

SM2714: FUNDAMENTALS OF ANIMATION

Effective Term

Semester A 2025/26

Part I Course Overview

Course Title

Fundamentals of Animation

Subject Code

SM - School of Creative Media

Course Number

2714

Academic Unit

School of Creative Media (SM)

College/School

School of Creative Media (SM)

Course Duration

One Semester

Credit Units

3

Level

B1, B2, B3, B4 - Bachelor's Degree

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

Nil

Precursors

Nil

Equivalent Courses

SM3602 Animation I

Exclusive Courses

Nil

Part II Course Details

Abstract

Traditional animation was the primary technique used for most animated films in the 20th century. It is a time-based medium that combines art and science to deliver emotional experiences. It not only captures, represents, and transcends

motion as an art form but also serves as the foundation for other time-based and interactive media such as 2D and 3D computer animation, digital film, digital visual effects, motion graphics, VR/AR/MR/XR, and UI/UX design today. This course covers the fundamental aspects of animation from traditional to contemporary methods, examining each from theoretical and practical perspectives. Students will explore and comprehend animation's history, concepts, principles, arts, aesthetics, creative research, pre-production, documentation, production, post-production processes, animation methodologies, and technical knowledge. Additionally, students must demonstrate their understanding of animation as a storytelling, communication, and emotional experience medium by visually and aurally delivering their ideas through 2D frame-by-frame hand-drawn animation, cut-out animation, rotoscoping, pixelation, and stop-motion animation.

Course Intended Learning Outcomes (CILOs)

CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Discuss the history, concepts, principles, art form, aesthetics, creative research, visual storytelling, pre-production, documentation, production, post-production processes, animation methodologies, and technical knowledge.		x	
2	Generate, illustrate and communicate ideas through creative research, visual storytelling, pre-visualisation, pre-production, and documentation.	x	x	x
3	Synthesise and communicate ideas visually, and aurally, and emotionally in the form of animation	x	x	x
4	Demonstrate problem-solving skills, resource management skills, project management skills, teamworking skills, and the ability to critically evaluate and appreciate animation's quality.	x	x	x
5	Self-exploration and self-reflection of the exploration experiences	x	x	x

A1: Attitude

Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: Ability

Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.

A3: Accomplishments

Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

Learning and Teaching Activities (LTAs)

LTAs	Brief Description	CILO No.	Hours/week (if applicable)
1 - Case study - Demonstration - Practices - Discussion	Students will engage in lectures, screening, and discussion activities about animation history, concepts, principles, art form, aesthetics, creative research, visual storytelling, pre-production, documentation, production, post-production processes, animation methodologies, and technical knowledge.	1	
2 - Case study - Self-exploration - Critique - Discussion	Students will self-explore and apply the concept and principles of animation by producing three short 2D pencil animations, followed by discussion and critique to consolidate their learning.	2, 3, 5	
3 - Case study - Problem-solving - Presentation - Critique - Discussion	Students will participate in groups to consolidate their learning, problem-solving, and teamwork as they generate and visualise initial concepts and manage a group animation project, integrating creative research, visual storytelling, pre-production, pre-visualization, and documentation. They will also engage in structured progress review discussion, critique, and consultation.	2, 4, 5	

4	<ul style="list-style-type: none"> - Case study - Problem-solving - Presentation - Critique - Discussion 	<p>Students will participate in groups to consolidate their learning, problem-solving, and teamwork as they produce and manage a group animation project integrating pre-visualization, production, and post-production. They will also engage in structured progress review discussion, critique, consultation, and self-reflection.</p>	3, 4, 5	
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Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks ("- " for nil entry)	Allow Use of GenAI?
1	ASSIGNMENT 1: Self-exploration and Application of Principles of Animation through 2D Frame-by-frame Hand-drawn Animation	1, 5	50	-	No

2	ASSIGNMENT 2 - Creative Research, Pre- Production, Pre- Visualization, and Documentation (Group Project)	1, 2, 4	20	<p>The use of Generative AI (GenAI) in coursework, including text, visual, and moving image content, is prohibited in this course.</p> <p>In this course, the student can use GenAI to correct grammatical mistakes, improve writing, and generate sound effects and music to accompany the non-GenAI elements, such as frame-by-frame hand-made animation (e.g. hand-drawn animation, stop-motion animation), computer keyframe animation (e.g. Maya 3D keyframe animation), video, visual effects, and digital composition.</p> <p>With the approval by the course leader in black and white and with proper citation on the proposal, report, and end credits on the media, the student is allowed to use GenAI to generate visual references for ideation and inspirational purposes.</p> <p>However, the student must be aware of their ability to produce the same level of visual quality as the submitted references, concept arts, and visual design elements</p>	Yes
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3	ASSIGNMENT 3 - Visualisation, Production, Post- Production and Self-Reflection Presentation (Group Project)	1, 2, 3, 4	30	Continuous Assessment	No
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Continuous Assessment (%)

100

Examination (%)

0

Minimum Continuous Assessment Passing Requirement (%)

0

Minimum Examination Passing Requirement (%)

0

Assessment Rubrics (AR)**Assessment Task**

ASSIGNMENT 1: Self-exploration and Application of Principles of Animation through 2D Frame-by-frame Hand-drawn Animation

ASSIGNMENT 2 - Creative Research, Pre-Production, Pre-Visualization, and Documentation (Group Project)

ASSIGNMENT 3 - Visualisation, Production, Post-Production and Self-Reflection Presentation (Group Project)

Criterion

Please take note of the following criteria for grading:

- The ability to discuss and demonstrate a critical understanding of concepts, principles, art, design, aesthetics, visual literacy, storytelling, methodologies, workflow, application, and toolset.
- The ability to conceive, develop, consolidate, and visualise original and innovative ideas. Capability to communicate, document, collaborate, and evaluate during pre-production. Competency in problem-solving with lateral thinking, teamwork, and project management. Awareness of learning attitude, self-motivation, self-reflection, ethics, and professionalism.
- The ability to apply and transform knowledge of concepts, principles, art, design, aesthetics, visual literacy, storytelling, methodologies, and theory into creative media production with proficiency in media skills, tools, tool manipulation, and technologies.

Excellent (A+, A, A-)

- Strong evidence of original thinking, good organisation, capacity to analyse and synthesise, superior grasp of subject matter, and evidence of extensive knowledge base.
- Advancing knowledge through analysis and interpretation of issues discussed using information from a range of sources.
- Displayed courage to leave comfort zones and test existing boundaries, conventions, and rules for unknown possibilities.
- The project was highly original, involved significant logistical challenges, and required frequent problem-solving and reassessment of project methods and goals throughout the duration of the project. The student demonstrated exceptional and frequent initiative and self-direction in identifying and overcoming problems as they arose.

Good (B+, B, B-)

- Evidence of grasp of the subject, some evidence of critical capacity and analytic ability, reasonable understanding of issues, and evidence of familiarity with literature.
- Compare and contrast information from various sources with own interpretation relating to issues discussed
- Demonstrated openness to experiment with new approaches and challenge conventions (comfort zone).
- The project was original and challenging and required consistent problem-solving and re-assessment of project methods and goals throughout the duration of the project; the student demonstrated consistent initiative and self-direction in identifying and overcoming problems as they arose.

Fair (C+, C, C-)

- Students who profit from the university experience have an understanding of the subject and have the ability to develop solutions to simple problems in the material.
- Some discussion of the issue raised in class, drawing on a few sources of information
- Experimented with several different approaches, techniques, and materials to solve problems but did not go beyond conventions (comfort zone).
- The project was challenging and required minor problem-solving and re-assessment of project methods and goals throughout the project; the student demonstrated some initiative and self-direction in identifying and overcoming problems as they arose.

Marginal (D)

- Sufficient familiarity with the subject matter enables students to progress without repeating the course.
- Only a little discussion of issues raised in class, drawing on a few sources of information.
- Some attempts to experiment, but the approaches, techniques, and materials are limited and lack diversity.
- The project was simplistic and required little problem-solving; the student demonstrated little initiative and self-direction in identifying and overcoming problems as they arose.

Failure (F)

- Little evidence of familiarity with the subject matter; weakness in critical and analytic skills; limited or irrelevant use of literature.
- No or little discussion of issues raised in class
- No or little evidence of attempted experiment
- The project was simplistic and required no problem-solving; the student failed to demonstrate initiative and self-direction in identifying and overcoming problems as they arose.

Assessment Task

ASSIGNMENT 1: Self-exploration and Application of Principles of Animation through 2D Frame-by-frame Hand-drawn Animation

Criterion

This assessment will evaluate the ability to delve into introspection, focusing on the coherence, lucidity, and fluidity of self-reflection and insights. In this context, the essence of 'discovery' lies in the capacity to navigate and articulate a well-informed, defensible stance rooted in personal understanding and self-awareness.

Excellent (A+, A, A-)

- Deeply introspective content, exceptional ability to integrate and interpret various personal insights
- Thoughtful organisation, coherent structure, systematic self-reflection
- Precision in self-analysis, well-defined and reasoned viewpoints grounded in an insightful interpretation of personal experiences
- Openness to consider peer insights and other perspectives shared in class discussion
- Discussion illuminates new dimensions of personal understanding

Good (B+, B, B-)

- Adequate introspection, sufficient ability to integrate various personal insights

- Reasonable organisation with a balanced structure and self-reflection
- Clear elaboration of personal insights that stay on point, with clearly differentiated issues, ability to interpret personal experiences independently
- Adequate engagement with peer insights to sustain a discussion

Fair (C+, C, C-)

- Adequate introspection, fair ability to integrate various personal insights
- Fair organisation with adequate structure and self-reflection
- Relevant self-reflections made to the subject matter in question
- Ability to engage with other viewpoints and participate in class discussion

Marginal (D)

- Shallow introspection, limited use of personal insights
- Poor organisation, structure, and self-reflection
- Relevant self-reflections to the subject matter, marginal ability to interpret personal experiences
- Ability to respond to other viewpoints in simple terms

Failure (F)

- Inadequate introspection, no/irrelevant use of personal insights
- No organization, structure, or self-reflection
- Irrelevant self-reflections to the subject matter, no ability to interpret personal experiences
- Failure to engage with other viewpoints.

Assessment Task

ASSIGNMENT 2 - Creative Research, Pre-Production, Pre-Visualization, and Documentation (Group Project)

ASSIGNMENT 3 - Visualisation, Production, Post-Production and Self-Reflection Presentation (Group Project)

Criterion

This assessment will grade the content and presentation fluency. Students should show their cooperation in conducting a well-organized presentation with their own argument and evidence from readings and notes. The threshold of ‘discovery’ lies in a student’s self-initiative to conduct additional research and personalize theories for her/his personal daily experience.

Excellent (A+, A, A-)

- Rich, informative content, excellent grasp of the material with in-depth and extensive knowledge of the subject matter
- Rigorous organisation, coherent structure, and systematic exposition with a strong sense of narrative
- Superior presentation skills: distinct pronunciation, fluent expression and appropriate diction, exact time management
- Critical analysis with insightful comments opening up new issues or suggesting the ability to theorise

Good (B+, B, B-)

- Rich, informative content, excellent grasp of the material with in-depth and extensive knowledge of the subject matter
- Rigorous organisation, coherent structure, and systematic exposition with a strong sense of narrative
- Superior presentation skills: distinct pronunciation, fluent expression and appropriate diction, exact time management
- Critical analysis with insightful comments opening up new issues or suggesting the ability to theorise

Fair (C+, C, C-)

- Adequate content with a comprehensive grasp of the material, demonstrating fundamental knowledge of the subject matter
- Fair organization, weak structure and composition
- Fair presentation skills: acceptable pronunciation, expression and diction; fair time management

Marginal (D)

- Weak content, loose grasp of the general ideas with some knowledge of the subject matter

- Poor organization, structure and composition
- Poor presentation skills: marginal pronunciation, expression and diction; poor time management

Failure (F)

- Inadequate content, failure to identify the general ideas with knowledge of the subject matter
- No organization, structure and/or composition
- Poor presentation skills: marginal pronunciation, expression and diction; minimal time management

Additional Information for AR

All A+/A/A- grade assignments should comply with the highest performance of Discovery-oriented learning.

Part III Other Information**Keyword Syllabus**

Animation, Principles of Animation, Time-based Media, Emotional Experiences, Animated Content, Fundamentals of Animation, Creative Research, Visual Storytelling, Animation Production, Animation Pre-production, Animation Pre-Visualization, Thumbnail Sketching, Shot Definition, Storyboarding, Layouts, Staging, Composition, Dope Sheet, Bar Chart, Time Chart, Key, Extreme, Keyframe, Passing Position, In-between, Overlapping, Animatic, Story-reel, Work-reel, 2D Hand-drawn Animation, Stop-motion Animation, Cut-out Animation, Pixilation, Rotoscoping, 3D Computer Animation, Autodesk Maya, Blackmagic DaVinci Resolve, Apple QuickTime Movie, MP4, H.264, Programme Package, Slate, Peg Bar, Copy Stand, Flatbed Scanner, DSLR, Dragonframe Stop-Motion.

Reading List**Compulsory Readings**

Title	
1	Williames, Richard. (1940). The Animator's Survival Kit: A Manual of Methods, Principles, and Formulas for Classical, Computer, Games, Stop Motion, and Internet Animators.London, United Kingdom: Faber and Faber Ltd.
2	Johnston, Ollie & Thomas, Frank. (1995). The Illusion of Life: Disney Animation. (Rev Sub edition). CA, USA: Disney Editions
3	Whitaker, H. & Halas John (January 27, 2021). Timing for Animation, 40th Anniversary Edition 3rd EditionTiming for Animation. Boca Raton, FL, New Ed edition. St. Louis, USA: CRC Press. Focal Press, Inc.
4	White, T. (November 17, 2022). Animation Masterclasses: From Pencils to Pixels: A Complete Course in Animation & Production 1st Edition. Animation from Pencils to Pixels: Classical Techniques for the Digital Animator. Boca Raton, FL, St. Louis, USA: CRC Press.Focal Press, Inc.
5	Murdock, K. (July 10, 2024). Autodesk Maya 2025 Basics Guide Paperback. Mission, Kansas, USA. SDC Publications

Additional Readings

Title	
1	Nil