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: 2017
Degree: BACHELOR'S DEGREE IN VIDEO GAME DESIGN AND DEVELOPMENT (Syllabus 2014). (Teaching unit Optional)
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ECTS credits: 6
Teaching languages: Catalan, Spanish

Teaching staff
Coordinator: Ripoll Tarré, Marc
Borras Borrell, Elias
Others: Belmonte Martínez, Pablo

Prior skills
Basic knowledge of polygonal modeling and 3d animation.

Degree competences to which the subject contributes

Specific:
CEVJ 7. (ENG) Dominar el gran abanico de herramientas profesionales del sector para la elaboración de contenidos digitales de todo tipo.
CEVJ 8. (ENG) Dissenyar, modelar, texturitzar i animar objectes, personatges i escenes 2D i 3D per la seva inclusió en projectes digitals, seqüències audiovisuals i videojocs.
CEVJ 9. (ENG) Aplicar técnicas de modelado y animación avanzada, postproducción y efectos especiales para la elaboración de contenidos digitales y/o su inclusión en un proyecto de videojuego.

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.
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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.
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: 150h</td>
<td>18h</td>
<td>30h</td>
<td>0h</td>
<td>12h</td>
<td>90h</td>
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<td>12.00%</td>
<td>20.00%</td>
<td>0.00%</td>
<td>8.00%</td>
<td>60.00%</td>
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</tbody>
</table>
### 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 sculpt  
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
Bibliography

Basic:

Others resources:
Hyperlink

https://creative.pluralsight.com
Resource

https://www.cgtrader.com/
Resource

http://www.cgchannel.com/
Resource

http://www.zbrushcentral.com/
Resource