804258 - MA3DAV - Modelling and Advanced 3D 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 Optional)
ECTS credits: 6
Teaching languages: Catalan, Spanish

Coordinator: Ripoll Tarré, Marc
Others: Borras Borrell, Elias

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:
04 COE N2. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 2. Using strategies for preparing and giving oral presentations. Writing texts and documents whose content is coherent, well structured and free of spelling and grammatical errors.
06 URI N3. EFFECTIVE USE OF INFORMATION RESOURCES - Level 3. Planning and using the information necessary for an academic assignment (a final thesis, for example) based on a critical appraisal of the information resources used.
07 AAT N3. SELF-DIRECTED LEARNING - Level 3. Applying the knowledge gained in completing a task according to its relevance and importance. Deciding how to carry out a task, the amount of time to be devoted to it and the most suitable information sources.
05 TEQ. TEAMWORK. Being able to work as a team player, either as a member or as a leader. Contributing to projects pragmatically and responsibly, by reaching commitments in accordance to the resources that are available.

Learning objectives of the subject

To understand the theory of character design.
To plan characters and environments adapting to every possible mechanic, aesthetic and narrative combinations.
To understand the work methodology used by professional videogame studios and analyze the importance of teamwork.
To know commonly used techniques applied to character and level design.
To strengthen the modeling, texturing and animation basics.
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To use the subject learning to create professional high quality 3d model designs.
To do the exercises proposed in class applying the correct structure, presentation and planification and maintaining a good orthographic and grammatical level.

<table>
<thead>
<tr>
<th>Study load</th>
<th>Hours large group:</th>
<th>Hours medium group:</th>
<th>Hours small group:</th>
<th>Guided activities:</th>
<th>Self study:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total learning time:</td>
<td>150h</td>
<td>18h</td>
<td>30h</td>
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<td>12h</td>
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## Content

### Design

**Learning time:** 20h  
- Practical classes: 8h  
- Self study: 12h  

**Description:**  
- Game design  
- Character design  
- Level design  
- Concept art and references

### Modeling and Texturing

**Learning time:** 40h  
- Practical classes: 16h  
- Self study: 24h  

**Description:**  
- Polygonal modeling  
- Digital sculpting  
- Retopologize and UVs

### Game Level

**Learning time:** 20h  
- Practical classes: 8h  
- Guided activities: 6h  
- Self study: 6h  

**Description:**  
- Game level construction  
- VR environments

### Animation

**Learning time:** 40h  
- Practical classes: 16h  
- Self study: 24h  

**Description:**  
- Rigging  
- Skinning  
- Character animation  
- Mocap
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**Portfolio**

<table>
<thead>
<tr>
<th>Description:</th>
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<tbody>
<tr>
<td>3d portfolio</td>
</tr>
<tr>
<td>Online platforms</td>
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<tr>
<td>Good practices</td>
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**Specific objectives:**

Create a professional portfolio

**Learning time:**

- 20h
- Practical classes: 8h
- Self study: 12h

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**Bibliography**

**Basic:**


**Others resources:**

- Hyperlink
  - [https://creative.pluralsight.com](https://creative.pluralsight.com)
    - Resource
  - [https://www.cgtrader.com/](https://www.cgtrader.com/)
    - Resource
    - Resource
    - Resource