

# Postgraduate Diploma Traditional, Vector and Specialized 2D Animation





## Postgraduate Diploma Traditional, Vector and Specialized 2D Animation

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/videogames/postgraduate-diploma/postgraduate-diploma-traditional-vector-specialized-2d-animation](http://www.techtute.com/us/videogames/postgraduate-diploma/postgraduate-diploma-traditional-vector-specialized-2d-animation)

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# 01

# Introduction

Traditional 2D Animation, with its meticulous focus on each hand-drawn frame, brings a nostalgic charm and unique aesthetic to video games, evoking the handcrafted feel of classic animation. On the other hand, Vector Animation offers exceptional flexibility, allowing scalability without loss of quality and remarkable efficiency in terms of storage and performance. In addition, Specialized Animation, which includes techniques such as *rigging* and motion interpolation, provides a level of realism and expressiveness that elevates player immersion to new levels. In this way, TECH has introduced a fully digital and versatile program, allowing graduates to connect anytime, anywhere.





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*The combination of Traditional, Vector and Specialized 2D Animation will offer you a wide range of possibilities, consolidating Animation as a crucial component in the visual narrative of video games"*



Traditional 2D Animation, known for its classic artistic style, has found its place in video games, bringing a nostalgic charm and unique aesthetic to titles. On the other hand, 2D Vector Animation has gained popularity due to its versatility and efficiency in terms of storage and performance, allowing fluid and detailed movements in characters and environments. In addition, Specialized Animation raises the visual quality of video games, by introducing elements such as particles, dynamic lighting and more realistic facial expressions.

This is how this Postgraduate Diploma was born, thanks to which designers will immerse themselves in the refinement of movements through position animation, where they will create expressive silhouettes, using effective lines of action and mastering contraposes and reversals to bring characters to life. In addition, they will explore lip sync and walk cycles, delving into details such as full turns and exaggeration of movements to add dynamism and expressiveness to animations.

Professionals will also acquire specific skills in programs such as Adobe Animate and Toon Boom Harmony. From the creation of characters, to the use of lights and shading, they will master the necessary tools to produce high quality vector animations, working with bitmaps, vectors and specialized animation software.

Finally, the creation of movement cycles for non-bipedal beings, special effects such as fire, smoke and weather phenomena, and techniques to animate hair, fabric and other complex elements will be addressed. In this way, a profound immersion will be provided in the creation of fantastic and science fiction special effects, as well as in the manipulation of lighting and shadows, in order to achieve realistic and captivating results.

In this way, the academic proposal will provide a unique experience for graduates, offering them a completely virtual and adaptable format. This initiative will allow students greater autonomy in structuring their study time, making it easier for them to balance their personal and professional commitments more efficiently.

This **Postgraduate Diploma in Traditional, Vector and Specialized 2D Animation** contains the most complete and up-to-date program on the market. The most important features include:

- ♦ Practical cases presented by experts in Traditional, Vector and Specialized 2D Animation
- ♦ The graphic, schematic and practical contents with which it is conceived gather practical theoretical information on those disciplines that are essential for professional practice
- ♦ Practical exercises where the self-assessment process can be carried out to improve learning
- ♦ Its special emphasis on innovative methodologies
- ♦ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ♦ Content that is accessible from any fixed or portable device with an Internet connection



*This 100% online Postgraduate Diploma will provide you with the skills and knowledge necessary to excel in the 2D Animation industry, in all its forms and applications"*

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*You will analyze detailed concepts, such as silhouettes, action lines, contraposes, reversals, mouth movements, walk cycles and trick turns, among others, to perfect your skills in Traditional 2D Animation”*

The program's teaching staff includes professionals from the sector who contribute their work experience to this program, as well as renowned specialists from leading societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive education programmed to learn in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

*You will master tools such as Adobe Animate, Toon Boom Harmony and Story Board Pro, as well as alternative softwares such as Krita, Animation Paper, Open Toonz, Moho and Blender's Greased Pencil.*

*You will use detailed techniques to create stunning and realistic animations in a variety of situations, from action scenes to magic and science fiction effects.*



# 02 Objectives

The main objective of this Postgraduate Diploma will be to provide professionals with the technical and creative skills necessary to excel in the 2D Animation industry. The program will provide them with comprehensive education, ranging from the fundamentals of traditional animation to the most advanced techniques in vector and specialized animation. In this way, designers will be able to apply principles of design, movement and narrative in their projects, developing a deep understanding of the relevant tools and software in the field. in the field.



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*You will hone your ability to work in teams, solve problems creatively and adapt to the changing demands of the industry. What are you waiting for to enroll?"*



## General Objectives

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- ♦ Research and apply trends and technological advances in 2D animation, keeping abreast of innovations and adapting practices to industry standards
- ♦ Encourage creativity and originality in the generation of concepts, characters and plots, promoting innovation and differentiation in animated projects
- ♦ Specialize in specific areas of animation, adapting skills to different styles and genres
- ♦ Analyze and evaluate own and others' work, identifying areas for improvement and applying adjustments to optimize the final quality of animations

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*Bet on TECH! It will prepare you to access successful careers in fields such as film production, animated series, advertising, video games and visual effects”*





## Specific Objectives

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### Module 1. Advanced Traditional Animation

- ◆ Perfect the technique of position animation, ensuring smooth and coherent transitions between different poses to achieve dynamic and expressive visual sequences.
- ◆ Master the creation of walk cycles, optimizing naturalness and fluidity in basic motion animation
- ◆ Integrate complete turns seamlessly into 2D animation, addressing realistic and stylized representation of character and object rotations in different narrative contexts
- ◆ Develop advanced skills in the application of color in animation, considering palette, lighting and visual consistency.

### Module 2. Vector Animation

- ◆ Use Adobe Animate expertly, applying its tools and functions to create 2D animations with efficiency and precision.
- ◆ Deftly manipulate Toon Boom Harmony, taking advantage of its advanced features for creating and manipulating 2D animations.
- ◆ Exploit Story Board Pro's capabilities in the pre-production phase, using its tools for detailed planning of animated sequences
- ◆ Use Moho effectively, exploring its specific features for the creation and manipulation of animated characters and elements.
- ◆ Apply Blender's Greased Pencil in 2D animation, taking advantage of its tools for the creation and manipulation of strokes and visual elements.

### Module 3. Specialized Animation

- ◆ Explore and apply advanced specialized animation techniques, focusing on specific styles and genres to expand creative versatility in animated projects.
- ◆ Develop skills in the animation of fantastic creatures and beings, addressing aspects such as unique movements, behaviors and distinctive visual characteristics.
- ◆ Develop competencies in the animation of action sequences, ensuring fluidity, impact and coherence in the visual representation of fast and exciting movements.
- ◆ Apply specific animation techniques for video games, adapting the visual narrative and character movements to the dynamics and constraints of interactive animation.

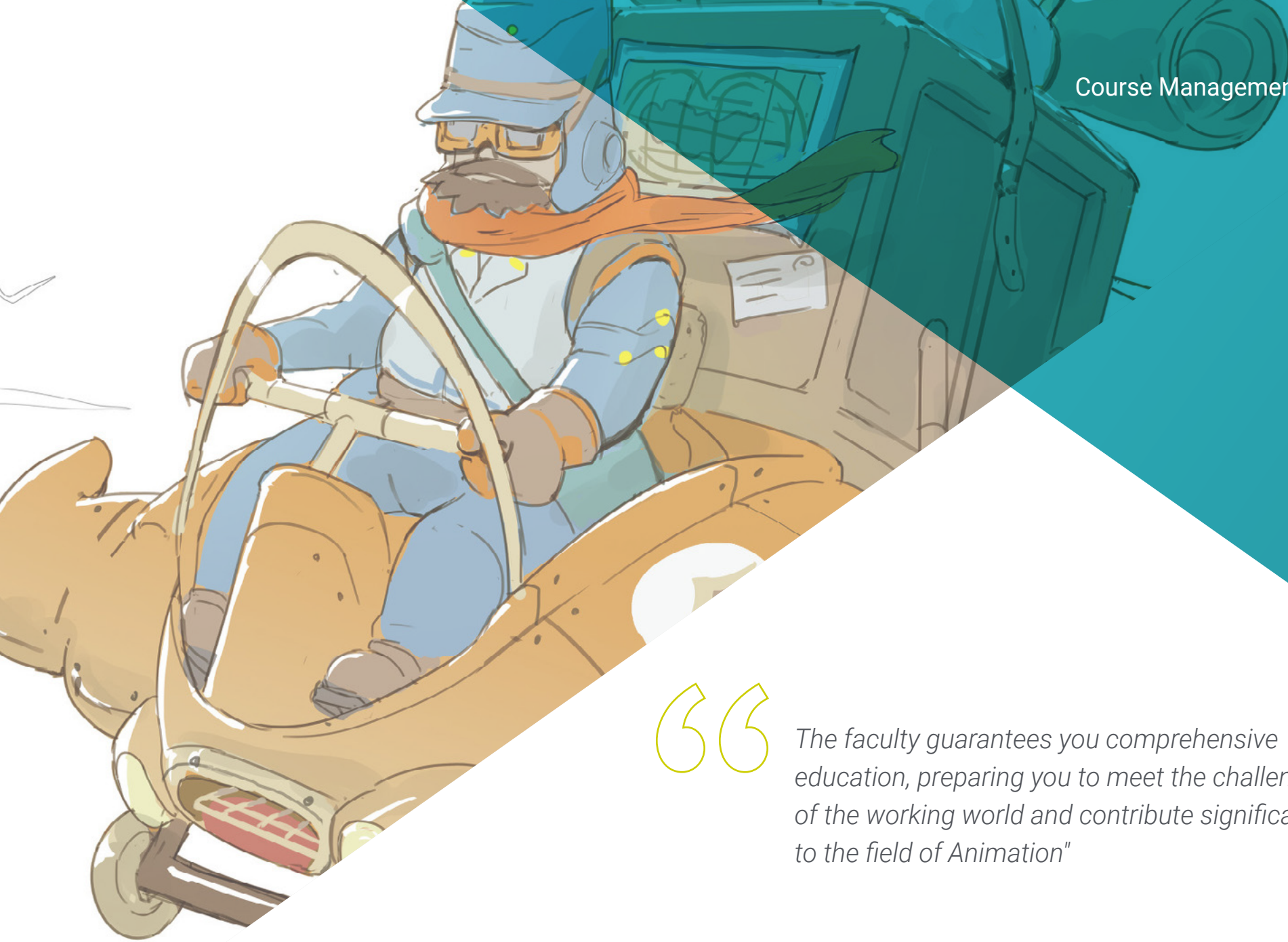
# 03

# Course Management

The teachers, carefully selected by TECH, are highly qualified and experienced professionals in the field of Animation. With a combination of practical experience and theoretical knowledge, these educators will be dedicated to guiding graduates through a rigorous syllabus, which will cover all aspects of 2D Animation. In addition to imparting technical skills, teachers will encourage creativity, critical thinking and problem solving to help each student reach their full potential.







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*The faculty guarantees you comprehensive education, preparing you to meet the challenges of the working world and contribute significantly to the field of Animation”*



## Management



### Dr. Larrauri, Julián

- ♦ Television and Film Director
- ♦ Executive Producer at Capitán Araña
- ♦ Managing Producer at Arcadia Motion Pictures
- ♦ Head of Production, Director and Writer at B-Water
- ♦ Executive Producer, Production Manager and Head of Development at Ilion Animation Studios
- ♦ Production Manager at Imira Entertainment
- ♦ Ph.D. in Humanities from Rey Juan Carlos University
- ♦ Professional Master's Degree in Executive Production of Films and Series by Audiovisual Business School
- ♦ Professional Master's Degree in Communication and Advertising Management by ESIC
- ♦ Degree in Audiovisual Communication from the Complutense University of Madrid
- ♦ Nominated as "Best Production Director" at the Goya Awards for "Mortadelo y Filemón contra Jimmy el Cachondo"

## Professors

### Mr. Coronado Pozo, Jorge

- Character Animation Specialist
- Animation Supervisor at Dreamwall
- Lead Character Animator/Layout Artist at Arcadia Motion Pictures
- Senior Character Animator in several projects
- Character Animator (2D/3D) at several companies
- Storyboard and layout for television
- Video game animator



*Take the opportunity to learn about the latest advances in this field in order to apply it to your daily practice"*

# 04

## Structure and Content

The syllabus will cover a wide range of content to develop technical and creative skills in the field of 2D Animation. From the fundamentals of Traditional Animation, where principles such as anticipation, overshoot and acceleration will be analyzed, to advanced Vector Animation, including the use of specialized software such as Adobe Animate and Toon Boom Harmony. In this way, graduates will acquire in-depth knowledge of character creation, fluid movements and visually stunning narratives.





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*You will address specialized aspects, such as visual effects, lip-syncing, weather animation and lighting techniques, through an extensive library of the most innovative multimedia resources”*

## Module 1. Advanced Traditional Animation

- 1.1. Position Animation
  - 1.1.1. Silhouette
  - 1.1.2. Lines of Action
  - 1.1.3. Counterposes and Reversals
- 1.2. Lip Synchronization
  - 1.2.1. Mouth Movements
  - 1.2.2. Vocalization Interleaving and Mouth Performance
  - 1.2.3. Digitally Automated Synchronization
- 1.3. Walking Cycles
  - 1.3.1. Contacts and Position Changes
  - 1.3.2. Walk Cycle Position Changes
  - 1.3.3. Cycling a Linear Walk and Cycles in Animate and Toon Boom
- 1.4. Walks, Running Cycles and Alternate Cycles
  - 1.4.1. Walks
  - 1.4.2. Races
  - 1.4.3. Alternative Cycles
- 1.5. Complete Turns
  - 1.5.1. Of the Head
  - 1.5.2. Complete and Object
  - 1.5.3. Truncated Turns
- 1.6. Exaggerate and Calm Down
  - 1.6.1. Exaggerate
  - 1.6.2. Calm Down
  - 1.6.3. Bounce
- 1.7. Rotoscopy, Reference and Documentation
  - 1.7.1. Rotoscopy
  - 1.7.2. Video Reference
  - 1.7.3. Integration with Live Action
- 1.8. Sweeps, Multiples and Blurs
  - 1.8.1. Sweeps
  - 1.8.2. Multiples
  - 1.8.3. Blurs







- 1.9. Clean Strokes and Assistance
  - 1.9.1. Assistance
  - 1.9.2. Interleaving
  - 1.9.3. Cleaning of Strokes
- 1.10. Color Application
  - 1.10.1. Shading as a Second Level of Animation
  - 1.10.2. Shadow Casting
  - 1.10.3. Digital Automation of Color and Shadows using Toon Boom

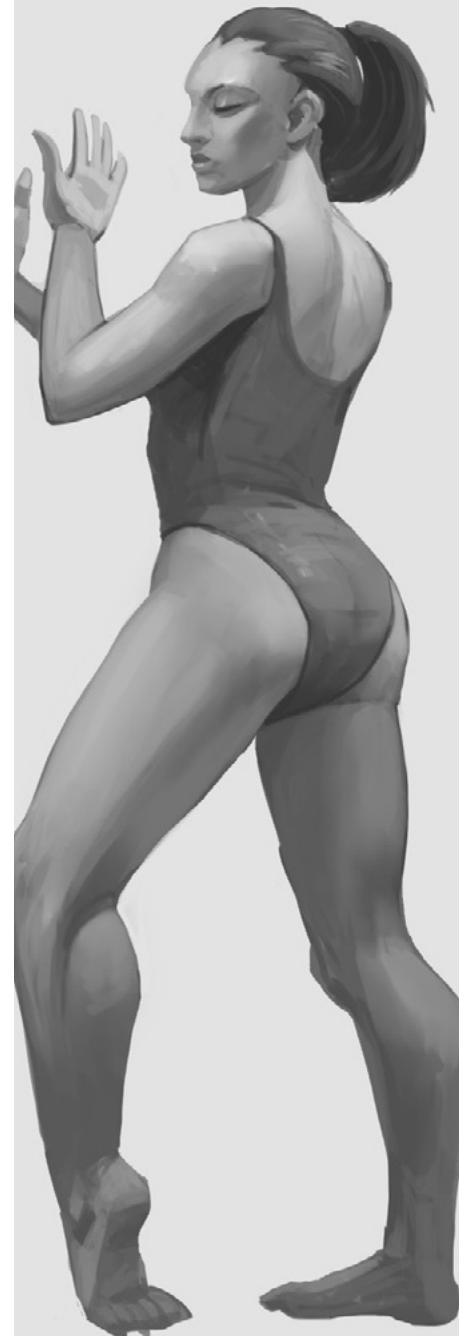
## Module 2. Vector Animation

- 2.1. Bitmaps and Vectors
  - 2.1.1. Bits Map
  - 2.1.2. Vector Drawing
  - 2.1.3. Comparatives and Applications
- 2.2. Use Adobe Animate
  - 2.2.1. Symbols, Graphics and Movie ClipTool
  - 2.2.2. Motion Interpolation and Semi-Three-Dimensional Motion
  - 2.2.3. Shape Interpolation and Virtual Camera
- 2.3. Use of Toon Boom Harmony
  - 2.3.1. Libraries
  - 2.3.2. Bones and Deformers
  - 2.3.3. Auto Color
- 2.4. Preparing a Character for Adobe Animate
  - 2.4.1. Separation of Elements and Layout
  - 2.4.2. Internal Key Strokes
  - 2.4.3. Character Construction
- 2.5. Preparation of a Character for Toon Boom Harmony
  - 2.5.1. Layout
  - 2.5.2. Bones and Digital Control
  - 2.5.3. Adjustments
- 2.6. Lights and Shading in Toon Boom Harmony
  - 2.6.1. Set Volumes
  - 2.6.2. Virtual Lights and Camera
  - 2.6.3. Shadow Casting

- 2.7. Using Story Board Pro
  - 2.7.1. Interface
  - 2.7.2. Timeline
  - 2.7.3. Digital Edition
- 2.8. Alternative Software
  - 2.8.1. Krita
  - 2.8.2. Animation Paper
  - 2.8.3. Open Toonz- Anime
- 2.9. Use of Mold
  - 2.9.1. Explore the Interface
  - 2.9.2. Smart Warp Tool
  - 2.9.3. Smart Bones and Pin Bones Tools
- 2.10. Using Blender's Greased Pencil
  - 2.10.1. Software Recognition
  - 2.10.2. Drivers and Additional Features
  - 2.10.3. Automated Lip Synchronization

### Module 3. Specialized Animation

- 3.1. Walking Cycles of Non-bipedal Beings
  - 3.1.1. Quadrupeds
  - 3.1.2. Other Non-plantigrade Animals
  - 3.1.3. Alternative Locomotion Cycles
- 3.2. Additional Practical Movements
  - 3.2.1. Flight Cycles
  - 3.2.2. Ladders, Weight Lifting, Drops
  - 3.2.3. Bumping, Interactions, Dancing
- 3.3. Special Effects, Fluids
  - 3.3.1. Small Bodies of Water
  - 3.3.2. Large Bodies of Water
  - 3.3.3. Viscous Fluids



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- 3.4. Special Effects, Fire and Smoke
  - 3.4.1. Fire
  - 3.4.2. Smoke
  - 3.4.3. Fires, Flares and Lava
- 3.5. Animation of Weather and Climate Phenomena
  - 3.5.1. Rain, Thunderstorms and Lightning
  - 3.5.2. Snow and Wind
  - 3.5.3. Refractions
- 3.6. Fantastic and Science Fiction Special Effects Animation
  - 3.6.1. Magic Effects
  - 3.6.2. Emphatic Effects
  - 3.6.3. Science Fiction Effects
- 3.7. Hair and Cloth Animation
  - 3.7.1. Hair
  - 3.7.2. Cloth
  - 3.7.3. Paper, Ropes and Others
- 3.8. Explosions, Falls and Breaks
  - 3.8.1. Landslides
  - 3.8.2. Explosions
  - 3.8.3. Breaks
- 3.9. Lighting Effects and Shadow Casting
  - 3.9.1. Shadows on the Figure
  - 3.9.2. Lighting Effects
  - 3.9.3. Projection of Shadows and Digitally Automated Shadows
- 3.10. Image Transitions and Transformations
  - 3.10.1. Image Transitions
  - 3.10.2. Extreme Deformations
  - 3.10.3. Orbits



# 05

# Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.







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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*



## Case Study to contextualize all content

Our program offers a revolutionary approach to developing skills and knowledge. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

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*At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world”*



*You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.*



*The student will learn to solve complex situations in real business environments through collaborative activities and real cases.*

### A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and professional reality is taken into account.

“*Our program prepares you to face new challenges in uncertain environments and achieve success in your career”*

The case method has been the most widely used learning system among the world's leading business schools for as long as they have existed. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question that you are presented with in the case method, an action-oriented learning method. Over the course of 4 years, you will be presented with multiple practical case studies. You will have to combine all your knowledge, and research, argue, and defend your ideas and decisions.

## Relearning Methodology

TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

*In 2019, we obtained the best learning results of all online universities in the world.*

At TECH you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Relearning.

Our university is the only one in the world authorized to employ this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best online university indicators.





In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

This methodology has trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, and financial markets and instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

*Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.*

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.



This program offers the best educational material, prepared with professionals in mind:



### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



### Practising Skills and Abilities

They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization we live in.



### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.







#### Case Studies

Students will complete a selection of the best case studies chosen specifically for this program. Cases that are presented, analyzed, and supervised by the best specialists in the world.



#### Interactive Summaries

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



# 06 Certificate

The Postgraduate Diploma in Traditional, Vector and Specialized 2D Animation guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Global University.



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*Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork”*



This program will allow you to obtain your **Postgraduate Diploma in Traditional, Vector and Specialized 2D Animation** endorsed by **TECH Global University**, the world's largest online university.

**TECH Global University** is an official European University publicly recognized by the Government of Andorra ([official bulletin](#)). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Traditional, Vector and Specialized 2D Animation**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**



\*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.





**Postgraduate Diploma**  
Traditional, Vector and  
Specialized 2D Animation

- » Modality: **online**
- » Duration: **6 months**
- » Certificate: **TECH Global University**
- » Credits: **18 ECTS**
- » Schedule: **at your own pace**
- » Exams: **online**

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