



ACADEMIC PROGRAM

ADVANCED ANIMATION

B.F.A. IN ANIMATION

MODALITY: ON CAMPUS

ACADEMIC YEAR: 2023-2024

| | |
|----------------------------|---|
| Name of the course: | Advanced Animation |
| Degree : | Animation |
| Location: | Centro Universitario de Tecnología y Arte Digital |
| Area: | Animation |
| Year: | 4º |
| Teaching period: | 1 |
| Type: | OB |
| ECTS credits: | 6 |
| Teaching modality: | On campus |
| Language: | English |
| Lecturer / Email | David W. Mora Chamorro /david.mora@u-tad.com |
| Web page: | http://www.u-tad.com/ |

SUBJECT DESCRIPTION

Area description

The animation subject is oriented to enable students to acquire the skills that will allow them to convey emotions through the movement and performance of the characters using the 3D animation technique and acquiring the knowledge of other experimental animation techniques. They will apply the concepts of anatomy and mechanics of human body movement and the principles of traditional animation to 3D and experimental animation, transferring them to actions of increasing complexity, both in the physical simulation of movement and in the transmission of emotions through the attitude and gestures of the character.

Subject description

The creation of animated characters that are able to convey emotions through non-verbal language is essential for the animation industry, since a large part of the empathy and immersion that is intended to provoke in the viewer depends on it. The course delves into the visual domain of body expression in general and facial expression, within the process of generating an animation. The course is considered an extension of the subjects 3D Character Animation I and II, as well as Character Design, and the subjects of the narrative area, and serves to enrich in a definitive way the capacity of expression of a character from its visual animated manifestation.

COMPETENCIES AND LEARNING OUTCOMES

Competencies

BASIC AND GENERAL

CB1 - That students have demonstrated possession and understanding of knowledge in an area of study that builds on the foundation of general secondary education, and is usually at a level that, while relying on advanced textbooks, also includes some aspects that involve knowledge from the cutting edge of their field of study.

CB2 - That students know how to apply their knowledge to their work or vocation in a professional manner and possess the competencies usually demonstrated through the development and defense of arguments and problem solving within their field of study.

CB3 - That students have the ability to gather and interpret relevant data (usually within their area of study) to make judgments that include a reflection on relevant social, scientific or ethical issues.

CB4 - Students should be able to convey information, ideas, problems and solutions to both specialized and non-specialized audiences.

CB5 - That students have developed those learning skills necessary to undertake further studies with a high degree of autonomy.

TRANSVERSALS

CT5 - Demonstrate versatility, flexibility and creativity in the development of projects, activities and works.

SPECIFIC

CE5 - Apply the traditional principles of animation to the digital animation of characters and other elements.

CE19 - Apply different techniques of experimental animation, for the realization of an animation according to the artistic and narrative style sought.

CE3 - Know and represent the anatomy, shape and proportion of the human body.

Learning outcomes

At the end of the degree, the graduate will be able to:

- Recreate the anatomy of the human figure from digital or physical references applied to character animation.
- Apply knowledge of human and animal anatomy to the animation and rigging of human and animal figures in 2D and 3D.
- Reconstruct the anatomy and body mechanics of bipedal characters at the physiological and technical level.
- Master the basic laws of animation in both traditional and digital environments.
- Recreate fluid movements to generate believable animations in characters and objects.
- Reconstruct the anatomy and body mechanics of bipedal characters at physiological and technical level.
- Know experimental and less frequent techniques in the industry such as stop motion, cut out or sand animation to produce original and unexpected results.

- Integrate digital and analog animation techniques in the search for new visual and expressive solutions.
- Generate stop motion animations by using models, rigs, cameras and specific software.
- Generate acting, secondary actions, overlapping and interactions between characters for the representation of emotions in the narrative context.
- Optimize the programming code used in an animation scene using the necessary debugging tools.

CONTENTS

- Advanced acting
- Lip sync and dialogue animation
- Character interaction and complex physics
- Animation of non biped characters

SUBJECT SYLLABUS

Topic 1. Introduction of gestures and expressions

- 1.1. Video references
- 1.2. Staging & Posing
- 1.3. Body mechanics
- 1.4. Timing and Spacing

Topic 2. Non-verbal language

- 2.1. The importance of hand gestures
- 2.2. Emotions and Facial Expressions
- 2.3. Eye darts and Blinks

Asymmetry, contrast and facial exaggeration 2.4.

Theme 3. Pantomime

- 3.1. Personality
- 3.2. Change of emotion. The use of "takes".
- 3.3. Entertainment
- 3.4. Subtext

Theme 4. Acting

- 4.1. Facial animation
- 4.2. Lipsync
- 4.3. Knowing and building the character

4.4. How to make a character think

TRAINING ACTIVITIES AND TEACHING METHODOLOGIES

TRAINING ACTIVITIES

| LEARNING ACTIVITIES | Total hours | Hours of presence |
|---|-------------|-------------------|
| <i>Theoretical / Expository classes</i> | 20,00 | 20,00 |
| <i>Practical classes</i> | 35,56 | 35,56 |
| <i>Tutorials</i> | 4,44 | 2,22 |
| <i>Independent study and autonomous work of the student</i> | 32,22 | 0,00 |
| <i>Elaboration of work (group or individual)</i> | 53,33 | 0,00 |
| <i>Evaluation Activities</i> | 4,44 | 4,40 |
| TOTAL | 150 | 62,18 |

Teaching methodologies

Expository method or master class

Case method

Problem-based learning

Cooperative or collaborative learning

Inquiry-based learning

Flipped classroom or inverted classroom methodology

Gamification

TEMPORAL DEVELOPMENT

Topic 1. 3 weeks

Topic 2. 3 weeks

Topic 3. 4 weeks

Topic 4. 4 weeks.

EVALUATION SYSTEM

| ASSESSMENT SYSTEM | MINIMUM SCORE RESPECT TO THE FINAL ASSESSMENT (%) | MAXIMUM SCORE RESPECT TO THE FINAL ASSESSMENT (%) |
|--|--|--|
| <i>Assessment of participation in class, exercises or projects of the course</i> | 10 | 25 |
| <i>Assessment of assignments, projects, reports, memos</i> | 30 | 60 |
| <i>Objective test</i> | 30 | 60 |

GRADING CRITERIA

| ASSESSMENT SYSTEM | ORDINARY EVALUATION | EXTRAORDINARY EVALUATION |
|--|------------------------|-----------------------------|
| <i>Assessment of participation in class, exercises or projects of the course</i> | 10 | 10 |
| <i>Assessment of assignments, projects, reports, memos</i> | 40 | 40 |
| <i>Objective test</i> | 50 | 50 |

General comments on the evaluations/assessments

Students must achieve 80% of the learning objectives to pass the course satisfactorily.

Final numerical grade will be from 0 to 10, being a 5 the minimum grade to pass.

Follow-up of the work in the classroom. It is required the delivery of 100% of the weekly/fortnightly practices or exercises and to have approved the final practice in order to pass the course.

A practical will be delivered at the end of the course that brings together all the knowledge learned in the course.

Global evaluation of the learning process and acquisition of competences and knowledge.

In the extraordinary convocation, the final practical must be handed in, which will be worth 100% of the grade. Both the video and the scene to be worked on will be handed in. You will have to provide both the video of the practice and the original files (Maya scene). You may be called for consultation and review of how the exercise was performed or request a modification and, in case of omission or reasonable doubt, an external review will be requested by the academic coordination and the publication of these notes will be reserved until a consensus decision is reached.

Any detection of plagiarism in a paper or exam will imply the failure of that paper with a zero, the report to the faculty and academic coordinator and the application of the current regulations, which can lead to very serious penalties for the student.

LIST OF REFERENCES (BOOKS, PUBLICATIONS, WEBSITES):

Basic:

Williams, Richard. The Animator's Survival Kit.

Ed Hooks, Acting for Animators.

Derek Hayes "Acting and Performance for Animation".

Referencias recomendadas:

Stanchfield ,Walt.Gesture Drawing for the Animaton.

Muybridge, Eadweard. Horses and Other Animals in Motion.

REQUIRED MATERIALS, SOFTWARE AND TOOLS

Type of classroom

Theory

Materials:

Display - Digital whiteboard, Laptop

Software:

Autodesk Maya