804239 - E3D - 3D Scenaries

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: Catalan, Spanish

Teaching staff
Coordinator: Martínez Navarro, Beatriz
Others: Belmonte Martínez, Pablo
Ripoll Tarré, Marc
Bertomeu Farnós, Gerard

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. 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.

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 level design.
To plan game levels 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 level design.
To strengthen the modeling, texturing and lightning basics.
804239 - E3D - 3D Scenaries

To use the subject learning to create professional high quality level designs.
To adapt the concepts of 2d design and illustration into the creation of interactive levels.
To do the exercises proposed in class applying the correct structure, presentation and planification and maintaining a good orthographic and grammatical level.

Study load

<table>
<thead>
<tr>
<th>Total learning time: 150h</th>
<th>Hours large group: 18h</th>
<th>12.00%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hours medium group: 32h</td>
<td>21.33%</td>
</tr>
<tr>
<td></td>
<td>Hours small group: 0h</td>
<td>0.00%</td>
</tr>
<tr>
<td></td>
<td>Guided activities: 10h</td>
<td>6.67%</td>
</tr>
<tr>
<td></td>
<td>Self study: 90h</td>
<td>60.00%</td>
</tr>
</tbody>
</table>
# Content

<table>
<thead>
<tr>
<th>Level design</th>
<th>Learning time: 41h 20m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theory classes: 5h</td>
<td></td>
</tr>
<tr>
<td>Practical classes: 8h 20m</td>
<td></td>
</tr>
<tr>
<td>Guided activities: 3h</td>
<td></td>
</tr>
<tr>
<td>Self study : 25h</td>
<td></td>
</tr>
</tbody>
</table>

**Description:**
- Planning & preproduction.
- Game types.
- Environment art.
- 2d vs 3d.
- Progressió visual.

<table>
<thead>
<tr>
<th>Architecture and lightning</th>
<th>Learning time: 41h 20m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theory classes: 5h</td>
<td></td>
</tr>
<tr>
<td>Practical classes: 8h 20m</td>
<td></td>
</tr>
<tr>
<td>Guided activities: 3h</td>
<td></td>
</tr>
<tr>
<td>Self study : 25h</td>
<td></td>
</tr>
</tbody>
</table>

**Description:**
- Architecture and urban planning.
- Visual perception and lightning.
- Virtual sets.

<table>
<thead>
<tr>
<th>Content creation</th>
<th>Learning time: 41h 20m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theory classes: 5h</td>
<td></td>
</tr>
<tr>
<td>Practical classes: 8h 20m</td>
<td></td>
</tr>
<tr>
<td>Guided activities: 3h</td>
<td></td>
</tr>
<tr>
<td>Self study : 25h</td>
<td></td>
</tr>
</tbody>
</table>

**Description:**
- Digital sculpture and painting.
- Map extraction.
- Photogrametry.
- Baking of light.
**Export and integration**

<table>
<thead>
<tr>
<th>Learning time: 26h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theory classes: 3h</td>
</tr>
<tr>
<td>Practical classes: 7h</td>
</tr>
<tr>
<td>Guided activities: 1h</td>
</tr>
<tr>
<td>Self study: 15h</td>
</tr>
</tbody>
</table>

**Description:**
- Interactivity.
- Collision model.
- Effects.
- Optimization.

---

**Planning of activities**

### Level design

<table>
<thead>
<tr>
<th>Hours: 10h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self study: 10h</td>
</tr>
</tbody>
</table>

**Description:**
To design a game level from a variety of rules and concepts specified in the documentation of the exercise. This is an individual task.

**Support materials:**
- Classroom documentation, Adobe photoshop, Microsoft Word.
- Autodesk Maya, Unity 3d

**Descriptions of the assignments due and their relation to the assessment:**
Upload to the folder located in the Àgora campus, as specified in the classroom documentation.

**Specific objectives:**
- To design a functional game level, following the classroom documentation.

---

### Production of a game level

<table>
<thead>
<tr>
<th>Hours: 20h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practical classes: 5h</td>
</tr>
<tr>
<td>Self study: 15h</td>
</tr>
</tbody>
</table>

**Description:**
Following a design guide, a 3d level must be created, alongside its game executable. This is a group activity.

**Support materials:**
- Autodesk Maya, Unity 3d

**Descriptions of the assignments due and their relation to the assessment:**
The project will be presented in class. Documentation, graphics and a working executable must also be uploaded to the campus.

**Specific objectives:**
- Teamwork.
- 3d assets production.
- Game engine integration.
804239 - E3D - 3D Scenarios

Bibliography

Basic:


Complementary:


Others resources:

Hyperlink

www.digitaltutors.com
Resource

http://www.brainstorm-digital.com
Resource

http://level-design.org
Resource