



Course guide

804238 - A2D - 2D Animation

Last modified: 25/04/2024

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

Degree: BACHELOR'S DEGREE IN VIDEO GAME DESIGN AND DEVELOPMENT (Syllabus 2014). (Compulsory subject).

Academic year: 2024 **ECTS Credits:** 6.0 **Languages:** Spanish, English

LECTURER

Coordinating lecturer: Maria Pagés

Others: Maria Pagés
Javier Ruiz

PRIOR SKILLS

The 2D animation subject presents the introduction of the animation principles and the context of animation inside the film language. We will work the history of animation and the tools necessary to dominate the bases. This activities will conclude with the creation and animation of videogame characters.

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

CEVJ 7. Master the wide range of professional tools in the sector for developing all kinds of digital content.

CEVJ 8. Design, model, texturise and animate 2D and 3D objects, characters and scenes for inclusion in digital projects, audiovisual sequences and video games.

CEVJ 9. Apply advanced modelling and animation, post-production and special effects techniques to the creation of digital content and/or its inclusion in a video game project.

Transversal:

07 AAT. SELF-DIRECTED LEARNING. Detecting gaps in one's knowledge and overcoming them through critical self-appraisal. Choosing the best path for broadening one's knowledge.

CT3. TEAMWORK: Being able to work in an interdisciplinary team, whether as a member or as a leader, with the aim of contributing to projects pragmatically and responsibly and making commitments in view of the resources that are available.

CT4. EFFECTIVE USE OF INFORMATION RESOURCES: Managing the acquisition, structuring, analysis and display of data and information in the chosen area of specialisation and critically assessing the results obtained.

CT5. FOREIGN LANGUAGE: Achieving a level of spoken and written proficiency in a foreign language, preferably English, that meets the needs of the profession and the labour market.

TEACHING METHODOLOGY

The subject will provide three theoretical resources to be able to execute a series of practices that summarize the general role that an animator has within a production. The first will be a cultural documentation on the world of animation, its history and its main figures, as well as weekly recommendations to enrich the global vision of the matter. Each practice also has a theoretical formula to face it easily and finally a practical example by the teacher during class. These practices will receive as much feedback as the student needs before the delivery date.

The total of practices and contents will be summarized in an exam that will work the main aspects worked during the subject.

LEARNING OBJECTIVES OF THE SUBJECT

- Master the fundamentals and principles of animation.
- Understand the production phases of 2D animation.
- Learn the traditional and Cut-Out techniques of 2D animation.
- Show knowledge and know how to apply concepts related to the control of the visualization of objects and scenes through viewers and synthetic cameras.
- Show understanding of the basic concepts and procedures involved in 2D animation, as well as the mathematical and physical foundations.
- Show ability to analyze movement in objects, humans and animals and the ability to apply computer animation techniques and its mathematical and physical foundations in 2D animation.
- Show knowledge and mastery of procedures, techniques, technologies and graphic computer programs and the ability to select the most appropriate in each case and to apply them, in the process of composition and animation of 2D objects and characters in the video game creation.
- Show knowledge of the phases of creating a 2D or 3D movie and ability to plan the process.
- Use strategies to prepare and carry out oral presentations and write texts and documents with coherent content, an adequate structure and style, and a good level of spelling and grammar.

STUDY LOAD

| Type | Hours | Percentage |
|--------------------|-------|------------|
| Hours medium group | 32,0 | 21.33 |
| Guided activities | 10,0 | 6.67 |
| Self study | 90,0 | 60.00 |
| Hours large group | 18,0 | 12.00 |

Total learning time: 150 h

CONTENTS

COURSE INTRODUCTION

Description:

Course presentation, personal and 2D animation history and concept introduction.

Specific objectives:

Teacher introduction along with his job and course general information.

Full-or-part-time: 7h 30m

Theory classes: 2h 30m

Self study : 5h



INTRODUCTION TO ANIMATION

Description:

- Animation principles
- Animator's job, tools and techniques
- Production pipeline

Full-or-part-time: 50h

Theory classes: 20h

Self study : 30h

INTRODUCTION TO SCREENWRITING AND STORYBOARD FOR ANIMATION

Description:

- Adventure screenwriting structure for animation.
- Composition and camera movement in Toonboom.
- Storyboard in Toonboom.

Full-or-part-time: 7h 30m

Theory classes: 2h 30m

Self study : 5h

ANIMATION BIBLE CREATION

Description:

Concepts for animation bible creation.

Full-or-part-time: 10h

Theory classes: 5h

Self study : 5h

CHARACTER DESIGN AND RIGGING

Description:

Drawing, color and rigging concepts for character creation in Toonboom.

Full-or-part-time: 25h

Theory classes: 10h

Self study : 15h

VIDEOGAMES CHARACTER ANIMATION

Description:

Advanced character animation for videogames.

Full-or-part-time: 50h

Theory classes: 20h

Self study : 30h



ACTIVITIES

EASY BALL

Description:

Animation of ball moving from on side to the other of the frame, learning de concept of easy in and easy out.

1- 25 drawings of a ball moving from frame 1 to 25 with the same timming.

2- 21 drawings of a ball moving from frame 1 to 25 with an easy out and easy in.

Full-or-part-time: 1h

Guided activities: 1h

BOUNCING BALL SOLID

Description:

Tradicional animation of a solid ball bouncing in Y until it stops.

Full-or-part-time: 1h

Guided activities: 1h

BOUNCING BALL SOFT

Description:

Traditional animation of a soft ball bouncing in X until it stops. It's necessary to apply the concepts of easy in and easy out and squash and stretch.

Full-or-part-time: 2h

Guided activities: 2h

BOUNCING BALL OBSTACLE

Description:

Cut-Out animation of a ball bouncing from a high position until it stops at the bottom through a number of simple obstacles.

Full-or-part-time: 2h

Guided activities: 2h

POSE TO POSE FACE

Description:

Tradicional animation of a simple face looking from one side to the other. It's necessary to apply the easy in and easy out, squash and stretch, timming, breackdown and inbetween concepts.

Full-or-part-time: 2h

Guided activities: 2h



POSE TO POSE BODY

Description:

Mixed animation of a body changing his weight from on leg to the other applying the concepts from the last pose to pose exercise.

Full-or-part-time: 3h

Guided activities: 3h

JUMP

Description:

Traditional animatin of a character jumping in X applying the pose to pose technique.

Full-or-part-time: 3h

Guided activities: 3h

WALKING CYCLE

Description:

Traditional animation of a character walking as a Richard Williams cycle.

Full-or-part-time: 3h

Guided activities: 3h

PROJECT BIBLE

Description:

Bible creation in groups.

- 1- Cover
- 2- Index
- 3- Sinopsis
- 4- Screenplay structure
- 5- Moodboard
- 6- Character design
- 7- BG design
- 8- Storyboard for one scene
- 9- Simple animation of the scene

Full-or-part-time: 12h

Guided activities: 12h

CHARACTER CREATION

Description:

Design and rigging for a Toonboom character

Full-or-part-time: 6h

Guided activities: 6h



CHARACTER ANIMATION IDLE

Description:

Cut-Out animation of a videogame IDLE

Full-or-part-time: 3h

Guided activities: 3h

CHARACTER ANIMATION WALKING

Description:

Cut-Out animation of a walking videogame character

Full-or-part-time: 3h

Guided activities: 3h

CHARACTER ANIMATION STRIKE

Description:

Cut-Out animation of a videogame character stricke

Full-or-part-time: 3h

Guided activities: 3h

CHARACTER ANIMATION FINAL

Description:

Cut-Out animation of a videogame character linking animations.

Full-or-part-time: 4h

Guided activities: 4h

GRADING SYSTEM

- Weekly activities 45%
- Parcial 15%
- Animation test 30%
- Attitude 10%

Students who fail will have the chance to take the reevaluation exam. The mark of this exam will replace the mark of the partial and final exams and, in case of passing the course, the maximum final mark will be 5.



BIBLIOGRAPHY

Basic:

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- Commodore 64: a visual compendium. Bitmap Books, 2016. ISBN 9780993012983.
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- Retrogamer magazine. Imagine Publishing,
- Caldwell, B. Action! cartooning. New York: Sterling Publishing, 2004. ISBN 9780806987392.
- Blair, P. Cartoon animation. Laguna Hills: Walter Foster, 1994. ISBN 9781560100843.
- Thomas, F.; Johnston, O. The illusion of life: Disney animation. New York: Hyperion, 1995. ISBN 0786860707.
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