

Course guides

804258 - MA3DAV - Modelling and Advanced 3D Animation

Last modified: 07/04/2021

Unit in charge: Image Processing and Multimedia Technology Centre
Teaching unit: 804 - CITM - Image Processing and Multimedia Technology Centre.

Degree: BACHELOR'S DEGREE IN VIDEO GAME DESIGN AND DEVELOPMENT (Syllabus 2014). (Optional subject).

Academic year: 2021 **ECTS Credits:** 6.0 **Languages:** Catalan, Spanish

LECTURER

Coordinating lecturer: Ripoll Tarré, Marc

Others: Borrás 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.

TEACHING METHODOLOGY

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.

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.



STUDY LOAD

Type	Hours	Percentage
Hours medium group	30,0	20.00
Hours large group	18,0	12.00
Guided activities	12,0	8.00
Self study	90,0	60.00

Total learning time: 150 h

CONTENTS

Dessign

Description:

Game dessign
Character dessign
Level dessign
Concept art and references

Full-or-part-time: 20h

Practical classes: 8h
Self study : 12h

Modeling and texturing

Description:

Polygonal modeling
Digital sculpt
Retopologize and UVs

Full-or-part-time: 40h

Practical classes: 16h
Self study : 24h

Game level

Description:

Game level construction.
VR environments.

Full-or-part-time: 20h

Practical classes: 8h
Guided activities: 6h
Self study : 6h



Animation

Description:

Rigging
Skinning
Character animation
Mocap

Full-or-part-time: 40h

Practical classes: 16h

Self study : 24h

Portfolio

Description:

3d portfolio
Online platforms
Good practices

Specific objectives:

Create a professional portfolio

Related competencies :

CEVJ 7. Master the wide range of professional tools in the sector for developing all kinds of digital content.

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.

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.

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.

Full-or-part-time: 20h

Practical classes: 8h

Self study : 12h

GRADING SYSTEM

BIBLIOGRAPHY

Basic:

- Demers, Owen. Digital texturing & painting. [S.l.]: New Riders, cop. 2002. ISBN 0735709181.
- Ahearn, Luke. 3D game textures: create professional game art using Photoshop [on line]. 3rd ed. Waltham, MA: Focal Press, 2012 [Consultation: 18/04/2018]. Available on: <https://www.sciencedirect.com/science/book/9780240820774>. ISBN 9780240820774.
- Williams, Richard. The animator's survival kit. Expanded ed. London: Faber and Faber, 2009. ISBN 9780571238347.
- Thomas, Frank; Johnston, Ollie. The illusion of life: Disney animation. New York: Hyperion, 1995. ISBN 0786860707.
- Birn, Jeremy. Digital lighting & rendering. 3rd ed. Berkeley, CA: New Riders, cop. 2014. ISBN 0321928989.



RESOURCES

Hyperlink:

- <https://creative.pluralsight.com>. Resource
- <https://www.cgtrader.com/>. Resource
- <http://www.cgchannel.com/>. Resource
- <http://www.zbrushcentral.com/>. Resource