COURSE DESCRIPTIONS

Degree in Video Games Design

➢ First year

8199 THE VIDEO GAME INDUSTRY

TOPIC 1. DEVELOPMENT OF THE MODERN VIDEOGAME INDUSTRY

1.1 The emergence of videogames and their industrial background.
1.2 Tendencies and videogame developments of throughout the 21st c.
1.3 The videogame industry and videogame usage.

TOPIC 2. ORGANIGRAM AND WORK STRUCTURE IN VIDEOGAME STUDIES

2.1 Organization of the videogame industry.
2.2 Professional profiles.

TOPIC 3. WORK PHASES IN THE DEVELOPMENT OF A VIDEOGAME

3.1 Pre-production.
3.2 Production.
3.3 Post-production.

TOPIC 4. BUSINESS STRUCTURE (TYPES OF FIRMS AND ADMINISTRATION)

4.1 National differences and international uniformity:
- EEUU
- Asia
- Europe

4.2 The videogame industry in Spain:
- The videogame market in Spain
- The production of videogames in Spain

TOPIC 5. BUSINESS MODELS: THE VIDEOGAME INDUSTRY AND INTERACTIVE EXPERIENCES

5.1 Tools and technology.

TOPIC 6. DEVELOPERS

6.1 Triple A development.
6.2 Independent developers.
6.3 Other types of developers.

TOPIC 7. DISTRIBUTION CHANNELS

7.1 Marketing of videogames.
7.2 Platforms.
7.3 Users.

TOPIC 8. SOCIAL IMPACT OF THE VIDEOGAME INDUSTRY

8.1 The negative stereotype.
- Videogame-induced violence.
- Videogames and ludopathy (obsessive-compulsive disorder).
- Videogames from the gender perspective.
- Other problems of videogames.
8.2 Social benefits.
- Videogames that reinforce positive behaviors.
- Videogames as educational tools.
- Therapeutic uses of videogames.
- Videogames for social inclusion.

8200 PROGRAMMING FUNDAMENTALS

UNIT I. Introduction to programming.

UNIT II. Introduction to structured programming.

UNIT III. Compound data sets and algorithms.

UNIT IV. Introduction to object-oriented programming.

UNIT V. Inheritance, polymorphism and genericness.

UNIT VI. Robustness.

8201 PRINCIPLES OF DRAWING, COLOUR AND COMPOSITION

TOPIC 1. OBSERVATIONAL DRAWING. VISUAL PERCEPTION AND REPRESENTATION.

1.1 Perception of forms.
- Frame.
- Frame and composition.
- Inverted painting.
- Visual borders.

- Blind contours.
- Applied lines.
- Valuation and modulation of the line.

1.2 Spatial perception.
- Shared contours
- Segregation figure-background
- Negative spaces and positive forms

TOPIC 2. COLOR BASES

- Color SYS-topics
- The chromatic circle
- The additive and the subtractive combination
- Tone, luminosity and saturation

TOPIC 3. SYS-topics PROJECTIONS

- Types of projection
- Orthogonal cylindrical projection
- Oblique cylindrical projection
- Conical projection

TOPIC 4. ANALYSIS OF LIGHT AND SHADE. CHIAROSCURO

4.1 Light and shade.
- Own shade and projected shade

4.2 Tones and tonal values.
- Tonal simplification
- Tonal gradation
- Tonal key and tonal contrast

4.3 Shading methods.
- Dry and humid techniques.

TOPIC 5. DRAWING THE HUMAN FIGURE

5.1 Proportional relations
- The head as a unit.

5.2 Simplified structure.
- Bone structure
- Simplified muscular groups

5.3 Profiles.
- Conical perspective and visual effects
- Movement curves

5.4 The human head.
- Anatomic elements

- The graphic portrait

TOPIC 6. CHROMATIC EFFECTS

6.1 Warm colors/cold colors.
- Chromatic harmonies
- Optical illusions
6.2 Color from the psychological point of view.
- Chromotherapy
- Color and form
6.3 Meaning of color.

TOPIC 7. DIGITAL CREATION

7.1 Digital color.
7.2 Introduction to the design of people.
7.3 Concept-art.
- Character files
- Reference panel
7.4 Stereotype of character.
7.5 Graphic experimentation.
- Thumbnails
- Sketches
7.6 Solid drawing.
- Volumetric simplification
- Study of surfaces
7.7 Rendering and texturing.
- Lighting studies.
7.8 Technical representation.
- Model sheet.
- Blue-print.
- Turn around.

8202 BASIC COMPUTING SCIENCE

TOPIC 1. BASIC HISTORY AND CONCEPTS OF COMPUTING

1.1 History of computing: historic development and present-day perspectives.
1.2 Architecture of a computer.
1.3 Peripherals.

TOPIC 2. DATA REPRESENTATION

2.1. Type of datum (number, text, image, audio and video).
2.2. Datum representation.

2.3. Decimal and binary.
2.4. Representation of images, audios and videos.

TOPIC 3. INTRODUCTION TO SYS-TOPIC OPERATIONS

3.1 Basic definitions
3.2 Process management and monitoring. Batch processing. Queues. States of a Process.
3.3 Memory management. Virtual memory.
3.4 File management.
3.5 Command interface.

TOPIC 4. INTRODUCTION TO OFFICE AUTOMATION

4.1 Text processing.
4.2 Spreadsheets.
4.3 Presentations.

TOPIC 5. COMPUTER NETWORKS: INTERNET

5.1 Network hardware. Cabled networks. Wifi networks.
5.2 Definition and history of Internet.
5.3 Connection of equipment and structure of the network.
5.4 TCP/IP protocol.
5.5 Web technologies and their applications.
5.6 Topologies for videogames in red: peer-peer and client server.
5.7 Network impact: Latency, jitter and reliability.
5.8 Basic website-design notions.

TOPIC 6. INTRODUCTION OF CYBERSECURITY

6.1 Security trends.
6.2 User safety.
6.3 Program security.
6.4 Network security.
6.5 Creation and management of passwords.

8203 MATHEMATICS CONTENTS

MATHEMATICAL ELEMENTS
- Vectors, matrices and transformations.
- Random variables, probability, combinatorial.
- Graphs, trees and optimization.
- Games and strategies.

8204 MYTHS AND REFERENCES IN CONTEMPORANEAN POPULAR CULTURE

TOPIC 1. THE MYTH AND ITS SOCIAL FUNCTION
Definition and concepts. Principal characteristics of the story and mythical characters. Principal approximations to the study of the myth. Myth, stories and tales: ways of storytelling. Narrative of the myth: the voyage of the hero.

TOPIC 2. CLASSIC AND RELIGIOUS MYTHS
Approaching the most relevant stories and mythical characters from Greco-Roman culture: on unicorns, amazons and sirens. The mythical in the religious parable: prophet, savior and virgin. Evolution and development of some classic and religious myths present in contemporary audiovisual culture.

TOPIC 3. LITERATURE AS A MYTHICAL SOURCE
Mythicized literary characters. The gender of the comic and the myth of the superhero and the superheroine.

TOPIC 4. CINEMA AS A PRODUCER OF MYTHS
The myths proposed by cinema. Cinematographic genders and mythical readings of history. Gender stereotypes on the big screen. Cinema and literature: constructing transmedia myths.

TOPIC 5. CONTEMPORARY AUDIOVISUAL-MEDIA MYTHS
Hegemonic myths in contemporary society. The golden age of television used as a myth. Mythical storylines in videogames. Mythical games.

8205 NARRATIVE AND VIDEO GAMES GENRES

TOPIC 1. NARRATOLOGY AND VIDEOGAMES

- Classic narrative structure
- History and narration
- Elements of narration
- Types of leisure video narrative

TOPIC 2. THE VIDEOGAME GUIDE

- Game concept
- Characters: protagonist, antagonist and minor characters
- Dialogues and decision trees
- The introduction to the game

TOPIC 3. NARRATIVE AND GENDERS

- Basic concepts
- Gender typology

8206 CREATIVE DESIGN

TOPIC 1. WHAT IS DESIGN? DESIGN OBJECTIVES AND FUNCTIONS?

TOPIC 2. ANALYSIS OF THE BASES OF CREATIVITY

2.1 What is it to be creative?
2.2 Techniques to work creativity.
Brainstorming
2.2.1 Filtering ideas.
2.2.2 Influences.

TOPIC 3. ANALYSIS OF ESTHETICAL AND VANGUARD TRENDS. APPLICATION IN VISUAL DESIGN.

3.1 Artistic styles.
3.2 Digital art.
3.3 Visual formats in videogames.

TOPIC 4. THE DESIGN OF VIDEOGAMES AND SOCIETY: HOMO LUDENS[1]

4.1 Design for society.
4.2 Design for a public objective.
4.3 Design for a client.

TOPIC 5. CREATIVE DESIGN OF THE VIDEOGAME

5.1 Mechanics.
5.2 Distribution.

TOPIC 6. PREPARATION OF A VIDEOGAME PORTFOLIO OR PROJECT

6.1 Project planning and design.
6.2 Design portfolio and videogame development.

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[1] Homo Ludens: a Study of the Play-Element in Culture. Johan Huizinga, Beacon Press, Boston, 1995
Homo ludens : a study of the play-element in culture : Huizinga, Johan H : Free Download, Borrow, and Streaming : Internet Archive

8207 VIDEO GAMES HISTORY

TOPIC 1. START OF FIRST DEVELOPMENTS (1950s and 1960s)

TOPIC 2. FIRST COMMERCIAL DEVELOPMENTS (1970s)

2.1 Platforms, games and protagonists.

TOPIC 3. THE GOLDEN-AGE OF THE SPANISH VIDEOGAME (1980s)

3.1 Platforms, games and protagonists.

TOPIC 4. THE NEW CENTURY AND THE GENESIS OF THE MODERN VIDEOGAME INDUSTRY.

4.1 Milestones, trends and developments in the first decade of the 21st C.