Advanced Master's Degree
Integral 3D Modeling

tech technological university

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Advanced Master's Degree
Integral 3D Modeling

- Modality: **online**
- Duration: **2 years**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Website: www.techtitute.com/us/information-technology/advanced-master-degree/advanced-master-degree-integral-3d-modeling

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01

Introduction

In a world in constant technological evolution, 3D Modeling is a highly valued skill in the workplace of computer science and design. That's why, the market calls for more and more specialized professionals in this field. In this sense, TECH has created a 100% online course that will lead students to enhance their skills and knowledge in areas such as texturing with Allegorithmic Substance Painter and Mari, 3D modeling with Graphite Tool, VRay-powered rendering in 3DS Max and technical modeling in Rhino, among others. All of the above with an accessible teaching material and a flexible pedagogy, fully compatible with the daily responsibilities of each graduate.

An Advanced Master's Degree in Integral 3D Modeling 100% online with 3,000 teaching hours of quality learning"

In an increasingly digital world, 3D Modeling has become a fundamental skill for any IT professional who wants to excel in the field of design. A creative process that allows the creation of objects and characters in three dimensions, offering more realistic and attractive productions for the public. A technique that is widely used in film production, advertising, video games, architecture or engineering.

In this scenario, computer scientists have a wide range of possibilities to grow in various sectors of great relevance before them. To promote this goal, TECH provides this Advanced Master's Degree in Integral 3D Modeling in a 100% online educational format and only 24 months long.

A program with a theoretical-practical approach, which will take students to delve into the key areas of organic modeling, texture modeling and hardsurface modeling. To do this, graduates will delve into the use of tools such as ZBrush, Substance Painter, Blender, 3DS Max, Unreal and Marmoset Toolbag. Likewise, students will have the opportunity to investigate specific topics, such as texturing with Allegorithmic Substance Painter and Mari, 3D modeling with Graphite Tool and UV preparation for UDIM systems focused on large production models.

All of the above with a system that allows the graduate to reduce the long hours study and memorization. With Relearning method, based on repetition of key content, the graduate will consolidate the main concepts in an agile way.

An excellent educational option for those who wish to improve in 3D Modeling and boost their career path through flexible teaching. The graduate only needs a digital device with an Internet connection to view the content of this avant-garde program at any time.

This **Advanced Master's Degree in Integral 3D Modeling** contains the most complete and up-to-date program on the market. The most important features include:

- The development of practical cases presented by experts in 3D Modeling
- The graphic, schematic, and practical contents with which they are created, that provide scientific and 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
- Special emphasis on innovative methodologies in 3D Modeling
- Theoretical lessons, questions for experts, discussion forums on controversial issues and individual reflection work
- Content that is accessible from any fixed or portable device with an Internet connection

Get ready to become a comprehensive expert in 3D Modeling, using the latest techniques and tools in the industry"

Develop your skills in organic, texture and hardsurface modeling with ZBrush, Substance Painter, Blender, 3DS Max, Unreal and Marmoset Toolbag"

Make the most of the flexibility and comfort of studying 100% online, adapting your studies to your pace and personal needs.

Apply this program's teachings in projects from various sectors, from television, design to engineering.

Its teaching staff includes professionals belonging to the field of 3D Modeling, who pour the experience of their work into this program as well as recognized specialists from leading societies and prestigious universities.

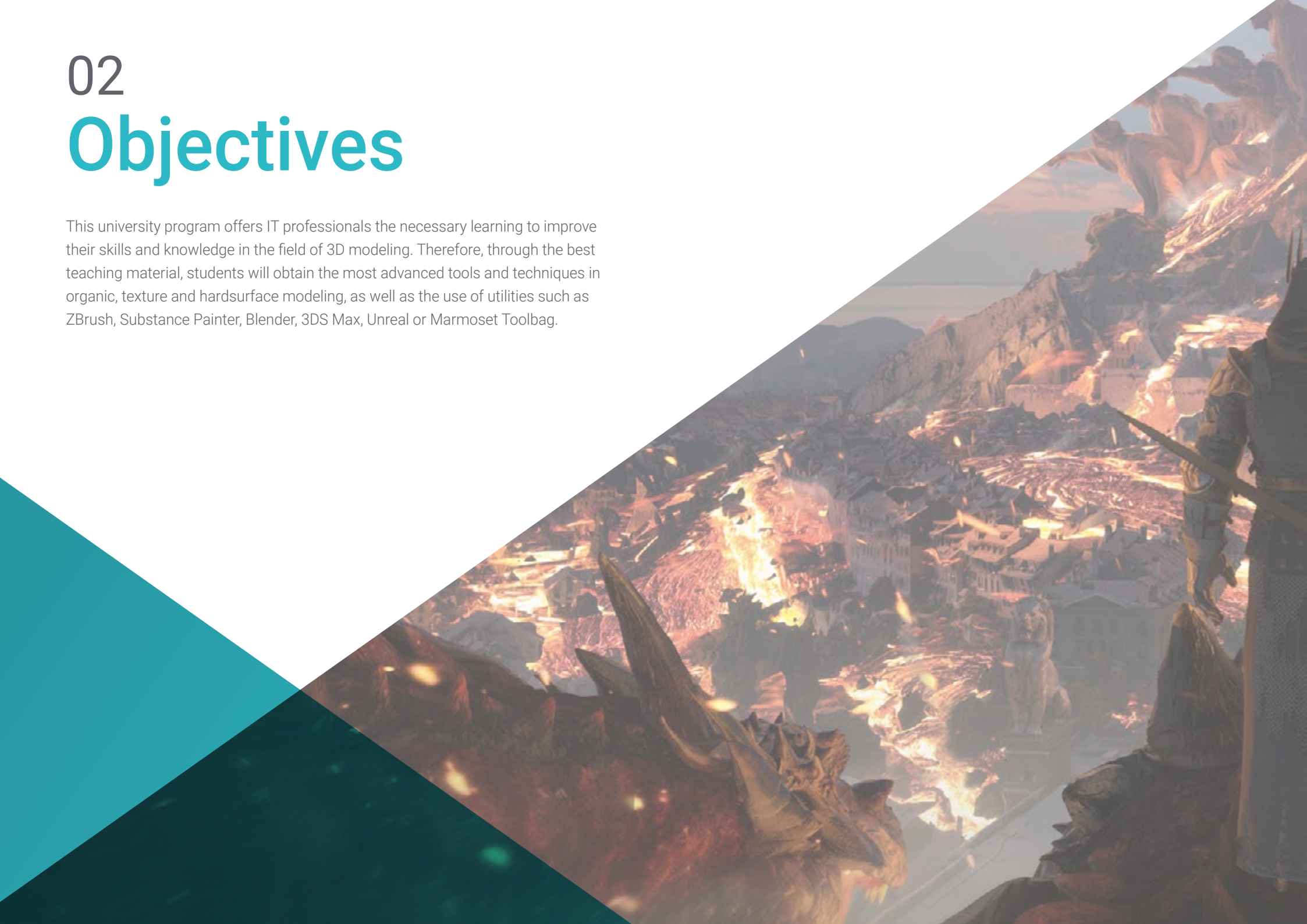
The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide an immersive learning experience designed to prepare for real-life situations.

This program is designed around Problem-Based Learning, whereby the student must try to solve the different professional practice situations that arise throughout the program. For this purpose, the professional will be assisted by an innovative system of interactive videos made by renowned experts.

02

Objectives

This university program offers IT professionals the necessary learning to improve their skills and knowledge in the field of 3D modeling. Therefore, through the best teaching material, students will obtain the most advanced tools and techniques in organic, texture and hardsurface modeling, as well as the use of utilities such as ZBrush, Substance Painter, Blender, 3DS Max, Unreal or Marmoset Toolbag.



Acquire skills and knowledge directly applicable to the work environment, preparing you to access the best professional opportunities in the 3D Modeling sector"

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
- Know all the steps to create a professional 3D modeling in depth
- Know and understand how textures work and how they influence on the modeling in detail
- Master several programs focused on modeling, texturing and real time used today in the professional world
- Apply the knowledge acquired in solving modeling problems
- Know how to organize and control the time spent on a complete 3D modeling, learning to value their work for possible jobs
- Know the latest updates in the world of modeling and video games, learning from the most up-to-date and used tools of each program
- Expertly use the knowledge acquired to create your own projects and intelligently add them to your portfolio

- Develop the resources of each program to achieve the best effect for your modeling
- Be professionally qualified to organize adequate working time for a job
- Solve complex problems and make responsible decisions
- Learn in depth the different types of hardsurface modeling, the different concepts and features to apply them in the 3D modeling industry
- Delve into the theory of shape creation in order to develop Shape Masters
- Learn in detail the basics of 3D modeling in its different forms
- Generate designs for different industries and their application
- Be a technical expert and/or Artist in 3D modeling for Hard surface
- Know all the tools involved in the 3D modeling profession
- Acquire skills for the development of textures and FX of 3D models

Specific Objectives

Module 1. Anatomy

- Investigate both male and female human anatomy
- Develop the highly detailed human body
- Sculpt hyper-realistic faces

Module 2. Retopology and Maya Modeling

- Master the different professional sculpting techniques
- Create advanced full body and face retopology in Maya
- Delve into how to apply details using alphas and brushes in ZBrush

Module 3. Uvs and Texturing with Allegorithmic Substance Painter and Mari

- Study the most optimal form of 'UVs in Maya and UDIM systems
- Develop the knowledge to texture in Substance Painter for video games
- Knowledge of texturing in Mari for hyper-realistic models
- Learn how to create XYZ textures and displacement maps on our models
- Delve into the import of our textures in Maya

Module 4. 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 model's subsequent possible animation
- Observe the control and use of the rendering of the model, bringing out all its details

Module 5. Hair Creation for Video Games and Movies

- Delve into the advanced use of Xgen in Maya
- Create hair for movies
- Study hair using Cards for video games
- Develop your own hair textures
- See the different use of hairbrushes in ZBrush

Module 6. Clothing Simulation

- Study the use of Marvelous Designer
- Create fabric simulations in Marvelous Designer
- Practice different types of complex patterns in Marvelous Designer
- Delve into the professional workflow from Marvelous to ZBrush
- Develop the texturing and shading of clothes and fabrics in Mari

Module 7. Stylized Characters

- Focus anatomical knowledge in simpler, cartoon-like forms
- Create a cartoon model from the base to the detail by applying what has been previously learned
- Review the techniques learned in the course in a different modeling style

Module 8. Creature Modeling

- Learn the modeling of different types of animal anatomy
- Review the different types of reptiles and how to create scales with Displacement maps and Alphas
- 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 9. Blender: A New Twist in the Industry

- Outstanding software performance
- 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 the blender practice models with the two types of render engines Eevee and Cycles

Module 10. Creation of Organic Environments in Unreal Engine

- Study software functionality and project configuration
- Delve into the study of PST and the Storytelling of the scene to achieve a good design for our environment
- Learn the different terrain and organic modeling techniques, as well as the implementation of our own scanned models
- Delve into the vegetation creation system and how to control it perfectly in Unreal Engine
- Create different types of texturing of the project's parts, as well as shading and materials with their corresponding configurations
- Develop knowledge about the different types of lights, atmospheres, particles and fog, how to place different types of cameras and how to take pictures to have our composition in different ways

Module 11. 3D Modeling with 3ds Max

- In-depth knowledge of the functionality of the 3DS Max program
- Know in depth the program interface and its controls
- Transform the geometry to get the shape we want in the fastest and most efficient way
- Learn all the effects of the modifiers and learn how to combine them for greater effect
- Understand Boolean operations and know how to use them to our advantage
- Use 2D elements to combine them with our 3D to create shapes more efficiently

Module 12. Advanced 3D Modeling with 3DS Max

- Learn in depth two ways of editing and use them according to the type of modeling or objective
- Know all types of program editing to create any type of modeling proposed by the user
- Customize the program to use it in the fastest and most efficient way for each professional
- Know and use the most advanced tools of the program
- Get introduced to Plugins and Scripts to use them for the benefit of modeling

Module 13. 3D Modeling with Graphite Tool

- Know in detail the Graphite Tool, the most used by 3DS Max professionals
- Learn its interface and how to use it for a more professional result in less time
- Compare each tool with its counterpart in polygonal mode and learn about their benefits
- Know the tools you will use throughout the 3D modeling process and their optimization
- Find errors in 3D modeling and know how to solve them in the most intelligent way

Module 14. 3D Modeling with ZBrush

- Know in depth the ZBrush program, the most used in organic modeling in the market
- Optimize the model as you work on it, avoiding potential problems after refinement
- Understand each of the program's tools, knowing when to use each one and why
- Learn the Hard Surface tool, which allows inorganic modeling within the program
- Knowing different methods to perform organic modeling
- Learn everything you need to start a character or creature from scratch and see it through without any problems

Module 15. Texturing

- Know and understand all texture maps and their application to modeling
- Know the types of materials existing today and how they work in order to create one from scratch or modify an existing one
- Generate and understand mapping coordinates from a 3D model for further work on texturing
- Assign Object IDs to work more efficiently on textures
- Work models from high to low resolution and vice versa to further optimize the model while retaining the same levels of detail
- Create textures for the 3D model with different programs

Module 16. Substance Painter Texturing

- Know in depth the Substance Painter program, the most widely used for texturing in the world of video games today
- Understand the process of Baking from a high resolution model to a low resolution model
- Know and understand different layers of a material and how they affect it
- Create materials from scratch and modify existing materials to achieve a fully customized material
- Know how to work with mapping coordinates and masks to correctly apply textures to the model
- Learn about brushes, how to use them and how to create customized brushes
- Learn how to use the resources found in the program or externally to improve our textures
- Know different methods to create or modify textures

Module 17. Rendering

- Know in depth the materials and rendering tool of the Marmoset Toolbag program, widely used by 3D modelers and sculptors
- Understand how to position the lights to create a suitable ambient environment for our model
- Create and position cameras to achieve a perspective that makes our 3D modeling more interesting
- Export professional renderings
- Delve into the basics of camera animation to create an animated rendering for more effects
- Know the up-to-date tools of the programs
- Know how to perform basic rendering with other programs, such as IRay, Zbrush, Photoshop and Keyshot

Module 18. Rendering with VRay Engine in 3DS Max

- In-depth knowledge of the Vray engine assigned to the 3DS Max program
- Configure the rendering options to assign the desired rendering engine
- Know Vray's materials and work with them through nodes
- Migrate textures created in Substance Painter to Vray engine
- Set up the lighting of our Vray scene
- Give more details to our model without the need to change or add geometry
- Intelligently position our model and camera to create an interesting scene
- Perform static and animated renders of our model

Module 19. Characters

- Create a character or creature from scratch to render
- Learn tricks to work faster and more efficiently with ZBrush
- Have the knowledge to know when to use one method or another depending on of the situation
- Have a practical sculpting guide for certain elements that may become more complicated
- Troubleshooting throughout the entire course of a modeling
- Know specific methods to create various types of materials in a model
- Generate hair in different styles and with different programs depending on the style, from stylized/cartoon to hyperrealism
- Knowing how to pose the character, as well as the importance of dynamism and silhouette
- Include elements that increase the character's importance, such as accessories, props and the environment

Module 20. Exports to Unreal

- Handle the real-time Unreal Engine in such a way that it performs perfectly when working with a 3D model and its textures
- Understand the properties of Unreal materials
- Know how to work with and understand Unreal material nodes, giving effects to textures to achieve unique materials
- Correctly light an Unreal scene in a realistic way according to the desired ambience
- Configure Unreal Lightmaps, achieving better resolution and optimizing engine performance
- Perform basic post-processing for rendering with good visual effects

Module 21. Study of Figure and Shape

- Conceive and apply constructions of geometric figures
- Understand the basics of three-dimensional geometry
- Knowing in detail how it is represented in technical drawing
- Identify different mechanical components
- Apply transformations through symmetries
- Develop an understanding of how shapes are developed
- Work through shape analysis

Module 22. Hard Surface Modeling

- Understand in depth how to control the topology
- Develop function communication
- Have knowledge of the emergence of Hard Surface
- Have a detailed understanding of the different industries of its application
- Have a comprehensive understanding of the different types of modeling
- Possess valid information on the fields that make up modeling

Module 23. Technical Modeling in Rhino

- Broadly understand how Nurbs modeling software works
- Work with precision modeling systems
- Learn in detail how to execute commands
- Create the basis of geometries
- Edit and transform geometries
- Work with an organization in the scenes

Module 24. Modeling Techniques and their Application in Rhino

- Develop techniques for solving specific cases
- Apply solutions to different types of requirements
- Know the main software tools
- Incorporate mechanical knowledge into the modeling process
- Work with analysis tools
- Develop strategies to approach a model

Module 25. Advanced Modeling in Rhino

- Learn in depth about the application of techniques to advanced models
- Understand in detail how the component parts of an advanced model work.
- Work with different parts of a complex model
- Acquire skills to sort a complex model
- Identify how details are adjusted

Module 26. Polygonal Modeling in 3D Studio Max

- Possess extensive knowledge of using 3D Studio Max
- Work with custom settings
- Have an in-depth understanding of how mesh smoothing works
- Conceive geometries through a variety of methods
- Develop an understanding of how a mesh behaves
- Apply object transformation techniques
- Have knowledge of creating *UV* maps

Module 27. Advanced Polygonal Modeling in 3D Studio Max

- Apply all the techniques for specific product development
- In-depth understanding of component parts development
- Understand the topology of an aircraft in modeling in depth
- Apply knowledge of technical components
- Create complex shapes through the development of simple shapes
- Understand the physiognomy of a bot form

Module 28. Low Poly 3D Studio Max Modeling

- Working with basic shapes for mechanical models
- Develop the ability to decompose elements
- Understand in depth how detail makes for realism
- Solve different techniques to develop details
- Understand how mechanical parts are connected

Take a firm step in your professional aspirations in the field of film production. Enroll now in this unique TECH degree"

03

Skills

This Advanced Master's Degree focuses on perfecting Integral 3D Modeling techniques, which are essential for any computer professional wishing to prosper in this field. Therefore, you will increase your skills in texturing with Allegorithmic Substance Painter, character stylization with Substance Painter and ZBrush, 3D modeling with Graphite Tool, rendering with the VRay engine in 3DS Max, and technical modeling in Rhino, among others.

Apply the most innovative concepts in 3D Modeling in architectural projects and expand your field of action"

General Skills

- Create any kind of completely organic living being including its clothes and Props autonomously and with high quality
- Adapt to any type of workflow in the sector, using the most suitable one for each type of work
- Create the skeleton of a character using a Rig to test its functionality and correct errors
- Use the best and most widespread software in the industry in the field of 3D modeling and sculpting
- Master the necessary tools for creating textures from low-quality figures and vice versa
- Apply lighting knowledge to enhance the texture of the figure
- Mastery and management of editing and rendering techniques
- Know how to communicate ideas and develop projects in which you work
- Master the tools for the design of hard surfaces
- Apply knowledge appropriately to make 3D modelings
- Employ theory to create realistic shapes
- Generate new designs for any industry
- Master all the tools and programs of the profession

Specific Skills

- In-depth knowledge of the anatomy of the body, making the most of every detail
- Lay the artistic foundations to differentiate yourself from other designers
- Create great human models, both male and female
- Solve problems of other work departments
- Increase the professionalism of the student with cross-cutting competencies in rhetopology
- Understand the influence of a good topology at all levels of production
- Master Mari software, which is widely used in the film industry
- Knowledge of the standard in video game texturing through Substance
- Delve into the current demands of the film and video game industry to offer the best possible design solutions
- Mastering rendering to avoid models that look bad or do not meet required standards
- Required standards
- Present design models and portfolios in a professional manner
- Refine the composition of light, shape, color and pose of the models to enhance the work
- Know and meet the demands in hair creation for film and video games
- Create hair mastering different artistic styles
- Master the Marvelous Designer tool and its complex patterns
- Create realistic or cartoon characters in a versatile and plausible manner
- Know the anatomy of all types of creatures in order to represent them accurately
- Master Unreal Engine and Blender more effectively than most designers
- Be able to make realistic figures using 3DS Max programs, also using 2D elements to create more fluid shapes
- Seamless use of two or more forms of editing depending on the modeling objective
- Know shortcuts and plugins to use programs faster and more efficiently
- Perfectly manage the interface of programs such as Graphite Tool and identify possible errors to solve them intelligently
- Be able to seamlessly use the ZBrush program to create textures and organic modeling from scratch
- Dive deeply into Substance Painter for creating materials from scratch, using brushes and layers for clean textures
- Be able to properly set up lighting in ZBrush to generate hair
- Be able to properly set up lighting in ZBrush to generate hair in different styles and hyperrealism
- Master rendering to avoid models that look bad or do not comply the required standards
- Develop the necessary skills to use different techniques for maximum modeling
- Being able to create realistic surfaces using different software polygonal modeling
- Seamless use of two or more forms of editing depending on the modeling objective
- Perfectly master the Low Poly 3D Studio Max interface to simplify the mechanical components of any object
- Be able to perfectly use Hardsurface parameters to create characters with Sculpt modeling
- Be able to carry out a texturing project using different variations of PBR materials
- Extrapolate basic shapes to create realistic mechanical models

04

Course Management

TECH has selected a teaching team of active professionals who are up to date with the latest innovations in 3D Modeling to guide the student's entire learning process.

These specialized teachers will transmit all the necessary knowledge for students to progress in this area of design, so that they can apply everything they have learned directly to their work. For this reason, the Advanced Master's Degree is the best option to specialize in 3D Modeling, since it specifically prepares students to access the best professional opportunities with a highly qualified faculty.

Learn from active 3D Modeling professionals, who will bring you the latest news in the field and will guide you in your educational progress"

Management

Ms. Gómez Sanz, Carla

- 3D Animation Specialist
- Concept Artist, 3D Modeler and Shading in Timeless Games Inc
- Vignettes and animations design consultant for commercial proposals in Spanish multinationals
- 3D Specialist at Blue Pixel 3D
- Higher Technician in 3D Animation, Videogames and Interactive Environments at CEV Superior School of Communication, Image and sounds
- 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

Ms. Sanches Lalaguna, Ana

- 3D Artist for videogames
- Generalista 3D at NeuroDigital Technologies
- 3D Designer at Lalaguna Studio
- Freelance Video Game Figure Modeler
- Junior Videogame Artist at InBreak Studios
- Master's Degree in Videogame Art and Design at U-tad
- Diploma in 2D and 3D Animation Filmmaking at ESDIP

Professors

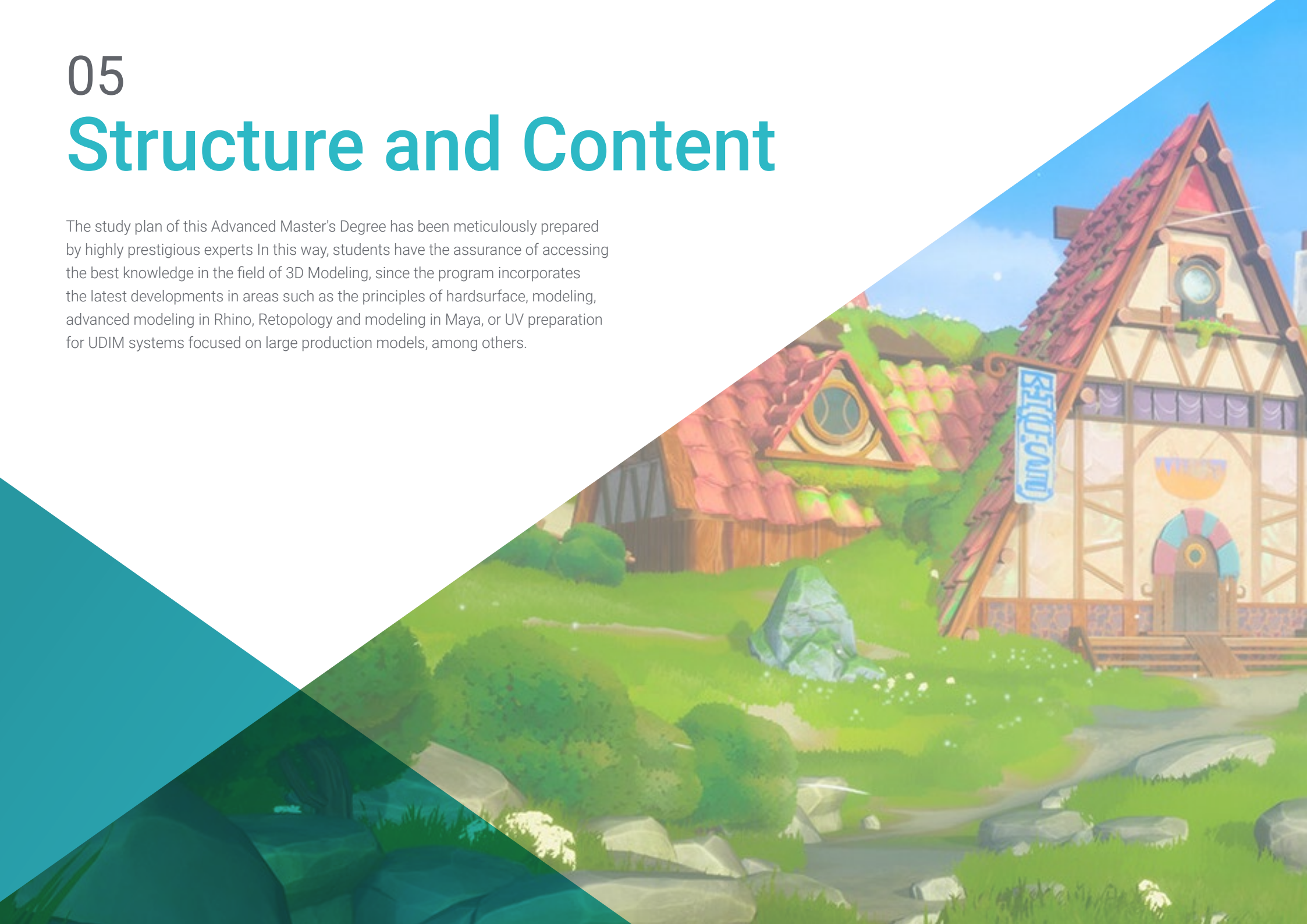
Mr. Salvo Bustos, Gabriel Agustín

- Industrial designer andexpert in design and three-dimensional modeling
- CEO atD-Save 3D Services
- 3D Artist at 3D Visualization Service Inc
- Product Designer In Craftsmen Essence
- Film and video editor at Digital Film
- Industrial Designer, Specializing in Products, National University of Cuyo, Argentina
- Digital Composition Seminar, National University of Cuyo, Argentina

05

Structure and Content

The study plan of this Advanced Master's Degree has been meticulously prepared by highly prestigious experts In this way, students have the assurance of accessing the best knowledge in the field of 3D Modeling, since the program incorporates the latest developments in areas such as the principles of hardsurface, modeling, advanced modeling in Rhino, Retopology and modeling in Maya, or UV preparation for UDIM systems focused on large production models, among others.



A complete program, accessible 24 hours a day from a laptop with an Internet connection"

Module 1. Anatomy

1.1. General Skeletal Masses, Proportions
- 1.1.1. Bones
- 1.1.2. The Human Face
- 1.1.3. Anatomical Canons

1.2. Anatomical Differences between Genders and Sizes
- 1.2.1. Shapes Applied to Characters
- 1.2.2. Curves and Straight Lines
- 1.2.3. Behavior of Bones, Muscles and Skin

1.3. The Head
- 1.3.1. The Skull
- 1.3.2. Muscles of the Head
- 1.3.3. Layers: Skin, Bone and Muscle Facial Expressions

1.4. The Torso
- 1.4.1. Torso Musculature
- 1.4.2. Central Axis of the Body
- 1.4.3. Different Torsos

1.5. The Arms
- 1.5.1. Joints: Shoulder, Elbow and Wrist
- 1.5.2. Arm Muscle Behavior
- 1.5.3. Detail of the Skin

1.6. Hand Sculpting
- 1.6.1. Hand Bones
- 1.6.2. Hand Muscles and Tendons
- 1.6.3. Hand Skin and Wrinkles

1.7. Leg Sculpting
- 1.7.1. Joints: Hip, Knee and Ankle
- 1.7.2. Muscles of the Leg
- 1.7.3. Skin Details

1.8. The Feet
- 1.8.1. Bone Construction for the Foot
- 1.8.2. Foot Muscles and Tendons
- 1.8.3. Foot Skin and Wrinkles

1.9. Whole Human Figure Composition
- 1.9.1. Complete Creation of a Human Base
- 1.9.2. Joint and Muscle Attachment
- 1.9.3. Skin Composition, Pores and Wrinkles

1.10. Complete Human Model
- 1.10.1. Model Polishing
- 1.10.2. Hyper Skin Detail
- 1.10.3. Composition

Module 2. Retopology and Maya Modeling

2.1. Advanced Facial Retopology
- 2.1.1. Importing into Maya and the Use of Quad Draw
- 2.1.2. Retopology of the Human Face
- 2.1.3. Loops

2.2. Human Body Retopology
- 2.2.1. Creation of Loops in the Joints
- 2.2.2. Ngons and Tris and When to Use Them
- 2.2.3. Topology Refinement

2.3. Retopology of Hands and Feet
- 2.3.1. Movement of Small Joints
- 2.3.2. Loops and Support Edges to Improve the Base Mesh of Feet and Hands
- 2.3.3. Difference of Loops for Different Hands and Feet

2.4. Differences Between Maya Modeling vs. ZBrush Sculpting
- 2.4.1. Different Workflows for Modeling
- 2.4.2. Low Poly Base Model
- 2.4.3. High Poly Model

2.5. Creation of a Human Model from Scratch in Maya
- 2.5.1. Human Model Starting From the Hip
- 2.5.2. General Base Form
- 2.5.3. Hands and Feet and their Topology

2.6. Transformation ofLow poly en High Poly
- 2.6.1. Zbrush
- 2.6.2. High Poly: Differences Between Divide and Dynamesh
- 2.6.3. Sculpting Form: Alternation Between Low Poly and High Poly

2.7. Application of Details in ZBrush: Pores, Capillaries, etc
- 2.7.1. Alphas and Different Brushes
- 2.7.2. Detail: Dam-Standard Brush
- 2.7.3. Projections and Surfaces in ZBrush

2.8. Advanced Eye Creation in Maya
- 2.8.1. Creation of the Spheres: Sclera, Cornea and Iris
- 2.8.2. Lattice Tool
- 2.8.3. Displacement Map from ZBrush

2.9. Use of Deformers in Maya
- 2.9.1. Maya Deformers
- 2.9.2. Topology Movement: Polish
- 2.9.3. Polishing of the Final Mesh

2.10. Creation of Final Uv's and Application of Displacement Mapping
- 2.10.1. Character Uv's and Importance of Sizes
- 2.10.2. Texturing
- 2.10.3. Displacement Map

Module 3. UVs and Texturing with Allegorithmic Substance Painter and Mari

3.1. Creation of High-Level UVs in Maya
- 3.1.1. Facial UVs
- 3.1.2. Creation and Layout
- 3.1.3. Advanced UV´s

3.2. UV Preparation for UDIM Systems Focused on High Throughput Models
- 3.2.1. UDIM
- 3.2.2. UDIM in Maya
- 3.2.3. Textures in 4K

3.3. XYZ Textures: What They Are and How to Use Them
- 3.3.1. XYZ. Hyperrealism
- 3.3.2. MultiChannel Maps
- 3.3.3. Texture Maps

3.4. Texturing: Video Games and Film
- 3.4.1. Substance Painter
- 3.4.2. Mari
- 3.4.3. Types of Texturing

3.5. Texturing in Substance Painter for Videogames
- 3.5.1. Baking from High to Low Poly
- 3.5.2. PBR Textures and Their Importance
- 3.5.3. ZBrush with Substance Painter

3.6. Finalizing our Substance Painter Textures
- 3.6.1. Scattering, Translucency
- 3.6.2. Model Texturing
- 3.6.3. Scars, Freckles, Tattoos, Paints or Makeup

3.7. Hyper-Realistic Facial Texturing with XYZ Textures and Color Mapping
- 3.7.1. XYZ Textures in ZBrush
- 3.7.2. Wrap
- 3.7.3. Correction of Errors

3.8. Hyper-Realistic Facial Texturing with XYZ Textures and Color Mapping
- 3.8.1. Mari's Interface
- 3.8.2. Texturing in Mari
- 3.8.3. Projection of Skin Textures

3.9. Advanced Detailing of Displacements Maps in Zbrush and Mari
- 3.9.1. Texture Painting
- 3.9.2. Displacement for Hyperrealism
- 3.9.3. Creation of Layers

3.10. Shading and Texture Implementation in Maya
- 3.10.1. Skin Shaders in Arnold
- 3.10.2. Hyper-realistic Eye
- 3.10.3. Touch-ups and Tips

Module 4. Rendering, Lighting and Posing of Models

4.1. Characters Posing in ZBrush
- 4.1.1. Rig in zbrush with ZSpheres
- 4.1.2. Transpose Master
- 4.1.3. Professional Finish

4.2. Rigging and Weighting of our Own Skeleton in Maya
- 4.2.1. Rig in Maya
- 4.2.2. Rigging Tools with Advanced Skeleton
- 4.2.3. Rig Weighting

4.3. Blend Shapes to Give Life to Your Character's Face
- 4.3.1. Facial Expressions
- 4.3.2. Blend Shapes of Maya
- 4.3.3. Animation with Maya

4.4. Mixamo, a Quick Way to Present Our Model
- 4.4.1. Mixamo
- 4.4.2. Mixamo Rigs
- 4.4.3. Animations

4.5. Lighting Concepts
- 4.5.1. Lighting Techniques
- 4.5.2. Light and Color
- 4.5.3. Shade

4.6. Arnold Render Lights and Parameters
- 4.6.1. Lights with Arnold and Maya
- 4.6.2. Lighting Control and Parameters
- 4.6.3. Arnold Parameters and Configuration

4.7. Lighting of our Models in Maya with Arnold Render
- 4.7.1. Lighting Set Up
- 4.7.2. Model Lighting
- 4.7.3. Mixing Light and Color

4.8. Going Deeper into Arnold: Denoising and the Different AOV
- 4.8.1. AOV
- 4.8.2. Advanced Noise Treatment
- 4.8.3. Denoiser

4.9. Post-Production Rendering in Photoshop
- 4.9.1. Image Processing
- 4.9.2. Photoshop: Levels and Contrasts
- 4.9.3. Layers: Characteristics and their Effects

Module 5. Hair Creation for Video Games and Movies

5.1. Differences Between Videogame Hair and Film Hair
- 5.1.1. FiberMesh and Cards
- 5.1.2. Tools for Hair Creation
- 5.1.3. Hair Software

5.2. ZBrush Hair Sculpting
- 5.2.1. Basic Shapes for Hairstyles
- 5.2.2. Creating Brushes in ZBrush for Hair
- 5.2.3. Curve Brushes

5.3. Hair Creation in XGen
- 5.3.1. XGen
- 5.3.2. Collections and Descriptions
- 5.3.3. Hair vs. Grooming

5.4. Xgen Modifiers: Give Realism to Hair
- 5.4.1. Clumping
- 5.4.2. Coil
- 5.4.3. Hair Guides

5.5. Color and Region Maps: for Absolute Hair Control
- 5.5.1. Maps of Hair Regions
- 5.5.2. Cuts: Curly, Shaved and Long Hair
- 5.5.3. Micro Detail Facial Hair

5.6. Advanced Xgen Use of Expressions and Refinement
- 5.6.1. Expressions
- 5.6.2. Utilities
- 5.6.3. Hair Refinement

5.7. Cards Placement in Maya for Videogame Modeling
- 5.7.1. Fibers in Cards
- 5.7.2. Cards by Hand
- 5.7.3. Cards and Real-Time Engine

5.8. Optimization for Movies
- 5.8.1. Optimization of the Hair and its Geometry
- 5.8.2. Preparation for Physics with Movements
- 5.8.3. XGen Brushes

5.9. Hair Shading
- 5.9.1. Arnold Shader
- 5.9.2. Hyper-Realistic Look
- 5.9.3. Hair Treatment

5.10. Render
- 5.10.1. Rendering When Using XGen
- 5.10.2. Lighting
- 5.10.3. Noise Elimination

Module 6. Clothing Simulation

6.1. Importing your Model to Marvelous Designer and Program Interface
- 6.1.1. Marvelous Designer
- 6.1.2. Software Functionality
- 6.1.3. Real-Time Simulations

6.2. Creation of Simple Patterns and Clothing Accessories
- 6.2.1. Creations: T-shirts, Accessories, Hats and Pockets
- 6.2.2. Fabric
- 6.2.3. Patterns, Zippers and Seams

6.3. Creation of Advanced Clothes Complex Patterns
- 6.3.1. Pattern Complexity
- 6.3.2. Physical Qualities of Fabrics
- 6.3.3. Complex Accessories

6.4. Clothing Simulation at Marvelous
- 6.4.1. Animated Models at Marvelous
- 6.4.2. Fabric Optimization
- 6.4.3. Model Preparation

6.5. Export of Clothing from Marvelous Designer to ZBrush
- 6.5.1. Low Poly in Maya
- 6.5.2. UV in Maya
- 6.5.3. Zbrush, Use of Reconstruct Subdiv

6.6. Refinement of Clothing
- 6.6.1. Workflow
- 6.6.2. Details in Zbrush
- 6.6.3. Clothing Brushes in Zbrush

6.7. Improve the Simulation with ZBrush
- 6.7.1. From Tris to Quads
- 6.7.2. UV's Maintenance
- 6.7.3. Final Carving

6.8. High Detail Clothing Texturing in Mari
- 6.8.1. Tileable Textures and Fabric Materials
- 6.8.2. Baking
- 6.8.3. Texturing in Mari

6.9. Maya Fabric Shading
- 6.9.1. Shading
- 6.9.2. Textures Created in Mari
- 6.9.3. Realism with Arnold Shaders

6.10. Render
- 6.10.1. Clothing Rendering
- 6.10.2. Illumination in Clothing
- 6.10.3. Texture Intensity

Module 7. Stylized Characters

7.1. Choice of a Stylized Character and Blocking of Base Forms
- 7.1.1. References and Concept Arts
- 7.1.2. Base Forms
- 7.1.3. Deformities and Fantastic Shapes

7.2. Conversion of our Low Poly to High Poly model: Head, Hair and Face Sculpting
- 7.2.1. Head Blocking
- 7.2.2. New Hair Creation Techniques
- 7.2.3. Improvements

7.3. Model Refinement: Hands and Feet
- 7.3.1. Advanced Sculpting
- 7.3.2. Refinement of General Shapes
- 7.3.3. Shape Cleaning and Smoothing

7.4. Creation of Jaw and Teeth
- 7.4.1. Creation of Human Teeth
- 7.4.2. Increase its Polygons
- 7.4.3. Fine Detailing of Teeth in ZBrush

7.5. Modeling Clothing and Accessories
- 7.5.1. Types of Cartoon Clothing
- 7.5.2. Zmodeler
- 7.5.3. Applied Maya Modeling

7.6. Retopology and Clean Topology Creation from Scratch
- 7.6.1. Retopology
- 7.6.2. Loops According to the Model
- 7.6.3. Optimization of the Mesh

7.7. UV Mapping and Baking
- 7.7.1. University of Valencia
- 7.7.2. Substance Painter: Baking
- 7.7.3. Polishing Baking

7.8. Texturing and Painting In Substance Painter
- 7.8.1. Substance Painter: Texturing
- 7.8.2. Hand Painted Cartoon Techniques
- 7.8.3. Fill Layers with Generators and Masks

7.9. Lighting and Rendering
- 7.9.1. Lighting of Our Character
- 7.9.2. Color Theory and Presentation
- 7.9.3. Substance Painter: Render

7.10. Posing and Final Presentation
- 7.10.1. Diorama
- 7.10.2. Posing Techniques
- 7.10.3. Presentation of Models

Module 8. Creature Modeling

8.1. Understanding Animal Anatomy
- 8.1.1. Study of the Bones
- 8.1.2. Proportions of an Animal Head
- 8.1.3. Anatomic Differences

8.2. Anatomy of the Skull
- 8.2.1. Animal Face
- 8.2.2. Muscles of the Head
- 8.2.3. Skin Layer, Over Bones and Muscles

8.3. Anatomy of the Spine and Thoracic Cage
- 8.3.1. Animal Torso and Hip Musculature
- 8.3.2. Central Axis of its Body
- 8.3.3. Creation of Torsos in Different Animals

8.4. Animal Musculature
- 8.4.1. Muscle
- 8.4.2. Synergy Between Muscles and Bones
- 8.4.3. Shapes of an Animal Body

8.5. Reptiles and Amphibians
- 8.5.1. Reptilian Skin
- 8.5.2. Small Bones and Ligaments
- 8.5.3. Fine Detail

8.6. Mammals
- 8.6.1. Fur
- 8.6.2. Larger, Stronger Bones and Ligaments
- 8.6.3. Fine Detail

8.7. Animals with Feathers
- 8.7.1. Plumage
- 8.7.2. Elastic and Light Bones and Ligaments
- 8.7.3. Fine Detail

8.8. Analysis of the Jaw and Creation of Teeth
- 8.8.1. Animal Specific Teeth
- 8.8.2. Detailing of Teeth
- 8.8.3. Teeth in the Jaw Cavity

8.9. Creation of Fur, Fur for Animals
- 8.9.1. XGen in Maya: Grooming
- 8.9.2. XGen: Feathers
- 8.9.3. Render

8.10. Fantastic Animals
- 8.10.1. Fantastic Animal
- 8.10.2. Complete Modeling of the Animal
- 8.10.3. Texturing, Lighting and Rendering

Module 9. Blender: A New Twist in the Industry

9.1. Blender VS Zbrush
- 9.1.1. Advantages and Differences
- 9.1.2. Blender and the 3D Art Industry
- 9.1.3. Advantages and Disadvantages of Freeware

9.2. Blender Interface and Program Knowledge
- 9.2.1. Interface
- 9.2.2. Customization
- 9.2.3. Experimentation

9.3. Head Sculpting and Transpolation of Controls from ZBrush to Blender
- 9.3.1. The Human Face
- 9.3.2. 3D Sculpting
- 9.3.3. Blender Brushes

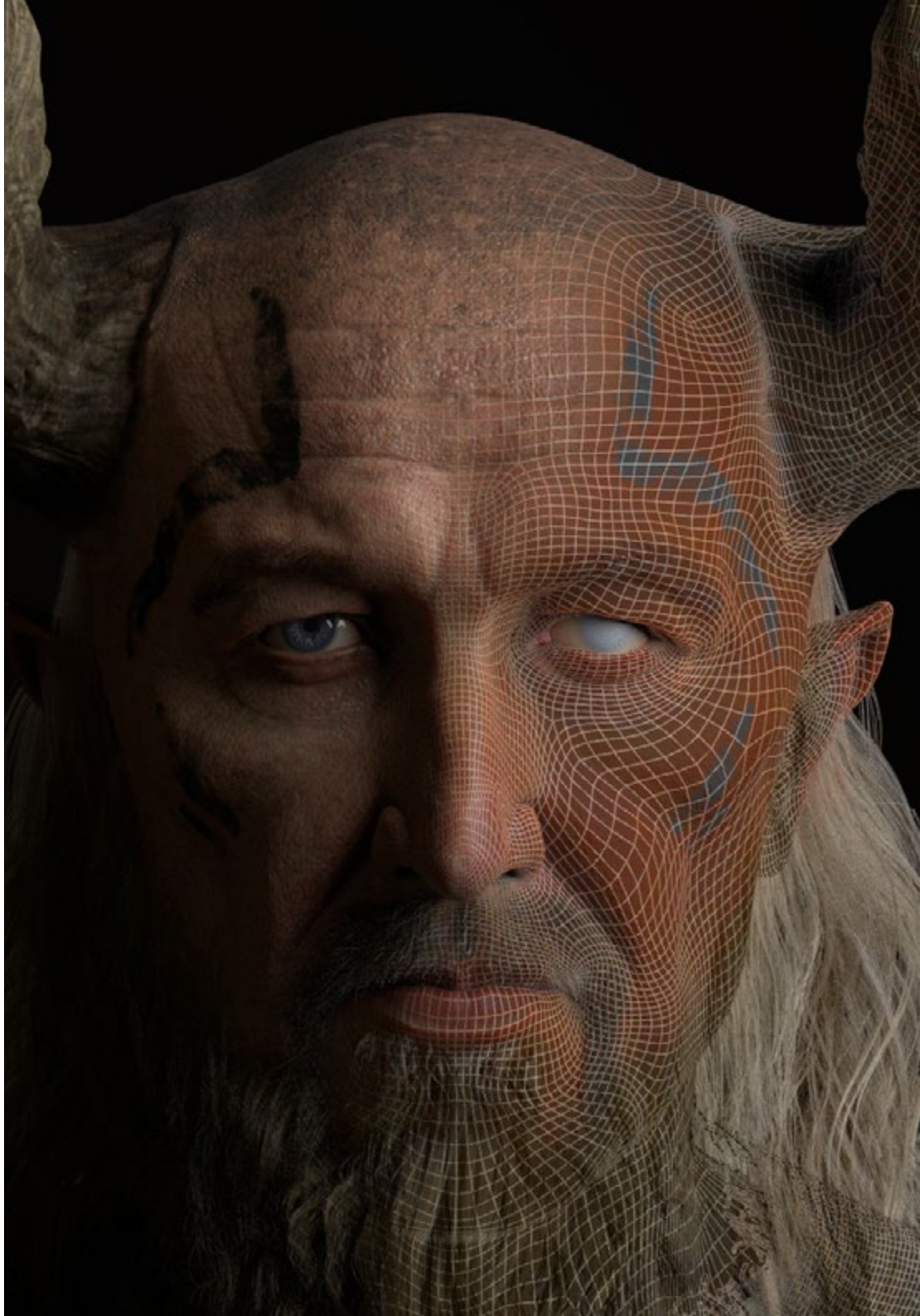
9.4. Full Body Sculpting
- 9.4.1. The Human Body
- 9.4.2. Advanced Techniques
- 9.4.3. Detail and Refinement

9.5. Retopology and UV in Blender
- 9.5.1. Retopology
- 9.5.2. University of Valencia
- 9.5.3. Blender UDIMs

9.6. From Maya to Blender
- 9.6.1. Hard Surface
- 9.6.2. Modifiers
- 9.6.3. Keyboard Shortcuts

9.7. Blender Tips & Tricks
- 9.7.1. Range of Possibilities
- 9.7.2. Geometry Nodes
- 9.7.3. Workflow

9.8. Nodes in Blender: Shading and Texture Placement
- 9.8.1. Nodal System
- 9.8.2. Shaders Through Nodes
- 9.8.3. Textures and Materials



9.9. Rendering in Blender with Cycles and Eevee
- 9.9.1. Cycles
- 9.9.2. Eevee
- 9.9.3. Lighting

9.10. Implementación de Blender en nuestro workflow como artistas
- 9.10.1. Implementation in the Workflow
- 9.10.2. Search for Quality
- 9.10.3. Types of Exports

Module 10. Creation of Organic Environments in Unreal Engine

10.1. Unreal Engine Configuration and Project Organization
- 10.1.1. Interface and Configuration
- 10.1.2. Folder Organization
- 10.1.3. Search for Ideas and References

10.2. Blocking an Environment in Unreal Engine
- 10.2.1. Primary, Secondary and Tertiary PST Elements
- 10.2.2. Scene Design
- 10.2.3. Storytelling

10.3. Terrain Modeling: Unreal Engine and Maya
- 10.3.1. Unreal Terrain
- 10.3.2. Terrain Sculpting
- 10.3.3. Heightmaps: Maya

10.4. Modeling Techniques
- 10.4.1. Rock Sculpting
- 10.4.2. Rock Brushes
- 10.4.3. Cliffs and Optimization

10.5. Creation of Vegetation
- 10.5.1. Speedtree Software
- 10.5.2. Low Poly Vegetation
- 10.5.3. Unreal's Foliage System

10.6. Texturing in Substance Painter and Mari
- 10.6.1. Stylized Terrain
- 10.6.2. Hyper-realistic Texturing
- 10.6.3. Tips and Guidelines

10.7. Photogrammetry
- 10.7.1. Megascan Library
- 10.7.2. Agisoft Metashape Software
- 10.7.3. Model Optimization

10.8. Shading and Materials in Unreal Engine
- 10.8.1. Blending of Textures
- 10.8.2. Material Settings
- 10.8.3. Final Touches

10.9. Lighting and Post-production of our Environment in Unreal Engine
- 10.9.1. Scene Look
- 10.9.2. Types of Lights and Atmospheres
- 10.9.3. Particles and Fog

10.10. Cinematographic Render
- 10.10.1. Camera Techniques
- 10.10.2. Video and Screen Capture
- 10.10.3. Presentation and Final Finishing

Module 11. 3D Modeling with 3DS Max

11.1. 3D Modeling with 3DS Max
- 11.1.1. Orbit, Viewers and Views
- 11.1.2. Geometry Display Modes
- 11.1.3. Steering Wheels

11.2. Transformations and Geometry
- 11.2.1. Interactive and Parametric Transformations
- 11.2.2. Standard and Extended Primitives
- 11.2.3. Scaling Transformation
- 11.2.4. Select and Place/Select and Rotate
- 11.2.5. Align and Symmetry

11.3. Main Operations
- 11.3.1. Duplicate, Interactive Selection and Selection Groups and Elements
- 11.3.2. Layers, Grid, Snap and Pivot Point
- 11.3.3. Links, Coordinate Systems, Actions, Views and Isolate Geometry

11.4. Parametric Modifiers
- 11.4.1. Bend, Taper, Skew and Twist
- 11.4.2. Stretch and Squeeze
- 11.4.3. Ripple, Wave and Noise
- 11.4.4. Spherify, Lattice and Mirror
- 11.4.5. Push and Relax
- 11.4.6. Slice, Shell and CapHoles

11.5. Free Deformation Modifiers
- 11.5.1. FFD Modifiers
- 11.5.2. FFD Cyl
- 11.5.3. FFD Box

11.6. Composition Objects
- 11.6.1. Boolean Operations Boolean and ProBoolean
- 11.6.2. Objects Dispersion Scatter
- 11.6.3. Morphism Morph

11.7. 2D Shapes Splines
- 11.7.1. Splines and its Options
- 11.7.2. The Line and Vertex Types
- 11.7.3. Vertex, Segment and Splines Subobjects

11.8. 2D Shapes Advanced Splines
- 11.8.1. Editable Splines and use of Grid and Snap to Create 2D Shapes
- 11.8.2. Parametric Modifiers, FFD and Booleans with Splines
- 11.8.3. Extended Splines and Section

11.9. Modifiers of splines
- 11.9.1. Extrude
- 11.9.2. Bevel
- 11.9.3. Sweep
- 11.9.4. Lathe

11.10. Composition Objects Splines
- 11.10.1. Loft
- 11.10.2. Terrain
- 11.10.3. Shape Merge

Module 12. Advanced 3D Modeling with 3DS Max

12.1. Mesh Editing Polygonal Editing
- 12.1.1. Polygonal Editing EditablePoly and EditPoly
- 12.1.2. Panels, Selection and Flexible Selection
- 12.1.3. TurboSmooth, MeshSmooth and HSDS Modifier

12.2. Mesh Editing Geometry
- 12.2.1. Vertex, Edge and Edge Editing
- 12.2.2. Polygon, Element and Geometry Editing
- 12.2.3. Geometry Cutting Planes and Added Resolution

12.3. Mesh Editing Selection Groups
- 12.3.1. Geometry Alignment and Visibility
- 12.3.2. Selection Sub- material and Smoothing Groups
- 12.3.3. Surface Subdivision and Vertex Painting

12.4. Mesh Editing Surface
- 12.4.1. Geometry Displacement and Deformation Brush
- 12.4.2. Modo Plano and EditableMesh
- 12.4.3. Splines + Surface

12.5. Advanced Mesh Editing
- 12.5.1. EditablePatch
- 12.5.2. Model Sheet and Setup for Modeling
- 12.5.3. Symmetry Tracing and Symmetry

12.6. User Customization
- 12.6.1. Display Floater Tool and Panel Display
- 12.6.2. Object Properties and Preferences
- 12.6.3. Personalization IU Shortcuts, Menus and Colors
- 12.6.4. Viewer Configuration

12.7. Object Distribution
- 12.7.1. Orthographic View
- 12.7.2. Spacing Tool and SnapShot
- 12.7.3. Cloning and Alignment Tool
- 12.7.4. Matrices. Array

12.8. Geometric Operations
- 12.8.1. Polygonal and Parametric Combination
- 12.8.2. Polygonal Combination and Shapes
- 12.8.3. Polygonal and Boolean Combination
- 12.8.4. Polygonal, Spline, Parametric and Boolean Combination

12.9. Other Tools
- 12.9.1. Loops, Constraints and Edge Splitting
- 12.9.2. Isoline and Collapse Modifiers
- 12.9.3. Polygon Counter and Types of Optimization

12.10. Plugins and Scripts
- 12.10.1. Plugins and Scripts: Grass - o - Matic
- 12.10.2. Creation of Herbs and Fibers with Grass - or Matic
- 12.10.3. Plugin Greeble
- 12.10.4. Script Voronoi. FractureFracture

Module 13. 3D Modeling with Graphite Tool

13.1. Interface
- 13.1.1. Functionality
- 13.1.2. Enable the Tool
- 13.1.3. Interface

13.2. Sub-objects and Selection
- 13.2.1. Sub-objects
- 13.2.2. Modify Topology
- 13.2.3. Modify Selection

13.3. Edition
- 13.3.1. Swift Loop
- 13.3.2. Paint Connect
- 13.3.3. Constraints

13.4. Geometry
- 13.4.1. Relax
- 13.4.2. Attach and Detach
- 13.4.3. Create and Collapse
- 13.4.4. Quadrify and Slice

13.5. Tools Similar to the Polygonal Mode
- 13.5.1. Polygons
- 13.5.2. Loops
- 13.5.3. Tris
- 13.5.4. Subdivisions
- 13.5.5. Visibility
- 13.5.6. Align
- 13.5.7. Smoothing and Hardening

13.6. PolyDraw 1
- 13.6.1. Drag and Conform
- 13.6.2. Step Build Over the Grid
- 13.6.3. Step Build Over a Surface

13.7. PolyDraw 2
- 13.7.1. Shapes and Topology
- 13.7.2. Splines and Strips
- 13.7.3. Surface and Branches

13.8. PaintDeform
- 13.8.1. Pincel Shift and its Options
- 13.8.2. Pincel Push/Pull and its Options
- 13.8.3. Mirror and Other Options

13.9. Selection
- 13.9.1. Closed and Open Selections and Saving Selections
- 13.9.2. Select by Normal Surfaces, Perspective or Random Parameters
- 13.9.3. Select by Vertex, Distance, Symmetry or Color

13.10. Painting with Objects
- 13.10.1. Catalog of Objects
- 13.10.2. Brush Options
- 13.10.3. Functionality

Module 14. 3D Modeling with ZBrush

14.1. ZBrush
- 14.1.1. Interface and Basic Controls
- 14.1.2. Subtools, Symmetry, Transpose and Deformation
- 14.1.3. Brushes and Alphas

14.2. Main Tools
- 14.2.1. Masks and Polygroups
- 14.2.2. Subdivisions, Dynamesh y ZRemesher
- 14.2.3. Modify Topology, Matcaps y BPR

14.3. Modification Tools
- 14.3.1. Insert Multi Mesh
- 14.3.2. Layers and Morph Target
- 14.3.3. Projections and Extract

14.4. Advanced Tools
- 14.4.1. Crease and Bevel
- 14.4.2. Surface and Shadowbox
- 14.4.3. Decimation Master

14.5. ZSpheres and Adaptive Skin
- 14.5.1. ZSpheres Controls
- 14.5.2. ZSketch
- 14.5.3. Adaptive Skin

14.6. Dynamesh and Advanced ZRemesher
- 14.6.1. Booleans
- 14.6.2. Brushes
- 14.6.3. ZRemesher Using Guides

14.7. Curve Brushes
- 14.7.1. Controls and Modifiers
- 14.7.2. Curve Surface and Other Brushes
- 14.7.3. Creating Brushes with Curve

14.8. Hard Surface
- 14.8.1. Segments with Masks
- 14.8.2. PolyGroupIt
- 14.8.3. Panel Loops
- 14.8.4. ZModeler
- 14.8.5. Primitives

14.9. Modifiers
- 14.9.1. Extender and Multi Slice
- 14.9.2. Deformer and Blend Twist
- 14.9.3. Taper and Flatten
- 14.9.4. Bend Arc and Bend Curve

14.10. Transpose Master
- 14.10.1. Posing a Character with Transpose Master
- 14.10.2. Corregir detalles
- 14.10.3. Prepare Character for Rendering

Module 15. Texturing

15.1. Texturing
- 15.1.1. Baking
- 15.1.2. PBR. Physycally Based Rendering
- 15.1.3. Basic and Compound Texturing
- 15.1.4. Tileable Textures

15.2. Mapping Coordinates University of Valencia
- 15.2.1. Unwrap and Seams
- 15.2.2. UvWs Editor
- 15.2.3. Editor Options

15.3. Object ID
- 15.3.1. ID Assignment and Functionality
- 15.3.2. Multi-Subject Material
- 15.3.3. Application of Materials as Instances

15.4. HighPoly and Normal Baking in 3DS Max
- 15.4.1. HighPoly and LowPoly
- 15.4.2. Projection Settings for Normal Map Baking
- 15.4.3. Normal Map Texture Baking
- 15.4.4. Normal Map

15.5. Baking of Other Materials in 3DS Max
- 15.5.1. Application and Baking Diffuse Map
- 15.5.2. Composite Materials
- 15.5.3. Mask Adjustment

15.6. Retopology in 3DS Max
- 15.6.1. Retopology Tools
- 15.6.2. Graphite Tool Retopology
- 15.6.3. Retopology Adjustments

15.7. Textured with 3DS Max
- 15.7.1. Material Properties
- 15.7.2. Texture Baking
- 15.7.3. Texture Toasting Complete Map, Normal Map and AO Map

15.8. Texturing with Photoshop
- 15.8.1. Template Coordinates
- 15.8.2. Add Details in Photoshop and Reimport Template with Textures
- 15.8.3. Tile a Texture
- 15.8.4. Create Normal Map

15.9. Mapping Coordinates with Zbrush
- 15.9.1. UV Master:
- 15.9.2. Control Painting
- 15.9.3. Unwrap and Flatten

15.10. Texturing with Zbrush
- 15.10.1. Painting Mode
- 15.10.2. Noise Maker
- 15.10.3. Image Proyection

Module 16. Substance Painter Texturing

16.1. Substance Painter
- 16.1.1. Create New Project and Reimport Models
- 16.1.2. Basic Controls and Interface 2D and 3D Views
- 16.1.3. Baking

16.2. Baking Layers
- 16.2.1. World Space Normal
- 16.2.2. Ambient Occlusion
- 16.2.3. Curvature
- 16.2.4. Position
- 16.2.5. ID, Normal, Thickness

16.3. Layers
- 16.3.1. Base Color
- 16.3.2. Roughness
- 16.3.3. Metallic
- 16.3.4. Material

16.4. Masks and Generators
- 16.4.1. Layers and UVs
- 16.4.2. Masks
- 16.4.3. Procedural Generators

16.5. Base Material
- 16.5.1. Types of Material
- 16.5.2. Customized Generators
- 16.5.3. Creation of a Base Material from Scratch

16.6. Brushes
- 16.6.1. Predefined Parameters and Brushes
- 16.6.2. Alphas, Lazy Mouse and Symmetry
- 16.6.3. Create Custom Brushes and Save Them

16.7. Particles
- 16.7.1. Particle Brushes
- 16.7.2. Properties of Particles
- 16.7.3. Particles Using Masks

16.8. Projections
- 16.8.1. Preparing Textures
- 16.8.2. Stencil
- 16.8.3. Cloning

16.9. Substance Share/Source
- 16.9.1. Substance Share
- 16.9.2. Substance Source
- 16.9.3. Textures.com

16.10. Terminology
- 16.10.1. Normal Map
- 16.10.2. Padding or Bleed
- 16.10.3. Mipmapping

Module 17. Rendering

17.1. Marmoset Toolbag
- 17.1.1. Geometry Preparation and FBX Formatting
- 17.1.2. Basic Concepts. Importance of Geometry
- 17.1.3. Links and Materials

17.2. Marmoset Toolbag Sky
- 17.2.1. Environmental Setting
- 17.2.2. Lighting Points
- 17.2.3. Lights outside Sky

17.3. Marmoset Toolbag Details
- 17.3.1. Shade and Pose
- 17.3.2. Procedural Materials
- 17.3.3. Channels and Reflection

17.4. Real-Time Rendering with Marmoset Toolbag
- 17.4.1. Image Export with Transparency
- 17.4.2. Interactive Export Marmoset Viewer
- 17.4.3. Film Export

17.5. Marmoset Toolbag Animated Cameras
- 17.5.1. Model Preparation
- 17.5.2. Cameras
- 17.5.3. Main Camera Interactive Animation

17.6. Marmoset Toolbag Advanced Animated Cameras
- 17.6.1. Adding New Cameras
- 17.6.2. Parametric Animation
- 17.6.3. Final Details

17.7. Marmoset Toolbag 4 Raytrace
- 17.7.1. Subsurface
- 17.7.2. Ray Tracing
- 17.7.3. Adding Cameras and Map Rendering

17.8. Substance Painter Rendering IRay
- 17.8.1. IRay Settings
- 17.8.2. Viewer Settings
- 17.8.3. Display Settings

17.9. Rendering with ZBRush
- 17.9.1. Material Settings
- 17.9.2. BPR Render and Lights
- 17.9.3. BPR Masks and Final Rendering in Photoshop

17.10. Keyshot Rendering
- 17.10.1. From Zbrush to Keyshot
- 17.10.2. Materials and Lighting
- 17.10.3. Photoshop Compositing and Final Image

Module 18. Rendering with VRay Engine in 3DS Max

18.1. VRay Render Engine Assignment
- 18.1.1. Preparation of the Rendering Space
- 18.1.2. Render Setup Options and Assign Render
- 18.1.3. Optimize Rendering Time

18.2. Lighting and Light Creation
- 18.2.1. 3-Point Lighting
- 18.2.2. Light Setup
- 18.2.3. Render Region

18.3. Creation and Application of Materials
- 18.3.1. VRay Materials
- 18.3.2. VRay Materials Settings
- 18.3.3. Self-Illumination

18.4. From Substance Painter to VRay
- 18.4.1. Connect Nodes and Material Settings
- 18.4.2. Export Presets
- 18.4.3. Set Up Smart Material in VRay

18.5. Details and Positioning in the Scene
- 18.5.1. Application of Shades According to the Position of the Model
- 18.5.2. Adjust Model and Silhouette
- 18.5.3. Metallic Base

18.6. Surface Rounding
- 18.6.1. VRayEdgeTex
- 18.6.2. Functionality and Setup
- 18.6.3. Rendering With and Without Rounding

18.7. Field of View
- 18.7.1. Camera and Shot
- 18.7.2. Camera Aperture
- 18.7.3. Field of View

18.8. Ambient Occlusion and Global Illumination
- 18.8.1. GI and Render Elements
- 18.8.2. VRayExtraTex and VrayDirt
- 18.8.3. Global Illumination Multiplier

18.9. Rendering of a Static Frame
- 18.9.1. Adjust Render Values
- 18.9.2. Save Final Render
- 18.9.3. Composition of Ambient Occlusion

18.10. Rendering of a Sequence
- 18.10.1. Camera Animation
- 18.10.2. Rendering Options for Sequence
- 18.10.3. Frame Assembly for the Sequence

Module 19. Characters

19.1. Types of Characters
- 19.1.1. Realistic and Cartoon/Stylized
- 19.1.2. Humanoids and Creatures
- 19.1.3. Anatomy and Proportions

19.2. Tips to Work with ZBrush
- 19.2.1. Work with references and transparencies. Snap and 1transformation from 2D to 3D
- 19.2.2. Union of Pieces with Dynamesh. Work in Pieces or Together with Polygroups and ZRemesher
- 19.2.3. Lazy Mouse and GoZ

19.3. Sculpting a Head in ZBrush
- 19.3.1. Primary Forms and Proportions
- 19.3.2. Eyelids and Eyes
- 19.3.3. Nose, Ears and Lips
- 19.3.4. ZRemesher for A Head
- 19.3.5. Eyebrows and Eyelashes
- 19.3.6. Detail and Refinement

19.4. Clothing
- 19.4.1. Clothing
- 19.4.2. Armor
- 19.4.3. Details Modeled and with Noise Maker

19.5. Modeling Tips
- 19.5.1. Hands
- 19.5.2. Stylized Hair
- 19.5.3. Extra Details with Alpha

19.6. Tips for Modeling Types of Materials
- 19.6.1. Feathers
- 19.6.2. Rocks or Minerals
- 19.6.3. Scales

19.7. Hair with ZBrush
- 19.7.1. Curve Brushes
- 19.7.2. Long Hair with Curve Brush
- 19.7.3. Short Hair or Animal Fur

19.8. Hair with Xgen
- 19.8.1. Tool Set-up and Preparation
- 19.8.2. Application of Modifiers and Tools in Depth
- 19.8.3. Illumination and Rendering

19.9. Posed with Transpose Master
- 19.9.1. TPoseMesh. Work with Smooth Masks, Move and Rotate
- 19.9.2. Importance of Silhouettes
- 19.9.3. TPose SubtTool. Correcting and Finishing Detailing

19.10. Character Props and Environment
- 19.10.1. Weapons and Accesories Elements that Tell Us about the Character's Story
- 19.10.2. Elements of the Environment and Background Enhancing the character
- 19.10.3. The Character's Lighting

Module 20. Exports to Unreal

20.1. Unreal Engine
- 20.1.1. Game Exporter
- 20.1.2. Create New Project and Controls
- 20.1.3. Importing Models into Unreal

20.2. Basic Properties of Materials
- 20.2.1. Create Materials and Nodes
- 20.2.2. Constant and Its Values
- 20.2.3. Texture Sample

20.3. Common Material Nodes
- 20.3.1. Multiply
- 20.3.2. Texture Coordinate
- 20.3.3. Add
- 20.3.4. Fresnel
- 20.3.5. Panner

20.4. Materials and Bloom
- 20.4.1. Linear Interpolate
- 20.4.2. Power
- 20.4.3. Clamp

20.5. Textures to Modify the Material
- 20.5.1. Masks
- 20.5.2. Transparent Textures
- 20.5.3. Match Color

20.6. Basic Lighting
- 20.6.1. Light Source
- 20.6.2. Skylight
- 20.6.3. Fog

20.7. Fill and Creative Lighting
- 20.7.1. Point Light
- 20.7.2. Spot Light y Rect Light
- 20.7.3. Objects as Light Sources

20.8. Night Lighting
- 20.8.1. Light Source Properties
- 20.8.2. Fog Properties
- 20.8.3. Skylight Properties

20.9. Lightmaps
- 20.9.1. Viewer Modes. Lightmap Density
- 20.9.2. Improving Lightmaps Resolution
- 20.9.3. Lightmass Importance Volume

20.10. Rendering
- 20.10.1. Cameras and Their Parameters
- 20.10.2. Basic Post-Processing
- 20.10.3. High Resolution Screenshot

Module 21. Study of Figure and Shape

21.1. The Geometric Figure
- 21.1.1. Types of Geometrical Figures
- 21.1.2. Basic Geometric Constructions
- 21.1.3. Geometric Transformations on the Plane

21.2. Polygons
- 21.2.1. Triangles
- 21.2.2. Quadrilaterals
- 21.2.3. Regular Polygons

21.3. Axonometric System
- 21.3.1. System Fundamentals
- 21.3.2. Types of Orthogonal Axonometry
- 21.3.3. Sketches

21.4. Three-Dimensional Drawing
- 21.4.1. Perspective and Third Dimension
- 21.4.2. Essential Elements of Drawing
- 21.4.3. Perspectives

21.5. Technical Drawing
- 21.5.1. Basic Notions
- 21.5.2. Disposition of Views
- 21.5.3. Cuts

21.6. Fundamentals of Mechanical Elements I
- 21.6.1. Axis
- 21.6.2. Joints and Bolts
- 21.6.3. Springs

21.7. Fundamentals of Mechanical Elements II
- 21.7.1. Bearings
- 21.7.2. Gears
- 21.7.3. Flexible Mechanical Elements

21.8. Laws of Symmetry
- 21.8.1. Translation– Rotation– Reflection- Extension
- 21.8.2. Touch– Overlay– Subtract– Intersect- Join
- 21.8.3. Combined Laws

21.9. Form Analysis
- 21.9.1. Form and Function
- 21.9.2. Mechanical Form
- 21.9.3. Types of Shapes

21.10. Topological Analysis
- 21.10.1. Morphogenesis
- 21.10.2. Composition
- 21.10.3. Morphology and Topology

Module 22. Hardsurface Modeling

22.1. Hardsurface Modeling
- 22.1.1. Topology Control
- 22.1.2. Function Communication
- 22.1.3. Speed and Efficiency

22.2. Hardsurface I
- 22.2.1. Hard Surface
- 22.2.2. Development
- 22.2.3. Structure

22.3. Hardsurface II
- 22.3.1. Applications
- 22.3.2. Physical Industry
- 22.3.3. Virtual Industry

22.4. Types of Modeling
- 22.4.1. Technical Modeling / NURBS
- 22.4.2. Polygonal Modeling
- 22.4.3. Sculpt Modeling

22.5. Deep Hardsurface Modeling
- 22.5.1. Profiles
- 22.5.2. Topology and Edge Flow
- 22.5.3. Mesh Resolution

22.6. NURBS Model
- 22.6.1. Dots– Lines– Polylines- Curves
- 22.6.2. Surfaces
- 22.6.3. 3D Geometry

22.7. Fundamentals of Polygonal Modeling
- 22.7.1. Edit Poly
- 22.7.2. Vortexes – Edges- Polygons
- 22.7.3. Surgery

22.8. Fundamentals of Sculpt Modeling
- 22.8.1. Basic Geometry
- 22.8.2. Subdivisions
- 22.8.3. Deformities

22.9. Topology and Retopology
- 22.9.1. High Poly and Low Poly
- 22.9.2. Polygonal Count
- 22.9.3. Bake Maps

22.10. UV Maps
- 22.10.1. UV Coordinates
- 22.10.2. Techniques and Strategies
- 22.10.3. Unwrapping

Module 23. Technical Modeling in Rhino

23.1. Rhino Modeling
- 23.1.1. Rhino Interface
- 23.1.2. Types of Objects
- 23.1.3. Navigating the Model

23.2. Fundamental Notions
- 23.2.1. Editing with Gumball
- 23.2.2. Viewports
- 23.2.3. Modeling Support

23.3. Precision Modeling
- 23.3.1. Input by Coordinates
- 23.3.2. Distance and Angle Restriction Input
- 23.3.3. Object Restriction

23.4. Command Analysis
- 23.4.1. Additional Modeling Support
- 23.4.2. SmartTrack
- 23.4.3. Construction Planes

23.5. Lines and Polylines
- 23.5.1. Circles
- 23.5.2. Free-Form Lines
- 23.5.3. Helix and Spiral

23.6. Geometry Editing
- 23.6.1. Fillet and Chamfer
- 23.6.2. Mixture of Curves
- 23.6.3. Loft

23.7. Transformations I
- 23.7.1. Move - Rotate– Scale
- 23.7.2. Join– Prune - Extend
- 23.7.3. Separate - Offset - Formations

23.8. Creating Shapes
- 23.8.1. Deformable Shapes
- 23.8.2. Modeling With Solids
- 23.8.3. Transformation of Solids

23.9. Creating Surfaces
- 23.9.1. Simple Surfaces
- 23.9.2. Extrusion, Lofting and Surface Revolution
- 23.9.3. Surface Sweeping

23.10. Organisation
- 23.10.1. Layers
- 23.10.2. Groups
- 23.10.3. Blocks

Module 24. Modeling Techniques and their Application in Rhino

24.1. Techniques
- 24.1.1. Support Intersection
- 24.1.2. Creation of a Space Helmet
- 24.1.3. Pipelines

24.2. Application I
- 24.2.1. Creating a Car Tire
- 24.2.2. Creating a Tire
- 24.2.3. Modeling a Watch

24.3. Basic Techniques II
- 24.3.1. Use of Isocurves and Edges for Modeling
- 24.3.2. Making Apertures in the Geometry
- 24.3.3. Working with Hinges

24.4. Application II
- 24.4.1. Creation of a Turbine
- 24.4.2. Creation of Air Inlets
- 24.4.3. Tips for Imitating Edge Thickness

24.5. Data Science
- 24.5.1. Tips for Using Mirror Symmetry
- 24.5.2. Use of Fillets
- 24.5.3. Use of Trims

24.6. Mechanical Applications
- 24.6.1. Gear Creation
- 24.6.2. Pulley Construction
- 24.6.3. Construction of a Shock Absorber

24.7. File Import and Export
- 24.7.1. Send Rhino Files
- 24.7.2. Export Rhino Files
- 24.7.3. Import to Rhino from Illustrator

24.8. Analysis Tools I
- 24.8.1. Graphical Curvature Analysis Tool
- 24.8.2. Curve Continuity Analysis
- 24.8.3. Curve Analysis Problems and Solutions

24.9. Analysis Tools II
- 24.9.1. Surface Directional Analysis Tool
- 24.9.2. Environment Surface Mapping Analysis Tool
- 24.9.3. Edge Display Analysis Tool

24.10. Strategies
- 24.10.1. Construction Strategies
- 24.10.2. Surface per Curve Grid
- 24.10.3. Working with Blueprints

Module 25. Advanced Modeling in Rhino

25.1. Motorcycle Modeling
- 25.1.1. Importing Reference Images
- 25.1.2. Modeling of Rear Tire
- 25.1.3. Modeling of Rear Rim

25.2. Mechanical Components of Rear Axle
- 25.2.1. Creating the Braking System
- 25.2.2. Building the Transmission Chain
- 25.2.3. Modeling the Chain Cover

25.3. Engine Modeling
- 25.3.1. Creation of the Body
- 25.3.2. Adding Mechanical Elements
- 25.3.3. Incorporating Technical Details

25.4. Modeling the Main Deck
- 25.4.1. Modeling Curves and Surfaces
- 25.4.2. Modeling the Deck
- 25.4.3. Cutting the Frame

25.5. Modeling the Upper Area
- 25.5.1. Building the Seat
- 25.5.2. Creating Front End Details
- 25.5.3. Creating Back End Details

25.6. Functional Parts
- 25.6.1. Gasoline Tank
- 25.6.2. Rear Lights
- 25.6.3. Front Lights

25.7. Building the Front Axle I
- 25.7.1. Brake System and Wheel Rim
- 25.7.2. Fork
- 25.7.3. Handlebar

25.8. Building the Front Axle II
- 25.8.1. Grips
- 25.8.2. Brake Cables
- 25.8.3. Instruments

25.9. Adding Details
- 25.9.1. Refining the Main Body
- 25.9.2. Adding the Muffler
- 25.9.3. Adding the Pedals

25.10. Final Components
- 25.10.1. Modeling the Windshield
- 25.10.2. Modeling the Support
- 25.10.3. Final Details

Module 26. Polygonal Modeling in 3D Studio Max

26.1. Reference Modeling
- 26.1.1. Reference Image Creation
- 26.1.2. Hard Surface Smoothing
- 26.1.3. Scene Organization

26.2. High Resolution Meshing
- 26.2.1. Basic Smoothed Modeling and Smoothing Groups
- 26.2.2. Modeling with Extrusions and Bevels
- 26.2.3. Using the Turbosmooth Modifier

26.3. Spline Modeling
- 26.3.1. Modifying Curvatures
- 26.3.2. Configuring Polygon Faces
- 26.3.3. Extruding and Spherizing

26.4. Creating Complex Shapes
- 26.4.1. Setting Up Components and Work Grid
- 26.4.2. Duplicating and Welding Components
- 26.4.3. Cleaning Polygons and Smoothing

26.5. Modeling With Edge Cuts
- 26.5.1. Creating and Positioning the Template
- 26.5.2. Making Cuts and Cleaning Topology
- 26.5.3. Extruding Shapes and Creating Folds

26.6. Modeling from Low Poly Model
- 26.6.1. Starting with the Basic Shape and Adding Chamfers
- 26.6.2. Adding Subdivisions and Generating Edges
- 26.6.3. Cutting, Welding and Detailing

26.7. Edit Poly I Modifier
- 26.7.1. Workflows
- 26.7.2. Interface
- 26.7.3. Sub Objects

26.8. Creating Compounds Objects
- 26.8.1. Morph, Scatter, Conform and Connect Compound Objects
- 26.8.2. BlobMesh, Shape Merge and Boolean Compound Objects
- 26.8.3. Loft, Mesher and Proboolean Compound Objects

26.9. Techniques and Strategies to Create UVs
- 26.9.1. Simple Geometries and Arc-Like Geometries
- 26.9.2. Hard Surfaces
- 26.9.3. Examples and Applications

Module 27. Advanced Polygonal Modeling in 3D Studio MAX

27.1. Sci-FI spacecraft Modeling
- 27.1.1. Creating our Workspace
- 27.1.2. Starting with the Main Body
- 27.1.3. Configuration for the Wings

27.2. The Cabin
- 27.2.1. Development of the Cabin Area
- 27.2.2. Modeling the Control Panel
- 27.2.3. Adding Details

27.3. The Fuselage
- 27.3.1. Defining Components
- 27.3.2. Adjusting Minor Components
- 27.3.3. Developing the Underbody Panel

27.4. The Wings
- 27.4.1. Creation of the Main Wings
- 27.4.2. Incorporation of the Tail
- 27.4.3. Adding Inserts for the Ailerons

27.5. Main Body
- 27.5.1. Separation of Parts into Components
- 27.5.2. Creating Additional Panels
- 27.5.3. Incorporating the Spring Doors

27.6. The Engines
- 27.6.1. Creating the Space for the Engines
- 27.6.2. Building the Turbines
- 27.6.3. Adding the Exhaust

27.7. Adding Details
- 27.7.1. Lateral Components
- 27.7.2. Characteristic Components
- 27.7.3. Refining General Components

27.8. Bonus I - Creation of the Pilot's Helmet
- 27.8.1. Head Block
- 27.8.2. Detail Refinements
- 27.8.3. Helmet Neck Modeling

27.9. Bonus II – Creation of the Pilot's Helmet
- 27.9.1. Helmet Neck Refinements
- 27.9.2. Steps for Final Details
- 27.9.3. Mesh Finishing

27.10. Bonus III – Creation of a Co-Pilot Robot
- 27.10.1. Development of the Shapes
- 27.10.2. Adding Details
- 27.10.3. Supporting Edges for Subdivision

Module 28. Low Poly 3D Studio MAX Modeling

28.1. Heavy Machinery Vehicle Modeling
- 28.1.1. Creation of the Volumetric Model
- 28.1.2. Volumetric Modeling of the Crawler Tracks
- 28.1.3. Volumetric Construction of the Shovel

28.2. Incorporating Different Components
- 28.2.1. Cab Volumetry
- 28.2.2. Volumetry of the Mechanical Arm
- 28.2.3. Volumetry of the Mechanical Shovel Sword

28.3. Adding Subcomponents
- 28.3.1. Creating Shovel Teeth
- 28.3.2. Adding the Hydraulic Piston
- 28.3.3. Connecting Subcomponents

28.4. Incorporating Details to Volumetries I
- 28.4.1. Creating Caterpillars
- 28.4.2. Incorporating Track Bearings
- 28.4.3. Defining the Track Housing

28.5. Incorporating Details to Volumetrics II
- 28.5.1. Chassis Subcomponents
- 28.5.2. Bearing Covers
- 28.5.3. Adding Parts Cuts

28.6. Incorporating Details to Volumetrics III
- 28.6.1. Creating Radiators
- 28.6.2. Adding the Hydraulic Arm Base
- 28.6.3. Creating the Exhaust Pipes

28.7. Incorporating Details to Volumetrics IV
- 28.7.1. Creating the Protective Cabin Grille
- 28.7.2. Adding Piping
- 28.7.3. Adding Nuts, Bolts and Rivets

28.8. Developing the Hydraulic Arm
- 28.8.1. Creating the Supports
- 28.8.2. Retainers, Washers, Screws and Connections
- 28.8.3. Creation of the Head

28.9. Developing the Cabinet
- 28.9.1. Defining the Housing
- 28.9.2. Adding Windshields
- 28.9.3. Door Handle and Headlight Details

28.10. Mechanical Development of the Excavator
- 28.10.1. Creating the Body and Teeth
- 28.10.2. Creating the Tooth Roller
- 28.10.3. Wiring with Splines, Connectors and Fasteners

Do you want to get an advanced learning in 3D Polygonal Modeling with Studio MAX? Do it through this university degree"

06

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.

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 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.

Relearning Methodology

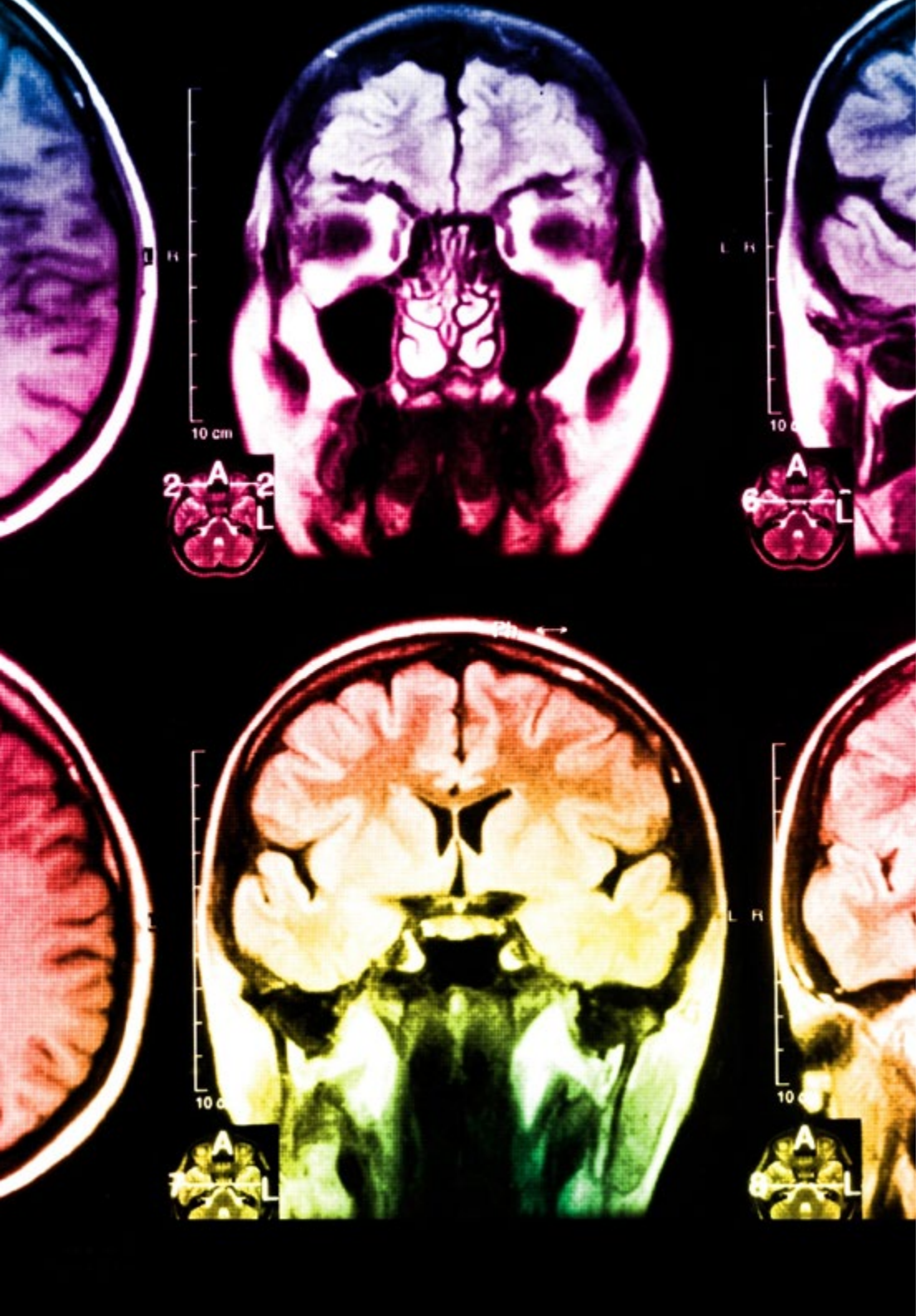
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

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.



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.

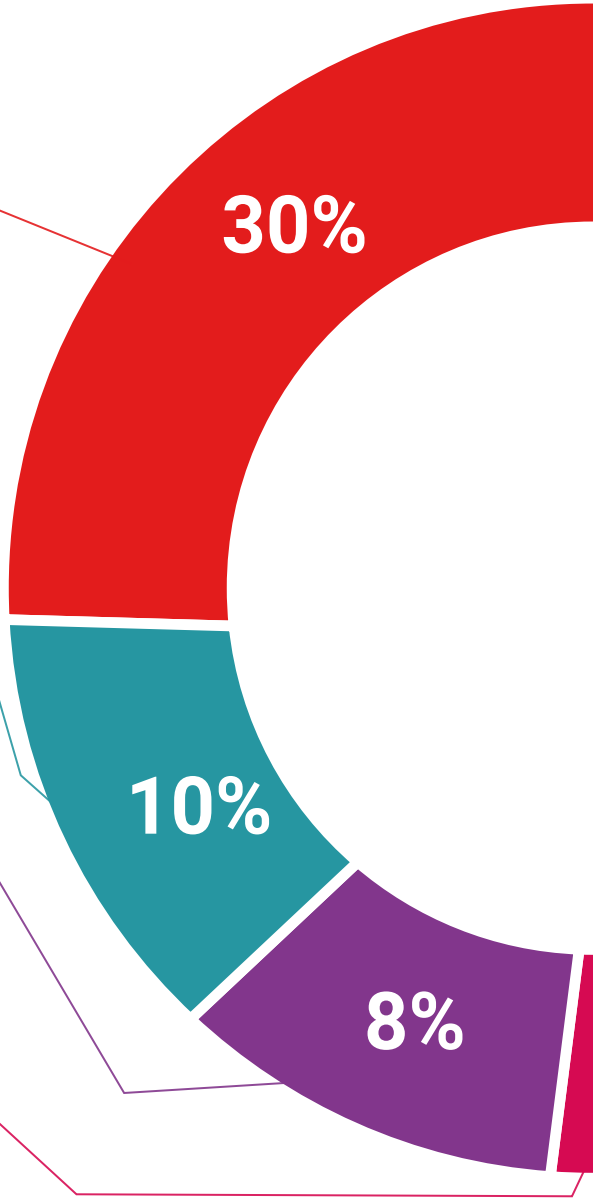
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

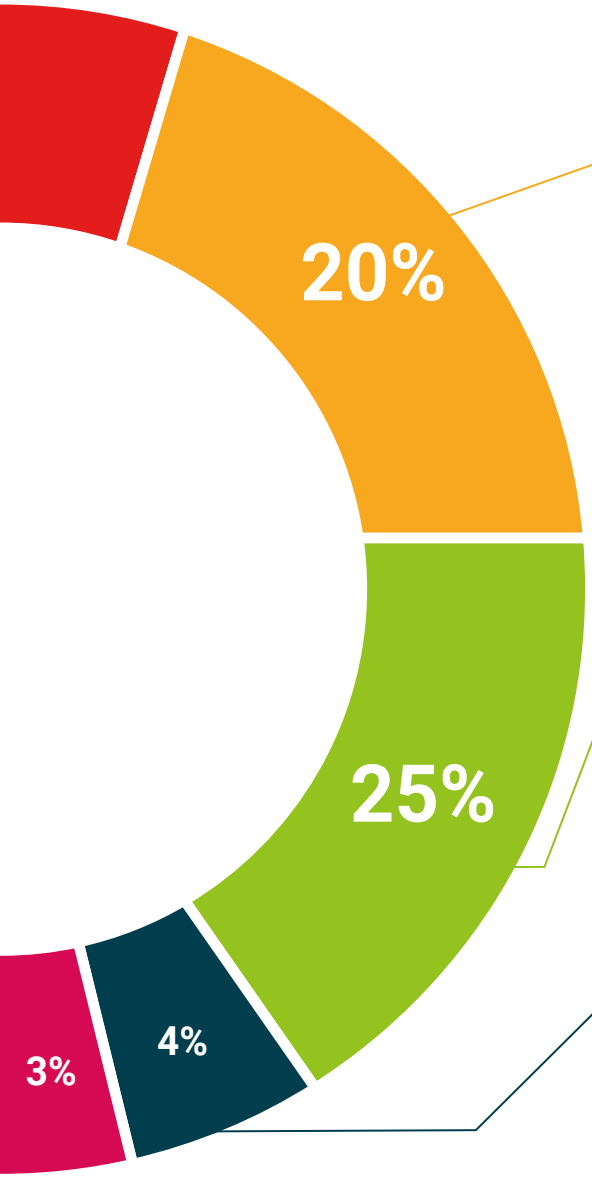
Practising Skills and Abilities

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 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.





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.

07

Certificate

The Advanced Master's Degree in Integral 3D Modeling guarantees students, in addition to the most rigorous and up-to-date education, access to an Advanced Master's Degree 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 **Advanced Master's Degree in Integral 3D Modeling** contains the most complete and up-to-date program in the market.

After the student has passed the assessments, they will receive their corresponding **Professional Master's Degree** diploma issued by **TECH Technological University** via tracked delivery*.

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the Advanced Master's Degree, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Advanced Master's Degree in Integral 3D Modeling**
Official Nº of Hours: **3,000 h.**

tech technological university

Awards the following

DIPLOMA

to

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

ADVANCED MASTER'S DEGREE
in
Integral 3D Modeling

This is a qualification awarded by this University, equivalent to 3,000 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

Advanced Master's Degree in Integral 3D Modeling

General Structure of the Syllabus

Year	Subject	Hours	Type
1º	Anatomy	110	CO
1º	Retopology and Maya Modeling	110	CO
1º	Uvs and Texturing with Allegorithmic Substance	110	CO
1º	Painter and Mari	110	CO
1º	Rendering, Lighting and Posing of Models	110	CO
1º	Hair Creation for Video Games and Movies	110	CO
1º	Clothing Simulation	110	CO
1º	Stylized Characters	110	CO
1º	Creature Modeling	110	CO
1º	Blender: A New Twist in the Industry	110	CO
1º	Creation of Organic Environments in Unreal Engine	110	CO
1º	3D Modeling with 3ds Max	110	CO
1º	Advanced 3D Modeling with 3DS Max	110	CO
1º	3D Modeling with Graphite Tool	110	CO
1º	3D Modeling with ZBrush	110	CO

Year	Subject	Hours	Type
2º	Texturing	110	CO
2º	Substance Painter Texturing	110	CO
2º	Rendering	110	CO
2º	Rendering with VRay Engine in 3DS Max	110	CO
2º	Characters	110	CO
2º	Exports to Unreal	110	CO
2º	Study of Figure and Shape	100	CO
2º	Hard Surface Modeling	100	CO
2º	Technical Modeling in Rhino	100	CO
2º	Modeling Techniques and their Application in Rhino	100	CO
2º	Advanced Modeling in Rhino	100	CO
2º	Polygonal Modeling in 3D Studio Max	100	CO
2º	Advanced Polygonal Modeling in 3D Studio Max	100	CO
2º	Low Poly 3D Studio Max Modeling	100	CO

Tere Guevara Navarro
Dean

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

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Advanced Master's Degree
Integral 3D Modeling

- Modality: **online**
- Duration: **2 years**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Advanced Master's Degree
Integral 3D Modeling

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