Course guides
804035 - A3D-M - 3D Animation

Unit in charge: Image Processing and Multimedia Technology Centre
Teaching unit: 804 - CITM - Image Processing and Multimedia Technology Centre.
Degree: BACHELOR’S DEGREE IN MULTIMEDIA STUDIES (Syllabus 2009), (Compulsory subject).
Academic year: 2021 ECTS Credits: 6.0 Languages: Catalan, Spanish

LECTURER
Coordinating lecturer: Pulpón Alcolea, Carlos

OTHERS:

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
4. Identify the basic principles of 2D and 3D animation and the physical and mathematical laws that govern movement.
5. Plan the pre-production, production and post-production phases of a 2D and 3D animated film.

6. Analyse movement in objects, humans and animals, and apply computer animation techniques and their mathematical and physical foundations in 2D and 3D animation.
7. Apply computer animation and composition techniques in 2D and 3D animation.

Transversal:
1. 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.
2. EFFICIENT ORAL AND WRITTEN COMMUNICATION. Communicating verbally and in writing about learning outcomes, thought-building and decision-making. Taking part in debates about issues related to the own field of specialization.
3. EFFECTIVE USE OF INFORMATION RESOURCES. Managing the acquisition, structure, analysis and display of information from the own field of specialization. Taking a critical stance with regard to the results obtained.

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Hours medium group</td>
<td>60,0</td>
<td>40.00</td>
</tr>
<tr>
<td>Self study</td>
<td>90,0</td>
<td>60.00</td>
</tr>
</tbody>
</table>

Total learning time: 150 h
# CONTENTS

## 1. Introduction to 3D animation

**Description:**
1.1 Course introduction  
1.2. Course assessment

**Full-or-part-time:** 10h  
Practical classes: 4h  
Self study : 6h

## 2. History of animation

**Description:**  
2.1. What is animation?  
2.2. Retinal persistence  
2.3. Uncanny Valley  
2.4. History of animation

**Full-or-part-time:** 30h  
Practical classes: 12h  
Self study : 18h

## 3. Introduction to Maya

**Description:**  
3.1. Project Window y Set Project  
3.2. Workspaces  
3.3. Status Line  
3.4. Shelf  
3.5. Panel Toolbar y Outliner  
3.6. Display y Viewer Settings  
3.7. Channel box  
3.8. Atribute Editor  
3.9. Modeling Toolkit  
3.10. Maya Marking Menus y basic Shortcuts

**Full-or-part-time:** 28h  
Practical classes: 12h  
Self study : 16h
### 4. Animation Basics

**Description:**
- 4.1. Squash & Stretch
- 4.2. Anticipation
- 4.3. Staging
- 4.4. Straight Ahead
- 4.5. Follow Through & Overlapping action
- 4.6. Slow In & Slow Out
- 4.7. Arcs
- 4.8. Secondary Action
- 4.9. Timing
- 4.10. Exaggeration
- 4.11. Solid Drawing
- 4.12. Appeal

**Full-or-part-time:** 29h  
Practical classes: 3h  
Self study : 26h

### 5. 3D animation workflow

**Description:**
- 5.1. Pre-Production of 3D animation
- 5.2. 3D animation production
- 5.3. Post-Production of 3D Animation
- 5.4. Facial Expressions
- 5.5. Time Slider
- 5.6. Animation tricks
- 5.7. Different departments in 3D animation
- 5.8. Types of 3D animation
- 5.9. Designing characters for 3D animation
- 5.10. RIG
- 5.11. RIG Drivers
- 5.12. Character Sets
- 5.13. Matching
- 5.14. Graph Editor
- 5.15. Dope Sheet

**Full-or-part-time:** 8h  
Practical classes: 4h  
Self study : 4h

### 6. Finishing:

**Description:**
- 6.1. Cameras
- 6.2. Lighting
- 6.3. Render

**Full-or-part-time:** 5h  
Practical classes: 4h  
Self study : 1h
ACTIVITIES

Exams

Full-or-part-time: 4h
Practical classes: 4h

Project

Full-or-part-time: 20h
Self study: 20h

GRADING SYSTEM

EXAMINATION RULES.

(eng)

BIBLIOGRAPHY

Basic:

Complementary: