

**City University of Hong Kong
Course Syllabus**

**offered by School of Creative Media
with effect from Semester A 2017/18**

Part I Course Overview

Course Title: 3D Animation I - Basic

Course Code: SM2231

Course Duration: One semester

Credit Units: 3 units

Level: B2

Proposed Area:
(for GE courses only)

Arts and Humanities
 Study of Societies, Social and Business Organisations
 Science and Technology

Medium of Instruction: English

Medium of Assessment: English

Prerequisites:
(Course Code and Title) Nil

Precursors:
(Course Code and Title) Nil

Equivalent Courses:
(Course Code and Title) Nil

Exclusive Courses:
(Course Code and Title) Nil

Part II Course Details

1. Abstract

(A 150-word description about the course)

This course aims to provide a basic understanding of 3D computer animation production. A broad range of concepts will be explored, from the science of computer graphics, the practices in the industry, to the aesthetics of the medium. Through a series of hands-on exercises, students will produce creative works and build up personal portfolios. Topics will include Polygonal Modeling, Geometric Deformation, Simple Character Rigging, Surface Shading, UV Texture Mapping, Lighting and Compositing.

2. Course Intended Learning Outcomes (CILOs)

(CILOs state what the student is expected to be able to do at the end of the course according to a given standard of performance.)

No.	CILOs [#]	Weighting* (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	A2	A3
1	Demonstrate understanding of the central facets of computer animation production - modelling, surfacing, rigging, animation, effects, lighting and compositing.			√	
2	Demonstrate basic skills and the capacity for self-directed learning to gain skills in operatign 3D animation software applications.		√	√	
3	Apply the key concepts in creative works.		√	√	√
4	Demonstrate the capacity to evaluate the quality of a work and to conduct constructive criticism.			√	
5 [^]	Create a short animation either individually or in a collaborative effort.		√	√	√
* If weighting is assigned to CILOs, they should add up to 100%.		100%			

[^] Negotiated Learning Outcome (NLO) explicitly articulating the elements of Discovery oriented learning.

[#] Please specify the alignment of CILOs to the Gateway Education Programme Intended Learning outcomes (PILOs) in Section A of Annex.

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 self-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.

3. Teaching and Learning Activities (TLAs)
(TLAs designed to facilitate students' achievement of the CILOs.)

TLA	Brief Description	CILO No.					Hours/week (if applicable)
		1	2	3	4	5	
Lecture	Explain the key concepts of a computer animation production. - Polygonal modeling - Geometric deformation and basic character rigging - Animating with keyframes and graphs - Surface materials and texture mapping - Lighting and cinematography - Rendering in layers and compositing	√					2 hrs / wk
Class Exercises and Assignments	Students create works that explore the key concepts in CILO1	√	√	√	√		4 hrs / wk for 9 weeks
Critique Sessions	Critique sessions are held regularly to encourage open discussions and constructive criticism of each other's works.	√			√		1 hr / 2 weeks
Final Project	By going through a typical production workflow, students create short animations either individually or collaboratively.	√	√	√	√	√	4 hrs / wk for 6 weeks

4. Assessment Tasks/Activities (ATs)
(ATs are designed to assess how well the students achieve the CILOs.)

Assessment Tasks/Activities	CILO No.					Weighting*	Remarks
	1	2	3	4	5		
Continuous Assessment: 100%							
Class Participation				√		10%	
In-class Exercises and Assignments	√	√	√			40%	
Final Project and Presentation	√	√	√	√	√	50%	
Examination: 0% (duration: ---, if applicable)							
* The weightings should add up to 100%.						100%	

5. Assessment Rubrics

(Grading of student achievements is based on student performance in assessment tasks/activities with the following rubrics.)

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
In-class Exercises and Assignments	Ability to understand and to apply the concepts on creative works	High	Significant	Moderate	Basic	Not reaching marginal levels
	General Craftsmanship	High	Significant	Moderate	Basic	Not reaching marginal levels
Final Project and Presentation	Capacity for self-directed learning to operate the software tools	High	Significant	Moderate	Basic	Not reaching marginal levels
	Ability to apply the key concepts holistically and creatively on a multifaceted production	High	Significant	Moderate	Basic	Not reaching marginal levels
	General Craftsmanship	High	Significant	Moderate	Basic	Not reaching marginal levels

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

Part III Other Information (more details can be provided separately in the teaching plan)

1. Keyword Syllabus

(An indication of the key topics of the course.)

Polygonal Modeling, Faces, Vertices, Edges, User Interface, Animation, Grouping, Parenting, Hypergraph, Hypershade, Shading, Texture, UV Mapping, Lights, Raytracing, Shadow quality, Constraints, NURBS curve, Control Vertices, Environmental Map, Keyframe Animation, Surface Normals, Bump Map, Rendering.

2. Reading List

2.1 Compulsory Readings

(Compulsory readings can include books, book chapters, or journal/magazine articles. There are also collections of e-books, e-journals available from the CityU Library.)

	Nil

2.2 Additional Readings

(Additional references for students to learn to expand their knowledge about the subject.)

1.	Jerry Beck: Animation Art, HarperCollins, 2004
2.	Stephen Cavalier: The World History of Animation, Aurum Press Ltd, 2011
3.	Greg Hilty and Alona Pardo: Watch Me Move, Merrell, 2011
4.	The Animation Bible: A Guide to Everything - From Flipbooks to Flash, London (Laurence King), 2008
5.	Julius Wiedermann: Animation Now! Taschen, 2004
6.	Preston Blair: Cartoon Animation, Walter Foster, 1994
7.	Richard Williams: The Animator's Survival Kit, Faber and Faber, 2004
8.	Digital Tutors http://www.digitaltutors.com/
9.	Animation World Network http://www.awn.com/
10.	Animate! http://www.animateonline.org/
11.	3Dtotal http://www.3dtotal.com/