

Course Unit	Video (Motion Capture)		Field of study	Audiovisual	
Bachelor in	Game Design		School	School of Public Management, Communication and Tourism	
Academic Year	2022/2023	Year of study	2	Level	1-2
Type	Semestral	Semester	1	ECTS credits	6.0
Code	8309-414-2105-00-22				
Workload (hours)	162	Contact hours	T -	TP 15	PL 45
			TC -	S -	E -
			OT -	O -	

T - Lectures; TP - Lectures and problem-solving; PL - Problem-solving, project or laboratory; TC - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other

Name(s) of lecturer(s) Barbara Costa Vilas Boas Barroso, Joao Victor Boechat Gomide, Matias Lopez Iglesias

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:

1. Use audiovisual production technical equipments;
2. Recognize and use shots, camera positions and camera movements;
3. Implement the lighting of a scene;
4. Assimilate the different production roles and rules and act accordingly;
5. Know and apply the stages of audiovisual production;
6. Understand motion capture workflow: technical aspects of shooting with chroma and manipulations of motion capture software.

Prerequisites

Before the course unit the learner is expected to be able to:
Demonstrate basic knowledge of screenwriting.

Course contents

Development of skills for video production: audiovisual language; production crew; techniques and aesthetics. Development of skills for motion capture: theory, history and techniques.

Course contents (extended version)

1. Video production:
 - Technologies, formats and functions of video: analog and digital; picture quality.
 - Film and video language : history of cinema; major theories.
 - Production tasks: directing; producing; camera; sound; photography directing (. . .).
 - Camera work: focus/aperture, camera positions, camera movements; framing.
 - Light design: natural; artificial; color temperatures; contrast, quality and direction.
 - Production design: set design elements; plans; costume; characterization.
 - Guidelines for directing actors.
 - Crew dynamics while shooting.
 - Analysis of audiovisual products.
 - Development of practical work.
2. Motion capture:
 - Theory and History of Motion Capture (types of techniques and materials).
 - Mathematical and physical elements for the preparation of motion capture.
 - Applying motion capture to 3D animation.
 - Development of practical work.
3. Project development.

Recommended reading

1. Asher, S. & Pincus, E. (2013). The Filmmaker's Handbook. London: Plume. ISBN: 978-0452297289
2. Barnwell, J. (2017). Production Design for Screen: Visual Storytelling in Film and Television. London: Bloomsbury Visual Arts . ISBN: 978-1472580672
3. Cook, D. A. (2016). A history of narrative film. 5th ed. New York / London: W. W. Norton & Company. ISBN: 978-0393920093
4. Rabiger, M. & Hurbis-Cherrier, M. (2012). Directing, Fifth Edition: Film Techniques and Aesthetics. Burlington, MA: Focal Press. ISBN: 978-0240818450
5. Tobon, R. (2010). The Mocap Book: A practical guide to the art of motion capture. [s/l]: Foris Force. ISBN: 9780615293066

Teaching and learning methods

Expository method - transmission of knowledge in a structured and continuous manner. Interrogative method - systematically questioning students in order to develop critical skills. Demonstrative method - followed by practical application by students. Active method - exercise solving and project development, promoting the consolidation of acquired knowledge.

Assessment methods

- DISTRIBUTED EVALUATION (Internal & Mobility) - (Regular, Student Worker) (Final, Supplementary, Special)
- Practical Work - 35% ([Mod 1] Research. Analysis. Preparation for shooting tasks. Shooting. Rough-cut. Peer-review.)
- Practical Work - 35% ([Mod 2] Exercises. Motion Capture Project.)
- Projects - 10% (Work developed within the scope of Interdisciplinary Week.)
- Projects - 20% (Capstone project between Curricular Units of the semester.)

Language of instruction

1. Portuguese
2. English

Electronic validation

Barbara Costa Vilas Boas Barroso, Joao Victor Boechat Gomide	Barbara Costa Vilas Boas Barroso	Carlos Sousa Casimiro da Costa	Luisa Margarida Barata Lopes
12-11-2022	12-11-2022	12-11-2022	14-11-2022