SM4124: CHARACTER ANIMATION

Effective Term
Semester A 2025/26

Part I Course Overview

Course Title
Character Animation

Subject Code
SM - School of Creative Media

Course Number
4124

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
SM3605 3D Contents Production in Maya or SM2231 3D Animation I - Basic (Waiver may be granted on a case-by-case basis to students who have undertaken Maya Fundamental Training or Equivalent)

Precursors
Nil

Equivalent Courses
Nil

Exclusive Courses
Nil

Part II Course Details

Abstract

Character animation is a crucial and specialised aspect of the animation process. It involves bringing animated characters to life and managing the animation and interaction between multiple characters featured in an animated production. It is artistically and technically distinct from other forms of animation because it requires creating apparent thought and emotion that lead to physical action, reaction, facial expression, and the associated body language. Different characters must have their own signature gestures and movements involving specific pacing, rhythm, acting, and performances. The role of a character animator is to create and animate lifelike and believable characters in a way that aligns with the script, supports the director's vision, and creates an appealing character with depth and complexity.

This course offers specialised lectures and training in the "know-why" and the "know-how" of creatively researching, designing, rigging, and animating virtual characters using Autodesk Maya 3D technologies. Students will learn how to use appropriate techniques to portray a character's personality, create fluid body motion and organic movement, and convey gestures with body language, weight, thought, action, reaction, facial expression, lip sync, and acting, emphasising character-building and storytelling. Additionally, students will explore the technical aspects and process of character rig mechanics for non-human and realistic biped virtual characters.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Self-exploration of generating and communicating ideas to bring character designs to life through creative research, visualisation, and detailed documentation.		x	x	
2	Portray character personality through creative research, act-out, and visualise with body language, gesture, weight, expression, action, reaction, staging, acting and performance, emphasising character-building and storytelling.			x	
3	Discuss and apply aesthetic and technical expertise in Autodesk Maya for 3D character keyframe animation and rigging.		x	x	x
4	Synthesise and communicate ideas visually, aurally, and emotionally in the form of 3D character keyframe animation.		x	x	x
5	Demonstrate problem-solving skills, project management skills, and the ability to evaluate and appreciate character animation's quality critically.		x	x	x
6	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 - Self-exploration - Self-reflection	Self-exploration of Character Design & Development, and final Self-reflection Report writing and presentation	1, 2, 6	
2	- Case study - Screening - Demonstration - Practices - Discussion	Students will engage in lectures, screening, discussion, and lab activities about Character Design and development, Body Language, Body Movement, Gesture, Weight, Expression, Action and reaction, Staging, Essential Acting Concepts, Eight LMA Efforts, Staging Multiple Characters, Staging Standing -The Still Action, and Portraying Character Personality.	2, 3, 4	
3	- Case study - Screening - Demonstration - Practices - Discussion	Students will engage in lectures, screening, discussion, and lab activities about Effort Animation, Walk and Run Animation, Lip Sync and Facial Animation with Voice Recording, Jump, Climb, Push and Pull Animation, Character Rig Mechanics, and Rigging for 3D Virtual Characters.	2, 3, 4	

4	- Project Execution and Management - Problem Solving - Screening - Presentation - Critique - Discussion	Students will demonstrate and consolidate their learning by completing a solo Autodesk Maya 3D character animation project. This project will require them to apply action design, animation principles, and visual storytelling to showcase their visual, artistic, and technical skills. They must accurately depict a character's personality, create fluid body motion and organic movement, and convey gestures through body language, weight, thought, action, reaction, facial expression, and acting. Additionally, students will participate in structured progress review discussions, critiques, and consultations.	2, 3, 4, 5	

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks ("-" for nil entry)	Allow Use of GenAI?
1	In-Class Workshop	1, 2, 3, 4	0	Associate with Assignment 1 to 7	No

2	Assignment 1 – Self-Exploration: Creative Research on Character Design & Development	1, 2	17	The use of Generative AI (GenAI) in coursework, including text, visual, and moving image content, is prohibited in this course. 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. 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. 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	Yes

3	Assignment 2 – Staging	2	12	-	No
4	Assignment 3 – Effort Animation Actions - Fluid Body Motion and Organic Movement	2, 3	12	-	No
5	Assignment 4 – Walk and Run with Performance	2, 3, 4	12	-	No
6	Assignment 5 – Lip Sync and Facial Expression Animation	2, 3, 4	12	-	No
7	Assignment 6 – Final Project: "ESCAPE FROM THE SECRET ROOM"	2, 3, 4, 5	30	-	No
8	Assignment 7 – Self-Reflection Report Presentation	6	5	-	No

Continuous Assessment (%)

100

Examination (%)

0

Assessment Rubrics (AR)

Assessment Task

In-Class Workshop

Criterion

This assessment task reviews students' participation and performance in discussions, debates, and peer critiques during the tutorial and lab sessions. The evidence of 'negotiation', the sign of discovery, lies in students' pre-class preparation and interpersonal sensitivity to his/her peer members.

Excellent (A+, A, A-)

- Active in-class participation, positive listening, strong ability to stimulate class discussion and comment on other points
- In-depth pre-class preparation and familiarity with other related materials
- Interpret others' views with an open mind and ready to negotiate
- Readiness to share personal insight via analysis and synthesis with informed views
- Constructively critical, thus facilitating the discovery of new issues

Good (B+, B, B-)

- Active in-class participation, positive listening, ability to initiate class discussion and comment on other points
- Adequate pre-class preparation and familiarity with other related materials
- Interpret opinions effectively

Fair (C+, C, C-)

- Attentive in in-class participation, listening with comprehension, but only infrequently contributing
- Adequate pre-class preparation but little familiarity with other related materials

- Fair ability in to interpret opinions

Marginal (D)

- Unmotivated to participate in class discussion or comment on other people’s views
- Little pre-class preparation and familiarity with other related materials
- Poor ability to interpret opinions

Failure (F)

- Unwilling to participate in class discussion and comment on other points, even when requested by the teacher
- No pre-class preparation and familiarity with other related materials
- Minimal ability to interpret opinions

Assessment Task

Assignment 1 – Self-Exploration: Creative Research on Character Design & Development
Assignment 2 – Staging
Assignment 3 – Effort Animation Actions - Fluid Body Motion and Organic Movement
Assignment 4 – Walk and Run with Performance
Assignment 5 – Lip Sync and Facial Expression Animation
Assignment 6 – Final Project: "ESCAPE FROM THE SECRET ROOM"

Criterion

These assessments will be graded on:
- Ability to understand and demonstrate a critical awareness of the concept, workflow, application, and tool set.
- Learning by doing. Reflection of Tool Proficiency / Tool Manipulation / Application of Art and Aesthetic/ Technology / Technological Theory
- Ability to plan, execute and evaluate a project. Reflection of Innovation / Originality / Imagination / Lateral Thinking / Production Management / Learning Attitude / Ethics / Presentation Skills

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 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 7 – Self-Reflection Report Presentation

Criterion

This assessment will grade on rationality, clarity and fluency of argument and comment. The threshold of ‘discovery’ lies in a student’s ability to negotiate a position that is informed, defendable position, and stand on personal insight.

Excellent (A+, A, A-)

- Rich content, excellent ability to interpret and integrate various resources
- Rigorous organisation, coherent structure, systematic composition
- Precision in argument, well-defined and reasoned points of view grounded in insightful interpretation of existing literature
- Readiness to respond to peer opinion and other views initiated in class discussion
- Discussion shed light on new dimensions of the issue

Good (B+, B, B-)

- Adequate content, sufficient ability to integrate various resources based on demand
- Reasonable organisation with balanced structure and composition
- Clear elaboration of ideas that sticks to the point, with clearly differentiated issues, ability to interpret opinions independently
- Sufficient responses to peer comments to sustain a discussion

Fair (C+, C, C-)

- Adequate content, fair ability to integrate various resources based on demand
- Fair organisation with adequate structure and composition
- Relevant points made to the subject matter in question
- Ability to respond to other statements and engage in class discussion

Marginal (D)

- Weak content, limited use of resources
- Poor organisation, structure and composition
- Relevant points to the subject matter, marginal ability to interpret opinions
- Ability to respond to other comments in simple terms

Failure (F)

- Inadequate content, no/ irrelevant use of resources
- No organisation, structure or/and composition
- Irrelevant points to the subject matter, no ability to interpret opinions
- Fail to respond to other comments

Additional Information for AR

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

Part III Other Information

Keyword Syllabus

Character Animation, Maya 3D Computer Animation, Principles of Animation, Acting for Animation, Storytelling, Character Design and Development, Creative Research for Character Building, Characterization, Character Portraying Character Personality, Pre-production, Pre-Visualization, Character Sheets, Thumbnail Sketching, Storyboard, Animatic, Story-reel, Acting, Performance, Fluid Body Motion, Organic Movement, Staging Gesture, Force, Speed, Weight, Thought, Action, Reaction, Take and Accent, Moving-Hold, Facial Expression, Lip-Sync, Character Rig Mechanics, Character Rigging, Maya MEL, Blackmagic Design DaVinci Resolve, Apple QuickTime Movie, H.264.

Reading List

Compulsory Readings

	Title
1	Hooks, Ed. (2023). Acting for Animators (5th edition) FL, USA: Routledge, Taylor & Francis;
2	Miller, Eric and Thuriot, Paul and Unay, Jeff. Autodesk Maya Press. (2008). Maya Techniques: Hyper-Real Creature Creation (2nd Edition). Hoboken, NJ: Sybex
3	Murdock, K. (July 10, 2024). Autodesk Maya 2025 Basics Guide Paperback. Mission, Kansas, USA. SDC Publications
4	Autodesk, Inc. (2024). Autodesk Maya Learning Channel https://www.youtube.com/mayahowtosDerakhshani
5	Autodesk, Inc. (2024). Autodesk Area https://area.autodesk.com/learn/courses/maya-intro/01-navigating-the-interface
6	Pluralsight LLC. (2024). Maya Rigging Fundamentals https://www.pluralsight.com/courses/maya-rigging-fundamentals

Additional Readings

	Title
1	Williams, R. E. (July 18, 2023). The Animator's Survival Kit 4 Books Collection Set By Richard Williams (Walks, Flexibility and Weight, Dialogue Directing Acting and Animal Action & Runs Jumps and Skips) Paperback – July 18, 2023, 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 Edition Boca Raton, FL, USA: CRC Press.
4	White, T. (November 17, 2022). Animation Masterclasses: From Pencils to Pixels: A Complete Course in Animation & Production 1st Edition. Boca Raton, FL,USA: CRC Press.