Postgraduate Diploma
3D Creature Modeling

tech *technological university*

Postgraduate Diploma
3D Creature Modeling

- » Modality: **online**
- » Duration: **6 months**
- » Certificate: **TECH Technological University**
- » Dedication: **16h/week**
- » Schedule: **at your own pace**
- » Exams: **online**

Website: **www.techtitute.com/in/information-technology/postgraduate-diploma/postgraduate-diploma-3d-creature-modeling**

Index

01
Introduction

It's not all about human characters in the 3D modeling industry. It is common to find artists who are pigeonholed into a single theme and find it difficult to get out of that comfort zone. Therefore, the purpose of this 100% online qualification is for the student to be able to create anything that comes to mind, from a T-Rex to a dragon and even a lion. In addition to the mixture of this and the creation of fantastic creatures that come out of your own imagination, the more things you know how to do, the more doors you will have to choose from.

In the dizzying technological revolution in which we live, this Postgraduate Diploma is a differentiating factor that will make you more competitive"

This Postgraduate Diploma will provide the student with the necessary updating of skills in a constantly evolving environment. In this way, the necessary knowledge is given to be able to face the supervision and technical direction and therefore be able to become an expert computer scientist in 3D creatures in film, advertising and video game companies.

A good presentation speaks a lot about the person as an artist, so this program will teach the student to refine the composition of color and light, as well as the forms and elements that enhance their work. You will learn in depth concepts of photography to learn how to sell your models in the best way and you will delve into the development of a Rig in Maya for the subsequent animation of the model.

The graduate will also learn to master *Blender* software, which is being implemented more and more in the industry. Therefore, whether for a personal or indie production, or for a large production that implements this software in its workflow, the student must be up to date and prepared for any situation with the latest software on the market.

Additionally, as it is an online program, students are not conditioned by fixed schedules or the need to move to another physical location. You will have access to a rich content that will help you reach the 3D modeling elite at any time of the day, balancing, at your own pace, your work and personal life with your academic life.

This **Postgraduate Diploma in 3D Creature Modeling** contains the most complete and up-to-date educational program on the market. Its most notable features are:

- ◆ The development of practical cases presented by experts in 3D creatures modeling
- ◆ The graphic, schematic, and practical contents with which they are created, provide practical information on the 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 qualification is based on an extensive compilation of industry experience and different opinions from professionals"

"A good presentation speaks a lot about the person as an artist, learn to refine the composition of color and light, forms and elements that enhance their work"

Whether for a personal or indie production, or for a large production, implement Blender in your workflow.

You will be able to create anything that comes to your mind, from a T-Rex to a dragon and even a lion.

The program's teaching staff includes professionals from sector who contribute their work experience to this educational 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.

The design of this program focuses on Problem-Based Learning, by means of which the professional must try to solve the different situations of professional practice that may arise throughout the academic course. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

02
Objectives

The design of the program of this Postgraduate Diploma will allow the graduate to expand their knowledge in animal anatomy in order to develop hyper-realistic creatures, delving into *Grooming* and how to apply it to animals with *XGen*. All this, observing the control and use of the *Rendering* of the model, bringing out all its details.

You will become a computer 3D artist and a great digital sculptor who can freelance"

General Objectives

- Expand knowledge of human and animal anatomy in order to develop hyper-realistic creatures
- Master the retopology, UVS and texturing to perfect the models created
- Create an optimal and dynamic workflow to work more efficiently with 3D modeling
- Have the skills and knowledge most in demand in the 3D industry to be able to apply for the best jobs

You will get the practical training necessary for the creation of organic digital characters for any digital animation, advertising or video game project"

Specific Objectives

Module 1. Creature Modeling
- Learn the modeling of different types of animal anatomy
- Review the different types of reptiles and how to create scales with Displacement and Alphas maps
- Investigate how to export models to Mari for realistic texturing
- Learn more about Grooming and how to Groom animals with XGen
- Render models in Arnold Render in Maya

Module 2. Rendering, Lighting and Posing of Models
- Discover advanced lighting and photography concepts to sell models more efficiently
- Develop the learning of model posing by means of different techniques.
- Delve into the development of a rig in Maya for the subsequent possible animation of the model
- Observe the control and use of the Rendering of the model, bringing out all its details

Module 3 Blender: a new twist in the industry
- Be able to perform excellently in the software.
- Transfer knowledge of Maya and ZBrush to Blender to create amazing models
- Delve into Blender's node system to create different shaders and materials
- Render Blender practice models with the two types of render engines Eevee and Cycles

Course Management

TECH has selected teachers who have extensive experience in different types of design work for both the video game industry and for animation and scene creation in various projects. Thanks to this professional experience, the student benefits from studying a theory adapted to the realities of today's market, mastering the aspects most in demand by companies and that are not taught in traditional computer science faculties.

"

Industry professionals will teach you how to create never-before-seen fantastical creatures"

Management

Ms. Gómez Sanz, Carla

* 3D Generalist at Blue Pixel 3D
* Concept Artist, 3D Modeler, Shading in Timeless Games Inc
* Collaboration with multinational consulting firm for the design of vignettes and animation for commercial proposals
* Advanced Technician in 3D Animation, video games and interactive environments at CEV School of Communication, Image and Sound
* Master's Degree and Bachelor's Degree in 3D Art, Animation and Visual Effects for video games and cinema at CEV School of Communication, Image and Sound.

04

Structure and Content

The syllabus has been designed based on the requirements of computer science applied to the specificity of the organic 3D Creature Modeling sector, therefore bringing together a study plan whose modules offer a broad perspective of anatomy, repotology and Maya Modeling, as well as UVS and texturing with Allegorithmic Substance Painter and Mari.

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Many artists get pigeonholed into a single theme and find it hard to get out of that comfort zone. This Postgraduate Diploma wants you to be able to create anything that comes into your mind"

Module 1. Creature Modeling

1.1.   Understanding Animal Anatomy
    1.1.1.   Study of the Bones
    1.1.2.   Proportions of an Animal Head
    1.1.3.   Anatomic Differences
1.2.   Anatomy of the Skull
    1.2.1.   Animal Face
    1.2.2.   Muscles of the Head
    1.2.3.   Skin Layer, Over Bones and Muscles
1.3.   Anatomy of the Spine and Thoracic Cage
    1.3.1.   Animal Torso and Hip Musculature
    1.3.2.   Central Axis of its Body
    1.3.3.   Creation of Torsos in Different Animals
1.4.   Animal Musculature
    1.4.1.   Muscle
    1.4.2.   Synergy Between Muscles and Bones
    1.4.3.   Shapes of an Animal Body
1.5.   Reptiles and Amphibians
    1.5.1.   Reptilian Skin
    1.5.2.   Small Bones and Ligaments
    1.5.3.   Fine Detail

1.6.   Mammals
    1.6.1.   Fur
    1.6.2.   Larger, Stronger Bones and Ligaments
    1.6.3.   Fine Detail
1.7.   Animals with Feathers
    1.7.1.   Plumage
    1.7.2.   Elastic and Light Bones and Ligaments
    1.7.3.   Fine Detail
1.8.   Analysis of the Jaw and Creation of Teeth
    1.8.1.   Animal Specific Teeth
    1.8.2.   Detailing of Teeth
    1.8.3.   Teeth in the Jaw Cavity
1.9.   Creation of Fur, Fur for Animals
    1.9.1.   XGen in Maya: Grooming
    1.9.2.   XGen: Feathers
    1.9.3.   Render
1.10.   Fantastic Animals
    1.10.1.   Fantastic Animal
    1.10.2.   Complete Modeling of the Animal
    1.10.3.   Texturing, Lighting and Rendering
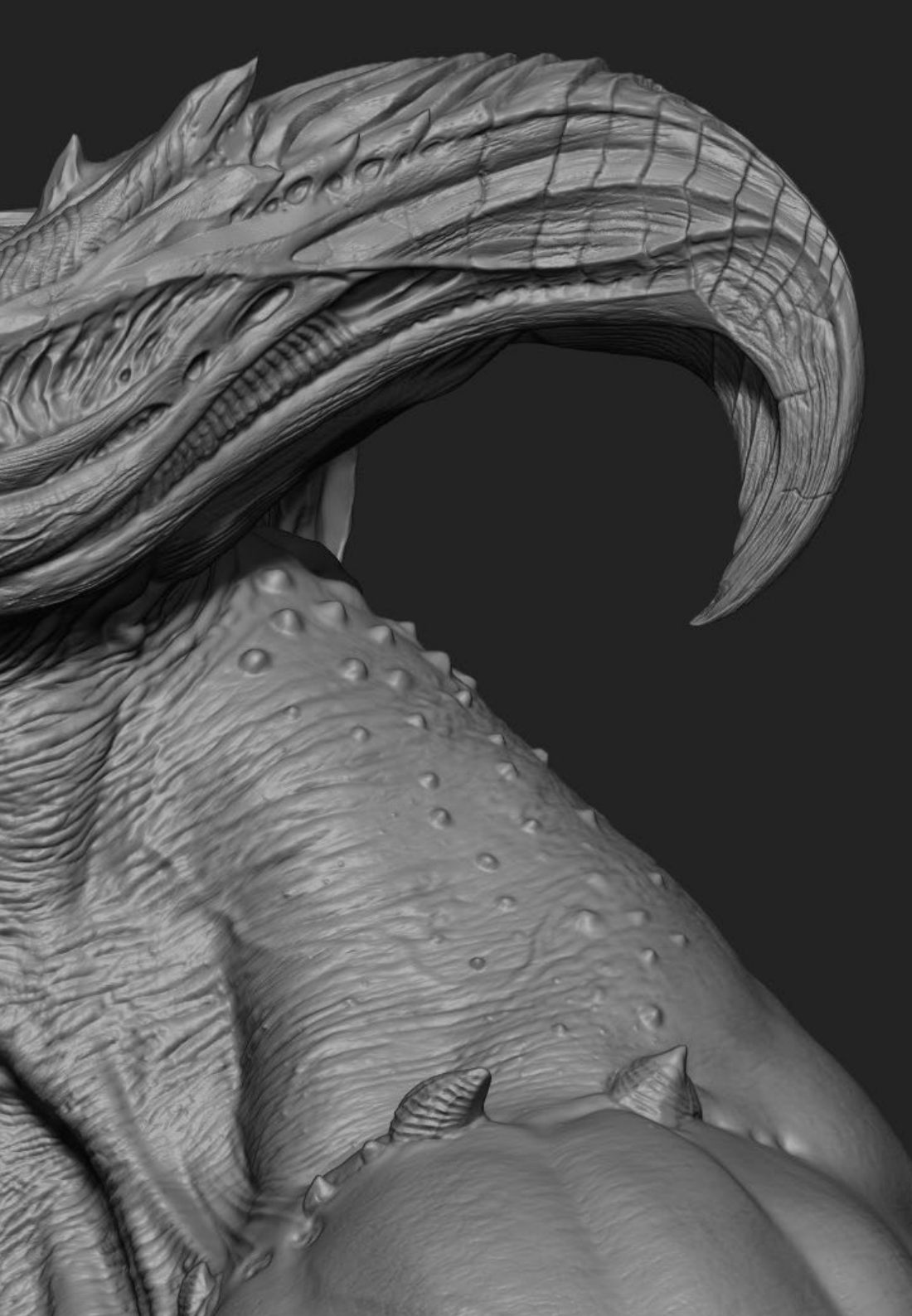
Module 2. Rendering, Lighting and Posing of Models

2.1.   Characters Posing in ZBrush
    2.1.1.   Rig in ZBrush with ZSpheres
    2.1.2.   Transpose Master
    2.1.3.   Professional Finish
2.2.   Rigging and Weighting of our Own Skeleton in Maya
    2.2.1.   Rig in Maya
    2.2.2.   Rigging Tools with Advanced Skeleton
    2.2.3.   Rig Weighting
2.3.   Blend Shapes to Give Life to Your Character's Face
    2.3.1.   Facial Expressions
    2.3.2.   Blend Shapes of Maya
    2.3.3.   Animation with Maya
2.4.   Mixamo, a Quick Way to Present Our Model
    2.4.1.   Mixamo
    2.4.2.   Mixamo Rigs
    2.4.3.   Animations
2.5.   Lighting Concepts
    2.5.1.   Lighting Techniques
    2.5.2.   Light and Color
    2.5.3.   Shade

2.6.   Arnold Render Lights and Parameters
    2.6.1.   Lights with Arnold and Maya
    2.6.2.   Lighting Control and Parameters
    2.6.3.   Arnold Parameters and Configuration
2.7.   Lighting of our Models in Maya with Arnold Render
    2.7.1.   Lighting Set Up
    2.7.2.   Model Lighting
    2.7.3.   Mixing Light and Color
2.8.   Going Deeper in Arnold: Denoising and the Different AOV's
    2.8.1.   AOVs
    2.8.2.   Advanced Noise Treatment
    2.8.3.   Denoiser
2.9.   Real-Time Rendering in Marmoset Toolbag
    2.9.1.   Real-Time vs. Ray Tracing
    2.9.2.   Advanced Marmoset Toolbag
    2.9.3.   Professional Presentation
2.10.   Post-Production Rendering in Photoshop
    2.10.1.   Image Processing
    2.10.2.   Photoshop: Levels and Contrasts
    2.10.3.   Layers: Characteristics and their Effects

Module 3. Blender: a New Twist in the Industry

"The more things you know how to do, the more doors you will have to choose from tomorrow"

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.

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.

"

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.

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 Information Technology 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. Throughout the course, students will be presented with multiple real cases. They will have to combine all their knowledge and research, and argue and defend their ideas and decisions.

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

Relearning Methodology

TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 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.

01 learning from evidence

02 relearning from evidence

03 testing

04 learning from an expert

05 neurocognitive context dependent learning

06 Von-Restorff effect

07 case based learning through storytelling

08 competencies testing (retesting)

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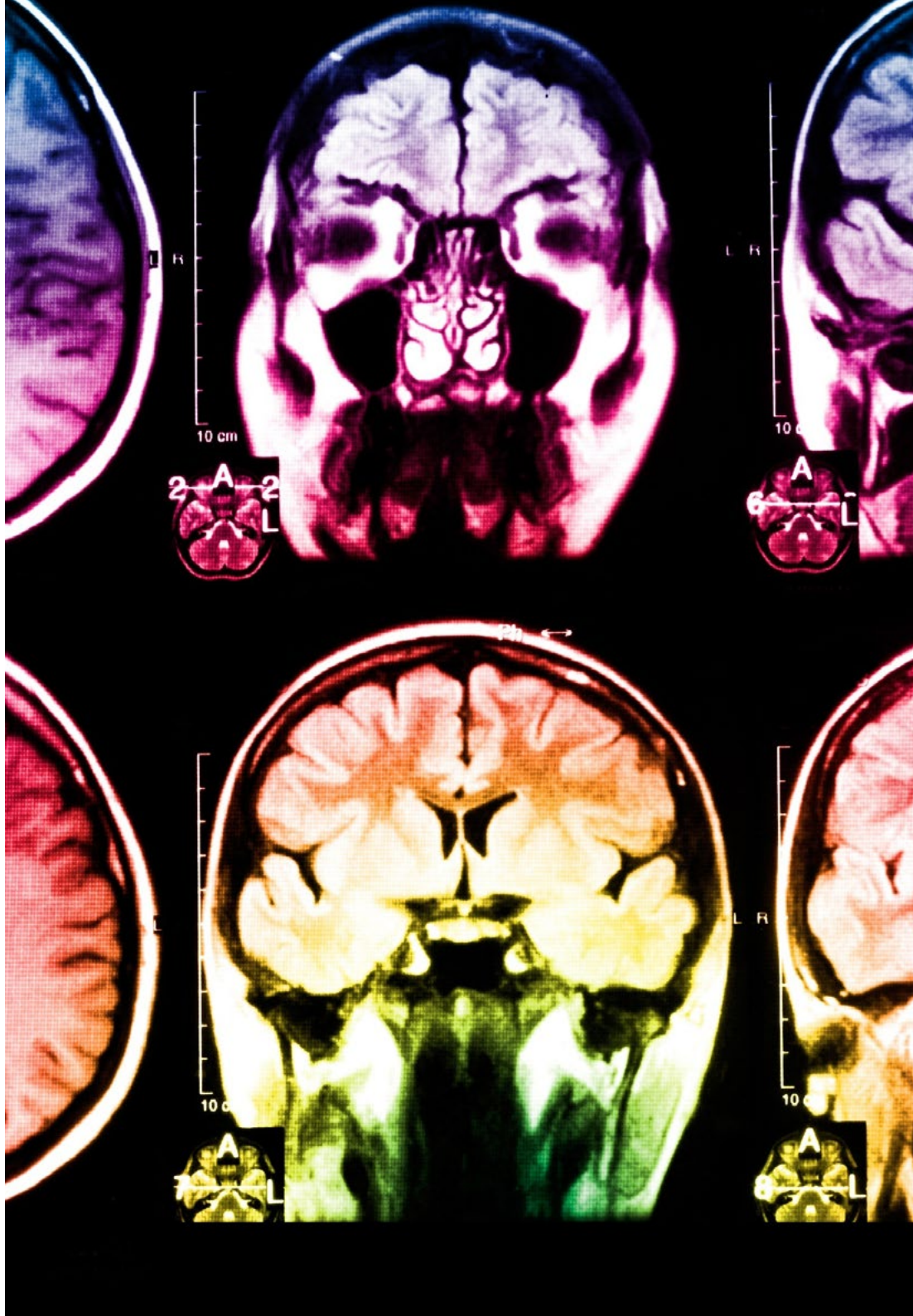
This program offers the best educational material, prepared with professionals in mind:

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 adapted in 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 competencies and skills in each thematic area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.

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.

30%

10%

8%

20%

25%

4%

3%
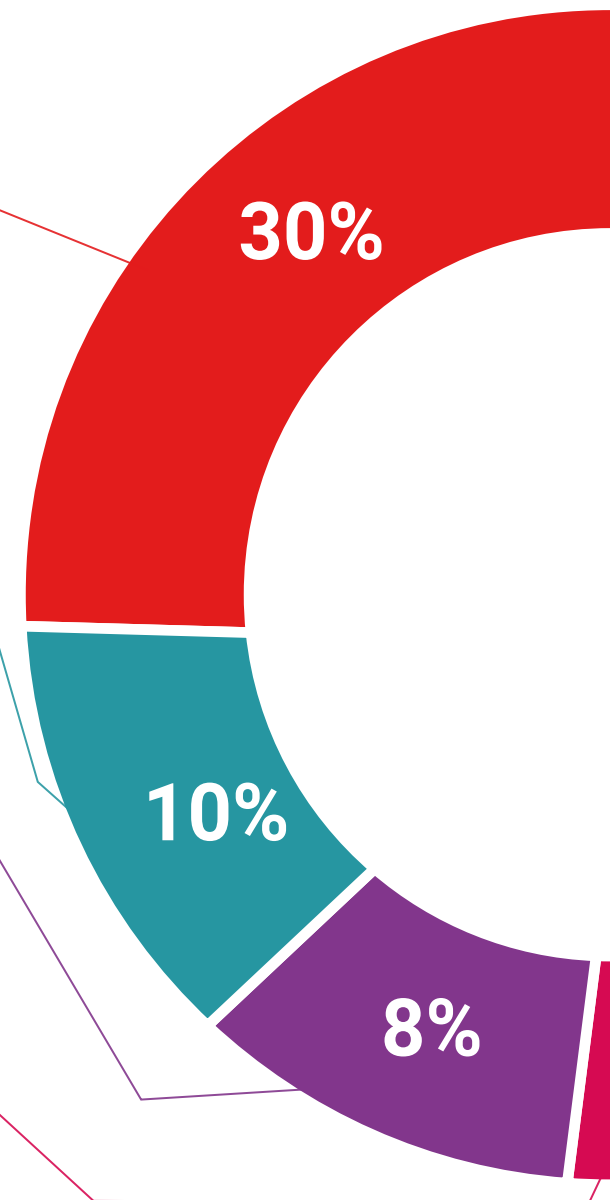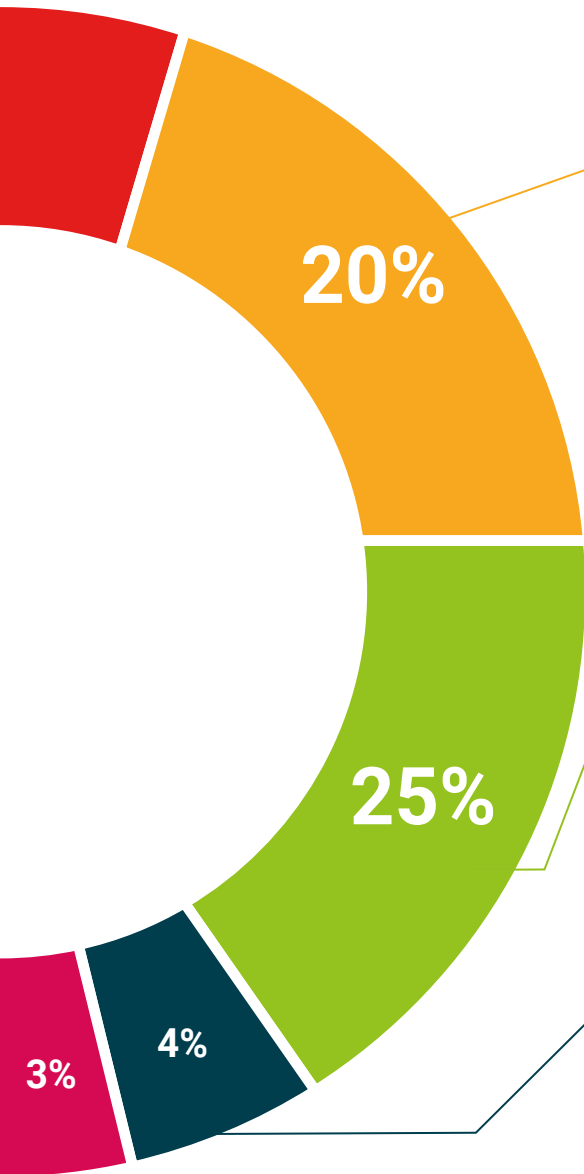
Case Studies

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.

Certificate

The Postgraduate Diploma in 3D Creature Modeling guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Technological University.

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

This **Postgraduate Diploma in 3D Creature Modeling** contains the most complete and up-to-date educational program on the market.

After the student has passed the assessments, they will receive their corresponding Postgraduate Diploma issued by **TECH Technological University** via tracked delivery*.

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Diploma, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Diploma in 3D Creature Modeling**

Official Nº of Hours: **450 h.**

tech technological university

Awards the following

CERTIFICATE
to

Mr./Ms. _____, with identification number _____.
For having passed and accredited the following program

POSTGRADUATE DIPLOMA
in

3D Creature Modeling

This is a qualification awarded by this University, equivalent to 450 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
Dean

Unique TECH Code: AFWORD23S   techtitute.com/certificates

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

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