



Course guide

804402 - A3D - 3D Animation

Last modified: 20/07/2023

Unit in charge: Image Processing and Multimedia Technology Centre
Teaching unit: 804 - CITM - Image Processing and Multimedia Technology Centre.

Degree: BACHELOR'S DEGREE IN DESIGN, ANIMATION AND DIGITAL ART (Syllabus 2023). (Compulsory subject).

Academic year: 2023 **ECTS Credits:** 6.0 **Languages:** Catalan

LECTURER

Coordinating lecturer: Fonts González, Elisabet

Others:

TEACHING METHODOLOGY

Learning of new contents through theory, references and practical examples.
Participative classroom where to resolve problems and discuss contents.
Practical exercises to apply and experiment with the contents of the course. They will be used to work during the week and improve the skills to master the 3D design and animation tools.

LEARNING OBJECTIVES OF THE SUBJECT

- Recognize the phases of creating a 3D movie and be able to plan and develop the production process.
- Analyze the techniques used in the different types of audiovisual productions to apply them later through the use of software.
- Apply the basic concepts and procedures involved in 3D animation, as well as the fundamentals of representing movement in objects, humans and animals in the various computer animation techniques.

STUDY LOAD

Type	Hours	Percentage
Hours large group	30,0	20.00
Hours medium group	18,0	12.00
Self study	90,0	60.00
Guided activities	12,0	8.00

Total learning time: 150 h



CONTENTS

Bloque 1 - Fundamentos de la animación

Description:

Qué significa la animación
Ser actor
Observar
Vídeo referencias

Full-or-part-time: 10h

Theory classes: 2h
Practical classes: 2h
Guided activities: 3h
Self study : 3h

Conociendo Maya

Description:

Interface
Configuración
Programación del teclado
Keys
Cámaras
Trabajar con más pantallas
Graph Editor
Figuras básicas
Herramientas para crear el usuario
Playblast

Full-or-part-time: 20h

Theory classes: 4h
Practical classes: 4h
Guided activities: 6h
Self study : 6h

Los principios de la animación

Description:

Timing
Squash & Stretch
Slow in, slow out
Anticipación
Overlap
Arcs
Pose
Acción secundaria
Exageración
Appeal

Full-or-part-time: 20h

Theory classes: 4h
Practical classes: 4h
Guided activities: 6h
Self study : 6h



Primera fase de creación de un plano

Description:

Observación
Vídeo referencia
La pose en la animación
Cámara y la pose

Full-or-part-time: 10h

Theory classes: 2h
Practical classes: 2h
Guided activities: 3h
Self study : 3h

Principio del ritmo del movimiento

Description:

Timing
Anticipación
Animando con Squatch y Stretch
Animando y dando vida a una pelota

Full-or-part-time: 20h

Theory classes: 4h
Practical classes: 4h
Guided activities: 6h
Self study : 6h

Bloque 2 - Fundamentos de la locomoción humana

Description:

Overlapping Action
Drag
Breakdown
Principios Wave
El principio del Overlap
Conceptos: peso, inercia, gravedad, momentum, aceleración, desaceleración, física

Full-or-part-time: 10h

Theory classes: 2h
Practical classes: 2h
Guided activities: 3h
Self study : 3h



Introducción al caminar

Description:

Planificación
Balance
Línea central
Ángulo
Blocking
Polishing
Sector inferior
Análisis del caminar
Pops y spacing

Full-or-part-time: 20h

Theory classes: 4h
Practical classes: 4h
Guided activities: 6h
Self study : 6h

Caminar avanzado

Description:

Características del personaje
Estado de ánimo del personaje
Biomecánica. Sector Superior y personalidad
Manos
Animación física y metodología
Centro de gravedad
Appeal
Workflow

Full-or-part-time: 20h

Theory classes: 4h
Practical classes: 4h
Guided activities: 6h
Self study : 6h

Dibujo animado: Relación con la Animación 3D

Description:

Dibujo en programas 3D
Dibujo animado, 3D spacing e intermedios
Consejos de cámara y estilos de planos
Moving Holds
Overshoot
Breakdowns
Composición visual
Dark side
IK/FK
Línea de acción

Full-or-part-time: 10h

Theory classes: 2h
Practical classes: 2h
Guided activities: 3h
Self study : 3h



Actuación y Pantomima

Description:

Personaje y escena
Definición del personaje
Objetivos del personaje

Full-or-part-time: 10h

Theory classes: 2h
Practical classes: 2h
Guided activities: 3h
Self study : 3h

GRADING SYSTEM

Practices: 5 practices (AA1 to AA5) with a weighting of 10% of the final grade of each subject.

Control: 1 Partial Exam with a weighting of 15% of the final mark of the subject.

Final project: 1 final project (Activity AA6) with a weighting of 25% of the final mark of the subject.

Participation and attitude of learning: 10% of the mark of the subject.

Revaluation exam: possibility to reevaluate the weightings of the final mark corresponding to the partial exam (15%). Students who have not passed the subject can only present themselves through continuous evaluation.

EXAMINATION RULES.

Some of the exercises can be worked in classroom with professors, however, students must work in an autonomous way to finish their exercises. They should follow the instructions given in the exercise document.

BIBLIOGRAPHY

Basic:

- Osipa, Jason. Stop staring : facial modeling and animation done right . 2a ed. Indianapolis, Indiana : Wiley, 2007. ISBN 9780471789208.
- Thomas, Frank; Johnston, Ollie. The Illusion of life : Disney animation . New York : Hyperion, 1995. ISBN 0786860707.
- Williams, Richard. The Animator's survival kit . Expanded ed. London : Faber and Faber, 2009. ISBN 9780571238347.
- Whitaker, Harold; Halas, John; Sito, Tom. Timing for animation . 2nd ed. Oxford : Focal Press, 2009. ISBN 9780240521602.