- Knowledgeable determination of techniques to attract attention - Correct adaptation of techniques
5. Connect the levels.	Careful implementation of connections
6. Finalize the visual communication.	- Sensible addition of details and elements - Complete elimination of communication noises

Objective**Standard**

Statement of the Competency	Achievement Context
Develop materials and textures.	• For the creation of all types of stylized or photo-realistic surfaces • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions ◦ the production mandate • Using: ◦ information technologies ◦ narrative codes ◦ creativity techniques ◦ references • Based on: ◦ models associated with the project ◦ scanned images
Performance Criteria for the Competency as a Whole	
	• Compliance with the production mandate • Meaningful enrichment of materials and textures • Believability of materials and textures • Harmonious balancing of the aesthetic, storytelling and technical aspects
Elements of the Competency	Performance Criteria
1. Carry out the implementation plan.	• Clear confirmation of the production aim • Correct establishment of the structure of the operations • Proper monitoring of the progress of the operations
2. Create the materials.	• Correct establishment of the arborescence • Correct establishment of the reaction of surfaces to light
3. Detail the textures.	• Sensible determination of the colour palette • Logical adjustment of the maps • Coherency of the parameterization
4. Finalize the appearance of surfaces.	• Addition of specific visual details in accordance with the storytelling needs • Careful upgrading of the appearance of surfaces

Objective**Standard**

Statement of the Competency	Achievement Context
Harmonize the appearance of surfaces.	- For the harmonization and standardization of stylized or photo-realistic materials and textures within a sequence of images or a scene - Under the supervision of the person in charge - Referring to: - the legal framework for practising the profession - production documents and verbal instructions - the production mandate - the laws of physics - Using: - information technologies - a virtual lighting studio - a document renderer or a game engine - narrative codes - creativity techniques - references - Based on: - scanned images - textured models

Performance Criteria for the Competency as a Whole
- Compliance with the production mandate - Meaningful enrichment of the appearance of surfaces - Believability of the appearance of surfaces - Harmonious balancing of the aesthetic, storytelling and technical aspects

Elements of the Competency	Performance Criteria
1. Carry out the implementation plan.	- Clear confirmation of the production aim - Correct establishment of the structure of the operations - Proper monitoring of the progress of the operations
2. Evaluate the appearance of surfaces.	- Exhaustive analysis of the reaction of surfaces to the light - Sensible critique of the aesthetic
3. Imitate the physical play of light on the surfaces.	- Optimal reproduction of visual characteristics of materials - Logical positioning of textures - Complete standardization
4. Harmonize the appearance of surfaces.	Precise adjustment of parameters

Objective**Standard**

Statement of the Competency	Achievement Context
Perfect the control systems.	- For the improvement and optimization of control systems - Under the supervision of the person in charge - Referring to: - the legal framework for practising the profession - production documents and verbal instructions - the production mandate - Using: - information technologies - narrative codes - creativity techniques - references - Based on models and their control systems
Performance Criteria for the Competency as a Whole	
	- Compliance with the production mandate - Meaningful enrichment of control systems - Believability of reactions of control systems and models - Harmonious balancing of the aesthetic, storytelling and technical aspects
Elements of the Competency	Performance Criteria
1. Carry out the implementation plan.	- Clear confirmation of the production aim - Correct establishment of the structure of the operations - Proper monitoring of the progress of the operations
2. Study the control systems.	- Exhaustive testing of control tools - Complete reverse engineering of control systems
3. Ensure the transformations of models.	- Optimal morphing of models - Careful control of deformations
4. Refine the control tools.	- Sensible addition of toggles, pivot points and control panels - Optimal parameterization of the manipulation limits - Optimal adjustment of the curve effect
5. Ensure the usability of control systems.	- Exhaustive tests of control systems - Adapted corrections, if applicable

Objective**Standard**

Statement of the Competency	Achievement Context
Do motion capture and data assignment.	• For the capture of real motions as well as the processing and assignment of data to a control system • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions ◦ the production mandate • Using: ◦ audiovisual equipment ◦ information technologies ◦ actors ◦ narrative codes ◦ creativity techniques ◦ references • Based on: ◦ control systems ◦ banks of models
Performance Criteria for the Competency as a Whole	
	• Compliance with the production mandate • Believability of the model's movements • Harmonious balancing of the aesthetic, storytelling and technical aspects
Elements of the Competency	Performance Criteria
1. Carry out the implementation plan.	• Clear confirmation of the production aim • Correct establishment of the structure of the operations • Proper monitoring of the progress of the operations
2. Prepare the capture session.	• Meticulous installation of the equipment • Rigorous direction of players for the calibration of the equipment • Precise calibration of the equipment • Careful implementation of the capture skeletal code

Elements of the Competency	Performance Criteria
3. Ensure the validity of the data.	• Optimal capture of images, if applicable • Methodical saving of the data related to each movement • Rigorous verification of saved data
4. Assign the data.	• Methodical management • Careful cleaning • Precise transcoding • Optimal adjustment of data to control systems
5. Produce animation clips.	• Compliant uploading and archiving of clips

Objective**Standard**

Statement of the Competency	Achievement Context
Animate a character.	• For the representation of the reactions, emotions and psychological characteristics of a character • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions ◦ the production mandate ◦ the laws of physics • Using: ◦ information technologies ◦ creativity techniques ◦ communication and narrative codes ◦ a soundtrack ◦ references • Based on: ◦ the staging ◦ models ◦ control systems
Performance Criteria for the Competency as a Whole	
	• Compliance with the production mandate • Meaningful enrichment of the interpretation of the character • Believability of the interpretation of the character • Harmonious balancing of the aesthetic, storytelling and technical aspects
Elements of the Competency	Performance Criteria
1. Carry out the implementation plan.	• Clear confirmation of the production aim • Correct establishment of the structure of the operations • Proper monitoring of the progress of the operations
2. Represent body and facial expressions.	• Correctness of gestures • Understandability of psychological traits and emotions
3. Ensure lip synchronization.	• Accuracy of jaw movements and visemes • Constant synchronization with the soundtrack
4. Finalize the animation.	• Sensible addition of details and information • Careful upgrading of poses and interpolations of movements

Objective**Standard**

Statement of the Competency	Achievement Context
Recreate the engineering of movements.	• For the imitation of the engineering of the movements of mechanical and biological models • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions ◦ the production mandate ◦ the laws of physics • Using: ◦ information technologies ◦ narrative codes ◦ creativity techniques ◦ references • Based on: ◦ the staging ◦ models ◦ control systems
	Performance Criteria for the Competency as a Whole
	• Compliance with the production mandate • Meaningful enrichment of movements • Intelligibility of silhouettes • Harmonious balancing of the aesthetic, storytelling and technical aspects

Elements of the Competency	Performance Criteria
1. Carry out the implementation plan.	• Clear confirmation of the production aim • Correct establishment of the structure of the operations • Proper monitoring of the progress of the operations
2. Imitate the mechanical or biological functioning system.	• Respect for the limitations of joint movements and movement constraints • Accurate representation of the flexibility and elasticity of parts of the system • Full matching of the posture
3. Adjust the movements.	• Correct representation of the energy used • Respect for the direction and intensity of the forces presented • Continuous adjustment of the balance of the model
4. Finalize the movements.	• Sensible addition of details • Careful updating of mechanics

Objective**Standard**

Statement of the Competency	Achievement Context
Develop animated sequences.	• For the assembling of isolated actions into sequences • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions ◦ the production mandate ◦ the laws of physics • Using: ◦ information technologies ◦ communication and narrative codes ◦ creativity techniques ◦ references • Based on: ◦ the staging ◦ models ◦ control systems ◦ animation banks
Performance Criteria for the Competency as a Whole	
	• Compliance with the production mandate • Meaningful enrichment of actions • Believability of movements • Fluidity of the animation • Harmonious balancing of the aesthetic, storytelling and technical aspects
Elements of the Competency	Performance Criteria
1. Carry out the implementation plan.	• Clear confirmation of the production aim • Correct establishment of the structure of the operations • Proper monitoring of the progress of the operations
2. Produce animated clips.	• Relevant choice of animation • Coherent cutting of the animation • Complete production of missing movements, if applicable
3. Assemble the animated clips into sequences.	• Logical arrangement of animated clips on the timeline • Arrangement of animated clips in accordance with the needs
4. Finalize the animated sequences.	• Sensible addition of details and information • Careful harmonization of animated sequences

Objective**Standard**

Statement of the Competency	Achievement Context
Reconstitute the shapes and movements.	• For the reproduction of shapes and movements • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions ◦ the production mandate ◦ the laws of physics • Using: ◦ information technologies ◦ narrative codes ◦ creativity techniques ◦ references • Based on: ◦ the staging ◦ digitized data ◦ models ◦ control systems ◦ images and videos

Performance Criteria for the Competency as a Whole
• Compliance with the production mandate • Completeness of shapes and movements • Harmonious balancing of the aesthetic, storytelling and technical aspects

Elements of the Competency	Performance Criteria
1. Carry out the implementation plan.	• Clear confirmation of the production aim • Correct establishment of the structure of the operations • Proper monitoring of the progress of the operations
2. Scan the images and the control points.	• Optimal location of control points on the images • Continuity of the grounding • Rigorous verification of data
3. Reproduce the movements.	• Meticulous cleaning of data • Rigorous monitoring of movements (<i>tracking 2D</i>) • Continuous correspondence between the virtual camera and the real camera (<i>camera tracking</i>)
4. Associate the shapes with the movements.	• Precise copying of the shapes of the subject • Continuous correspondence between the linear perspective and the transformations

Objective**Standard**

Statement of the Competency	Achievement Context
Skin models.	• For the creation of clothing and hairiness • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions ◦ the production mandate ◦ the properties of the material ◦ the laws of physics - Using: ◦ information technologies ◦ narrative codes ◦ creativity techniques ◦ references • Based on: ◦ the staging ◦ animated models
Performance Criteria for the Competency as a Whole	
	• Compliance with the production mandate • Meaningful enrichment of the skinning • Believability of the skinning • Harmonious balancing of the aesthetic, storytelling and technical aspects
Elements of the Competency	Performance Criteria
1. Carry out the implementation plan.	• Clear confirmation of the production aim • Correct establishment of the structure of the operations • Proper monitoring of the progress of the operations
2. Make clothing.	• Adapted production of pieces • Meticulous assembly of pieces • Sensible adjustment of clothing on the model
3. Add hairiness.	• Satisfactory productions of elements of hairiness • Parameterization of the hairiness according to the needs • Appropriate handling of the hairiness

Elements of the Competency	Performance Criteria
4. Simulate the movements.	• Sensible pinning of the skinning • Respect for the movements of the model, the characteristics of the skinning elements and the forces present • Strict control of interactions and collisions
5. Finalize the skinning.	• Sensible addition of details and props • Careful upgrading of the appearance and movements of the skinning

Objective**Standard**

Statement of the Competency	Achievement Context
Simulate the effects of fluids.	• For the physical simulation of visual effects involving fluids in liquid or gas form • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions ◦ the production mandate ◦ the laws of physics • Using: ◦ information technologies ◦ narrative codes ◦ creativity techniques ◦ references • Based on the staging
Performance Criteria for the Competency as a Whole	
	• Compliance with the production mandate • Meaningful enrichment of effects • Believability of effects • Harmonious balancing of the aesthetic, storytelling and technical aspects
Elements of the Competency	Performance Criteria
1. Carry out the implementation plan.	• Clear confirmation of the production aim • Correct establishment of the structure of the operations • Proper monitoring of the progress of the operations
2. Produce the point clouds.	• Informed delineation of the generating zone • Strict control of the dynamic and fluidic parameters of the simulation
3. Reconstruct the surfaces.	• Optimization of the point cloud • Appropriate determination of the density of the coverage • Careful application of materials
4. Finalize the effect.	• Sensible addition of details and components • Careful upgrading of the appearance of volumes, surfaces and movements

Objective**Standard**

Statement of the Competency	Achievement Context
Simulate crowd effects.	• For the physical simulation of visual effects involving crowds • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions ◦ the production mandate ◦ the laws of physics • Using: ◦ information technologies ◦ narrative codes ◦ creativity techniques ◦ references • Based on: ◦ the staging ◦ banks of models and animations

	Performance Criteria for the Competency as a Whole
	• Compliance with the production mandate • Meaningful enrichment of effects • Believability of effects • Harmonious balancing of the aesthetic, storytelling and technical aspects

Elements of the Competency	Performance Criteria
1. Carry out the implementation plan.	• Clear confirmation of the production aim • Correct establishment of the structure of the operations • Proper monitoring of the progress of the operations
2. Develop a behavioural system.	• Coherent taking into account of factors that influence behaviours • Proper creation of the behavioural algorithm
3. Parameterize the simulation.	• Complete updating of banks of models and animations • Faithful establishment of physical properties • Strict control of the parameters of the simulation
4. Finalize the effect.	• Sensible addition of details and variations • Careful upgrading of behaviours, movements and physical properties

Objective**Standard**

Statement of the Competency	Achievement Context
Create stage lighting and storytelling lighting.	• For the creation of lighting linked to the storytelling • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions ◦ the production mandate ◦ the characteristics of the setting as well as those of the inhabitants ◦ the laws of physics • Using: ◦ information technologies ◦ communication and narrative codes ◦ creativity techniques ◦ references • Based on: ◦ the staging ◦ textured and animated models
Performance Criteria for the Competency as a Whole	
	• Compliance with the production mandate • Meaningful enrichment of the luminous space as well as the visual and storytelling aspects of the light • Believability of the lighting • Harmonious balancing of the aesthetic, storytelling and technical aspects
Elements of the Competency	Performance Criteria
1. Carry out the implementation plan.	• Clear confirmation of the production aim • Correct establishment of the structure of the operations • Proper monitoring of the progress of the operations
2. Develop the ambience.	• Representation of the atmosphere of the scene in accordance with the storytelling intent • Sensible highlighting of the psychology of the characters

Elements of the Competency	Performance Criteria
3. Present the action.	• Highlighting of the action in accordance with the storytelling • Constant following of the action
4. Direct attention.	• Correct accentuation of important visual elements • Efficient placement of leading lines • Proper use of lighted animations
5. Finalize the lighting.	• Sensible addition of details • Visual harmony between the ambience, the action and the focus of attention

Objective**Standard**

Statement of the Competency	Achievement Context
Reconstitute the lighting.	• For reproducing natural, photographic and cinematographic lighting • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions ◦ the production mandate ◦ the laws of physics • Using: ◦ information technologies ◦ narrative codes ◦ creativity techniques ◦ references • Based on: ◦ the staging ◦ scanned images and backgrounds ◦ textured and animated models
Performance Criteria for the Competency as a Whole	
	• Compliance with the production mandate • Completeness of the lighting • Harmonious balancing of the aesthetic, storytelling and technical aspects
Elements of the Competency	Performance Criteria
1. Carry out the implementation plan.	• Clear confirmation of the production aim • Correct establishment of the structure of the operations • Proper monitoring of the progress of the operations
2. Recreate the lighting system.	• Precise positioning of light sources • Precise adjustment of the lighting/colour temperature ratios
3. Imitate the characteristics of shadows.	• Exact depth of shadows • Correct diffusion of the penumbra
4. Imitate the light phenomena.	• Correct representation of the interactions between light and materials • Coherent diffusion of the light

Objective**Standard**

Statement of the Competency	Achievement Context
Composite the stereoscopic images.	• For bringing out the depth of images • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions ◦ the production mandate ◦ the laws of physics • Using: ◦ information technologies ◦ narrative codes ◦ creativity techniques ◦ 3D glasses and/or virtual reality headsets ◦ references • Based on: ◦ the staging ◦ banks of scanned models, textures, animations and images
Performance Criteria for the Competency as a Whole	
	• Compliance with the production mandate • Meaningful enrichment of the composition • Believability of the depth effect • Harmonious balancing of the aesthetic, storytelling and technical aspects
Elements of the Competency	Performance Criteria
1. Carry out the implementation plan.	• Clear confirmation of the production aim • Correct establishment of the structure of the operations • Proper monitoring of the progress of the operations
2. Gather monoscopic images.	• Meticulous preparation of images • Careful assembly • Optimal harmonization of visual characteristics
3. Transform monoscopic images into stereoscopic images.	• Exact duplication of elements of the image • Correct positioning of duplicates • Precise adjustment of the interpupillary distance
4. Ensure the quality of the stereoscopic images.	• Complete removal of artifacts and visual disparity • Meticulous reproduction of the visual characteristics of the camera • Complete resolution of convergence issues

Objective**Standard**

Statement of the Competency	Achievement Context
Embed a subject in a sequence of images.	- For the photorealistic integration of a subject into a sequence of images - Under the supervision of the person in charge - Referring to: - the legal framework for practising the profession - production documents and verbal instructions - the production mandate - the laws of physics - Using: - information technologies - narrative codes - creativity techniques - references - Based on banks of scanned models, textures, animations and images

	Performance Criteria for the Competency as a Whole
	- Compliance with the production mandate - Meaningful enrichment of the composition - Believability of the embedding - Harmonious balancing of the aesthetic, storytelling and technical aspects

Elements of the Competency	Performance Criteria
1. Carry out the implementation plan.	- Clear confirmation of the production aim - Correct establishment of the structure of the operations - Proper monitoring of the progress of the operations
2. Integrate the subject.	- Meticulous preparation of the components of the image - Positioning of subject in accordance with needs
3. Ensure the correspondence with the scene.	- Respect for the linear perspective - Correct adaptation of scales and proportions - Coherency of the lighting and atmospheric effects
4. Ensure the correspondence of the capture.	- Perfect alignment of the spatial and temporal positioning of cameras - Meticulous harmonization of the visual characteristics of images
5. Finalize the sequence of images.	Sensible addition of details and information

Objective**Standard**

Statement of the Competency	Achievement Context
Develop the decors.	• For creating realistic or fantasy virtual decors • Under the supervision of the person in charge • Referring to: ◦ the legal framework for practising the profession ◦ production documents and verbal instructions ◦ the production mandate ◦ the characteristics of the environment • Using: ◦ information technologies ◦ narrative codes ◦ creativity techniques ◦ references • Based on: ◦ the staging ◦ banks of scanned models, textures and images
	Performance Criteria for the Competency as a Whole
	• Compliance with the production mandate • Meaningful enrichment of the decors • Believability of the decors • Harmonious balancing of the aesthetic, storytelling and technical aspects
Elements of the Competency	Performance Criteria
1. Carry out the implementation plan.	• Clear confirmation of the production aim • Correct establishment of the structure of the operations • Proper monitoring of the progress of the operations
2. Draft the decors.	• Careful preparation of images • Relevant use of components of the staging • Coherent mixing of images and components

Elements of the Competency	Performance Criteria
3. Ensure the correspondence with the scene.	• Respect for the linear perspective • Correct adaptation of scales and proportions • Perfect blending of textures • Coherency of the lighting and atmospheric effects
4. Ensure the correspondence of the capture.	• Perfect alignment of the spatial and temporal positioning of cameras • Meticulous harmonization of the visual characteristics of images
5. Finalize the decors.	• Sensible addition of details and information

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

English, Language of Instruction and Literature

Code: 4EA0

Objective

Standard

Statement of the Competency

Analyze and produce various forms of discourse.

Elements of the Competency	Performance Criteria
1. Identify the characteristics and functions of the components of literary texts.	• Accurate explanation of the denotation of words • Adequate recognition of the appropriate connotation of words • Accurate definition of the characteristics and function of each component
2. Determine the organization of facts and arguments of a given literary text.	• Clear and accurate recognition of the main idea and structure • Clear presentation of the strategies employed to develop an argument or thesis
3. Prepare ideas and strategies for a projected discourse.	• Appropriate identification of topics and ideas • Adequate gathering of pertinent information • Clear formulation of a thesis • Coherent ordering of supporting material
4. Formulate a discourse.	• Appropriate choice of tone and diction • Correct development of sentences • Clear and coherent development of paragraphs • Formulation of a 750-word discourse
5. Revise the work.	• Appropriate use of revision strategies • Appropriate revision of form and content

Learning Activities

Discipline: English, Language of Instruction and Literature
 Weighting: 2-2-4 or 1-3-4
 Credits: 2½

English, Language of Instruction and Literature

Code: 4EA1

Objective**Standard****Statement of the Competency**

Apply an analytical approach to literary genres.

Elements of the Competency**Performance Criteria**

1. Distinguish genres of literary texts.	• Clear recognition of the formal characteristics of a literary genre
2. Recognize the use of literary conventions within a specific genre.	• Accurate recognition of the figurative communication of meaning • Adequate explanation of the effects of significant literary and rhetorical devices
3. Situate a work within its historical and literary period.	• Appropriate recognition of the relationship of a text to its period
4. Write a critical analysis of a literary genre.	• Selective use of appropriate terminology • Effective presentation of a 1000-word coherent response to a literary text
5. Revise the work.	• Appropriate use of revision strategies • Appropriate revision of form and content

Learning Activities

Discipline: English, Language of Instruction and Literature
 Weighting: 2-2-3
 Credits: 2½

Objective**Standard****Statement of the Competency**

Apply an analytical approach to a literary theme.

Elements of the Competency**Performance Criteria**

1. Recognize the treatment of a theme within a literary text.	• Clear recognition of elements within the text, which define and reinforce a theme and its development • Adequate demonstration of the effects of significant literary and rhetorical devices
2. Situate a literary text within its cultural context.	• Appropriate recognition of a text as an expression of cultural context • Adequate demonstration of the effects of significant literary and rhetorical devices
3. Detect the value system inherent in a literary text.	• Appropriate identification of expression (explicit/implicit) of a value system in a text
4. Write an analysis on a literary theme.	• Selective use of appropriate terminology • Effective presentation of a 1000-word coherent response to a literary text
5. Revise the work.	• Appropriate use of revision strategies • Appropriate revision of form and content

Learning Activities

Discipline: English, Language of Instruction and Literature
 Weighting: 2-2-3
 Credits: 2½

English, Language of Instruction and Literature

Code: 4EAP

Objective**Standard****Statement of the Competency**

Communicate in the forms of discourse appropriate to one or more fields of study.

Elements of the Competency**Performance Criteria**

1. Identify the forms of discourse appropriate to given fields of study.	• Accurate recognition of specialized vocabulary and conventions • Accurate recognition of the characteristics of the form of discourse • Exploration of a variety of topics
2. Recognize the forms of discourse appropriate to given fields of study.	• Clear and accurate recognition of the main ideas and structure • Appropriate distinction between fact and argument
3. Formulate an oral and a written discourse.	• Examine ways to address and structure a given topic • Appropriate choice of tone and diction • Correctly developed sentences • Clearly and coherently developed paragraphs • Appropriate use of program-related communication strategies including media and technology • Formulation of a 1000-word discourse
4. Revise the work.	• Appropriate use of revision strategies • Appropriate revision of form and content

Learning Activities

Discipline: English, Language of Instruction and Literature
 Periods of instruction: 60
 Credits: 2

Humanities

Code: 4HU0

Objective**Standard****Statement of the Competency**

Apply a logical analytical process to how knowledge is organized and used.

Elements of the Competency**Performance Criteria**

- | | |
|--|---|
| 1. Recognize the basic elements of a field of knowledge. | <ul style="list-style-type: none"> • Appropriate description of the basic elements • Appropriate use of terminology relevant to a field of knowledge |
| 2. Define the modes of organization and utilization of a field of knowledge. | <ul style="list-style-type: none"> • Adequate definition of the dimensions, limits, and uses of a field of knowledge |
| 3. Situate a field of knowledge within its historical context. | <ul style="list-style-type: none"> • Accurate identification of the main components in the historical development of a field of knowledge • Accurate description of the effects of historical development and social context on the limits and uses of a field of knowledge |
| 4. Organize the main components into coherent patterns. | <ul style="list-style-type: none"> • Coherent organization of the main components |
| 5. Produce a synthesis of the main components. | <ul style="list-style-type: none"> • Appropriate analysis of the components • Coherent synthesis of the main components • Appropriate expression, including a significant individual written component, of an analysis of the context, importance and implications of the organization and uses of knowledge • Appropriate use of revision strategies • Appropriate revision of form and content |

Learning Activities

Discipline: Humanities
 Weighting: 3-1-3
 Credits: 2½

Humanities

Code: 4HU1

Objective**Standard****Statement of the Competency**

Apply a critical thought process to world views.

Elements of the Competency	Performance Criteria
1. Describe world views.	• Accurate description of a society or group with a distinctive world view • Appropriate use of terminology relevant to these societies or groups
2. Explain the major ideas, values, and implications associated with a given world view.	• Adequate explanation of the salient components of a world view
3. Organize the ideas, values and experiences of a world view into coherent patterns.	• Coherent organization of ideas about a world view • Appropriate expression, including a significant individual written component, of an analysis of the context, importance, and implications of world views
4. Compare world views.	• Comparative analysis of these world views • Appropriate inclusion of central elements, relationships, and organizational principles of the societies or groups in the analysis
5. Convey the ideas, attitudes, and experiences of the societies or groups studied.	• Coherent integration of the importance and implications of the world views for the given societies or groups • Appropriate use of revision strategies • Appropriate revision of form and content

Learning Activities

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

Humanities

Code: 4HUP

Objective**Standard****Statement of the Competency**

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

Elements of the Competency**Performance Criteria**

- | | |
|---|---|
| 1. Situate significant ethical issues in appropriate world views and fields of knowledge. | <ul style="list-style-type: none"> • Accurate recognition of the basic elements of ethical issues • Appropriate use of relevant terminology • Adequate identification of the main linkages with world views and fields of knowledge |
| 2. Explain the major ideas, values, and social implication of ethical issues. | <ul style="list-style-type: none"> • Adequate description of the salient components of the issues |
| 3. Organize the ethical questions and their implications into coherent patterns. | <ul style="list-style-type: none"> • Coherent organization of the ethical questions and their implications • Appropriate expression, including a significant individual written component, of an analysis of the context, importance and implications of the issues |
| 4. Debate the ethical issues. | <ul style="list-style-type: none"> • Adequate development of substantiated argumentation including context and diverse points of view • Clear articulation of an individual point of view • Appropriate use of revision strategies • Appropriate revision of form and content |

Learning Activities

Discipline:	Humanities
Periods of instruction:	45
Credits:	2

Objective**Standard****Statement of the Competency**

Apply basic concepts for communicating in standard French.

Elements of the Competency**Performance Criteria**

1. Write and revise a simple text.

- Clear, coherent formulation of a text of about 250 words
- Adequate development of the text: intention, topic, reader
- Formulation of simple, well-constructed sentences
- Use of adequate vocabulary for the task
- Satisfactory application of the rules of grammar, in particular agreement in gender and number; regular verbs; verb tenses in the present, compound past and simple future
- Satisfactory correction of errors in spelling or grammar
- Appropriate use of revision strategies

2. Understand the meaning of a simple text.

- Accurate description of the general meaning and essential ideas of a 500-word text
- Accurate identification of the difficulties in understanding the text
- Appropriate use of reading techniques
- Accurate identification of the main elements of the text

3. Convey a simple oral message.

- Clear and coherent formulation of an oral presentation of at least four minutes
- Appropriate use of standard vocabulary
- Clear and coherent statements

4. Understand the meaning of a simple oral message.

- Accurate identification of the general meaning and essential ideas of an oral message of at least four minutes
- Accurate identification of the difficulties in understanding the message
- Accurate description of the general meaning and essential ideas of the message

Learning Activities

Discipline: French as a Second Language
 Weighting: 2-1-3
 Credits: 2

French as a Second Language (Level II)

Code: 4SF1

Objective**Standard****Statement of the Competency**

Communicate in standard French with some ease.

Elements of the Competency**Performance Criteria**

1. Write and revise a simple text.

- Writing of a text of about 350 words
- Respect for grammar and spelling rules
- Appropriate use of the main elements of the corpus
- Clear, coherent formulation of sentences
- Coherent organization of paragraphs
- Appropriate use of revision strategies
- Satisfactory correction of spelling and grammatical errors

2. Interpret a written text.

- Accurate identification of the main ideas and structure of a text of 700 to 1 000 words
- Accurate identification of the main elements of the text
- Accurate explanation of the meaning of the words of the text

3. Produce a planned oral text.

- Clear and coherent formulation of an oral presentation of at least five minutes
- Appropriate use of standard vocabulary
- Respect for the level of language and rules of grammar and pronunciation

4. Interpret a simple oral text.

- Accurate identification of the main elements of an oral text of at least five minutes
- Accurate identification of the ideas and subjects dealt with in the text
- Accurate explanation of the meaning of the words of the text

Learning Activities

Discipline: French as a Second Language

Weighting: 2-1-3

Credits: 2

French as a Second Language (Level III)

Code: 4SF2

Objective**Standard****Statement of the Competency**

Communicate with ease in standard French.

Elements of the Competency**Performance Criteria**

- | | |
|--|--|
| 1. Write a text of moderate complexity. | <ul style="list-style-type: none"> • Writing of a text of about 450 words • Respect for grammar and spelling rules • Adaptation to the intended audience • Appropriate use of the main elements of the corpus • Clear and coherent formulation of sentences, including at least three that are complex • Coherent organization of paragraphs |
| 2. Revise and correct a text of moderate complexity. | <ul style="list-style-type: none"> • Appropriate use of revision strategies • Appropriate revision of the text |
| 3. Comment on a written text of moderate complexity. | <ul style="list-style-type: none"> • Accurate identification of the main elements of a text of between 2 500 and 3 000 words • Accurate explanation of the meaning of the words of the text • Accurate identification of the main and secondary ideas, of facts and opinions • Accurate identification of what is implicit and what is explicit |
| 4. Produce a planned oral text of moderate complexity. | <ul style="list-style-type: none"> • Clear and coherent formulation of an oral presentation of at least five minutes • Appropriate use of standard vocabulary • Respect for the level of language and rules of grammar and pronunciation • Adaptation to the intended audience • Appropriate sequencing of ideas |

Learning Activities

Discipline: French as a Second Language
 Weighting: 2-1-3
 Credits: 2

French as a Second Language (Level IV)

Code: 4SF3

Objective**Standard****Statement of the Competency**

Explore a cultural and literary topic.

Elements of the Competency**Performance Criteria**

- | | |
|---|--|
| 1. Write a text on a cultural or literary topic. | <ul style="list-style-type: none"> • Clear and coherent formulation of a text of about 550 words • Respect for the topic • Respect for grammar and spelling rules • Adaptation to the intended audience • Appropriate use of the main elements of the corpus • Clear articulation of a personal point of view |
| 2. Revise and correct a text on a cultural or literary topic. | <ul style="list-style-type: none"> • Appropriate use of revision strategies • Appropriate revision of the text |
| 3. Analyze a cultural or literary text. | <ul style="list-style-type: none"> • Personal formulation of the main elements of the text • Identification of the main themes • Identification of clues that help situate the text in its socio-cultural and historical context • Accurate identification of the values expressed • Accurate identification of the structure of the text • Clear articulation of a personal point of view |

Learning Activities

Discipline: French as a Second Language
 Weighting: 3-0-3
 Credits: 2

French as a Second Language (Level I)

Code: 4SFP

Objective**Standard****Statement of the Competency**

Apply basic concepts for communicating in French in relation to the student's field of study.

Elements of the Competency**Performance Criteria**

1. Write and revise a short text related to the student's field of study.

- Accurate identification of difficulties in writing
- Appropriate use of writing techniques
- Appropriate use of standard and specialized vocabulary
- Clear and coherent formulation of the text
- Appropriate use of revision strategies
- Satisfactory correction of spelling and grammatical errors

2. Understand the meaning and characteristics of a text related to the student's field of study.

- Accurate identification of difficulties in understanding the text
- Accurate identification of the characteristics of the text
- Accurate identification of specialized vocabulary
- Accurate identification of the main elements of the text
- Accurate description of the general meaning and essential ideas of the text

3. Convey a simple oral message related to the student's field of study.

- Accurate identification of the difficulties in oral expression
- Appropriate use of techniques of oral expression
- Appropriate use of standard and specialized vocabulary
- Intelligible expression of the message

4. Understand the meaning of a simple oral message related to the student's field of study.

- Accurate identification of difficulties in understanding the message
- Accurate identification of the characteristics of the message
- Accurate identification of specialized vocabulary
- Accurate identification of the main elements of the message
- Accurate description of the general meaning and essential ideas of the message

Learning Activities

Discipline: French as a Second Language
 Periods of instruction: 45
 Credits: 2

French as a Second Language (Level II)

Code: 4SFQ

Objective**Standard****Statement of the Competency**

Communicate in French on topics related to the student's field of study.

Elements of the Competency**Performance Criteria**

- | | |
|--|---|
| 1. Write a text related to the student's field of study. | <ul style="list-style-type: none"> • Appropriate use of specialized vocabulary and of conventions specific to different types of texts • Respect for the level of language and rules of grammar and spelling • Clear and coherent formulation of the text • Appropriate use of writing techniques |
| 2. Revise and correct a text on a topic related to the student's field of study. | <ul style="list-style-type: none"> • Appropriate use of revision strategies • Satisfactory correction of spelling and grammatical errors |
| 3. Differentiate the types of texts specific to the student's field of study. | <ul style="list-style-type: none"> • Accurate identification of the formal characteristics of each of the main types of texts and the conventions used |
| 4. Analyze texts representative of the student's field of study. | <ul style="list-style-type: none"> • Accurate identification of the main elements of the text • Accurate interpretation of specialized vocabulary • Accurate identification of the ideas and subjects dealt with • Appropriate use of reading and listening techniques |

Learning Activities

Discipline:	French as a Second Language
Periods of instruction:	45
Credits:	2

French, Second Language (Level III)

Code: 4SFR

Objective**Standard****Statement of the Competency**

Communicate with ease in French on topics related to the student's field of study.

Elements of the Competency**Performance Criteria**

- | | |
|--|--|
| 1. Produce a text on a topic related to the student's field of study. | <ul style="list-style-type: none"> • Respect for the topic • Appropriate use of specialized vocabulary and the conventions specific to different types of texts • Respect for the level of language and rules of grammar and spelling • Clear and coherent formulation of the text • Appropriate sequencing of ideas • Appropriate form for the content |
| 2. Revise and correct a text on a topic related to the student's field of study. | <ul style="list-style-type: none"> • Appropriate use of revision strategies • Satisfactory correction of spelling and grammatical errors |
| 3. Comment on texts specific to the student's field of study. | <ul style="list-style-type: none"> • Accurate identification of the formal characteristics of the main types of texts and the conventions used • Accurate explanation of the meaning of the words in the text • Accurate identification of the structure of the text • Accurate reformulation of the main and secondary ideas, of the facts and opinions • Accurate use of specialized vocabulary |

Learning Activities

Discipline:	French as a Second Language
Periods of instruction:	45
Credits:	2

French as a Second Language (Level IV)

Code: 4SFS

Objective**Standard****Statement of the Competency**

Produce a text in French on a topic related to the student's field of study.

Elements of the Competency**Performance Criteria**

1. Write a text on a topic related to the student's field of study.	• Respect for the topic • Appropriate use of specialized vocabulary and the conventions specific to different types of texts • Appropriate choice of the main elements of the corpus based on the type of text • Clear and coherent formulation of the text • Respect for the level of language and rules of grammar and spelling • Clear articulation of a personal point of view
2. Revise and correct a text on a topic related to the student's field of study.	• Appropriate use of revision strategies • Satisfactory correction of spelling and grammatical errors
3. Analyze a text related to the student's field of study.	• Precise differentiation of the formal characteristics of specific types of texts • Personal formulation of the main elements • Listing of the main themes • Accurate identification of the structure of the text • Identification of clues that help situate the text in its context • Clear articulation of a personal point of view • Accurate association of elements of the text with the topic

Learning Activities

Discipline:	French as a Second Language
Periods of instruction:	45
Credits:	2

Objective**Standard****Statement of the Competency**

Analyze one's physical activity from the standpoint of a healthy lifestyle.

Elements of the Competency**Performance Criteria**

1. Establish the relationship between one's lifestyle habits and health.	• Proper use of documentation from scientific research or the media • Recognition of the influence of social and cultural factors on the practice of physical activity • Pertinent links made between one's lifestyle habits and the impact they have on health
2. Be physically active in a manner that promotes one's health.	• Respect for the rules specific to the physical activity practised • Respect for codes of ethics, safety rules and regulations when being physically active • Respect for one's abilities when practising physical activities
3. Recognize one's needs, abilities and motivational factors with respect to regular and sufficient physical activity.	• Appropriate use of strategies for the quantitative and qualitative evaluation of one's physical condition • Overall assessment of one's needs and abilities in terms of physical activity • Overall assessment of one's motivational factors with respect to being sufficiently active on a regular basis
4. Propose physical activities that promote one's health.	• Appropriate choice of physical activities according to one's needs, abilities and motivational factors • Use of clear reasoning to explain the choice of physical activity

Learning Activities

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

Physical Education

Code: 4EP1

Objective**Standard****Statement of the Competency**

Improve one's effectiveness when practising a physical activity.

Elements of the Competency**Performance Criteria**

- | Elements of the Competency | Performance Criteria |
|---|---|
| 1. Plan an approach to improve one's effectiveness when practising a physical activity. | <ul style="list-style-type: none"> • Initial assessment of one's abilities and attitudes when practising a physical activity • Statement of one's expectations and needs with respect to the ability to practise the activity • Appropriate formulation of personal objectives • Appropriate choice of the means to achieve one's objectives • Use of clear reasoning to explain the choice of physical activity |
| 2. Use a planned approach to improve one's effectiveness when practising a physical activity. | <ul style="list-style-type: none"> • Respect for the rules and regulations of the physical activity • Respect for codes of ethics, safety rules and regulations when being physically active • Appropriate use of strategies for the quantitative and qualitative evaluation of one's motor skills • Periodic assessment of one's abilities and attitudes when practising a physical activity • Meaningful interpretation of progress made and the difficulties encountered in the practice of physical activity • Pertinent, periodic and proper adjustments of one's objectives or means • Appreciable improvement in one's motor skills, techniques or complex strategies required by the physical activity |

Learning Activities

Discipline: Physical Education
 Weighting: 0-2-1
 Credits: 1

Objective**Standard****Statement of the Competency**

Demonstrate one's ability to assume responsibility for maintaining a healthy lifestyle through the continued practice of physical activity.

Elements of the Competency**Performance Criteria**

1. Plan a personal physical activity program.

- Mention of priorities according to one's needs, abilities, and motivational factors with respect to being sufficiently active on a regular basis
- Proper and appropriate formulation of personal objectives
- Appropriate choice of physical activity or activities to achieve personal objectives
- Appropriate planning of the conditions for performing the physical activity or activities in personal program

2. Combine the elements of a regular and sufficient practice of physical activity as part of a healthy lifestyle.

- Respect for the rules and regulations of the physical activity
- Respect for codes of ethics, safety rules and regulations when being physically active
- Regular and sufficient practice of a physical activity while maintaining a balance between effectiveness and health-promoting factors

3. Manage a personal physical activity program.

- Appropriate choice of criteria for measuring the attainment of program objectives
- Appropriate use of strategies for the quantitative and qualitative evaluation of one's physical activity
- Periodic assessment of the time invested and activities practised during the program
- Appropriate, periodic and proper adjustment of personal objectives or means used
- Meaningful interpretation of the progress made and difficulties encountered in the practice of physical activities
- Recognition of the effect of physical activity on one's lifestyle

Learning Activities

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

Complementary General Education Component

Social Sciences

Code: 000V

Objective

Standard

Statement of the Competency	Achievement Context
Estimate the contribution of the social sciences to an understanding of contemporary issues.	- Working alone - In an essay of approximately 750 words on the contribution of the social sciences to an understanding of contemporary issues - Using documents and data from the field of social sciences
Elements of the Competency	Performance Criteria
1. Recognize the focus of one or more of the social sciences and their main approaches.	- Formulation of the focus specific to one or more of the social sciences - Description of the main approaches used in the social sciences
2. Identify some of the issues currently under study in the social sciences.	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.	- Presentation of contemporary issues by highlighting the interpretation of the social sciences - Illustration of the interaction between certain social changes and the contribution of the social sciences
Learning Activities	
Periods of instruction:	45
Credits:	2
Note:	Use the 300 or 400 series of codes (except codes 300 and 360) to link a course to objective 000V. Use code 305 for a multidisciplinary course. Codes 340 and 345 may be used, provided the courses are not related to the objectives of common or specific general education.

Objective**Standard**

Statement of the Competency	Achievement Context
Analyze one of the major problems of our time using one or more social scientific approaches.	• Working alone • In an essay of approximately 750 words on a topic related to human existence • Using reference materials from the field of social sciences
Elements of the Competency	Performance Criteria
1. Formulate a problem using one or more social scientific approaches.	• Presentation of the background to the problem • Use of appropriate concepts and language • Brief description of individual, collective, spatiotemporal and cultural aspects of the problem
2. Address an issue using one or more social scientific approaches.	• Clear formulation of an issue • Selection of pertinent reference materials • Brief description of historical, experimental and survey methods
3. Draw conclusions.	• Appropriate use of the selected method • Determination of appropriate evaluation criteria • Identification of strengths and weaknesses of the conclusions • Broadening of the issue analyzed
Learning Activities	
Periods of instruction:	45
Credits:	2
Note:	Use the 300 or 400 series of codes (except codes 300 and 360) to link a course to objective 000W. Use code 305 for a multidisciplinary course. Codes 340 and 345 may be used, provided the courses are not related to the objectives of common or specific general education.

Objective**Standard**

Statement of the Competency	Achievement Context
Explain the general nature of science and technology and some of the major contemporary scientific or technological issues.	- Working alone - Using a written commentary on a scientific discovery or technological development - In an essay of approximately 750 words
Elements of the Competency	Performance Criteria
1. Describe scientific thinking and the standard scientific method.	- Brief description of the essential characteristics of scientific thinking, including quantification and demonstration - Ordered 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.	Definition of terms and description of the primary ways in which science 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.	- Pertinent and coherent explanation of the relationship between the determining contexts related to several scientific and technological discoveries - Listing of the main stages of scientific and technological discoveries
4. Deduce different consequences and questions resulting from certain recent scientific and technological developments.	- Brief description of important consequences (of different types) and the current major challenges resulting from several scientific and technological discoveries - Formulation of relevant questions and credibility of responses to the questions formulated
Learning Activities	
Periods of instruction:	45
Credits:	2
Note:	Use the 100 or 200 series of codes to link a course to objective 000X. Use code 105 for a multidisciplinary course. Codes 109, 340 and 345 may be used, provided the courses are not related to the objectives of common or specific general education.

Objective**Standard**

Statement of the Competency	Achievement Context
Resolve a simple problem by applying the basic scientific method.	- Working alone or in groups - Applying the standard scientific method to a given, simple scientific and technological problem - Using common scientific instruments and reference materials (written or other)
Elements of the Competency	Performance Criteria
1. Describe the main steps of the standard scientific method.	Ordered list and brief description of the characteristics of the steps of the standard scientific method
2. Formulate a hypothesis designed to solve a simple scientific and technological problem.	- Clear, precise description of the problem - Observance of the principles for formulating a hypothesis (observable and measurable nature of data, credibility, etc.)
3. Verify a hypothesis by applying the fundamental principles of the basic experimental method.	- Pertinence, reliability and validity of the experimental method used - Observance of established experimental method - Appropriate choice and use of instruments - Clear, satisfactory presentation of results - Validity of the connections established between the hypothesis, the verification and the conclusion
Learning Activities	
Periods of instruction:	45
Credits:	2
Note:	Use the 100 or 200 series of codes to link a course to objective 000Y. Use code 105 for a multidisciplinary course. Codes 109, 340 and 345 may be used, provided the courses are not related to the objectives of common or specific general education.

Objective**Standard**

Statement of the Competency	Achievement Context
Communicate with limited skill in a modern language.	- For modern Latin-alphabet languages: - during a conversation consisting of at least eight lines of dialogue - in a written text consisting of at least eight sentences - For modern non-Latin-alphabet languages: - during a conversation consisting of at least six lines of dialogue - in a written text consisting of at least six sentences - Based on learning situations on familiar themes - Using reference materials

Elements of the Competency	Performance Criteria
1. Understand the meaning of an oral message.	- Accurate identification of words and idiomatic expressions - Clear recognition of the general meaning of simple messages - Logical connection between the various elements of the message
2. Understand the meaning of a written message.	- Accurate identification of words and idiomatic expressions - Clear recognition of the general meaning of simple messages - Logical connection between the various elements of the message
3. Express a simple message orally.	- Appropriate use of language structures in main and coordinate clauses - Appropriate application of grammar rules - Use of verbs in the present indicative - Appropriate use of basic vocabulary and idiomatic expressions - Clear pronunciation - Coherent sequencing of simple sentences - Spontaneous and coherent sequencing of sentences in a conversation
4. Write a text on a given subject.	- Appropriate use of language structures in main and coordinate clauses - Appropriate application of basic grammar rules - Use of verbs in the present indicative - Appropriate use of basic vocabulary and idiomatic expressions - Coherent sequencing of simple sentences - Acceptable application of graphic rules for writing systems that do not use the Latin alphabet

Learning Activities

Periods of instruction: 45

Credits: 2

Note: The acquisition of a modern language requires an awareness of the culture of its native speakers.

“Limited skill” refers to the limited use of language structures, grammar and vocabulary. This limitation varies depending on the complexity of the modern language.

Use the 600 series of codes to link a course to objective 000Z, with the exception of codes 601, 602, 603 and 604.

Objective**Standard**

Statement of the Competency	Achievement Context
Communicate on familiar topics in a modern language.	• During a conversation that includes at least 15 lines of dialogue • In a written text consisting of at least 20 sentences for Latin-alphabet languages • In a written text consisting of at least 10 sentences for non–Latin-alphabet languages • Based on: ○ common situations in everyday life ○ simple topics from everyday life • Using reference materials

Elements of the Competency	Performance Criteria
1. Understand the meaning of an oral message.	• Accurate identification of words and idiomatic expressions • Clear recognition of the general meaning and essential ideas of messages of average complexity • Logical connection between the various elements of the message
2. Understand the meaning of a written message.	• Accurate identification of words and idiomatic expressions • Clear recognition of the general meaning and essential ideas of messages of average complexity • Logical connection between the various elements of the message
3. Express a simple message orally, using sentences of average complexity.	• Appropriate use of language structures in main or subordinate clauses • Appropriate application of grammar rules • Use of verbs in the present indicative • Appropriate use of enriched basic vocabulary and idiomatic expressions • Clear pronunciation • Coherent sequencing of sentences • Dialogue
4. Write a text on a given subject, using sentences of average complexity.	• Appropriate use of language structures in main or subordinate clauses • Appropriate application of grammar rules • Use of verbs in the present and past indicative • Appropriate use of enriched basic vocabulary and idiomatic expressions • Coherent sequencing of sentences of average complexity • Acceptable application of graphic rules for writing systems that do not use the Latin alphabet

Learning Activities

Periods of instruction: 45

Credits: 2

Note: The acquisition of a modern language requires an awareness of the culture of its native speakers.

Use the 600 series of codes to link a course to objective 0010, with the exception of codes 601, 602, 603 and 604.

Objective**Standard**

Statement of the Competency	Achievement Context
Communicate with relative ease in a modern language.	- Working alone - During a conversation consisting of at least 20 lines of dialogue - In a written text of medium length (at least 25 sentences for Latin-alphabet languages and 15 sentences for other languages) - Given documents of a socio-cultural nature - Using reference materials for the written text

Elements of the Competency	Performance Criteria
1. Understand the meaning of an oral message in everyday language.	- Accurate explanation of the general meaning and essential ideas of the message - Clear identification of structural elements of the language
2. Understand the meaning of a text of average complexity.	- Accurate explanation of the general meaning and essential ideas of the text - Clear identification of structural elements of the language
3. Have a conversation on a subject.	- Appropriate use of the structural elements of the language according to the message to be expressed - Appropriate use of everyday vocabulary - Accurate pronunciation and intonation - Normal flow in a conversation in everyday language - Coherence of the message expressed - Pertinent responses to questions
4. Write a text of average complexity.	- Appropriate use of the structural elements of the language according to the text to be written - Accurate vocabulary - Coherence of the text as a whole - Observance of presentation and writing rules applicable to the text

Learning Activities	
Periods of instruction:	45
Credits:	2
Note:	The acquisition of a modern language requires an awareness of the culture of its native speakers. Use the 600 series of codes to link a course to objective 0067, with the exception of codes 601, 602, 603 and 604.

Objective**Standard**

Statement of the Competency	Achievement Context
Recognize the role of mathematics or computer science in contemporary society.	- Working alone - In an essay of approximately 750 words - Using different personally selected concrete examples

Elements of the Competency	Performance Criteria
1. Demonstrate the acquisition of basic general knowledge of mathematics or computer science.	- Identification of basic notions and concepts - Identification of the main branches of mathematics or computer science - Appropriate use of terminology
2. Describe the evolution of mathematics or computer science.	Descriptive summary of several major phases
3. Recognize the contribution of mathematics or computer science to the development of other areas of knowledge.	Demonstration of the existence of important contributions, using concrete examples
4. Illustrate the diversity of mathematical or computer science applications.	Presentation of a range of applications in various areas of human activity, using concrete examples
5. Evaluate the impact of mathematics or computer science on individuals and organizations.	- Identification of several major influences - Explanation of the way in which mathematics or computer science have changed certain human and organizational realities - Recognition of the advantages and disadvantages of these influences

Learning Activities	
Periods of instruction:	45
Credits:	2
	Note: Only the following codes can be used to link a course to objective 0011: 105, 201, 204 and 420.
	Use code 204 for a multidisciplinary course.
	Codes 340 and 345 may be used, provided the courses are not related to the objectives of common or specific general education.

Objective**Standard**

Statement of the Competency	Achievement Context
Use various mathematical or computer science concepts, procedures and tools for common tasks.	• Working alone • While carrying out a task or solving a problem based on everyday needs • Using familiar tools and reference materials

Elements of the Competency	Performance Criteria
1. Demonstrate the acquisition of basic functional knowledge in mathematics or computer science.	• Brief definition of concepts • Correct execution of basic operations • Appropriate use of terminology
2. Select mathematical or computing tools and procedures on the basis of specific needs.	• Listing of numerous possibilities available through the use of mathematical and computing tools and procedures • Analysis of concrete situations and recognition of the usefulness of mathematical or computing tools and procedures • Appropriate choice according to needs
3. Use mathematical or computing tools and procedures to carry out tasks and solve problems.	• Use of a planned and methodical process • Correct use of tools and procedures • Satisfactory results, given the context • Appropriate use of terminology specific to a tool or procedure
4. Interpret the quantitative data or results obtained using mathematical or computing tools and procedures.	• Accurate interpretation, given the context • Clear, precise formulation of the interpretation

Learning Activities	
Periods of instruction:	45
Credits:	2
Note:	Only the following codes can be used to link a course to objective 0012: 105, 201, 204 and 420. Use code 204 for a multidisciplinary course. Codes 340 and 345 may be used, provided the courses are not related to the objectives of common or specific general education.

Objective**Standard**

Statement of the Competency	Achievement Context
Consider various forms of art produced according to aesthetic practices.	- Working alone - Given a specified work of art - In a written commentary of approximately 750 words
Elements of the Competency	Performance Criteria
1. Develop an appreciation for the dynamics of the imagination in art.	Precise explanation of a creative process connected to the construction of an imaginary universe
2. Describe art movements.	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.	Coherent organization of observations, including identification of four fundamental elements of form and structure related to the language used as well as a reasoned description of the meaning of the work of art
Learning Activities	
Periods of instruction:	45
Credits:	2
Note:	Use the 500 series of codes (except 502) to link a course to objective 0013. Use code 504 for a multidisciplinary course. Codes 340, 345, 601, 602, 603 and 604 may be used, provided the courses are not related to the objectives of common or specific general education.

Objective**Standard**

Statement of the Competency	Achievement Context
Produce a work of art.	• Working alone • During a practical exercise • In the context of creating or interpreting a work of art • Using the basic elements of 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.	• Identification of specific features: originality, essential qualities, means of communication, styles, genres
2. Use the medium.	• Personal, coherent use of elements of language • Satisfactory application of artistic techniques • Compliance with the requirements of the method of production
Learning Activities	
Periods of instruction:	45
Credits:	2
Note:	Use the 500 series of codes to link a course to objective 0014, with the exception of code 502. Use code 504 for a multidisciplinary course. Codes 340, 345, 601, 602, 603 and 604 may be used, provided the courses are not related to the objectives of common or specific general education.

Objective**Standard**

Statement of the Competency	Achievement Context
Consider contemporary issues from a transdisciplinary perspective.	• Individually or in groups • Drawing on different fields of knowledge • Using documents and data from various disciplines
Elements of the Competency	Performance Criteria
1. Identify major contemporary issues.	• Exploration of various contemporary issues • Description of the main perspectives concerning these issues • Clear formulation of objects to study related to these issues
2. Recognize the specific role of several disciplines in the understanding of an issue.	• Identification of some of the theories used in analyzing the issue • Clear description of the concepts and methods used
3. Demonstrate the contribution of several disciplines to the understanding of an issue.	• Clear formulation of the perspectives of the issue • Precise description of the main contributions of the disciplines • Pertinent explanation of the interaction among various disciplines • Appropriate use of language and concepts from the disciplines
Learning Activities	
Periods of instruction:	45
Credits:	2
Note:	This objective lends itself to teaching by one or more teachers. Use code 365 to link a course to objective 021L in order to maintain the transdisciplinary nature of the competency.

Objective**Standard**

Statement of the Competency	Achievement Context
Explore a contemporary issue from a transdisciplinary perspective.	• Individually or in groups • Drawing on different fields of knowledge • Using documents and data from various disciplines
Elements of the Competency	Performance Criteria
1. Present a research problem.	• Justification of the choice of research problem • Brief description of the main issues involved in the problem • Clear formulation of the main dimensions of the problem • Appropriate use of language and concepts from the disciplines • Clear formulation of the research question
2. Analyze the research problem.	• Relevant description of a research approach or method • Appropriate selection of research data • Proper application of the approach or method used • Appropriate use of an analytical framework
3. Propose solutions.	• Clear description of the main contributions from the disciplines • Pertinent explanation of the interaction among various disciplines • Justification of solutions proposed • Assessment of the strengths and weaknesses of the proposed solutions
Learning Activities	
Periods of instruction:	45
Credits:	2
Note:	This objective lends itself to teaching by one or more teachers. Use code 365 to link a course to objective 021M in order to maintain the transdisciplinary nature of the competency.

Additional Information

Vocabulary Used in Technical Programs

Program

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

Competency

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

Objective

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

Statement of the Competency

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

Elements of the Competency

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

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

Hours of instruction

Unit of measure for the division of teaching time, that is, the time spent by a students under the supervision of a teacher during a theoretical course, in a laboratory or during a practicum.

Standard

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

Performance Criteria

In the program-specific component of a technical program, 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. 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.

In both components, all the criteria must be respected for the objective to be recognized as having been attained.

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.

Learning Activities

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

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

Glossary for the Program-Specific Component

The following definitions offer readers a common understanding of terms used in the wording of the objectives and standards of the program-specific component. They are drawn from different sources (la Vitrine linguistique de l'Office québécois de la langue française, Termium Plus, Canadian Oxford Dictionary, etc.). Given the rapid evolution of technology in the industry, the meaning of some terms may evolve. It is up to the educational institutions to monitor this evolution and update this glossary over time.

Animation clip

A very short block of animated images mainly used in the video-game sector, the animation clip represents an isolated movement that is used to build an animation sequence. The animation clip can be used to create a loop of movements or in a linear fashion as a transition between two loops.

Architectural work

Large-scale fixed construction made of one or more materials and which is used to cross over a physical obstacle or to shelter, house or carry out social or professional activities (bridges, viaducts, aqueducts, houses, buildings, towers, etc.).

Artistic direction

Broad guidelines associated with the genre, style and aspect of the visual elements comprising the project and ensuring coherence and cohesion among them.

The artistic direction choices may change, evolve or become refined as the project is being carried out.

Chemical properties

Qualitative or quantitative characteristics that can be measured or observed using the five senses and that change the substance or create a new substance from it (combustion, decomposition, corrosion, inflammability, etc.).

Communication interference

Disruptions or obstacles that limit or change the communication of an item of visual information to the public. Communication interferences may be semantic (editing glitches, false messages, incorrect use of communication or narrative codes, etc.) or physical (tight spaces, inadequate lighting, objects obstructing the camera's line of sight, etc.).

Component

An element that is part of a model, a material, a texture, an animation, a scene or an image.

Delicate situation

A situation that presents difficult, embarrassing or uncomfortable aspects or conflict or that is highly charged emotionally.

Field of expertise

Range of professional competencies and responsibilities associated with a sector of activity or a profession.

Finalization of the model

The set of operations that following the modelling and are used to prepare the model for the rest of the production line or to be used. Finalization consists, among other things, of cleaning the stack of modifiers, reinitializing the changes and repositioning the pivot point.

Hairiness

The hair, feathers, spines and needles that normally cover the body of a living being and are associated with the work of the groom artist.

Information

Indication or information in verbal, written or visual form that enables the discovery or clarification of, for example, subtleties of animation, the physical representation of the history of a model (damage, wear, stains, etc.) or the format of the images to be produced. The information can be artistic, storytelling or technical.

Information technologies

All of the equipment, materials, software and services used to collect, process and transmit information, including specialized applications associated with the practice of the profession (Maya, Adobe Photoshop, etc.).

Legal framework associated with the practice of the profession

The set of laws and regulations governing the 3D production industry and other provisions such as institutional policies, procedures and protocols.

Linear perspective

Planar representation of axes, based on a point of view, for an object or a setting. Linear perspective can be used for corner pinning of an image or planar tracking within an image.

Non-characteristic properties

General characteristics of all substances that do not allow the substance to be precisely identified (state [solid, liquid, gas, plasma], shape, mass, size, weight, transparency, buoyancy, etc.).

Physical properties

Qualitative or quantitative characteristics that can be measured or observed using the five senses and that do not produce any new substances (colour, texture, malleability, ductility, viscosity, solubility, turbidity, etc.).

Production documents

Internal company publications that specify the production aims associated with the project, present the artistic, storytelling or technical direction and are developed in the preproduction phase. Production documents are often known as the “narrative bible” (script, storyboard, technical editing, etc.), the “art bible” (conceptual art, mood boards, colour palette, etc.) and the “technical bible” (limitations of the publication medium, allocations of resources, work process, etc.).

Production mandate

Tasks or activities assigned to the 3D artist or production team for the purpose of developing or updating a product or a particular element of a product. This mandate stipulates the expectations of the managers with regard to production deliverables, constraints and liberties that can be taken.

Professional conduct

A way of behaving, acting, conducting oneself and expressing oneself that exhibits, among other things, integrity, confidentiality, punctuality as well as respect for the hierarchy and the legal framework associated with the practice of the professional (ethical principles, codes of professional conduct, standards, protocols, etc.).

Professional conduct also includes the concept of professional stance, that is, a physical or verbal expression that is aligned with the values of the profession, which evolve and adapt in accordance with the needs of the job market.

Prop

A simple or complex 3D model that is used for staging, such as an inanimate object, a tool, a piece of furniture, a vehicle or even an electric or electronic device.

Reference

Basic elements of a comparison used by the artist to represent the product to be created for the project. A reference is usually visual (real object, photograph, video, illustration), but can be communicated verbally (*in the style of, resembling*).

Reference point

Component of the staging that enables the public (spectator, player, user) to orient themselves in space or time. A reference point is usually a physical element that is easily identifiable by its nature, shape, meaning or importance in popular culture (rock, tree, specific building, statue, waterfall, mountain, etc.).

Rendering layer

Separate elements that make up an image. The rendering layers are designed to be processed individually and assembled by digital typesetting in order to form a complete image.

Rendering pass

An image synthesis produced in order to isolate an element or the characteristic of an element of a 3D scene or to be used to visually represent data associated with an element or the entire scene such as AOVs (arbitrary output value) or LPEs (light path expression).

Species

Biological concept grouping living organisms that possess similar distinctive characteristics and are capable of interbreeding (human or humanoid species, animal species, plant species).

Storytelling direction

Broad guidelines associated with the development of characters as well as the staging of the project and ensuring the clarity and continuity of the story.

The storytelling direction choices may change, evolve or become refined as the project is being carried out.

Storytelling techniques

Methods and procedures used to ensure that the story develops from the point of view of the effective communication of the key elements of the story. Storytelling techniques help to concretely set the narrative direction for the project.

Technical direction

Parameters specific to the publication medium or to the project itself that allow production activities to be organized into a complete process and available digital resources to be shared among the different elements of the project or services.

The technical direction choices may change, evolve or become refined as the project is being carried out.

Viseme

Basic facial expression associated with an emotion or a speech sound or the speaking of a very short word.

Harmonization

Harmonization of the vocational and technical programs is a ministerial orientation that helps avoid overlap in program offerings, recognize acquired competencies and facilitate student progress on their training path. It consists of establishing similarities and continuity between secondary and college-level programs within a particular sector or in different sectors. When harmonization allows common competencies shared by more than one program to be identified, the results are published in tables on inforouteFTP.org. You can consult all the harmonization tables, available in French only, by visiting inforouteFTP.org (Government Documentation > Publications > Sector > Harmonization > Program of study).

Occupational Health and Safety Hazards

This section expands on the risks associated with the competencies in the *3D Production and Image Synthesis* program.

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

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

- Chemical hazards or dangers:
 - Form of substance (solid, liquid, aerosol, gas, etc.) and exposure (inhalation, absorption through the skin, ingestion, etc.).
- Physical hazards or dangers:
 - Electrical hazards
 - Thermal hazards
 - Noise
 - Vibration
 - Other physical hazards
- Biological hazards or dangers:
 - Form of substance (dust, mist, fluid, etc.) and exposure (inhalation, absorption through the skin, ingestion, cuts, etc.).
- Ergonomic hazards or dangers:
 - Constrained postures
 - Excessive effort
 - Repetitive movements
- Psychosocial hazards or dangers:
 - Factors associated with the nature of the work
 - Factors related to the organization of the work
 - Social factors
- Safety hazards or dangers:
 - Hazards related to general mechanical phenomena
 - Hazards related to moving parts, tools or vehicles
 - Risk of falling (workers and objects)
 - Hazards linked to confined spaces
 - Fire or explosion hazards

SOURCES AND RISKS FOR EACH COMPETENCY							
COMPETENCY NUMBER	3D Production and Image Synthesis	Sources of risk					
		Chemical hazards or dangers	Physical hazards or dangers	Biological hazards or dangers	Ergonomic hazards or dangers	Psychosocial hazards or dangers	Safety hazards or dangers
	STATEMENT OF THE COMPETENCY	1	2	3	4	5	6
1	Adopt professional conduct.		☐	☐	☐	☒	☐
2	Use information technologies.		☐	☐	☐	☒	☐
3	Use a research and problem-solving strategy.		☐	☐	☐	☒	☐
4	Contribute to implementing the artistic direction.		☐	☐	☐	☒	☐
5	Collaborate in the organization and implementation of the production plan.		☐	☐	☐	☒	☐
6	Animate the components of a scene.		☐	☐	☐	☒	☐
7	Generate the images.		☐	☐	☐	☒	☐
8	Process the images.		☐	☐	☐	☒	☐
9	Model the props.		☐	☐	☐	☒	☐
10	Reproduce the materials and textures.		☐	☐	☐	☒	☐
11	Create control systems.		☐	☐	☐	☒	☐
12	Stage the components of the plan.		☐	☐	☐	☒	☐
13	Create the lighting.		☐	☐	☐	☒	☐
14	Create the dynamic visual effects.		☐	☐	☐	☒	☐
15	Composite the images.		☐	☐	☐	☒	☐
16	Participate in the improvement of work processes.		☐	☐	☐	☒	☐
17	Automate the operations.		☐	☐	☐	☒	☐
18	Develop models of environments.		☐	☐	☐	☒	☐
19	Develop models of creatures.		☐	☐	☐	☒	☐
20	Develop models of characters.		☐	☐	☐	☒	☐
21	Reconstitute the models.		☐	☐	☐	☒	☐
22	Lay out the stage space.		☐	☐	☐	☒	☐
23	Create the scenography of the action.		☐	☐	☐	☒	☐
24	Fine-tune the visual communication.		☐	☐	☐	☒	☐
25	Develop materials and textures.		☐	☐	☐	☒	☐
26	Harmonize the appearance of surfaces.		☐	☐	☐	☒	☐
27	Perfect the control systems.		☐	☐	☐	☒	☐
28	Do motion capture and data assignment.		☐	☐	☐	☒	☐
29	Animate a character.		☐	☐	☐	☒	☐
30	Recreate the engineering of movements.		☐	☐	☐	☒	☐
31	Develop animated sequences.		☐	☐	☐	☒	☐

SOURCES AND RISKS FOR EACH COMPETENCY							
COMPETENCY NUMBER	3D Production and Image Synthesis	Sources of risk					
		Chemical hazards or dangers	Physical hazards or dangers	Biological hazards or dangers	Ergonomic hazards or dangers	Psychosocial hazards or dangers	Safety hazards or dangers
	STATEMENT OF THE COMPETENCY	1	2	3	4	5	6
32	Reconstitute the shapes and movements.		○	○	○	●	○
33	Skin models.		○	○	○	●	○
34	Simulate the effects of fluids.		○	○	○	●	○
35	Simulate crowd effects.		○	○	○	●	○
36	Create stage lighting and storytelling lighting.		○	○	○	●	○
37	Reconstitute the lighting.		○	○	○	●	○
38	Composite the stereoscopic images.		○	○	○	●	○
39	Embed a subject in a sequence of images.		○	○	○	●	○
40	Develop the decors.		○	○	○	●	○

Risk levels

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

Low risk: ○ High risk: ●

