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)
ECTS credits: 6

Teaching languages: Spanish

Learning objectives of the subject

Study load

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<thead>
<tr>
<th>Total learning time: 150h</th>
<th>Hours large group: 18h</th>
<th>12.00%</th>
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<tbody>
<tr>
<td>Hours medium group: 32h</td>
<td>21.33%</td>
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<td>Hours small group: 0h</td>
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<td>Guided activities: 10h</td>
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<td>Self study: 90h</td>
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<td>Learning time: 2h</td>
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Description:
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### Description:

**SESSION 1**
- Explanation of the course and final assignment
- Foundations of Pixel Art. What is (and what isn’t). Styles and trends
- Size and scale
- Do’s and Don’ts
- Looking for resources and inspiration
- Photoshop set up, tools and commands
- Color palettes
- Animating in Photoshop

**SESSION 2**
- Use and reuse
- HSB and Contrast
- Lines, curves and shapes
- Dithering
- Anti-aliasing
- Lightning

**SESSION 3**
- Types of pixel art animation
- Economy of frames
- Principles of animation applied to pixel art
- Spritesheets

**SESSION 4**
- Backgrounds in pixel art
- Debris objects
- Top-down / Isometric perspective
- Tilesets
- Particle simulation
- 2.5D effects and dynamic lightning

### Related activities:
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.
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## Bibliography

### Basic:

- **Retrogamer magazine.** Imagine Publishing,