

## 804238 - A2D - 2D Animation

Coordinating unit: 804 - CITM - Image Processing and Multimedia Technology Centre  
 Teaching unit: 804 - CITM - Image Processing and Multimedia Technology Centre  
 Academic year: 2019  
 Degree: BACHELOR'S DEGREE IN VIDEO GAME DESIGN AND DEVELOPMENT (Syllabus 2014). (Teaching unit Compulsory)  
 BACHELOR'S DEGREE IN VIDEO GAME DESIGN AND DEVELOPMENT (Syllabus 2014). (Teaching unit Compulsory)  
 ECTS credits: 6 Teaching languages: Spanish

### Teaching staff

Coordinator: Díaz Acedo, Ignacio Pablo

### Learning objectives of the subject

### Study load

Total learning time: 150h	Hours large group:	18h	12.00%
	Hours medium group:	32h	21.33%
	Hours small group:	0h	0.00%
	Guided activities:	10h	6.67%
	Self study:	90h	60.00%

## 804238 - A2D - 2D Animation

### Content

title english	Learning time: 2h Theory classes: 2h
Description: content english	
title english	Learning time: 10h Theory classes: 10h
Description: content english	

## 804238 - A2D - 2D Animation

title english	Learning time: 10h Theory classes: 10h
<p>Description:</p> <p>SESSION 1</p> <ul style="list-style-type: none"><li>- Explanation of the course and final assignment</li><li>- Foundations of Pixel Art. What is (and what isn't). Styles and trends</li><li>- Size and scale</li><li>- Do's and Don'ts</li><li>- Looking for resources and inspiration</li><li>- Photoshop set up, tools and commands</li><li>- Color palettes</li><li>- Animating in Photoshop</li></ul> <p>SESSION 2</p> <ul style="list-style-type: none"><li>- Use and reuse</li><li>- HSB and Contrast</li><li>- Lines, curves and shapes</li><li>- Dithering</li><li>- Anti-aliasing</li><li>- Lightning</li></ul> <p>SESSION 3</p> <ul style="list-style-type: none"><li>- Types of pixel art animation</li><li>- Economy of frames</li><li>- Principles of animation applied to pixel art</li><li>- Spritesheets</li></ul> <p>SESSION 4</p> <ul style="list-style-type: none"><li>- Backgrounds in pixel art</li><li>- Debris objects</li><li>- Top-down / Isometric perspective</li><li>- Tilesets</li><li>- Particle simulation</li><li>- 2.5D effects and dynamic lightning</li></ul> <p>Related activities:</p>	

## 804238 - A2D - 2D Animation

### PRACTICAL EXERCISE (SESSION 1)

Static character design for your RTS/RPG depending on your degree project (PNG)

Character animation: idle (animated GIF)

### PRACTICAL EXERCISE (SESSION 2)

Character animation: hurt, death (animated GIF)

### PRACTICAL EXERCISE (SESSION 3)

Character animation: walking cycle, attack (animated GIF).

### PRACTICAL EXERCISE (SESSION 4)

Static tilesets design to build background and debris objects (PNG)

Character animation including particle effects: respawn (animated GIF)

Specific objectives:

#### PREPARATION OF THE SUBJECT

Basic knowledge of Photoshop basic tools and functionality is needed since it will be the software used during the course. A Wacom tablet per student will be provided as well.

#### TEACHING METHODOLOGY

Sessions will have the following pattern:

- 45' theory
- 15' analysis of samples and inspiration
- 60' practice, where the instructor will work in parallel and also do Q&A

All practice exercises from sessions will be part of the final project. Some extra time outside the class will be needed in order to improve graphics and animations, therefore have a better final result of the assignment.

#### AVALUATION SYSTEM

The final project consists of:

- 1 Character spritesheet Personaje: (idle, walking cycle in 4 directions, attack, hurt, death, respawn)
- 1 Background spritesheet: 4 tilesets, 4 debris object (2 animated)
- 1 animated GIF with the character moving around and showing all different actions

Practice exercises during sessions will be part of the overall evaluation along with the final assignment.

## 804238 - A2D - 2D Animation

title english	Learning time: 4h Theory classes: 4h
Description: content english	

title english	Learning time: 12h Theory classes: 12h
Description: content english	

title english	Learning time: 4h Theory classes: 4h
Description: content english	

title english	Learning time: 12h Theory classes: 12h
Description: content english	

## 804238 - A2D - 2D Animation

### Bibliography

#### Basic:

NFGman. Character design for mobile devices: mobile games, sprites and pixel art. Mies, Switzerland: Rotovision, 2006. ISBN 9782940361120.

Commodore 64: a visual compendium. Bitmap Books, 2016. ISBN 9780993012983.

Méndez, S. 1x1: pixel-based illustration & design. Mark Batty, 2004. ISBN 9780972563628.

Sinclair, C. Sinclair ZX spectrum: a visual compendium. Bitmap Books, 2015. ISBN 9780993012921.

Bendinelli, J.; Günzel, S. Push > Start: the art of video games. Hamburg: Edel Germany, 2014. ISBN 9783943573091.

Lam, F. Pixelworld. Wan Chai, Hong Kong: Systems Design Limited: Laurence King, 2003. ISBN 1856693686.

Williams, R. The animator's survival kit: a manual of methods, principles and formulas for classical, computer, games, stop motion and internet animators. 2nd ed. London: Faber & Faber, 2012. ISBN 9780865478978.

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.

Hamm, J. Cartooning the head & figure. New York: Perigee Books, 1982. ISBN 9780399508035.