

# EUROPASS DIPLOMA SUPPLEMENT

## TITLE OF THE DIPLOMA (ES)

*Técnico Superior en Animaciones 3D, Juegos y Entornos Interactivos*

## TRANSLATED TITLE OF THE DIPLOMA (EN)<sup>(1)</sup>

*Higher Technician in 3D Animations, Games and Interactive Environments*

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(1) This translation has no legal status.

## DIPLOMA DESCRIPTION

**The holder of this diploma will have acquired the General Competence with regard to:**

Generating 2D and 3D animations for audiovisual productions and developing interactive multimedia audiovisual products, integrating the elements and the sources involved in their creation and considering their relationships, dependencies and interactivity criteria, according to the defined parameters.

**Within this framework, the PROFESSIONAL MODULES and their respective LEARNING OUTCOMES acquired by the holder are listed below:**

### “Audiovisual Projects of 2D and 3D Animation”

The holder:

- Defines the final technical features of the project, analyzing and evaluating their size and defining their working parameters and the final result.
- Defines networking mode features and communication and interaction protocols necessary for the realization of an animation project, considering the human and technical resources involved in the different types of projects.
- Carries out the separation of layers and organizes the rendering effects, assessing the possibilities of parameter configuration for the final calculation of the image construction.
- Carries out the final render layers, considering the needs of process monitoring and corrective measures aimed at achieving the post material.
- Ends the image project designing the cinematic effects required by the script and analyzing possible adjustment of resources and times to the project size.

### “Design, Drawing and Modelling for Animation”

The holder:

- Designs and creates characters, scenes and props for animation, considering the use of plastics and other technological methods.
- Defines the final appearance of animation, considering the use of a number of plastic or technological means.
- Prepares storyboard and animatics (leica reel) of an animation project, analyzing the needs of action, rhythm and narrative of the project.
- Models settings, characters and final sets to perform stop motion animations, considering the appropriateness of the choice of the necessary plastic and/or virtual tools.
- Models characters, settings, props and clothing in 3D, analyzing the characteristics of the use of different types of software.

### “Animation of 2D and 3D Elements”

The holder:

- Carries out the animation and stop motion capture or pixilation, considering the possibilities of optimizing the operations and adapting them, to the technical requirements of the script.
- Prepares the character setup of 3D characters, assessing the alternatives of use of all the elements affecting the realization of the most appropriate interface design for the animation.
- Animates frames on a physical surface or computer in 2D and 3D by interpreting the script in order to obtain the required expressiveness, applying techniques of drawing and animation and analyzing the expressive characteristics.
- Carries out 3D effects, according to the script, applying the laws of physics to the virtual universe.
- Develops the layout and prepares the drawings for the animation, analyzing the characteristics of the storyboard and animatics.
- Places and moves the cameras in 2D and 3D, from the interpretation of technical scripts, storyboard and animatics, analyzing the visual narrative and the characteristics of applied optics.
- Performs motion capture and rotoscoping in 2D and 3D, valuing the use of the relevant physical and virtual tools.

### **“Colour, Lighting and Finishings in 2D and 3D”**

The holder:

- Generates UV models maps, analyzing the possibilities of using the best suited software tools for the operation.
- Defines and applies virtual materials on models, analyzing all the parameters that affect the behaviour of the surfaces and interpreting colour studies.
- Generates virtual hair, painted geometry (paint effects), 2D and 3D procedural textures and bitmaps, animating them (where applicable) and analyzing their possible settings for colour studies and project size.
- Applies colour physically or by means of a computer for stop motion, matching the colour chart and the original designs.
- Defines and breaks down the necessary lights for each scenario, analyzing the colour studies.
- Applies, modifies and animates virtual lights and their parameters in each scenario, evaluating the choice of the appropriate software tools.
- Illuminates each animated scene, enhancing defined characters and analyzing the dramatic intent.

### **“Projects of Games and Interactive Environments”**

The holder:

- Establishes the objectives, the graphic and narrative style, the specifications and system requirements for an interactive multimedia project, preparing its documentation.
- Determines technology architectures of production or development and destination or deployment (final user) of interactive multimedia audiovisual projects, relating the technical specifications to the operation and safety requirements.
- Plans and monitors interactive multimedia audiovisual projects, assessing procedures of resource time and budgets optimization.
- Defines a quality and evaluation system for interactive multimedia audiovisual projects, preparing the necessary documentation according to international standards.
- Organizes as information modules the different sources necessary for the completion of interactive multimedia audiovisual projects, analyzing the technical, narrative and aesthetic needs.

### **“Making Interactive Multimedia Projects”**

The holder:

- Creates the main interface navigation and control, assessing the applicability of ergonomic, accessibility, usability and design for all criteria in order to optimize the operation of the products.
- Generates and adapts multimedia information modules, integrating sources of still images (illustration and photography), moving image (video and animation), sound and text, relating the narrative mode of multimedia projects to the adjustment of technical and formal features of sources and information modules.
- Catalogues the multimedia sources and information modules, analyzing file standardized protocols and sources exchange and applying management tools of digital media.
- Generates the interactive elements of a multimedia project, integrating sources of animation, image, sound and text, analyzing different methods of entering the code for the correct functioning of products and using auto tools.
- Creates and synchronizes the sequence of information modules on each screen, page, level and slide of the multimedia project, assessing the different narrative modes and rhythms specified in the script.

### **“Developing Multi-device Interactive Environments”**

The holder:

- Generates interactive multimedia projects applications until its final compilation, relating the consequences of the decisions made at this stage to the possibility of further development and project updates.
- Implements multi-device multimedia projects, taking into account the technical specifications for each type of device the multimedia project it is going to be accessed with.
- Develops interactive entertainment applications, allowing interaction with 3D elements and the simultaneous participation of multiple final users.
- Implements interactive multimedia projects with communication with different external physical devices that act as information sources.
- Implements a simulation and testing environment for the review and verification of the applications made with a focus on a design for all and multi-device and multi-platform orientation, ensuring the proper operation under specified initial conditions for the project, before putting it into production.

### **“Performing Audiovisual Edition and Postproduction”**

The holder:

- Sets and maintains post-production and edition equipment, relating the characteristics of the different technical standards of quality to the operational possibilities of the equipment.
- Performs the editing/postproduction of audiovisual products, applying editing theories, codes and techniques and evaluating the correspondence between the results achieved and the project objectives.
- Generates and/or introduces image effects into the editing process, assessing the functional and the operational characteristics of the tools and the standardized technologies.

- Prepares the materials for the exchange with other platforms and external companies, recognizing the characteristics of standards and standardised protocols for exchanging documents and audiovisual products.
- Carries out the finishing processes in postproduction of audiovisual products, recognizing the characteristics of the application of quality standards to different formats of recording, distribution and exhibition.
- Adapts the characteristics of the audiovisual product master to the different formats and technologies used in the exhibition, evaluating the existing technical solutions for the protection of the rights of exploitation of the work.

#### **“Project on 3D Animations, Games and Interactive Environments”**

The holder:

- Identifies the needs of the production sector, relating them to the relevant projects that may satisfy them.
- Designs projects related to the competences described in the diploma, including and developing their constituting stages.
- Plans the project implementation, determining the intervention plan and the associated documentation.
- Defines the procedures for the monitoring and control during the project implementation, justifying the selection of variables and instruments used.

#### **“Professional Training and Guidance”**

The holder:

- Selects job opportunities, identifying the different possibilities of labour integration, and the alternatives of lifelong learning.
- Applies teamwork strategies, assessing their effectiveness and efficiency on the achievement of the company's goals.
- Exercises rights and complies with the duties derived from labour relationships, recognising them in the different job contracts.
- Determines the protective action of the Spanish Health Service in view of the different covered eventualities, identifying the different types of assistance.
- Assesses the risks derived from his/her activity, analysing job conditions and risk factors present in his/her labour setting.
- Participates in the development of a risk prevention plan in a small enterprise, identifying the responsibilities of all agents involved.
- Applies protection and prevention measures, analysing risk situations in the labour setting of the Higher Technician in 3D Animations, Games and Interactive Environments.

#### **“Business and Entrepreneurial Initiative”**

The holder:

- Recognizes the skills related to entrepreneurial initiative, analysing the requirements derived from job positions and business activities.
- Defines the opportunity of creating a small enterprise, assessing the impact on the performance setting and incorporating ethic values.
- Carries out the activities for the setting-up and implementation of a company, choosing its legal structure and identifying the associated legal obligations.
- Carries out basic administrative and financial management activities of an SME, identifying the main accounting and tax obligations and filling in documentation.

#### **“On the Job Training”**

The holder:

- Identifies the structure and organization of the company, relating them to the production and marketing of the products obtained.
- Applies ethical and work habits in the development of his/her profession, according to the characteristics of the job and company procedures.
- Participates in the design and conceptualization of an animation or multimedia project, relating its specific requirements and characteristics to the processes needed to carry out its production.
- Participates in the planning of the production process of an animation or multimedia, identifying the activities and characteristics of human teams and technical equipment involved.
- Participates in the production of an animation project doing the capture in stop motion or pixilation, computer animating frames in 2D or 3D and designing the most appropriate motion and/or rotoscoping capture system.
- Participates in the production operations of a multimedia project until the project's realisation according to the established plan.
- Defines a system of quality and assessment for the animation or multimedia project, developing the necessary documentation according to international standards.

## RANGE OF OCCUPATIONS ACCESSIBLE TO THE HOLDER OF THE DIPLOMA

The Higher Technician in 3D Animations, Games and Interactive Environments works in the field of audiovisual production (film, television and video), in 2D and 3D animation, interactive and non-interactive multimedia, as well as in advertising agencies and companies related to internet and new media.

The most relevant occupations or jobs are the following:

- 3D Animator
- 2D Animator
- Interposer
- 3D Modeller
- Digital graphic designer
- Generator of virtual spaces
- 3D special effects technician
- Integrator of audiovisual media
- Developer of multimedia audiovisual applications and products
- Editor of interactive and non-interactive multimedia audiovisual contents
- Technician in multimedia systems and production

## AWARD, ACCREDITATION AND LEVEL OF THE DIPLOMA

**Name of the body awarding the diploma on behalf of the King of Spain:** Spanish Ministry of Education or the different Autonomous Communities according to their areas of competence. The title has academic and professional validity throughout Spain.

**Official duration of the education/ training leading to the diploma:** 2000 hours.

### Level of the diploma (national or international)

- NATIONAL: Non-University Higher Education
- INTERNATIONAL:
  - Level 5 of the International Standard Classification of Education (ISCED5).
  - Level 5 of the European Qualifications Framework (EQF5).

**Entry requirements:** Holding the Certificate in Post-Compulsory Secondary Education (Bachillerato) or holding the corresponding access test.

**Access to next level of education/training:** This diploma provides access to university studies.

**Legal basis:** Basic regulation according to which the diploma is established:

- Minimum teaching requirements established by the State: Royal Decree 1583/2011, of 4 November, according to which the diploma of Higher Technician in 3D Animations, Games and Interactive Environments and its corresponding minimum teaching requirements are established.

**Explanatory note:** This document is designed to provide additional information about the specified diploma and does not have any legal status in itself.

**COURSE STRUCTURE OF THE OFFICIALLY RECOGNISED DIPLOMA**

<b>PROFESSIONAL MODULES IN THE DIPLOMA ROYAL DECREE</b>	<b>CREDITS ECTS</b>
<b>Audiovisual Projects of 2D and 3D Animation</b>	7
<b>Design, Drawing and Modelling for Animation</b>	11
<b>Animation of 2D and 3D Elements</b>	16
<b>Colour, Lighting and Finishings in 2D and 3D</b>	11
<b>Projects of Games and Interactive Environments</b>	7
<b>Making Interactive Multimedia Projects</b>	12
<b>Developing Multi-Device Interactive Environments</b>	11
<b>Performing Audiovisual Editing and Postproduction</b>	9
<b>Project on 3D Animations, Games and Interactive Environments</b>	5
<b>Professional Training and Guidance</b>	5
<b>Business and Entrepreneurial Initiative</b>	4
<b>On the Job Training</b>	22
	TOTAL CREDITS
	<b>120</b>
<b>OFFICIAL DURATION (HOURS)</b>	<b>2000</b>

\* The minimum teaching requirements shown in the table above comprise 55% official credit points valid throughout Spain. The remaining 45% corresponds to each Autonomous Community and can be described in the **Annex I** of this supplement.

## INFORMATION ON THE EDUCATION SYSTEM

