

Professional Master's Degree Additive Manufacturing and 3D Printing

TECH is a member of:

A close-up, diagonal view of a 3D printer's extruder head printing a translucent orange part. The printer's frame is orange and black, with metal rods visible. The background is blurred, showing more of the machine and some greenery.

tech global
university



Professional Master's Degree Additive Manufacturing and 3D Printing

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Global University
- » Accreditation: 60 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techtute.com/us/design/professional-master-degree/master-additive-manufacturing-3d-printing

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01

Introduction to the Program

Additive Manufacturing, commonly known as 3D Printing, has transformed the way components are designed and produced across various industries. According to a report by the International Telecommunication Union, the adoption of these technologies is estimated to have grown by 30% in recent years. For this reason, it is essential that design professionals stay abreast of the latest advances in this technology to optimize their creative processes and strengthen their competitiveness in the marketplace. With this in mind, TECH has developed an innovative university program focused on Additive Manufacturing and 3D Printing, delivered completely online to provide flexibility and accessibility to students.



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Thanks to this 100% online process, you will develop innovative creative and production processes using Additive Manufacturing and 3D Printing technologies”

Today, advanced manufacturing technologies have enabled a significant evolution in the way components are produced and designed. In fact, these tools stand out for their ability to create three-dimensional objects from a digital Design, layer by layer. This innovation is having a significant impact on multiple sectors where customization, cost reduction, and material savings are key advantages.

In this context, TECH is launching a revolutionary program in Additive Manufacturing and 3D Printing. The syllabus delves into the use of specialized tools that enable the modeling of functional parts. In fact, graduates will not only specialize in the fundamentals of design, but also in the technical aspects related to the use of advanced software and post-processing techniques. In turn, they will have access to the most sophisticated methods that optimize both quality and efficiency in the production of parts through 3D printing, expanding their ability to solve complex problems in the industry.

Therefore, this university program will provide professionals with a comprehensive understanding of the technologies associated with Additive Manufacturing, enabling them to acquire skills to produce parts more efficiently. In addition, it will allow them to optimize production processes, resulting in a significant improvement in competitiveness within their respective fields. Finally, the application of this knowledge will enable mass customization of products and continuous improvement in manufacturing systems, which are fundamental aspects for growth in a global market.

Furthermore, the methodology used by TECH stands out for its flexibility, as the content is 100% accessible online, allowing professionals to access up-to-date material at any time and from any device with an Internet connection. In this sense, the Relearning method also facilitates autonomous and progressive learning, ensuring that professionals can advance at their own pace.

This **Professional Master's Degree in Additive Manufacturing and 3D Printing** contains the most complete and up-to-date program on the market. The most important features include:

- ♦ Development of case studies presented by design experts
- ♦ The graphic, schematic, and practical contents with which they are created, 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
- ♦ 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



You will develop advanced skills in creating detailed, multicolored prototypes using 3D printing techniques"

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You will gain advanced skills in the handling and application of materials for Additive Manufacturing, optimizing the most advanced techniques in the industry”

The teaching staff includes professionals from the field of 3D Printing, who bring their work experience to this program, as well as renowned specialists from leading companies 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 students 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 interactive video system created by renowned and experienced experts.

You will master the latest painting, varnishing, and texturing techniques to achieve high-quality surface finishes.

You will delve into the process of depositing materials layer by layer, optimizing each phase of the Design.



02

Why Study at TECH?

TECH is the world's largest online university. With an impressive catalog of more than 14,000 university programs available in 11 languages, it is positioned as a leader in employability, with a 99% job placement rate. In addition, it relies on an enormous faculty of more than 6,000 professors of the highest international renown.



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*Study at the world's largest online university
and guarantee your professional success.
The future starts at TECH”*

The world's best online university, according to FORBES

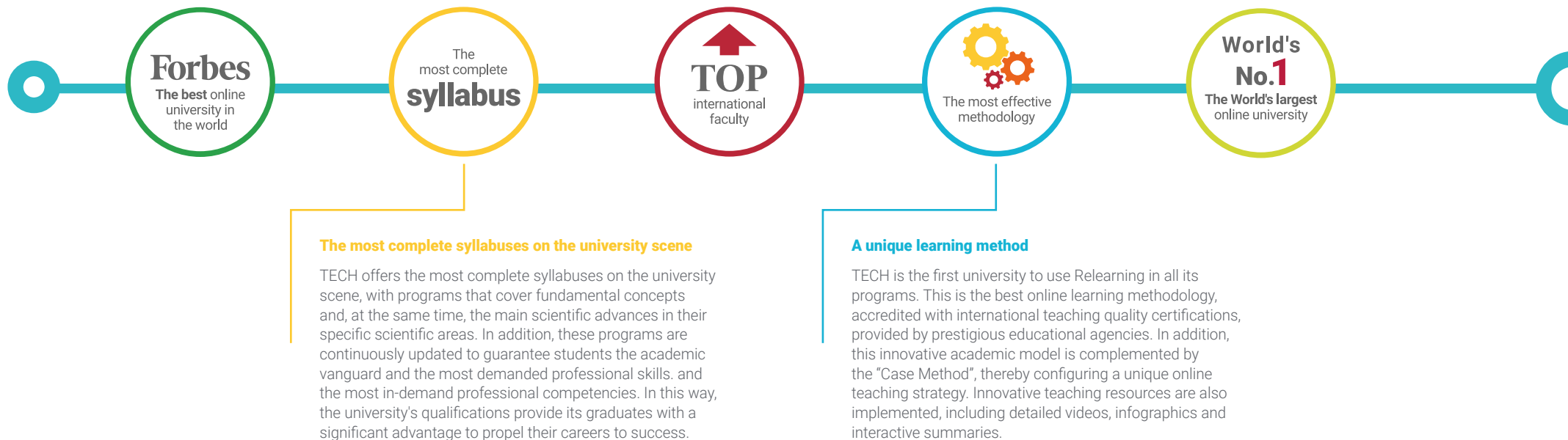
The prestigious Forbes magazine, specialized in business and finance, has highlighted TECH as "the best online university in the world" This is what they have recently stated in an article in their digital edition in which they echo the success story of this institution, "thanks to the academic offer it provides, the selection of its teaching staff, and an innovative learning method oriented to form the professionals of the future".

The best top international faculty

TECH's faculty is made up of more than 6,000 professors of the highest international prestige. Professors, researchers and top executives of multinational companies, including Isaiah Covington, performance coach of the Boston Celtics; Magda Romanska, principal investigator at Harvard MetaLAB; Ignacio Wistumba, chairman of the department of translational molecular pathology at MD Anderson Cancer Center; and D.W. Pine, creative director of TIME magazine, among others.

The world's largest online university

TECH is the world's largest online university. We are the largest educational institution, with the best and widest digital educational catalog, one hundred percent online and covering most areas of knowledge. We offer the largest selection of our own degrees and accredited online undergraduate and postgraduate degrees. In total, more than 14,000 university programs, in ten different languages, making us the largest educational institution in the world.



The official online university of the NBA

TECH is the official online university of the NBA. Thanks to our agreement with the biggest league in basketball, we offer our students exclusive university programs, as well as a wide variety of educational resources focused on the business of the league and other areas of the sports industry. Each program is made up of a uniquely designed syllabus and features exceptional guest hosts: professionals with a distinguished sports background who will offer their expertise on the most relevant topics.

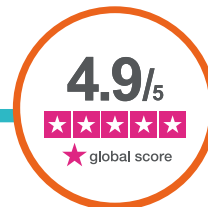
Leaders in employability

TECH has become the leading university in employability. Ninety-nine percent of its students obtain jobs in the academic field they have studied within one year of completing any of the university's programs. A similar number achieve immediate career enhancement. All this thanks to a study methodology that bases its effectiveness on the acquisition of practical skills, which are absolutely necessary for professional development.



Google Premier Partner

The American technology giant has awarded TECH the Google Premier Partner badge. This award, which is only available to 3% of the world's companies, highlights the efficient, flexible and tailored experience that this university provides to students. The recognition not only accredits the maximum rigor, performance and investment in TECH's digital infrastructures, but also places this university as one of the world's leading technology companies.



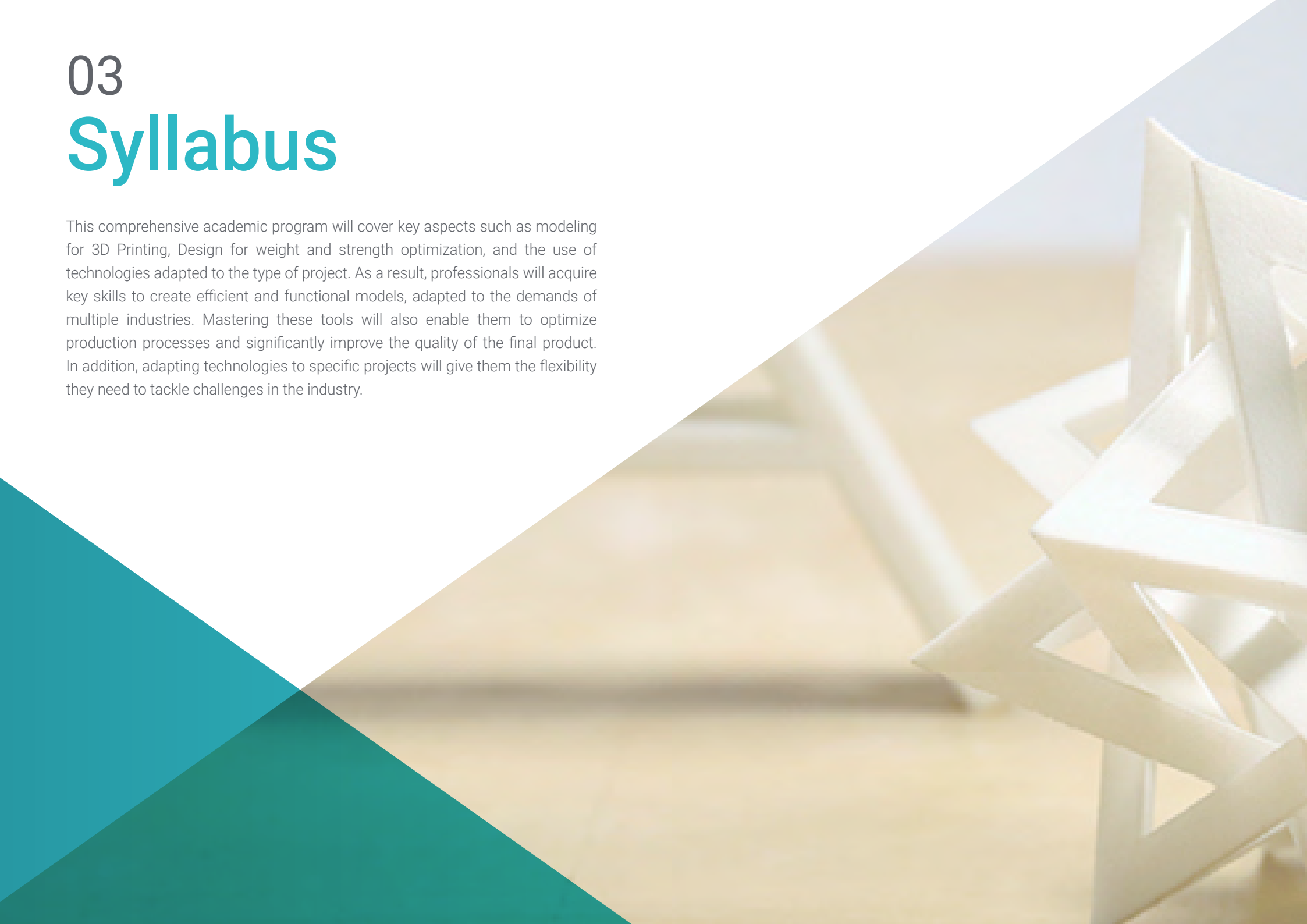
The top-rated university by its students

Students have positioned TECH as the world's top-rated university on the main review websites, with a highest rating of 4.9 out of 5, obtained from more than 1,000 reviews. These results consolidate TECH as the benchmark university institution at an international level, reflecting the excellence and positive impact of its educational model.



03 Syllabus

This comprehensive academic program will cover key aspects such as modeling for 3D Printing, Design for weight and strength optimization, and the use of technologies adapted to the type of project. As a result, professionals will acquire key skills to create efficient and functional models, adapted to the demands of multiple industries. Mastering these tools will also enable them to optimize production processes and significantly improve the quality of the final product. In addition, adapting technologies to specific projects will give them the flexibility they need to tackle challenges in the industry.





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You will adapt the use of technologies to the type of project in 3D modeling, tackling each challenge with precision and skill”

Module 1. Additive Manufacturing

- 1.1. Additive Manufacturing, Origins and Development of Processes and Materials
 - 1.1.1. Origins of Technology
 - 1.1.2. Development of Processes and Materials
 - 1.1.3. Expansion to Different Industries
- 1.2. Evolution of Additive Manufacturing Technologies
 - 1.2.1. Recent Technological Innovations
 - 1.2.2. Comparison of the Main Technologies
 - 1.2.3. Impact of Digitalization on the Industry
- 1.3. Software Technologies Involved in Additive Manufacturing
 - 1.3.1. Principles of CAD Modeling
 - 1.3.2. Importance of the STL Format in Printing
 - 1.3.3. Function of GCODE in Print Execution
- 1.4. Advantages and Limitations of Additive Manufacturing
 - 1.4.1. Flexibility in Design and Production
 - 1.4.2. Limitations in Materials and Size
 - 1.4.3. Comparison with Traditional Manufacturing
- 1.5. Differences between Additive and Subtractive Processes. General Comparison of Costs and Production Times
 - 1.5.1. Comparison of Costs and Production Times
 - 1.5.2. Applications in Different Industries
 - 1.5.3. Environmental Impact of Both Processes
- 1.6. Impact of Additive Manufacturing on Today's Industry. Supply Chain Revolution
 - 1.6.1. Supply Chain Revolution
 - 1.6.2. Customization in Short Runs – (No Molds)
 - 1.6.3. Applications in Local Production
- 1.7. Main Applications of Additive Manufacturing – Prototype Manufacturing
 - 1.7.1. Prototype Manufacturing
 - 1.7.2. Production of Functional Parts
 - 1.7.3. Applications in Healthcare and Automotive
- 1.8. Case Studies of Additive Manufacturing
 - 1.8.1. Implementation in the Aerospace Industry (External Cases)
 - 1.8.2. Use in the Manufacture of Medical Devices
 - 1.8.3. Innovative Projects in Construcccion

- 1.9. The Democratization of Additive Manufacturing – The Maker Phenomenon
 - 1.9.1. Creation of Customized Products
 - 1.9.2. Global Access to 3D Printing Technology
 - 1.9.3. Makerspaces Movements and Their Impact
- 1.10. Future Trends in Additive Manufacturing
 - 1.10.1. Manufacturing Automation
 - 1.10.2. New Advanced Materials
 - 1.10.3. Growth of the Personal Printer Market

Module 2. Additive Manufacturing Technologies and Processes

- 2.1. Classification of Additive Technologies
 - 2.1.1. Current Main Technologies by Parts
 - 2.1.2. Emerging Technologies in 3D Printing
 - 2.1.3. Classification by Materials Used
- 2.2. FDM – Fused Deposition Modeling – Operation and Applications
 - 2.2.1. Operation of the Extrusion Process
 - 2.2.2. Applications and Precision in Parts
 - 2.2.3. Limitations of the FDM Process
- 2.3. SLA – Stereolithography – Functioning, Characteristics, and Applications
 - 2.3.1. How It Works
 - 2.3.2. Applications and Precision in Parts
 - 2.3.3. SLA Limitations
- 2.4. SLS – Selective Laser Sintering – Operation and Applications
 - 2.4.1. How It Works
 - 2.4.2. Applications and Resolution
 - 2.4.3. SLS Limitations
- 2.5. MJF – MultiJet Fusion. Technology and Applications
 - 2.5.1. Multi-Agent Injection Technology
 - 2.5.2. Sectors Using MJF (Aerospace, Automotive)
 - 2.5.3. Comparison with Other Technologies
- 2.6. SLM – DLMS and Additive Manufacturing in Metal, Operation, Processes, and Applications
 - 2.6.1. Additive Technology for Metals
 - 2.6.2. Applications in High-Demand Industries
 - 2.6.3. Optimization of Metal Use in Manufacturing

- 2.7. Material Jetting: Polyjet, Applications and Layer-by-Layer Material Deposition Process. Detailed and Multicolor Prototype Applications
 - 2.7.1. Layer-by-Layer Material Deposition Process
 - 2.7.2. Detailed and Multicolor Prototype Applications
 - 2.7.3. Limitations in Mechanical Strength
- 2.8. Binder Jetting. Projection of Binders onto Metal Powder
 - 2.8.1. Projection of Binders onto Metal Powder
 - 2.8.2. Industrial Applications in Metal Parts
 - 2.8.3. Comparison with Laser Sintering
- 2.9. Advantages of Additive Manufacturing over Traditional Methods
 - 2.9.1. Flexibility in Creation of Complex Geometries
 - 2.9.2. Reduction in Material Waste
 - 2.9.3. Mass Product Customization
- 2.10. Comparison of Technologies Based on Cost, Quality, and Time
 - 2.10.1. Cost Evaluation by Technology
 - 2.10.2. Analysis of Production Times for Each Process
 - 2.10.3. Final Quality of the Parts Produced

Module 3. Materials for Additive Manufacturing

- 3.1. Classification of Materials for 3D Printing
 - 3.1.1. Polymers, Resins, and Metals in 3D Printing
 - 3.1.2. Composite Materials and Their Properties
 - 3.1.3. Material Selection Factors
- 3.2. Thermoplastics in FDM: PLA, ABS, and Others
 - 3.2.1. Properties of PLA and ABS
 - 3.2.2. Industrial Applications of Each Thermoplastic
 - 3.2.3. Selection Factors Based on the Final Product
- 3.3. Ceramics: A Specific Case of Deposition Printing
 - 3.3.1. Use of Ceramics in 3D Printing
 - 3.3.2. Applications in Industry and Art
 - 3.3.3. Technical Limitations
- 3.4. Resins for SLA, Types and Applications
 - 3.4.1. Types of Resins (Rigid, Flexible, Biocompatible)
 - 3.4.2. Applications in the Medical and Dental Sector
 - 3.4.3. Post-Printing Treatment of Resins

- 3.5. Powders for SLS: Nylon, Polyamides, and Others
 - 3.5.1. Characteristics of Plastic Powders
 - 3.5.2. Applications in Functional Parts
 - 3.5.3. Comparison of Materials Based on Strength
- 3.6. Materials for MultiJet Fusion
 - 3.6.1. MJF-Compatible Materials
 - 3.6.2. Advantages in the Production of Lightweight Parts
 - 3.6.3. Comparison with Other Additive Materials
- 3.7. Metallic Materials in Additive Manufacturing
 - 3.7.1. Alloys and Metals Used
 - 3.7.2. Applications in the Aerospace and Automotive Industries
 - 3.7.3. Challenges in Metal Printing
- 3.8. Composite Materials: Advanced Applications
 - 3.8.1. Combining Materials for Specific Properties
 - 3.8.2. Applications in High-Tech Industries
 - 3.8.3. Advantages of Hybrid Materials
- 3.9. Factors to Consider When Choosing Materials
 - 3.9.1. Mechanical and Thermal Properties
 - 3.9.2. Compatibility with Printing Technologies
 - 3.9.3. Costs and Market Availability
- 3.10. Recent Innovations in Materials for 3D Printing
 - 3.10.1. New Biodegradable Materials
 - 3.10.2. Functional Materials for Printed Electronics
 - 3.10.3. Development of Recyclable Materials

Module 4. Modeling and File Preparation for 3D Printing

- 4.1. CAD Software: Tools for 3D Modeling
 - 4.1.1. Main CAD Programs for 3D Design
 - 4.1.2. Creating Parametric Models
 - 4.1.3. Model Editing and Correction Tools
- 4.2. From CAD Design to STL File
 - 4.2.1. File Export Process in STL Format
 - 4.2.2. Considerations Regarding File Resolution and Size
 - 4.2.3. Optimizing the Model to Avoid Printing Errors

- 4.3. Adjusting Parameters in the STL File: Resolution and Tolerance
 - 4.3.1. Using Slicing Software to Generate GCODE
 - 4.3.2. Adjusting Parameters (Speed, Temperature, Layers)
 - 4.3.3. Correcting Common Problems in Slicing
- 4.4. Slicing Software: GCODE Preparation
 - 4.4.1. Using Slicing Software to Generate GCODE
 - 4.4.2. Adjusting Parameters (Speed, Temperature, Layers)
 - 4.4.3. Correcting Common Problems in Slicing
- 4.5. Design Optimization for Additive Manufacturing
 - 4.5.1. Design to Improve Printing Efficiency
 - 4.5.2. Avoiding Unnecessary Support Structures
 - 4.5.3. Adapting Design to Technology Capabilities
- 4.6. Strategies for Reducing Support Use
 - 4.6.1. Design Focused on Minimizing Supports
 - 4.6.2. Use of Favorable Angles and Geometries
 - 4.6.3. Technologies That Eliminate the Need for Supports
- 4.7. Techniques for Improving Surface Finish
 - 4.7.1. Optimization of Print Settings
 - 4.7.2. Post-Processing Methods for Improving Surfaces
 - 4.7.3. Use of Thinner Layers to Improve Quality
- 4.8. Parametric Modeling and Generative Design
 - 4.8.1. Advantages of Parametric Modeling in 3D Printing
 - 4.8.2. Use of Generative Design for Part Optimization
 - 4.8.3. Advanced Generative Design Tools
- 4.9. Integration of 3D Scanning into the Workflow
 - 4.9.1. Use of 3D Scanners for Model Capture
 - 4.9.2. Processing and Cleaning of Scanned Files
 - 4.9.3. Integration of Scanned Models into CAD Software
- 4.10. Pre-Printing Simulations and Analysis
 - 4.10.1. Simulation of Deformations and Stress in Parts
 - 4.10.2. Optimization of Orientation and Force Distribution
 - 4.10.3. Printability Analysis of Complex Models

Module 5. 3D Printers: Types and Selection

- 5.1. Types of FDM 3D Printers (Cartesian, Delta, Polar)
 - 5.1.1. Features of Cartesian Printers
 - 5.1.2. Advantages and Disadvantages of Delta Printers
 - 5.1.3. Specific Applications of Polar Printers
- 5.2. FDM Printers: Operation and Maintenance
 - 5.2.1. Basic Operation of the FDM Process
 - 5.2.2. Preventive and Corrective Maintenance
 - 5.2.3. Parameter Adjustment to Improve Quality
- 5.3. SLA and DLP Printers: Characteristics and Use
 - 5.3.1. Differences between SLA and DLP
 - 5.3.2. Industrial Uses and High-Precision Applications
 - 5.3.3. Specific Maintenance and Care
- 5.4. SLS Printers: Selection and Configuration
 - 5.4.1. Selection of SLS Printers according to Application
 - 5.4.2. Parameter Configuration for High-Strength Parts
 - 5.4.3. Maintenance Requirements for SLS Printers
- 5.5. MultiJet Fusion Printers: How to Choose the Right One
 - 5.5.1. Factors to Consider When Choosing MJF
 - 5.5.2. Comparison of MJF with Other Technologies
 - 5.5.3. Recommended Applications for MJF
- 5.6. Key Factors in Selecting a 3D Printer
 - 5.6.1. Budget and Operating Costs – Examples
 - 5.6.2. Size and Complexity of Parts. Volumes and Speeds
 - 5.6.3. Compatibility with Materials
- 5.7. Printer Comparison: Cost, Speed, and Quality
 - 5.7.1. Assessment of Acquisition and Maintenance Costs
 - 5.7.2. Comparison of Printing Speeds in Different Technologies
 - 5.7.3. Part Quality According to the Selected Printer
- 5.8. Large-Format 3D Printers: Applications and Limitations
 - 5.8.1. Advantages of Large-Format Printers for Large Parts
 - 5.8.2. Limitations in Printing Accuracy and Time
 - 5.8.3. Specific Industrial Applications

- 5.9. Hybrid Solutions: Additive and Subtractive in the Same Equipment
 - 5.9.1. Integration of 3D Printing with CNC Milling
 - 5.9.2. Advantages of Hybrid Processes for Mold Manufacturing
 - 5.9.3. Limitations of Hybrid Technology in Mass Production
- 5.10. New Trends in 3D Printers
 - 5.10.1. Recent Advances in Multimaterial Printing
 - 5.10.2. Ceramic Printing
 - 5.10.3. Networked 3D Printers and Automation

Module 6. Design for Additive Manufacturing

- 6.1. Design Focused on Optimizing Weight and Strength
 - 6.1.1. Use of Lattice Structures to Reduce Weight
 - 6.1.2. Topological Optimization to Improve Strength
 - 6.1.3. Application of Simulations in Design
- 6.2. Geometric Considerations in 3D Printing
 - 6.2.1. Complex Geometries Feasible in 3D Printing
 - 6.2.2. Orientation and Support Considerations
 - 6.2.3. Avoiding Sharp Angles in Overhangs
- 6.3. Designing Functional Parts vs. Aesthetic Parts
 - 6.3.1. Differences Between Functional and Decorative Design
 - 6.3.2. Materials and Finishes for Functional Parts
 - 6.3.3. Priorities in Geometry Selection
- 6.4. Reduction of Part and Assembly Count through Additive Manufacturing
 - 6.4.1. Consolidation of Complex Assemblies into a Single Part
 - 6.4.2. Advantages of Reducing Components for Production
 - 6.4.3. Design Considerations for Minimizing Assembly
- 6.5. Generation of Internal Structures and Lattice/Infill
 - 6.5.1. Design of Internal Lattice Structures
 - 6.5.2. Optimization to Reduce Material and Weight
 - 6.5.3. Applications in Lightweight and Strong Parts
- 6.6. Application of Generative Design in Complex Projects
 - 6.6.1. Use of Software to Generate Optimized Designs
 - 6.6.2. Considerations in Parameter Selection
 - 6.6.3. Success Stories in Applied Generative Design

- 6.7. Considerations for Cantilevered Parts and Supports
 - 6.7.1. Design Strategies to Avoid Cantilevers
 - 6.7.2. Efficient Use of Supports to Reduce Post-Processing
 - 6.7.3. Technologies That minimize the Need for Supports
- 6.8. Rapid Prototyping and Proof of Concept
 - 6.8.1. Advantages of Rapid Prototyping in Product Development
 - 6.8.2. Iteration Process in Proof of Concept
 - 6.8.3. Time Optimization in Functional Prototyping
- 6.9. Limitations in Design for Additive Manufacturing
 - 6.9.1. Restrictions due to Part Size and Resolution
 - 6.9.2. Material and Precision Limitations
 - 6.9.3. Impact of Printing Speed on Design
- 6.10. Design Optimization in 3D Printing
 - 6.10.1. Design Strategies to Improve Manufacturing Efficiency
 - 6.10.2. Reducing Printing Times through Design Adjustments
 - 6.10.3. Advanced Optimization Techniques for Cost Reduction

Module 7. Additive Manufacturing Post-Processing and Surface Finishing

- 7.1. Post-Processing Techniques: Cutting, Sanding, Polishing
 - 7.1.1. Automated Methods for Improving Surface Finish
 - 7.1.2. Polishing Tools and Equipment for Printed Parts
 - 7.1.3. Comparison of Techniques According to Material Type
- 7.2. Surface Finishes: Painting, Varnishing, and Texturizing
 - 7.2.1. Application of Protective Coatings
 - 7.2.2. Texturing Techniques to Improve Appearance
 - 7.2.3. Use of Paint and Varnishes to Improve Aesthetic Finish
- 7.3. Heat Treatment and Hardening of Parts
 - 7.3.1. Annealing Processes to Improve Strength
 - 7.3.2. Applications of Heat Treatment in Printed Metals
 - 7.3.3. Key Factors for Successful Hardening
- 7.4. Post-Printing Assembly Techniques
 - 7.4.1. Methods for Joining 3D Printed Parts
 - 7.4.2. Use of Adhesives and Welding in Complex Parts
 - 7.4.3. Design for Assembly and Simplification of Assembly

- 7.5. Support Removal Methods
 - 7.5.1. Mechanical and Chemical Techniques for Removing Supports
 - 7.5.2. Design Optimization to Facilitate Removal
 - 7.5.3. Reducing the Impact of Supports in Post-Processing
- 7.6. Post-Processing for Metallic Materials
 - 7.6.1. Polishing and Sanding of 3D Printed Metal Parts
 - 7.6.2. Specific Treatments to Improve Mechanical Properties
 - 7.6.3. Comparison of Post-Processing Techniques for Different Metals
- 7.7. Use of Soluble Materials for Supports
 - 7.7.1. Advantages of Using Water-Soluble Supports
 - 7.7.2. Materials Compatible with Dual Extruder Printers
 - 7.7.3. Reducing Post-Processing Time with Soluble Supports
- 7.8. Automation of Post-Processing: Advanced Systems
 - 7.8.1. Automated Machines for Sanding and Polishing
 - 7.8.2. Ultrasonic Cleaning Systems for Dust and Residue Removal
 - 7.8.3. Use of Robots in Post-Processing of Large Parts
- 7.9. Quality Control in Printed Parts
 - 7.9.1. Visual and Tactile Inspection Techniques
 - 7.9.2. 3D Measurement and Scanning Tools for Accuracy Verification
 - 7.9.3. Test Methods for Validating Strength and Durability
- 7.10. Post-Processing to Improve Functionality
 - 7.10.1. Additional Treatments to Improve Mechanical Properties
 - 7.10.2. Surface Finishes to Improve Functionality in Specific Parts
 - 7.10.3. Wear Reduction Through Special Coatings

Module 8. Industry-Specific Applications of Additive Manufacturing

- 8.1. Automotive: Prototypes and Functional Parts
 - 8.1.1. Rapid Prototyping for Design Validation
 - 8.1.2. Manufacturing of Functional and Customized Parts for Vehicles
 - 8.1.3. Optimization of 3D Printing in the Manufacturing of Lightweight Components
- 8.2. Aerospace: Optimization of Lightweight Components and Materials
 - 8.2.1. Weight Reduction in Aircraft Parts Using Lattice Structures
 - 8.2.2. Use of Lightweight Alloys in 3D-Printed Components
 - 8.2.3. Certification and Validation of Printed Parts for Aerospace Applications





- 8.3. Architecture: 3D-Printed Models and Constructions
 - 8.3.1. Creation of Detailed Models for Project Presentations
 - 8.3.2. Applications of 3D Printing in the Construction of Structures
 - 8.3.3. Recent Innovations in Concrete Printing and Architectural Materials
- 8.4. Health: Prosthetics, Implants, and Biomedical Applications
 - 8.4.1. Manufacturing Customized Prosthetics Using 3D Printing
 - 8.4.2. Printing Medical Implants Tailored to Patient Needs
 - 8.4.2. Innovations in Tissue and Organ Bioprinting
- 8.5. Fashion and Jewelry: Customization and Unique Design
 - 8.5.1. Producing Customized Jewelry with 3D Printers
 - 8.5.2. Use of 3D Printing for the Creation of Clothing and Accessories
 - 8.5.3. Impact of Additive Technology on the Fashion Industry
- 8.6. Education and Research: Innovative Projects with 3D Printing
 - 8.6.1. 3D Printing as an Educational Tool in Various Disciplines
 - 8.6.2. Research Projects Using 3D Printing for Prototyping
 - 8.6.2. Use of Technology in Scientific Research Laboratories
- 8.7. Electronics: Prototyping and Circuit Assembly
 - 8.7.1. Rapid Prototyping of Electronic Devices
 - 8.7.2. Printing Components for Integrated Circuit Assembly
 - 8.7.3. Innovations in Additive Manufacturing of Electronic Products
- 8.8. Food Industry: 3D Food Printing
 - 8.8.1. Applications in the Food Industry for Food Customization
 - 8.8.2. 3D Food Printing Technologies and Their Impact on Nutrition
 - 8.8.3. Innovations in Printed Textures and Shapes in Food
- 8.9. Energy and Sustainability: Components for Renewable Energy
 - 8.9.1. Production of Key Components for Renewable Energy Using 3D Printing
 - 8.9.2. Waste Reduction and Resource Optimization in Additive Manufacturing
 - 8.9.3. Innovations in Printing Components for the Solar and Wind Industry
- 8.10. Other Emerging Sectors: Exploration of New Fields
 - 8.10.1. Applications of 3D Printing in Fashion and Art
 - 8.10.2. Exploration of Emerging Sectors such as Biotechnology
 - 8.10.3. 3D Printing in the Manufacture of Customized Medical Devices

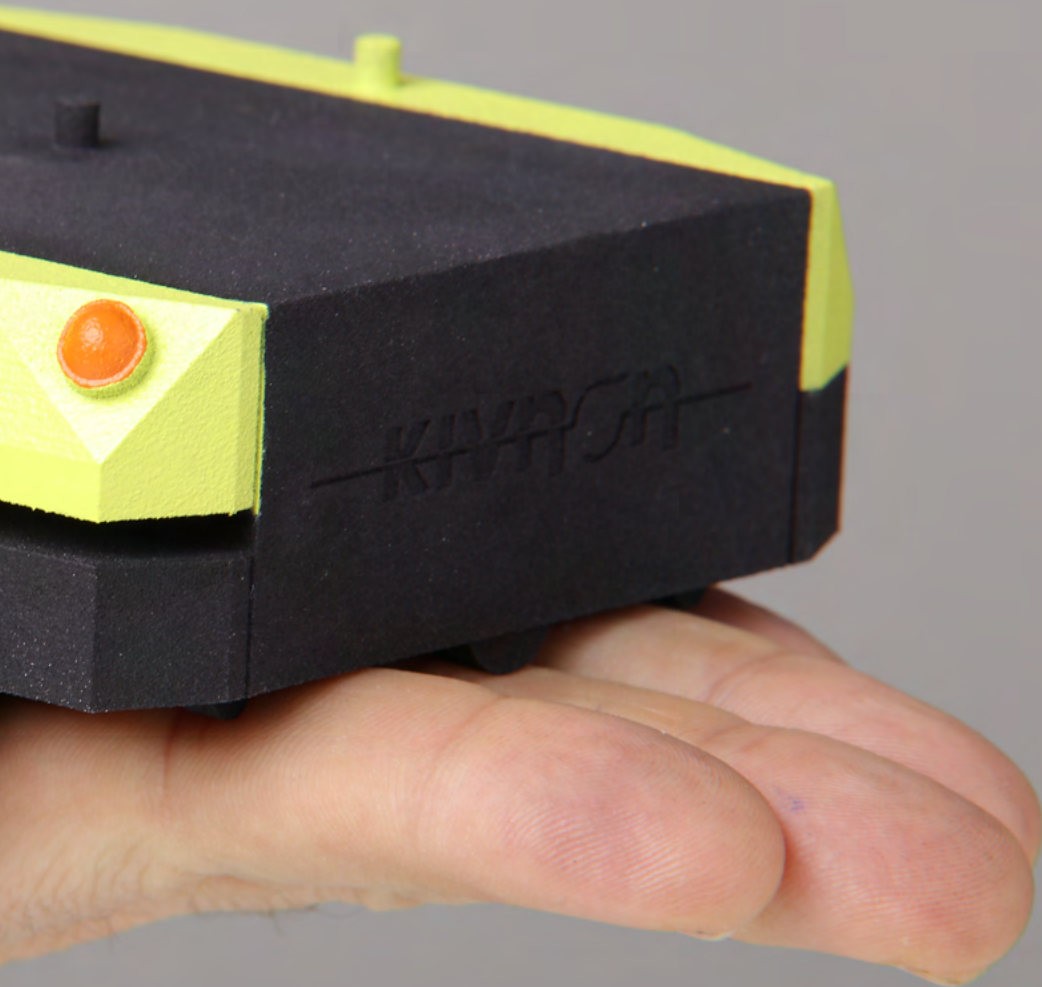
Module 9. Entrepreneurship in Additive Manufacturing

- 9.1. Business Opportunities in Additive Manufacturing
 - 9.1.1. Creation of New Markets for Customized Products
 - 9.1.2. Provision of Small-Scale 3D Printing Services
 - 9.1.3. Development of Innovative Products through Additive Manufacturing
- 9.2. Feasibility Analysis of Projects with 3D Printing
 - 9.2.1. Assessment of Production and Material Costs
 - 9.2.2. Identification of Optimization Opportunities in Projects
 - 9.2.3. Methods for Calculating Return on Investment in Additive Projects
- 9.3. Business Models Based on 3D Printing Services
 - 9.3.1. Provision of Services to Businesses and Individuals
 - 9.3.2. Strategies for Scaling a 3D Printing Business
 - 9.3.3. Profitability of Offering Customized Printing on Demand
- 9.4. How to Assess Return on Investment (ROI)
 - 9.4.1. Methods for Calculating ROI in Additive Projects
 - 9.4.2. Key Factors in Assessing Profitability
 - 9.4.3. Optimizing Delivery Time to Improve ROI
- 9.5. Strategies for Marketing 3D-Printed Products
 - 9.5.1. Distribution Channels for 3D-Printed Products
 - 9.5.2. Digital Marketing Strategies Applied to 3D Printing
 - 9.5.3. Positioning Products in the Global Market
- 9.6. Success Stories of Entrepreneurship in Additive Manufacturing - Example FDM
 - 9.6.1. Examples of Companies That Have Grown with 3D Printing
 - 9.6.2. Startup Innovations in the Additive Manufacturing Industry
 - 9.6.3. Keys to Success in Creating Businesses Based on 3D Printing
- 9.7. Global Strategy for Protecting Ideas and Products
 - 9.7.1. Methods for Protecting Intellectual Property Without Relying on Local Laws
 - 9.7.2. Open Licenses and Their Impact on Business Growth
 - 9.7.3. Strategies for Competing Globally in Additive Markets

- 9.8. Sustainability and Additive Manufacturing
 - 9.8.1. Additive Manufacturing Applications in the Circular Economy
 - 9.8.2. Reducing the Environmental Impact of Additive Processes
 - 9.8.3. Use of Recycled and Recyclable Materials in 3D Printing
- 9.9. Cost Reduction and Process Optimization
 - 9.9.1. Methods for Optimizing Material Use and Production Times
 - 9.9.2. Techniques for Reducing Waste and Operating Costs
 - 9.9.3. Process Automation in the Additive Manufacturing Production Chain
- 9.10. The Future of Entrepreneurship in 3D Printing
 - 9.10.1. Innovations That Are Shaping the Future of Entrepreneurship in Additive Manufacturing
 - 9.10.2. New Business Opportunities in Emerging Industries
 - 9.10.3. Impact of Additive Manufacturing on the Global Economy

Module 10. 3D Project Development

- 10.1. Selecting the Right Technology for a Real Project
 - 10.1.1. Comparing Technologies Based on Project Type
 - 10.1.2. Key Factors in Technology Selection
 - 10.1.3. Impact of Selected Technology on Production Costs and Timelines
- 10.2. Material and Cost Analysis
 - 10.2.1. Assessment of Material Costs and Their Impact on the Project
 - 10.2.1. Selection of Materials According to the Needs of the Final Product
 - 10.2.3. Comparison of Costs Between Different Printing Technologies
- 10.3. Design Optimization for Additive Manufacturing
 - 10.3.1. Design Adjustments to Improve Printing Efficiency
 - 10.3.2. Reduction of Supports and Material in the Design Process
 - 10.3.3. Optimization of Geometries to Improve Strength and Quality
- 10.4. Implementation of Supports and Preparation for Printing
 - 10.4.1. Strategies for the Correct Implementation of Supports
 - 10.4.2. Adjustment of Printing Parameters to Avoid Errors
 - 10.4.3. Optimization of Part Orientation to Improve the Final Finish



- 10.5. 3D Printing Process: From Setup to Printing
 - 10.5.1. Setting the Initial Parameters on the Printer
 - 10.5.2. Adjusting the Printing Temperature and Speed
 - 10.5.3. Troubleshooting Common Problems During the Printing Process
- 10.6. Post-Processing of Printed Parts
 - 10.6.1. Advanced Post-Processing Techniques to Improve Quality
 - 10.6.2. Support Removal and Surface Finishing
 - 10.6.3. Heat Treatment Methods for Printed Parts
- 10.7. Presentation of Results: Functional Prototypes
 - 10.7.1. Assessment of Prototype Performance in Functional Tests
 - 10.7.2. Comparison Between Initial Design and Results Obtained
 - 10.7.3. Adjustments to Improve Prototype Functionality
- 10.8. Strategies for Continuous Improvement in Additive Manufacturing Processes
 - 10.8.1. Process Optimization Methods to Reduce Times
 - 10.8.2. Improvements in the Quality of the Final Product through Design and Production Adjustments
 - 10.8.3. Implementation of Quality Control Systems in Production
- 10.9. Recent Technological Innovations Applied to Additive Manufacturing
 - 10.9.1. New Developments in Advanced Materials for Printing
 - 10.9.2. Automation of Online Printing Processes
 - 10.9.3. Impact of Artificial Intelligence on Design for Additive Manufacturing
- 10.10. Optimization of Productivity in 3D Projects
 - 10.10.1. Tools to Improve Efficiency in Mass Production
 - 10.10.2. Scaling Techniques in Additive Manufacturing Projects
 - 10.10.3. Software Innovations to Increase Productivity in 3D Printing

04 Teaching Objectives

This university program aims to develop essential skills in professionals, focusing on optimization and innovation within the field of Design. Through a practical and technical approach, students will acquire the skills necessary to tackle complex projects with precision and efficiency. At the same time, the program will foster the ability to make informed decisions about the use of advanced technologies, adapted to the specific requirements of each project, allowing for greater versatility and problem solving in changing environments. In this way, designers will be prepared to lead production processes with a focus on high quality and sustainability.





“

You will manage sophisticated strategies for the correct implementation of supports, ensuring their functionality and adaptability in various Additive Manufacturing processes”



General Objectives

- ♦ Understand the concepts of how Additive Manufacturing works
- ♦ Delve into the technologies specifically for the materials used
- ♦ Understand how each technology works and its application, whether by the function of the part or object or by its performance
- ♦ Use 3D surface modeling software
- ♦ Delve into the different types of 3D printers, understanding their operating principles
- ♦ Learn about topological design and optimization of parts for 3D printing
- ♦ Use the most advanced post-processing techniques to optimize 3D printing
- ♦ Visualize products for specific sectors such as automotive, aerospace, and architecture
- ♦ Encourage the identification of business opportunities in the field of Additive Manufacturing
- ♦ Develop project management skills, from conceptualization and design to manufacturing and post-processing of parts



You will have access to a variety of multimedia support resources that will make your study more enjoyable, including explanatory videos and interactive summaries”





Specific Objectives

Module 1. Additive Manufacturing

- ♦ Master Additive Manufacturing technologies to solve specific problems that can be solved with these technologies
- ♦ Analyze parts in 3D to select the best technology, taking into account key factors such as cost, strength, and quantities

Module 2. Additive Manufacturing Technologies and Processes

- ♦ Differentiate technologies by their applications
- ♦ Compare production times and understand post-processing

Module 3. Materials for Additive Manufacturing

- ♦ Identify and classify the different types of materials used in Additive Manufacturing
- ♦ Evaluate material selection criteria based on specific product requirements and available additive manufacturing technologies

Module 4. Modeling and File Preparation for 3D Printing

- ♦ Differentiate between software and its 3D modeling capabilities
- ♦ Transfer files from one software to another and export them in a format compatible with 3D printing

Module 5. 3D Printers: Types and Selection

- ♦ Develop skills to select the most suitable 3D printer according to project requirements
- ♦ Promote the exploration and adaptation of emerging technologies in 3D Printing, driving continuous improvement and efficiency in production processes

Module 6. Design for Additive Manufacturing

- ♦ Learn how to use CAD and simulation software, applying design methodologies that allow you to predict behavior during the printing process
- ♦ Identify and manage constraints such as overload angles, the need for supports, and the mechanical properties of materials

Module 7. Additive Manufacturing Post-Processing and Surface Finishing

- ♦ Address the best post-processing technique for each of the technologies and materials
- ♦ Develop skills to improve the quality, precision, and resistance of parts through polishing, heat treatment, painting, and other finishing techniques

Module 8. Industry-Specific Applications of Additive Manufacturing

- ♦ Analyze how Additive Manufacturing is implemented in different industries
- ♦ Evaluate the benefits and limitations of the technology in each industry, considering aspects such as cost, time, and quality

Module 9. Entrepreneurship in Additive Manufacturing

- ♦ Learn how to develop business plans, market analysis, and specific financing strategies for 3D printing projects
- ♦ Acquire tools to assess and mitigate risks, ensuring the viability and sustainability of ventures in this industry

Module 10. 3D Project Development

- ♦ Learn how to document, assess, and communicate results, ensuring knowledge transfer and the replicability of the solution developed
- ♦ Encourage critical analysis and the resolution of technical and logistical challenges during project implementation

05

Career Opportunities

This university degree opens up a range of professional opportunities for students, including key positions such as product designer, prototyper, and advanced manufacturing specialist. In addition, experts will be highly prepared to make the leap to any institution to lead its digital transformation and thus significantly optimize its processes. Along these lines, graduates will master techniques such as 3D modeling and Additive Manufacturing, enabling them to take on leadership and management roles in high-impact projects where optimization, precision, and creativity are essential for success in an ever-evolving market.



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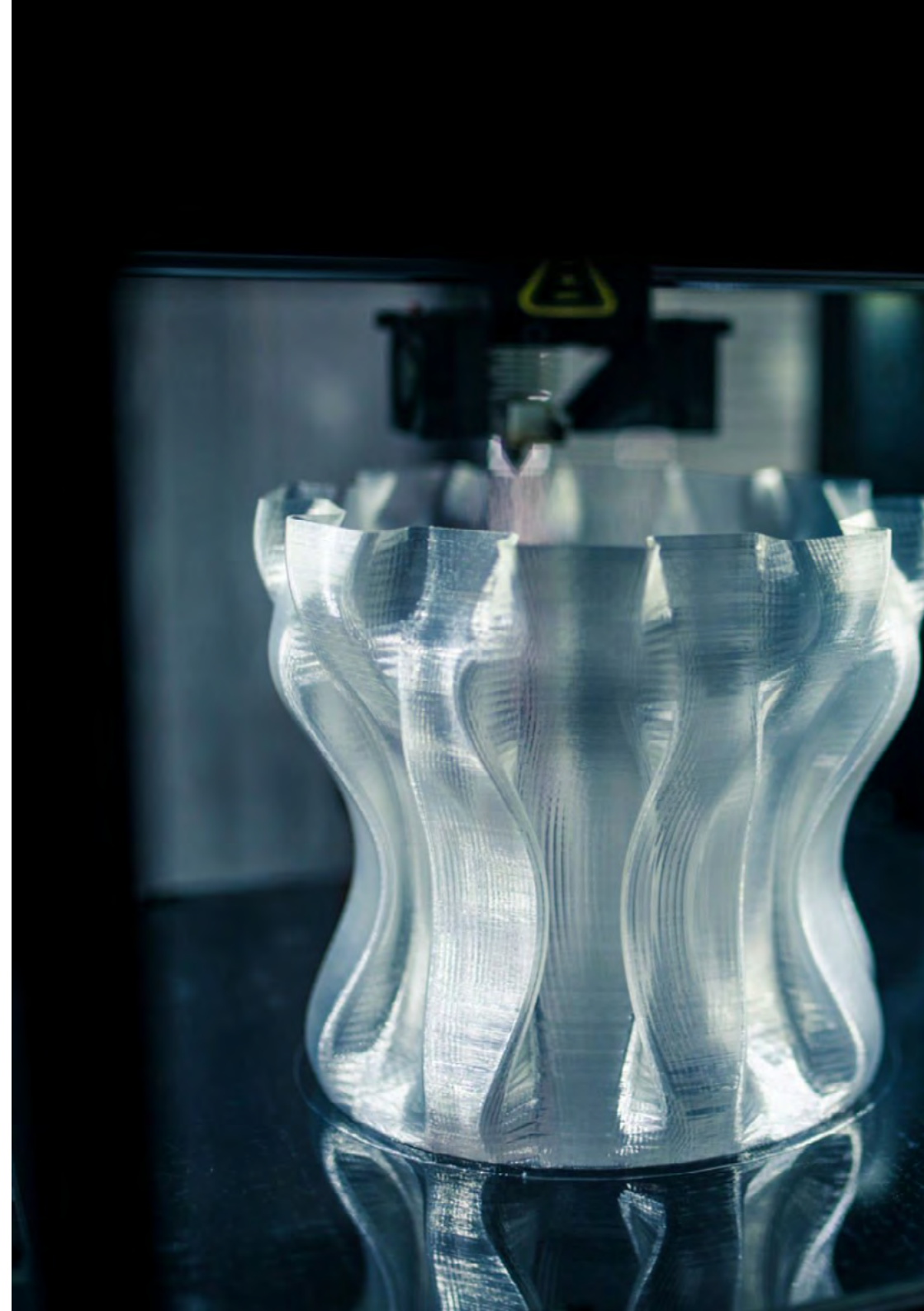
You will assess additive manufacturing processes from the perspective of efficiency, sustainability, and economic viability”


Graduate Profile

Graduates of this program will be known for their ability to lead innovative design projects, applying advanced technological solutions to different challenges. They will also have the skills to manage complex production processes, optimizing resources and maximizing efficiency. In addition, they will be able to quickly adapt to new trends and tools, anticipating market needs. As a result, their strategic approach will enable them to integrate sustainable methods into product design, establishing themselves as highly competent professionals in decision-making that adds value to organizations and projects.

Do you want to become an expert in Additive Manufacturing? This university program will provide you with the tools you need to achieve this in just 12 months.

- ♦ **Technological Adaptability:** manage new technologies and tools efficiently, adjusting to rapid changes in the field of design and manufacturing
- ♦ **Critical Thinking:** analyze complex situations and make informed decisions, evaluating various factors before proposing solutions
- ♦ **Project Management:** plan, coordinate, and supervise projects from conception to implementation, ensuring that deadlines are met and resources are optimized
- ♦ **Creativity and Innovation:** generate innovative ideas and solutions, adding value to design and production processes through unconventional approaches





After completing the Professional Master's Degree, you will be able to use your knowledge and skills in the following positions:

- 1. Product Designer:** Responsible for conceptualizing, creating, and improving products, applying industrial design and manufacturing principles to ensure functionality, aesthetics, and efficiency in production.
- 2. Advanced Manufacturing Specialist:** Dedicated to implementing and optimizing production processes, using cutting-edge technologies such as Additive Manufacturing and 3D modeling to improve efficiency and reduce costs.
- 3. Head of Industrial Design:** Oversees design projects, managing multidisciplinary teams and ensuring both the quality and aesthetic consistency of the products developed.
- 4. Prototype Designer:** Manages the creation and testing of prototypes, using advanced modeling and manufacturing tools to improve product characteristics prior to mass production.
- 5. Product Development Engineer:** Focuses on the research, design, and development of new products, applying technical and creative principles to meet market needs and ensure product viability.
- 6. 3D Modeling Specialist:** Creates three-dimensional models using specialized software, allowing product designs to be visualized and adjusted prior to manufacturing.
- 7. Innovation Manager:** Responsible for leading the research and development department, implementing innovative technological solutions to improve production processes and design products with high added value.
- 8. Design Project Coordinator:** Leads the planning, execution, and monitoring of design projects, ensuring that deadlines, budgets, and established quality standards are met.
- 9. Production Manager:** Focuses on supervising and managing production operations, ensuring that processes are efficient, profitable, and comply with the technical and quality requirements of the designed products.

06

Study Methodology

TECH is the world's first university to combine the **case study** methodology with **Relearning**, a 100% online learning system based on guided repetition.

This disruptive pedagogical strategy has been conceived to offer professionals the opportunity to update their knowledge and develop their skills in an intensive and rigorous way. A learning model that places students at the center of the educational process giving them the leading role, adapting to their needs and leaving aside more conventional methodologies.



“

TECH will prepare you to face new challenges in uncertain environments and achieve success in your career”

The student: the priority of all TECH programs

In TECH's study methodology, the student is the main protagonist.

The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

With TECH's asynchronous educational model, it is students who choose the time they dedicate to study, how they decide to establish their routines, and all this from the comfort of the electronic device of their choice. The student will not have to participate in live classes, which in many cases they will not be able to attend. The learning activities will be done when it is convenient for them. They can always decide when and from where they want to study.

“

*At TECH you will NOT have live classes
(which you might not be able to attend)”*



The most comprehensive study plans at the international level

TECH is distinguished by offering the most complete academic itineraries on the university scene. This comprehensiveness is achieved through the creation of syllabi that not only cover the essential knowledge, but also the most recent innovations in each area.

By being constantly up to date, these programs allow students to keep up with market changes and acquire the skills most valued by employers. In this way, those who complete their studies at TECH receive a comprehensive education that provides them with a notable competitive advantage to further their careers.

And what's more, they will be able to do so from any device, pc, tablet or smartphone.

“*TECH's model is asynchronous, so it allows you to study with your pc, tablet or your smartphone wherever you want, whenever you want and for as long as you want*”

Case Studies and Case Method

The case method has been the learning system most used by the world's best business schools. Developed in 1912 so that law students would not only learn the law based on theoretical content, its function was also to present them with real complex situations. In this way, they could make informed decisions and value judgments about how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

With this teaching model, it is students themselves who build their professional competence through strategies such as Learning by Doing or Design Thinking, used by other renowned institutions such as Yale or Stanford.

This action-oriented method will be applied throughout the entire academic itinerary that the student undertakes with TECH. Students will be confronted with multiple real-life situations and will have to integrate knowledge, research, discuss and defend their ideas and decisions. All this with the premise of answering the question of how they would act when facing specific events of complexity in their daily work.



Relearning Methodology

At TECH, case studies are enhanced with the best 100% online teaching method: Relearning.

This method breaks with traditional teaching techniques to put the student at the center of the equation, providing the best content in different formats. In this way, it manages to review and reiterate the key concepts of each subject and learn to apply them in a real context.

In the same line, and according to multiple scientific researches, reiteration is the best way to learn. For this reason, TECH offers between 8 and 16 repetitions of each key concept within the same lesson, presented in a different way, with the objective of ensuring that the knowledge is completely consolidated during the study process.

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



A 100% online Virtual Campus with the best teaching resources

In order to apply its methodology effectively, TECH focuses on providing graduates with teaching materials in different formats: texts, interactive videos, illustrations and knowledge maps, among others. All of them are designed by qualified teachers who focus their work on combining real cases with the resolution of complex situations through simulation, the study of contexts applied to each professional career and learning based on repetition, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neuroscience points to the importance of taking into account the place and context where the content is accessed before starting a new learning process. Being able to adjust these variables in a personalized way helps people to remember and store knowledge in the hippocampus to retain it in the long term. This is a model called Neurocognitive context-dependent e-learning that is consciously applied in this university qualification.

In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

Likewise, this very complete Virtual Campus will allow TECH students to organize their study schedules according to their personal availability or work obligations. In this way, they will have global control of the academic content and teaching tools, based on their fast-paced professional update.



The online study mode of this program will allow you to organize your time and learning pace, adapting it to your schedule"

The effectiveness of the method is justified by four fundamental achievements:

1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that assess real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.

The university methodology top-rated by its students

The results of this innovative teaching model can be seen in the overall satisfaction levels of TECH graduates.

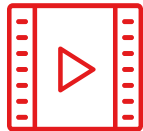
The students' assessment of the teaching quality, the quality of the materials, the structure of the program and its objectives is excellent. Not surprisingly, the institution became the top-rated university by its students according to the global score index, obtaining a 4.9 out of 5.

Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is at the forefront of technology and teaching.

You will be able to learn with the advantages that come with having access to simulated learning environments and the learning by observation approach, that is, Learning from an expert.



As such, the best educational materials, thoroughly prepared, will be available in this program:



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.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



Practicing Skills and Abilities

You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.



Interactive Summaries

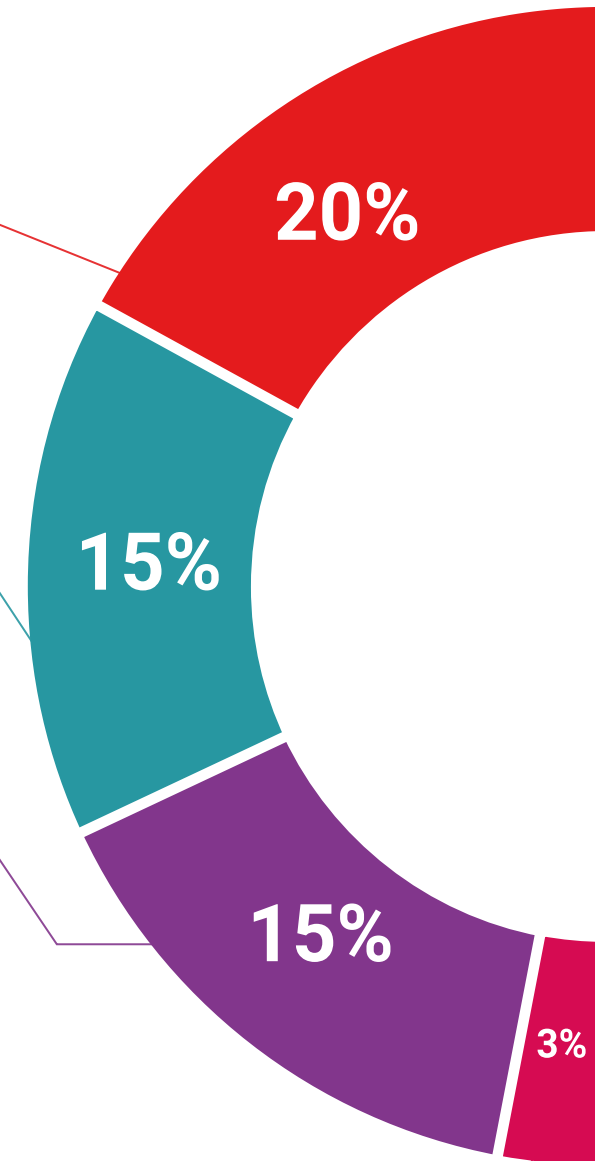
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

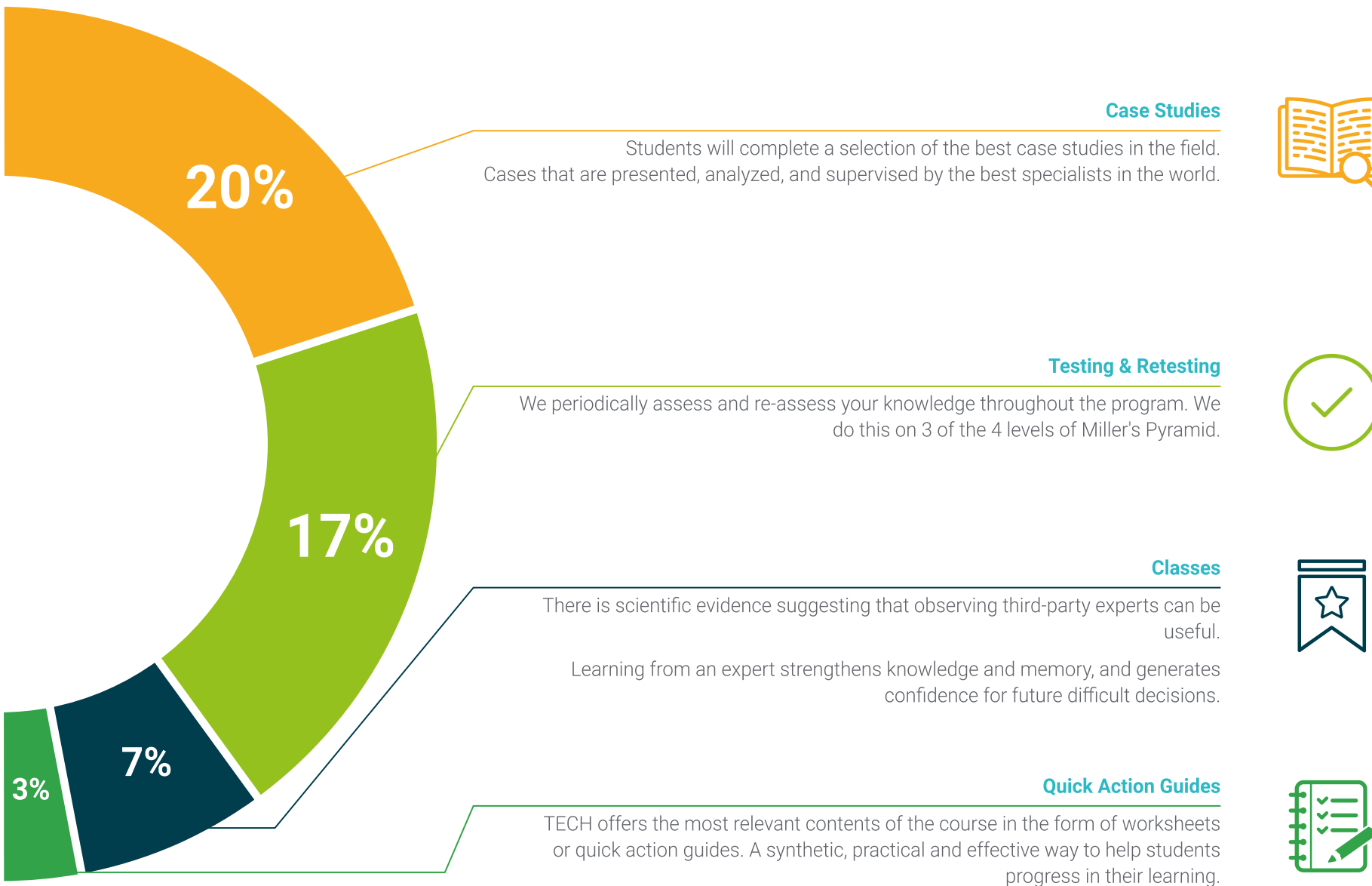
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



Additional Reading

Recent articles, consensus documents, international guides... In our virtual library you will have access to everything you need to complete your education.





07

Teaching Staff

TECH's philosophy is based on offering the most comprehensive and up-to-date university programs in the academic field, which is why it carefully selects its teaching staff. Renowned experts in Additive Manufacturing and 3D Printing have been brought in to teach this Continuing Education program. These professionals, with extensive experience in the field, have been instrumental in developing innovative digital solutions aimed at optimizing industrial processes. Students will therefore have the opportunity to enjoy an immersive experience that will enable them to make significant progress in their careers as designers.





“

An experienced teaching staff made up of experts in Additive Manufacturing and 3D Printing will guide you throughout the university program”

Management



Mr. Parera Buxeres, Antoni

- ♦ CEO and Creative Director at Innou
- ♦ Project Manager and Industrial Designer at Play
- ♦ Master's Degree in Project Management and Efficient Project Management from the Polytechnic University of Catalonia
- ♦ Bachelor of Arts with a specialization in Design from the University of Southampton

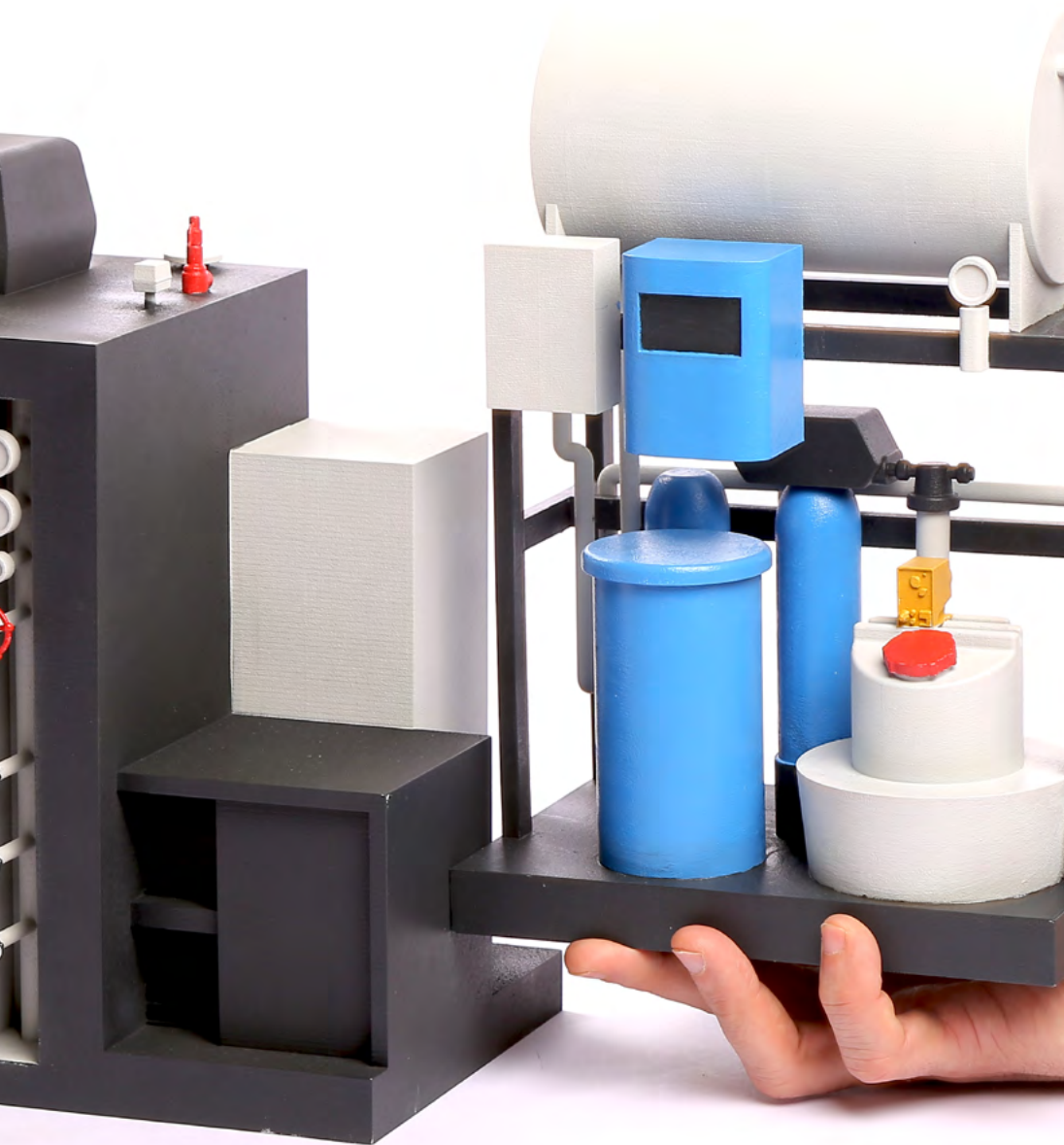
Professors

Mr. López Ratti, Diego

- ♦ Project Manager at Innou
- ♦ Expert in 3D Printer Assembly and Maintenance
- ♦ Master's Degree in Sustainable Product Design from IED Barcelona
- ♦ Bachelor's Degree in Product Design and Industrial Design from IED Barcelona

Mr. Sánchez González, Antonio

- ♦ Director of AsorCAD Engineering
- ♦ Industrial Designer at Segui Desing
- ♦ Project Manager in R&D at Play
- ♦ Founder of Innou
- ♦ Master's Degree in Technical Management and Production
- ♦ Bachelor's Degree in Mechanical Engineering from the University of Southampton

**Ms. Contreras, Lucía**

- ♦ Creative Strategist and Social Media Manager at 3Dnatives
- ♦ Head of Influencer Communications at Bebee
- ♦ Web Content Editor at Needme
- ♦ Master's Degree in Design and Art Direction from CICE
- ♦ Bachelor's Degree in Audiovisual Communication from the Complutense University of Madrid

Mr. Alonso Almirall, Óscar

- ♦ Head of Additive Manufacturing and 3D Printing at Industria Digital
- ♦ Mechanical Engineer at Leitat Technology Center
- ♦ Product Development Engineer at Mazel Ingenieros
- ♦ Bachelor's Degree in Industrial Engineering with a specialization in Mechanics from the Polytechnic University of Catalonia

Mr. Bafaluy Ojea, Sergi

- ♦ Senior Researcher in Additive Manufacturing and 3D Printing in Digital Industry
- ♦ Process Engineer at Gestamp Hardtech AB
- ♦ Materials Engineer at ABB
- ♦ Industrial Doctorate in HP Printing and Computing Solutions
- ♦ Degree in Chemical and Materials Engineering from the Polytechnic University of Catalonia and the European School of Engineers

Mr. Tutó Cabedo, Xavier

- ♦ Director of Engineering and Design at Industria Digital
- ♦ Founder of Kxdesigners
- ♦ Master's Degree in Design Research and Management from TFRAF at ISEC
- ♦ Bachelor's Degree in Design Engineering from ELISAVA University School

08 Certificate

This Professional Master's Degree in Additive Manufacturing and 3D Printing guarantees students, in addition to the most rigorous and up-to-date education, access to a diploma for the Professional Master's Degree issued by TECH Global University.



“

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

This private qualification will allow you to obtain a diploma for the **Professional Master's Degree in Additive Manufacturing and 3D Printing** endorsed by **TECH Global University**, the world's largest online university.

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

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

TECH is a member of **The Design Society (DS)**, the largest community of professionals focused on the development of design science, which provides learning opportunities and continuous professional development to all its members, focusing its benefits on the community in an educational setting, providing technological resources, tools, and digital teaching through forums, conferences, webinars, and master classes, resources that students can access during their professional training.

TECH is a member of:

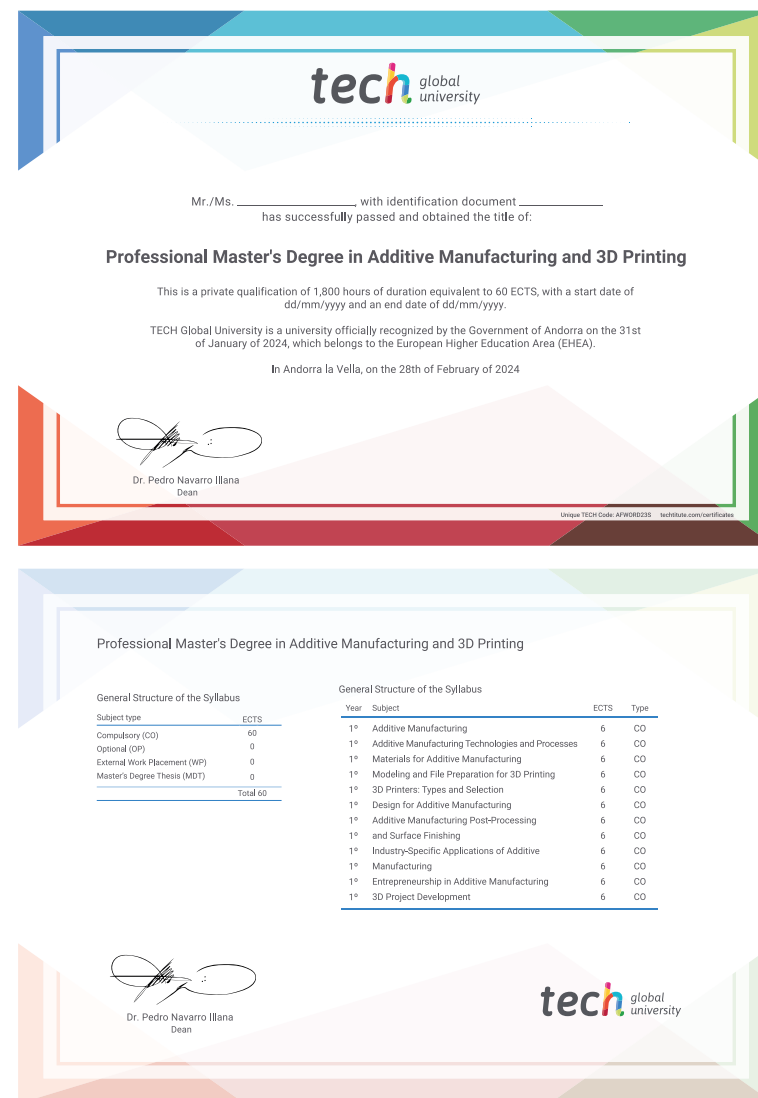


Title: **Professional Master's Degree in Additive Manufacturing and 3D Printing**

Modality: **online**

Duration: **12 months**

Accreditation: **60 ECTS**





Professional Master's Degree

Additive Manufacturing
and 3D Printing

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Global University
- » Accreditation: 60 ECTS
- » Schedule: at your own pace
- » Exams: online

Professional Master's Degree Additive Manufacturing and 3D Printing

TECH is a member of:

The background of the slide is a collage of images related to additive manufacturing. It includes a close-up of a 3D printer's internal mechanism with orange doors and a digital display showing '113.00'. Above this, there is a large, white, 3D printed architectural model of a building with a person standing on top for scale. The bottom right corner features the 'tech global university' logo, which consists of the word 'tech' in a bold, lowercase sans-serif font, followed by a colorful vertical bar and the words 'global university' in a smaller font.

tech global
university