Course guide
804398 - MP - Modelling of Characters

Last modified: 09/02/2024

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

Degree: BACHELOR'S DEGREE IN DESIGN, ANIMATION AND DIGITAL ART (Syllabus 2023). (Compulsory subject).

Academic year: 2023 **ECTS Credits:** 6.0 **Languages:** Spanish

LECTURER

Coordinating lecturer: Miranda, Miguel

Others:

TEACHING METHODOLOGY

- Master demo classes.
- Class participation.
- Case studies.
- Autonomous Work.

LEARNING OBJECTIVES OF THE SUBJECT

- Create organic models adapted to the needs of the different production phases of an animation.
- Carry out the design, modeling, texturing, lighting and rendering of 3D characters, to interact with objects or virtual environments.

STUDY LOAD

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

Total learning time: 150 h

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CONTENTS

title english

Description:
1. Search for references, style, influences
2. Assemble references. Pure Ref
3. Interface. Program organization, main menus and shortcuts
4. How to deal with character blocking: Image plane - classic fit
5. Mesh base or creation of a mannequin with primitives (Blocking)
6. Customize Zbrush, document, gradient, buttons
7. Materials, Colorize
8. Brushes, alphas, masks and selections
9. Subtools
10. Polygroups
11. Pipeline to sculpt a character

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

B. Organic modeling tools

Description:
12. Fitting the first basic volume
13. Proportions and silhouette
14. Relationship of perspective with volumes. Go from 2d to 3d
15. Organic modeling tools. Brushes
16. Layers, everything in layers
17. Sculptris Pro
18. Dynamesh
19. Zremesher and Geometry HD

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

C. Inorganic Modeling

Description:
20. Inorganic Modeling Tools
21. Brushes hard surfaces. Shadow Box and props
22. Zmodeler
23.Deformation
24. Sculpting and geometry optimization. Basic rules
25. Decimation. Subtoolmaster.
26. Zwrap

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

D. Sculpted

Description:
27. Anatomy
28. Basic hair, define, eyebrows, eyelashes
29. FiberMesh and Hair Brushes
30. UVs Mapping, polypaint and texturing. spotlight
31. Detailing the character. Micro details
32. Retopology
33. Model for production
34. Reinterpret
35. Facialshapes

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

E. Composition, rendering and assembly

Description:
36. Zbrush workflow with other applications (GoZ to Maya)
37. Extracting maps. Multimap exporter
38. Camera, composition and retouching
39. Transpose. Character pose
40. Timelapse. Video turnaround
41. Expression-appeal
42. Materials and lights
43. Render and assembly of layers in Photoshop
44. Character presentation: final illustration
45. Final exam review.
46. Portfolio review and Tips for finding a job (motivational)

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

GRADING SYSTEM

Practices 1: 20% of the final grade
Practices 2: 20% of the final grade
Final work: 35% final grade
Participation and learning attitude: 10%
Final exam: 15% final grade
Students who participate in the continuous evaluation and do not exceed this subject, may submit to the reevaluation test in which only the theoretical part will be reevaluated.

EXAMINATION RULES.

- The exercises will be done in autonomous work time.
- Its late delivery will behave to suspend the practice.
- The content of the exercises and their correct writing will be assessed.

BIBLIOGRAPHY

Basic:
- ZBrush Character Sculpting: Volume 1. 3dtotal,
- Tom Bancroft. Creating characters with Personality.
- Chris Legaspi. Anatomy for 3D Artists: The essential Guide for CG Proï¬□esionals.
- 100 Tuesday tips. Griz and Norm,
- Beginner´s Guide to ZBrush. 3dtotal Publishing,
- Disney research. Graph-Based Synthesis for Skin Micro Wrinkles.
- Sham Tichoo Purdue. Pixologic Zbrush 2022: A comprehensive Guide, 8th edition. Univ. and CADCIM Technologies, 2022.
- Uldis Zarins. Anatomy for sculptors and Anatomy of facial expression.
- Sarah Simblet. Anatomy for the artist.