



Animation (Ontario College Diploma) Program Standard

The approved program standard for Animation program of instruction leading to an Ontario College Diploma delivered by Ontario Colleges of Applied Arts and Technology (MTCU funding code 51901)

Permission to Reproduce

Permission is hereby granted to the following institutions to reproduce this document, in whole or in part, in print or by electronic means, for the following specific purposes, subject to the conditions that follow:

1. By an Ontario college of applied arts and technology for the purposes of implementation of the program standard within a college program, including for the purpose of informing students, potential students, program advisory committees or others about programs of study.
2. By an educational institution or school, for the purpose of informing prospective college students about programs of study at Ontario colleges of applied arts and technology.

Conditions:

1. Every reproduction must be marked “© 2014, Queen’s Printer for Ontario” at the beginning of the document or any part of it that is reproduced.
2. No other uses may be made of the document.
3. The document may not be reproduced for sale.
4. The Ministry may revoke the permission to reproduce at any time.

For permission to copy this document, in whole or in part, for other purposes or by other institutions, please contact:

Ministry of Training, Colleges and Universities
Programs Branch, Program Standards and Evaluation Unit

E-mail: psu@ontario.ca

Inquiries regarding Animation (Ontario College Diploma) programs offered by colleges of applied arts and technology in Ontario should be directed to the relevant college.

© 2014, Queen’s Printer for Ontario

ISBN 978-1-4606-4270-2 (PDF)

Acknowledgements

The Ministry of Training, Colleges and Universities acknowledges with thanks the significant contribution of the many individuals and organizations who participated in the development of this program standard. In particular, the Ministry of Training, Colleges and Universities would like to acknowledge the important roles of

- all individuals and organizations who participated in the consultations;
- the co-ordinators of Animation (Ontario College Diploma) programs for their assistance throughout the project, the project officers who led the development of the vocational standard, Nicole Simoneau, seconded faculty member from Collège Boréal; and Louise Campagna from La Cité collégiale.

Table of Contents

Contents

I. Introduction	1
Development of System-Wide Program Standards.....	1
Program Standards.....	1
The Expression of Program Standards as Vocational Learning Outcomes.....	2
The Presentation of the Vocational Learning Outcomes	2
The Development of a Program Standard.....	2
Updating the Program Standard	3
II. Vocational Standard	4
Synopsis of Vocational Learning Outcomes.....	6
The Vocational Learning Outcomes.....	8
Glossary.....	23
III. Essential Employability Skills	24
Skill Categories.....	24
Application and Implementation.....	25
IV. General Education Requirement	27
Requirement	27
Purpose.....	27
Themes	28

I. Introduction

This document is the Program Standard for the Animation Program of instruction leading to an Ontario College Diploma delivered by Ontario colleges of applied arts and technology (MTCU funding code 51901).

Development of System-Wide Program Standards

In 1993, the Government of Ontario initiated program standards development with the objectives of bringing a greater degree of consistency to college programming offered across the province, broadening the focus of college programs to ensure graduates have the skills to be flexible and to continue to learn and adapt, and providing public accountability for the quality and relevance of college programs.

The Program Standards and Evaluation Unit of the Ministry of Training, Colleges and Universities have responsibility for the development, review and approval of system-wide standards for programs of instruction at Ontario colleges of applied arts and technology.

Program Standards

Program standards apply to all similar programs of instruction offered by colleges across the province. Each program standard for a postsecondary program includes the following elements:

- **Vocational standard** (the vocationally specific learning outcomes which apply to the program of instruction in question),
- **Essential employability skills** (the essential employability skills learning outcomes which apply to all programs of instruction); and
- **General education requirement** (the requirement for general education in postsecondary programs of instruction).

Collectively, these elements outline the essential skills and knowledge that a student must reliably demonstrate in order to graduate from the program.

Individual colleges of applied arts and technology offering the program of instruction determine the specific program structure, delivery methods and other curriculum matters to be used in assisting students to achieve the outcomes articulated in the standard. Individual colleges also determine whether additional local learning outcomes will be required to reflect specific local needs and/or interests.

The Expression of Program Standards as Vocational Learning Outcomes

Vocational learning outcomes represent culminating demonstrations of learning and achievement. They are not simply a listing of discrete skills, nor broad statements of knowledge and comprehension. In addition, vocational learning outcomes are interrelated and cannot be viewed in isolation of one another. As such, they should be viewed as a comprehensive whole. They describe performances that demonstrate that significant integrated learning by graduates of the program has been achieved and verified.

Expressing standards as vocational learning outcomes ensures consistency in the outcomes for program graduates, while leaving to the discretion of individual colleges curriculum matters such as the specific program structure and delivery methods.

The Presentation of the Vocational Learning Outcomes

The **vocational learning outcome** statements set out the culminating demonstration of learning and achievement that the student must reliably demonstrate before graduation.

The **elements of the performance** for each outcome define and clarify the level and quality of performance necessary to meet the requirements of the vocational learning outcome. However, it is the performance of the vocational learning outcome itself on which students are evaluated. The elements of performance are indicators of the means by which the student may proceed to satisfactory performance of the vocational learning outcome. The elements of performance do not stand alone but rather in reference to the vocational learning outcome of which they form a part.

The Development of a Program Standard

In establishing the standards development initiative, the Government determined that all postsecondary programs of instruction should include vocational skills coupled with a broader set of essential skills. This combination is considered critical to ensuring that college graduates have the skills required to be successful both upon graduation from the college program and throughout their working and personal lives.

A program standard is developed through a broad consultation process involving a range of stakeholders with a direct interest in the program area, including employers, professional associations, universities, secondary schools and program graduates working in the field, in addition to students, faculty and administrators at the colleges themselves. It represents a consensus of

participating stakeholders on the essential learning that all program graduates should have achieved.

Updating the Program Standard

The Ministry of Training, Colleges and Universities will undertake regular reviews of the vocational learning outcomes for this program to ensure that the Animation (Ontario College Diploma) Program Standard remains appropriate and relevant to the needs of students and employers across the Province of Ontario. To confirm that this document is the most up-to-date release, please contact the Ministry of Training, Colleges and Universities at the address or email address noted on the inside cover page.

II. Vocational Standard

All graduates of Animation (Ontario College Diploma) programs have achieved the first twelve (12) vocational learning outcomes (VLOs) listed in the following pages, and two additional vocational learning outcomes (VLOs 13 and 14) if they are a graduates of Animation – 3D programs, in addition to achieving the essential employability skills (EES) learning outcomes and meeting the general education (GE) requirement.

Preamble

The animation industry has expanded at a rapid rate and offers dynamic career opportunities for Animation diploma graduates in areas such as television and film, gaming and other digital environments used for entertainment, information, education or training purposes.

Upon completion of the Animation diploma program, graduates have a sound understanding of the fundamental principles of animation and production techniques through frequent and repeated practice of various exercises. They become familiar with both the creative and technical processes involved in the creation of animation, and have begun to acquire the knowledge and skills needed to support the creation and animation of characters, objects and environments for use in a variety of mediums, such as television, film, and Web. They have developed classical art skills and are able to use traditional tools as well as industry-standard technology and animation software. Graduates are also prepared to assist in the planning and implementation stages of animation projects within the context of their role as members of a production pipeline*.

Graduates of the Animation diploma program acquire drawing, design and storytelling skills which form the basis for creating animation. They have learned to use traditional art skills in the creation of computer-generated animation and to apply creative abilities as well as technical skills and knowledge to various steps of the production process such as storyboarding, producing layouts and backgrounds, and creating and animating characters and objects. They have explored the principles of cinematography and how these may be used to enhance the overall quality of work. Graduates of the program have learned to use digital asset management techniques which allow them to function effectively within a pipeline*. They are also capable of preparing, editing and presenting a demo reel* or portfolio which allows them to highlight their best works and promote their skillsets. In addition, those graduates of programs with a specific focus on 3D animation have also acquired foundational skills related to modeling* and rigging*, as well as to lighting and texturing of characters, props and environments.

Employment opportunities await graduates of the Animation diploma program in areas such as television, video gaming industries, and Web production. Graduates may find employment in capacities ranging from layout or background artists, to character designers or animators. They may collaborate as regular members of an established production pipeline*, or work on a project-to-project basis for various studios and production companies, both locally and abroad.

There are also opportunities for graduates to pursue further educational qualifications. Graduates should contact individual colleges and universities for further details.

Endnote: The Ontario Council on Articulation and Transfer (ONCAT) maintains the [provincial postsecondary credit transfer portal](#), ONTransfer and the Ontario Postsecondary Transfer Guide (OPTG)

**See Glossary*

Synopsis of Vocational Learning Outcomes

Animation (Ontario College Diploma)

The graduate has reliably demonstrated the ability to:

- 1. design, create and animate characters and objects using fundamental principles of animation.**
- 2. produce hand-drawn and/or computer-generated drawings using fundamental principles of art, design and composition.**
- 3. use a variety of tools and technologies to create, capture and animate elements.**
- 4. participate in the planning and implementation of animation projects.**
- 5. develop and execute believable animation sequences.**
- 6. create animation sequences that employ basic cinematography principles.**
- 7. use storytelling skills to create, develop and execute animation sequences.**
- 8. apply performance theory to the creation of animation.**
- 9. produce layouts and backgrounds with attention to composition, perspective and colour.**
- 10. present a visual concept to a target audience.**
- 11. use computer skills and appropriate digital asset management techniques to function effectively within a production pipeline*.**
- 12. develop, assemble and present a demo reel* or portfolio in a manner that meets current industry expectations, and highlights one's creativity, skills and proficiency with relevant animation software and related technologies.**

VLOs 13 and 14 are designated only for Animation programs that include a specific focus on 3D animation. Graduates of these programs will have reliably demonstrated VLOs 1-12, in addition to the following VLOs 13 and 14.

- 13. model* and rig* objects, characters and background elements.**

14. light and texture objects, characters and sets using relevant tools and techniques.

Note: The learning outcomes have been numbered as a point of reference; numbering does not imply prioritization, sequencing, nor weighting of significance.

**See Glossary*

The Vocational Learning Outcomes

1. *The graduate has reliably demonstrated the ability to*

Design, create and animate characters and objects using fundamental principles of animation.

Elements of the Performance

- Apply fundamental knowledge and principles of aesthetics and anatomy (human and animal) to a character's appearance
- Apply knowledge and principles of motion study to the animation of objects
- Design and create characters and objects with shapes and proportions that reflect natural parts of the body or real-world appearance
- Use character design elements (e.g., facial expression, silhouette, scale and body proportions, poses, clothing, props) to convey the character's personality, mood and reactions
- Create simple actions or movements to convey an object's function or purpose
- Use performance skills to interpret and recreate characters' actions, expressions and emotional state
- Gather video or reference material of character performances and objects, and analyze shape, proportion, positioning/poses and movements
- Produce basic thumbnail drawings to illustrate key poses and steps required to achieve the desired movement or motion cycle (e.g., run-walk cycle) to be animated
- Use storyboarding to illustrate the line of action
- Create inbetweens*, manually or digitally, to build transitions between key frames or extreme poses
- Apply appropriate timing to the creation of each movement or action
- Reproduce character or object shape, size, proportions and detail consistently from one drawing or frame to another within a sequence
- Use basic animation principles effectively (e.g., squash and stretch, anticipation, staging, straight ahead action and pose-to-pose, follow-through and overlapping, slow in and slow out, use of arcs, exaggeration, timing, secondary action, etc.) to animate characters and objects
- Draw individual characters from various angles to create a model sheet*
- Use basic functions of 2D and/or 3D animation software to animate characters and objects

*See Glossary

2. *The graduate has reliably demonstrated the ability to*

Produce hand-drawn and/or computer-generated drawings using fundamental principles of art, design and composition.

Elements of the Performance

- Use drawing, sculpting and/or painting skills to translate visual concepts to paper and/or computer
- Use knowledge of human anatomy and life drawing skills to reproduce anatomically accurate depictions of the human form in action
- Select and use appropriate drawing tools and media (e.g., traditional drawing and/or painting mediums, paper, digital software tools, graphic tablet, stylus, etc.)
- Produce life and still life drawings, storyboards, etc. using principles of basic design and composition (e.g., unity, balance, scale/proportion, perspective, emphasis, pattern and rhythm, proximity, etc.)
- Employ basic design elements (e.g., line, shape, space, colour, weight, contrast and texture) in drawings
- Produce simple line drawings of characters, props and environments
- Use life drawings, photographs and subjects as references to generate lifelike reproductions of objects, characters and environments
- Use a variety of tools and techniques (e.g., shadow, perspective, software functions, etc.) to add 3D volume to two-dimensional artwork

3. *The graduate has reliably demonstrated the ability to*

Use a variety of tools and technologies to create, capture and animate elements.

Elements of the Performance

- Use drawing and/or digital tools (e.g., pencil/paper, digital cameras, camcorders, etc.) to capture images of objects, people or scenery, performances, or other visual reference material, as needed
- Use a variety of computer hardware and peripherals (e.g., scanners, drawing tablets, etc.) to create and manipulate animation elements
- Use appropriate tools and/or software (e.g., Maya, ToonBoom, Flash, 3dMax, etc.) to design, storyboard, model*, animate, edit, light, texture and/or render animation elements
- Use industry-related software (e.g., Flash, ToonBoom, AfterEffects, Photoshop) and equipment proficiently
- Use information and communication technology tools effectively (e.g., Web-based collaboration tools, Cloud-based applications, e-mail, mobile devices, etc.) for the purposes of research, data storage and sharing, collaboration and communication

*See Glossary

4. *The graduate has reliably demonstrated the ability to*

Participate in the planning and implementation of animation projects.

Elements of the Performance

- Apply knowledge of the sequence of steps involved in the animation production pipeline*
- Identify the interrelationship between different parts of the production pipeline* as well as their individual functions and responsibilities
- Attend editorial meetings to obtain information on project concept, story and idea development
- Keep informed on established milestones for various steps of an animation project
- Use time management tools to track task progress and project schedule
- Use project management tools (e.g., workflow charts, work plans, task logs, etc.) to document and report on the progress of one's own work throughout the project
- Develop strategies to work under pressure and meet deadlines, and perform tasks as assigned in a timely manner
- Collaborate with other members of the pipeline* and the project management team to report on project progress and solve problems as they arise
- Communicate with colleagues and supervisors to obtain information needed to inform the project planning and implementation process
- Assist in the identification of resources and tasks required to support one's own work within the project
- Use equipment and resources in a responsible manner in order to maintain optimum functionality and remain within budgets
- Participate in editorial meetings or group discussions and critiques to share ideas, obtain feedback, discuss challenges and brainstorm solutions
- Document project instructions, resources and constraints accurately

**See Glossary*

5. *The graduate has reliably demonstrated the ability to*

Develop and execute believable animation sequences.

Elements of the Performance

- Participate in group critiques to enhance the believability of the animation
- Create and/or develop story structures
- Contribute to the editing of scripts for individual animation sequences
- Use storyboarding to present each new idea as part of a sequence
- Use performance skills to accurately recreate each scene of the story and verify authenticity of animation
- Gather and use reference material to enhance accuracy of objects, characters, backgrounds and movements
- Transfer details of individual frames to an exposure sheet* for reference purposes and for use by other members of the production pipeline*
- Record sounds to be used within animation sequences
- Synchronize character lip movements with sound or voice recordings
- Use appropriate software to create believable characters and props
- Plan and create staging and scene setups for individual scenes
- Use animation skills and techniques to create seamless animated sequences and movements

**See Glossary*

6. *The graduate has reliably demonstrated the ability to*

Create animation sequences that employ basic cinematography principles.

Elements of the Performance

- Previsualize selected shot angles using storyboard panels
- Apply knowledge of camera placement, movement and angles (e.g., level, upward, downward, etc.) to shot designs
- Structure shots in a manner that highlights important characters and objects and their relationship within a scene environment
- Use staging techniques to encompass essential components in each scene and enhance the composition of key frames
- Use appropriate cinematography and editing techniques to illustrate the passing of time and pacing of actions
- Use lighting, colour and shadow to create the desired mood and in a manner that leads the viewer's eye to the desired focal point
- Apply composition skills to create visually balanced frames
- Use editing techniques to select and cut frames and shots in order to achieve appropriate continuity of sequences

7. The graduate has reliably demonstrated the ability to

Use storytelling skills to create, develop and execute animation sequences.

Elements of the Performance

- Apply knowledge of genres, story mechanics, story structures and story arcs in the development of coherent story structures
- Use narrative skills to convey ideas and to develop dialogue for the purpose of storytelling
- Gather reference material (e.g., historical, social and cultural contexts, clothing and housing styles, colour palettes, etc.) to generate ideas for sketches and original characters and backgrounds
- Create storyboards, from preliminary thumbnail sketches to a series of sequential story panels, to assist in developing story plot and visually present the story
- Execute a complete final animated sequence in the form of a story reel
- Apply knowledge of the effect of camera use (e.g., angles, moves) on the story
- Use terminology and knowledge relating to film structures and basic film editing skills
- Edit and arrange artwork, storyboard panels or animated stills combined with sound and voice recordings in a manner to produce an animatic* that effectively presents the story
- Use basic script writing techniques to produce scripts that convey essential storylines

8. *The graduate has reliably demonstrated the ability to*

Apply performance theory to the creation of animation.

Elements of the Performance

- Read text related to the subject matter to be animated
- Conduct research to better understand a character's backstory
- Identify subtext (i.e. motivation, goal behind the text)
- Emulate original voice, voice intonation and rhythm by studying dialogue
- Apply fundamental knowledge of various acting theories (e.g., method, improvisation, mime)
- Use basic knowledge of the study of motion and kinetic principles in performances

9. *The graduate has reliably demonstrated the ability to*

Produce layouts and backgrounds with attention to composition, perspective and colour.

Elements of the Performance

- Analyze storyboards to determine the shapes, objects, characters and elements to include in backgrounds
- Make appropriate use of space in the composition of layouts for interior and exterior scenes
- Arrange objects and characters in a manner that effectively demonstrates the camera's positioning and movement
- Apply colour theory to the preparation of backgrounds
- Use staging and scene planning to produce layouts that communicate the story and each character's actions
- Produce roughs and clean layouts for individual scenes and scene sequences
- Create background paintings, using various media and techniques (e.g., watercolour, acrylic) or appropriate software
- Create single-plane layouts (vertical, horizontal or diagonal)
- Use perspective to illustrate depth of field, angles and distortions
- Apply basic knowledge of camera techniques to layout designs

10. The graduate has reliably demonstrated the ability to

present a visual concept to a target audience.

Elements of the Performance

- Present and explain character and environment designs
- Use storyboards and animatics* to illustrate concepts and idea sequences
- Write simple scripts to convey essential storylines
- Describe the story structure and the line of action from beginning to end
- Present one's concept in a credible manner
- Solicit feedback and accept critique from peers, colleagues, supervisors and/or clients
- Integrate feedback and recommendations, when appropriate, and make adjustments to enhance the overall visual concept

**See Glossary*

11. The graduate has reliably demonstrated the ability to

use computer skills and appropriate digital asset management techniques to function effectively within a production pipeline*

Elements of the Performance

- Create hierarchical file structures to store, retrieve, catalogue, archive and save backups of digital files
- Use appropriate file and folder nomenclature strategies and protocols
- Transfer, copy and export files to and from different media sources or devices
- Create, load, modify and sort multiple versions of files
- Convert and deliver files in different media formats to meet the needs of the end user
- Use industry standard media storage technology and asset management software for organization, storage, retrieval, backup and archiving of files
- Compress video files to maximize storage and archiving capacity
- Select appropriate file formats, methods and tools for long-term file preservation
- Develop efficient data backup, archiving and recovery strategies
- Apply knowledge of operating systems (e.g., Windows, Mac) to the use of software, file formats and data file structures
- Use collaboration tools, such as software or online applications (e.g., text or video chat, IM, shared drives, etc.) to facilitate communication and team work
- Use productivity software (e.g., spreadsheet, database) to log tasks and progress notes, compile project information and track files and file versions

12. *The graduate has reliably demonstrated the ability to*

Develop, assemble and present a demo reel* or portfolio in a manner that meets current industry expectations, and highlights one's creativity, skills and proficiency with relevant animation software and related technologies.

Elements of the Performance

- Build and maintain contact lists of animation industry professionals and studios in order to network and distribute demo reels* or portfolios for employment purposes
- Develop strategies to keep current with existing and emerging industry standard animation software tools and technologies as well as trends and animation industry activities (e.g., via use of social media, online forums, blogs, newsletters, etc.)
- Use resources associated with relevant professional associations (e.g., Digital Media Industry Ontario - DMIO) to establish a network of animation professionals and discover potential mentorship or employment opportunities
- Critique and evaluate the quality of one's works or projects in order to select the best samples of personal animation projects for inclusion in a demo reel* or portfolio
- Communicate and collaborate in a professional manner with industry professionals, peers and colleagues to enhance career development opportunities and work performance
- Establish an online presence using social media and Web resources to market skills and display a demo reel* or digital portfolio in order to reach a global audience (e.g., personal Web page, blog, YouTube, social media, etc.)
- Edit and assemble personal animation clips in a coherent, logical, well-organized and concise manner
- Add soundtracks and transitions, where appropriate, in a manner that enhances the overall presentation of the demo reel*
- Prepare and present detailed breakdown information of the demo reel* or portfolio contents to outline the specific personal work accomplished, as well as the skills and the tools used to produce it
- Solicit feedback to improve the overall quality of one's demo reel* or portfolio
- Save and distribute demo reel* or portfolio contents in a format that meets the recipient's needs and requirements (e.g., choice of medium, duration, etc.)

- Respect copyright and intellectual property rights (i.e. obtain permission to use any part of collaborative work within one's personal demo reel* or portfolio)

*See Glossary

VLOs 13 and 14 are designated only for Animation programs that include a specific focus on 3D animation. Graduates of these programs will have reliably demonstrated VLOs 13 and 14, in addition to VLOs 1-12.

13. The graduate has reliably demonstrated the ability to

Model* and rig* objects, characters and background elements.

Elements of the Performance

- Apply knowledge of anatomy and kinesiology (e.g., bone structure, muscle function) to the reproduction of facial expressions and movements of individual body parts
- Apply fundamental knowledge of locomotion and the mechanics of movement to the reproduction of moving objects
- Use sculpting skills to reproduce object or character shapes and volumes
- Use basic functions of modeling* software (e.g., Maya, 3dMax) to create proxies, forms and/or structures
- Use automated scripts to generate accurate models
- Use control points and polygons to generate 3D models
- Use basic rigging* software functions to create simple control structures that generate movement
- Use performance skills to simulate movements to be reproduced
- Gather and analyze reference materials that illustrate movements to be reproduced
- Use automated software commands for frequently repeated modeling* and rigging* tasks

**See Glossary*

14. The graduate has reliably demonstrated the ability to

Light and texture objects, characters and sets using relevant tools and techniques.

Elements of the Performance

- Use knowledge of basic lighting theory to produce different types of lighting
- Use basic lighting principles and techniques (e.g., key, fill, bounce, rim) to create lighting effects
- Use appropriate lighting equipment and accessories to create desired lighting effects
- Create various lighting set-ups (e.g., primary, secondary, 3-point lighting, etc.)
- Apply different types of natural and artificial lighting (night, day, indoor, outdoor)
- Use basic directional lighting and shading techniques to express desired mood, state, feeling in characters and sets
- Use basic software lighting tools and functions proficiently
- Apply colour to objects and characters using a variety of painting tools and techniques
- Gather reference material to determine the texture characteristics of objects or surfaces to reproduce
- Apply texture and surfacing effects that create a realistic appearance, consistency and density of actual objects, materials, surfaces, etc.
- Apply knowledge of technical properties of reflective materials such as glass and metals to simulate transparency, reflection and shading
- Apply knowledge of UV mapping to unwrap, create and paint UV maps on different models

Glossary

Animatic(s): A previsualization tool used in 3D animation consisting of an assembled and timed sequence of storyboard panels and/or film clips which may be combined with sound; animatics help determine aspects such as blocking, staging, composition and timing of individual scenes as well as total duration; also known as “story reel” or “leica reel”, terms more commonly associated with 2D animation and use of storyboard panels.

Demo reel: A portfolio collection of works (e.g., drawings, paintings, sketches and/or videos) created by an artist or animator and presented in a movie format used for promotion and to highlight best work and areas of strength.

Exposure sheet: A sheet providing instructions on action and dialogue breakdown, as well as timing/exposure, backgrounds, movement, and fielding; it may also include detailed technical instructions for the preparation of a scene (e.g., use of cameras and sound synchronization); also known as an “x-sheet” or “dope sheet” (colloq.).

Inbetween: In traditional or 2D animation, an “inbetween” may consist of a drawing or a series of drawings that illustrate the transition of action between two key or extreme drawings; in 3D animation, an “inbetween” typically refers to digitally-produced frames that demonstrate transition positions and their timing between key poses within a timeline.

Model (v.): To design or create 2D or 3D shapes based on drawings and/or replicas of objects, characters or environments using digital tools and software.

Model sheet: A character reference sheet that illustrates character poses from different angles (e.g., front, profile, back, three-quarter) and various facial expressions which may also include notes on character construction, design, poses, proportions, colour and line weights.

Production pipeline: All of the process steps and tools required to produce a finished 2D or 3D animation product from start to finish, usually in three key stages: pre-production (creating storyboards, layouts, designs, model sheets, animatics); production (creating models or rigs; applying colour, lighting or texture; animating); post-production (compositing, rendering, sound/video editing).

Rig (v.): To prepare a model for animation by using software to set up an underlying skeleton or frame structure, including constraints, controllers and/or kinematic systems, and linking it to a rig or mesh form of the model.

III. Essential Employability Skills

All graduates of the Animation (Ontario College Diploma) program of instruction must have reliably demonstrated the essential employability skills learning outcomes listed on the following pages, in addition to achieving the vocational learning outcomes and meeting the general education requirement.

Context

Essential Employability Skills (EES) are skills that, regardless of a student's program or discipline, are critical for success in the workplace, in day-to-day living and for lifelong learning.

The teaching and attainment of these EES for students in, and graduates from, Ontario's colleges of applied arts and technology are anchored in a set of three fundamental assumptions:

- these skills are important for every adult to function successfully in society today;
- our colleges are well equipped and well positioned to prepare graduates with these skills;
- these skills are equally valuable for all graduates, regardless of the level of their credential, whether they pursue a career path, or they pursue further education.

Skill Categories

To capture these skills, the following six categories define the essential areas where graduates must demonstrate skills and knowledge.

- Communication
- Numeracy
- Critical Thinking & Problem Solving
- Information Management
- Interpersonal
- Personal

Application and Implementation

In each of the six skill categories, there are a number of defining skills, or sub skills, identified to further articulate the requisite skills identified in the main skill categories. The following chart illustrates the relationship between the skill categories, the defining skills within the categories and learning outcomes to be achieved by graduates from all postsecondary programs of instruction that lead to an Ontario College credential.

EES may be embedded in General Education or vocational courses, or developed through discrete courses. However these skills are developed, all graduates with Ontario College credentials must be able to reliably demonstrate the essential skills required in each of the six categories.

SKILL CATEGORY	DEFINING SKILLS: Skill areas to be demonstrated by graduates:	LEARNING OUTCOMES: The levels of achievement required by graduates. The graduate has reliably demonstrated the ability to:
COMMUNICATION	<ul style="list-style-type: none"> • Reading • Writing • Speaking • Listening • Presenting • Visual literacy 	<ol style="list-style-type: none"> 1. communicate clearly, concisely and correctly in the written, spoken and visual form that fulfills the purpose and meets the needs of the audience. 2. respond to written, spoken or visual messages in a manner that ensures effective communication.
NUMERACY	<ul style="list-style-type: none"> • Understanding and applying mathematical concepts and reasoning • Analyzing and using numerical data • Conceptualizing 	<ol style="list-style-type: none"> 1. execute mathematical operations accurately.
CRITICAL THINKING & PROBLEM SOLVING	<ul style="list-style-type: none"> • Analyzing • Synthesizing • Evaluating • Decision making • Creative and innovative thinking 	<ol style="list-style-type: none"> 1. apply a systematic approach to solve problems. 2. use a variety of thinking skills to anticipate and solve problems.

SKILL CATEGORY	DEFINING SKILLS: Skill areas to be demonstrated by graduates:	LEARNING OUTCOMES: The levels of achievement required by graduates. The graduate has reliably demonstrated the ability to:
INFORMATION MANAGEMENT	<ul style="list-style-type: none"> • Gathering and managing information • Selecting and using appropriate tools and technology for a task or a project • Computer literacy • Internet skills 	<ol style="list-style-type: none"> 1. <i>locate, select, organize and document information using appropriate technology and information systems.</i> 2. <i>analyze, evaluate and apply relevant information from a variety of sources.</i>
INTERPERSONAL	<ul style="list-style-type: none"> • Teamwork • Relationship management • Conflict resolution • Leadership • Networking 	<ol style="list-style-type: none"> 1. <i>show respect for the diverse opinions, values, belief systems and contributions of others.</i> 2. <i>interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals.</i>
PERSONAL	<ul style="list-style-type: none"> • Managing self • Managing change and being flexible and adaptable • Engaging in reflective practices • Demonstrating personal responsibility 	<ol style="list-style-type: none"> 1. <i>manage the use of time and other resources to complete projects.</i> 2. <i>take responsibility for one's own actions, decisions and their consequences.</i>

IV. General Education Requirement

All graduates of the Animation (Ontario College Diploma) program must have met the general education requirement described on the following pages, in addition to achieving the vocational and essential employability skills learning outcomes.

Requirement

The General Education Requirement for programs of instruction is stipulated in the Credentials Framework (Appendix A in the Minister's Binding Policy Directive *Framework for Programs of Instruction*).

In programs of instruction leading to either an Ontario College Diploma or an Ontario College Advanced Diploma, it is required that graduates have been engaged in learning that exposes them to at least one discipline outside their main field of study and increases their awareness of the society and culture in which they live and work. This will typically be accomplished by students taking 3 to 5 courses (or the equivalent) designed discretely and separately from vocational learning opportunities.

This general education learning would normally be delivered using a combination of required and elective processes.

Purpose

The purpose of General Education in the Ontario college system is to contribute to the development of citizens who are conscious of the diversity, complexity and richness of the human experience; who are able to establish meaning through this consciousness; and who, as a result, are able to contribute thoughtfully, creatively and positively to the society in which they live and work.

General Education strengthens students' essential employability skills, such as critical analysis, problem solving and communication, in the context of an exploration of topics with broad-based personal and/or societal importance.

Themes

The themes listed below will be used to provide direction to colleges in the development and identification of courses that are designed to fulfill the General Education Requirement for programs of instructions.

Each theme provides a statement of Rationale and offers suggestions related to more specific topic areas that could be explored within each area. These suggestions are neither prescriptive nor exhaustive. They are included to provide guidance regarding the nature and scope of content that would be judged as meeting the intent and overall goals of General Education.

1. Arts in Society:

Rationale:

The capacity of a person to recognize and evaluate artistic and creative achievements is useful in many aspects of his/her life. Since artistic expression is a fundamentally human activity, which both reflects and anticipates developments in the larger culture, its study will enhance the student's cultural and self-awareness.

Content:

Courses in this area should provide students with an understanding of the importance of visual and creative arts in human affairs, of the artist's and writer's perceptions of the world and the means by which those perceptions are translated into the language of literature and artistic expression. They will also provide an appreciation of the aesthetic values used in examining works of art and possibly, a direct experience in expressing perceptions in an artistic medium.

2. Civic Life:

Rationale:

In order for individuals to live responsibly and to reach their potential as individuals and as citizens of society, they need to understand the patterns of human relationships that underlie the orderly interactions of a society's various structural units. Informed people will have knowledge of the meaning of civic life in relation to diverse communities at the local, national and global level and an awareness of international issues and the effects of these on Canada, as well as Canada's place in the international community.

Content:

Courses in this area should provide students with an understanding of the

meaning of freedoms, rights and participation in community and public life, in addition to a working knowledge of the structure and function of various levels of government (municipal, provincial, national) in a Canadian and/or in an international context. They may also provide an historical understanding of major political issues affecting relations between the various levels of government in Canada and their constituents.

3. Social and Cultural Understanding:

Rationale:

Knowledge of the patterns and precedents of the past provide the means for a person to gain an awareness of his or her place in contemporary culture and society. In addition to this awareness, students will acquire a sense of the main currents of their culture and that of other cultures over an extended period of time in order to link personal history to the broader study of culture.

Content:

Courses in this area are those that deal broadly with major social and cultural themes. These courses may also stress the nature and validity of historical evidence and the variety of historical interpretation of events. Courses will provide the students with a view and understanding of the impact of cultural, social, ethnic or linguistic characteristics.

4. Personal Understanding:

Rationale:

Educated people are equipped for life-long understanding and development of themselves as integrated physiological and psychological entities. They are aware of the ideal need to be fully functioning persons: mentally, physically, emotionally, socially, spiritually and vocationally.

Content:

Courses in this area will focus on understanding the individual: his or her evolution; situation; relationship with others; place in the environment and universe; achievements and problems; and his or her meaning and purpose. They will also allow students the opportunity to study institutionalized human social behaviour in a systematic way. Courses fulfilling this requirement may be oriented to the study of the individual within a variety of contexts.

15. Science and Technology:

Rationale:

Matter and energy are universal concepts in science, forming a basis for understanding the interactions that occur in living and non-living systems in our universe. Study in this area provides an understanding of the behaviour of matter that provides a foundation for further scientific study and the creation of broader understanding about natural phenomena

Similarly, the various applications and developments in the area of technology have an increasing impact on all aspects of human endeavour and have numerous social, economic and philosophical implications. For example, the operation of computers to process data at high speed has invoked an interaction between machines and the human mind that is unique in human history. This and other technological developments have a powerful impact on how we deal with many of the complex questions in our society.

Content:

Courses in this area should stress scientific inquiry and deal with basic or fundamental questions of science rather than applied ones. They may be formulated from traditional basic courses in such areas of study as biology, chemistry, physics, astronomy, geology or agriculture. As well, courses related to understanding the role and functions of computers (e.g., data management and information processing) and assorted computer-related technologies should be offered in a non-applied manner to provide students with an opportunity to explore the impact of these concepts and practices on their lives.