

Postgraduate Diploma

Key Elements of Additive Manufacturing



Postgraduate Diploma Key Elements of Additive Manufacturing

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

Website: www.techtitude.com/us/engineering/postgraduate-diploma/postgraduate-diploma-key-elements-additive-manufacturing

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01

Introduction to the Program

Additive Manufacturing has emerged as one of the most ground-breaking technologies in modern industry. Its ability to create complex, customized, and functional geometries has revolutionized industries such as medicine. However, the final performance of the parts produced depends largely on the elements involved in the process, such as the materials used, the printing parameters, the manufacturing conditions, and the post-processing techniques. Therefore, it is essential that engineers have a solid understanding of the key factors that determine the quality, efficiency, and viability of Additive Manufacturing in industrial environments. In this context, TECH has developed an innovative 100% online university program focused on the Key Elements of Additive Manufacturing.



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With this completely online program, you will design parts adapted to the principles of 3D printing and optimize the manufacturing of functional components”

According to a new report by the International Monetary Fund, additive manufacturing has experienced sustained growth in recent years, with a global market exceeding \$18 billion. This advance has been driven by the ability of this tool to reduce product development times by up to 70% and decrease material waste by 90% compared to traditional methods. However, the performance and industrial viability of 3D printing depend directly on the elements involved in the process. For this reason, experts need to acquire a comprehensive understanding of aspects such as printing parameters to ensure their optimal application at an industrial level with efficiency.

To facilitate this task, TECH has created a pioneering program in Key Elements in Additive Manufacturing. Designed by leaders in the field, the academic syllabus will delve into the classification and selection of materials for 3D printing. In turn, the syllabus will offer students the latest post-processing techniques to improve the mechanical, aesthetic, and functional properties of the manufactured parts. In line with this, the teaching materials will delve into the use of automated systems for ultrasonic cleaning to remove residues. Graduates will therefore acquire advanced skills to supervise complete Additive Manufacturing processes, from material preparation to the final finishing of parts.

In terms of the university program's methodology, it will feature an online learning system that will allow engineers to continue developing their work without interruption, as this program will not subject them to rigid schedules or inconvenient travel. They will also have access to a prestigious teaching staff, who will share their knowledge using the latest multimedia resources (including interactive summaries and explanatory videos).

This **Postgraduate Diploma in Key Elements of Additive Manufacturing** contains the most complete and up-to-date program on the market. The most important features include:

- ♦ The development of case studies presented by experts in Key Elements of Additive Manufacturing
- ♦ 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 self-assessment can be used to improve learning
- ♦ Its special emphasis on innovative methodologies in engineering practice
- ♦ 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 implement 3D Printing solutions in production processes, contributing to innovation and operational efficiency”

“

The Relearning methodology developed by TECH will allow you to organize your study time and pace, adapting to your schedule”

The teaching staff includes professionals from the field of Additive Manufacturing, 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 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 interactive video system created by renowned and experienced experts.

You will analyze the key elements involved in 3D Printing processes, from materials to post-processing.

You will master the technical parameters involved in Additive Manufacturing, including design and printing.



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".

Forbes

The best online university in the world

The most complete
syllabus

The most complete syllabuses on the university scene

TECH offers the most complete syllabuses on the university scene, with programs that cover fundamental concepts and, at the same time, the main scientific advances in their specific scientific areas. In addition, these programs are continuously updated to guarantee students the academic vanguard and the most demanded professional skills. and the most in-demand professional competencies. In this way, the university's qualifications provide its graduates with a significant advantage to propel their careers to success.

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.

**↑
TOP**
international faculty



The most effective methodology

A unique learning method

TECH is the first university to use Relearning in all its programs. This is the best online learning methodology, accredited with international teaching quality certifications, provided by prestigious educational agencies. In addition, this innovative academic model is complemented by the "Case Method", thereby configuring a unique online teaching strategy. Innovative teaching resources are also implemented, including detailed videos, infographics and interactive summaries.

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.

World's No.1

The World's largest online university

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.

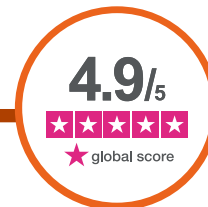
Leaders in employability

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.



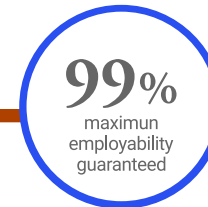
Google Premier Partner

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

The teaching materials that make up this university program have been designed by renowned experts in Additive Manufacturing. The syllabus will delve into issues ranging from the selection of materials for 3D printing and the most innovative post-processing techniques to the applications of Additive Manufacturing in rapidly advancing sectors such as the automotive industry. As a result, students will be highly qualified to lead cutting-edge projects, improve the efficiency of production processes, and contribute to technological development in different industries.



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You will gain an in-depth understanding of technical specifications, Manufacturing parameters, and tolerances in additive processes”

Module 1. Materials for Additive Manufacturing

- 1.1. Classification of Materials for 3D Printing
 - 1.1.1. Polymers, Resins, and Metals in 3D Printing
 - 1.1.2. Composite Materials and Their Properties
 - 1.1.3. Material Selection Factors
- 1.2. Thermoplastics in FDM: PLA, ABS, and Others
 - 1.2.1. Properties of PLA and ABS
 - 1.2.2. Industrial Applications of Each Thermoplastic
 - 1.2.3. Selection Factors Based on the Final Product
- 1.3. Ceramics: A Specific Case of Deposition Printing
 - 1.3.1. Use of Ceramics in 3D Printing
 - 1.3.2. Applications in Industry and Art
 - 1.3.3. Technical Limitations
- 1.4. Resins for SLA, Types and Applications
 - 1.4.1. Types of Resins (Rigid, Flexible, Biocompatible)
 - 1.4.2. Applications in the Medical and Dental Sector
 - 1.4.3. Post-Printing Treatment of Resins
- 1.5. Powders for SLS: Nylon, Polyamides, and Others
 - 1.5.1. Characteristics of Plastic Powders
 - 1.5.2. Applications in Functional Parts
 - 1.5.3. Comparison of Materials Based on Strength
- 1.6. Materials for MultiJet Fusion
 - 1.6.1. MJF-Compatible Materials
 - 1.6.2. Advantages in the Production of Lightweight Parts
 - 1.6.3. Comparison with Other Additive Materials
- 1.7. Metallic Materials in Additive Manufacturing
 - 1.7.1. Alloys and Metals Used
 - 1.7.2. Applications in the Aerospace and Automotive Industries
 - 1.7.3. Challenges in Metal Printing
- 1.8. Composite Materials: Advanced Applications
 - 1.8.1. Combining Materials for Specific Properties
 - 1.8.2. Applications in High-Tech Industries
 - 1.8.3. Advantages of Hybrid Materials



- 1.9. Factors to Consider When Choosing Materials
 - 1.9.1. Mechanical and Thermal Properties
 - 1.9.2. Compatibility with Printing Technologies
 - 1.9.3. Costs and Market Availability
- 1.10. Recent Innovations in Materials for 3D Printing
 - 1.10.1. New Biodegradable Materials
 - 1.10.2. Functional Materials for Printed Electronics
 - 1.10.3. Development of Recyclable Materials

Module 2. Additive Manufacturing Post-Processing and Surface Finishing

- 2.1. Post-Processing Techniques: Cutting, Sanding, Polishing
 - 2.1.1. Automated Methods for Improving Surface Finish
 - 2.1.2. Polishing Tools and Equipment for Printed Parts
 - 2.1.3. Comparison of Techniques According to Material Type
- 2.2. Surface Finishes: Painting, Varnishing, and Texturizing
 - 2.2.1. Application of Protective Coatings
 - 2.2.2. Texturing Techniques to Improve Appearance
 - 2.2.3. Use of Paint and Varnishes to Improve Aesthetic Finish
- 2.3. Heat Treatment and Hardening of Parts
 - 2.3.1. Annealing Processes to Improve Strength
 - 2.3.2. Applications of Heat Treatment in Printed Metals
 - 2.3.3. Key Factors for Successful Hardening
- 2.4. Post-Printing Assembly Techniques
 - 2.4.1. Methods for Joining 3D Printed Parts
 - 2.4.2. Use of Adhesives and Welding in Complex Parts
 - 2.4.3. Design for Assembly and Simplification of Assembly
- 2.5. Support Removal Methods
 - 2.5.1. Mechanical and Chemical Techniques for Removing Supports
 - 2.5.2. Design Optimization to Facilitate Removal
 - 2.5.3. Reducing the Impact of Supports in Post-Processing
- 2.6. Post-Processing for Metallic Materials
 - 2.6.1. Polishing and Sanding of 3D Printed Metal Parts
 - 2.6.2. Specific Treatments to Improve Mechanical Properties
 - 2.6.3. Comparison of Post-Processing Techniques for Different Metals


- 2.7. Use of Soluble Materials for Supports
 - 2.7.1. Advantages of Using Water-Soluble Supports
 - 2.7.2. Materials Compatible with Dual Extruder Printers
 - 2.7.3. Reducing Post-Processing Time with Soluble Supports
- 2.8. Automation of Post-Processing: Advanced Systems
 - 2.8.1. Automated Machines for Sanding and Polishing
 - 2.8.2. Ultrasonic Cleaning Systems for Dust and Residue Removal
 - 2.8.3. Use of Robots in Post-Processing of Large Parts
- 2.9. Quality Control in Printed Parts
 - 2.9.1. Visual and Tactile Inspection Techniques
 - 2.9.2. 3D Measurement and Scanning Tools for Accuracy Verification
 - 2.9.3. Test Methods for Validating Strength and Durability
- 2.10. Post-Processing to Improve Functionality
 - 2.10.1. Additional Treatments to Improve Mechanical Properties
 - 2.10.2. Surface Finishes to Improve Functionality in Specific Parts
 - 2.10.3. Wear Reduction Through Special Coatings

Module 3. Industry-Specific Applications of Additive Manufacturing

- 3.1. Automotive: Prototypes and Functional Parts
 - 3.1.1. Rapid Prototyping for Design Validation
 - 3.1.2. Manufacturing of Functional and Customized Parts for Vehicles
 - 3.1.3. Optimization of 3D Printing in the Manufacturing of Lightweight Components
- 3.2. Aerospace: Optimization of Lightweight Components and Materials
 - 3.2.1. Weight Reduction in Aircraft Parts Using Lattice Structures
 - 3.2.2. Use of Lightweight Alloys in 3D-Printed Components
 - 3.2.3. Certification and Validation of Printed Parts for Aerospace Applications
- 3.3. Architecture: 3D-Printed Models and Constructions
 - 3.3.1. Creation of Detailed Models for Project Presentations
 - 3.3.2. Applications of 3D Printing in the Construction of Structures
 - 3.3.3. Recent Innovations in Concrete Printing and Architectural Materials
- 3.4. Health: Prosthetics, Implants, and Biomedical Applications
 - 3.4.1. Manufacturing Customized Prosthetics Using 3D Printing
 - 3.4.2. Printing Medical Implants Tailored to Patient Needs
 - 3.4.2. Innovations in Tissue and Organ Bioprinting

- 3.5. Fashion and Jewelry: Customization and Unique Design
 - 3.5.1. Producing Customized Jewelry with 3D Printers
 - 3.5.2. Use of 3D Printing for the Creation of Clothing and Accessories
 - 3.5.3. Impact of Additive Technology on the Fashion Industry
- 3.6. Education and Research: Innovative Projects with 3D Printing
 - 3.6.1. 3D Printing as an Educational Tool in Various Disciplines
 - 3.6.2. Research Projects Using 3D Printing for Prototyping
 - 3.6.2. Use of Technology in Scientific Research Laboratories
- 3.7. Electronics: Prototyping and Circuit Assembly
 - 3.7.1. Rapid Prototyping of Electronic Devices
 - 3.7.2. Printing Components for Integrated Circuit Assembly
 - 3.7.3. Innovations in Additive Manufacturing of Electronic Products
- 3.8. Food Industry: 3D Food Printing
 - 3.8.1. Applications in the Food Industry for Food Customization
 - 3.8.2. 3D Food Printing Technologies and Their Impact on Nutrition
 - 3.8.3. Innovations in Printed Textures and Shapes in Food
- 3.9. Energy and Sustainability: Components for Renewable Energy
 - 3.9.1. Production of Key Components for Renewable Energy Using 3D Printing
 - 3.9.2. Waste Reduction and Resource Optimization in Additive Manufacturing
 - 3.9.3. Innovations in Printing Components for the Solar and Wind Industry
- 3.10. Other Emerging Sectors: Exploration of New Fields
 - 3.10.1. Applications of 3D Printing in Fashion and Art
 - 3.10.2. Exploration of Emerging Sectors such as Biotechnology
 - 3.10.3. 3D Printing in the Manufacture of Customized Medical Devices





“ You will integrate Additive Manufacturing into complex industrial processes, taking into account aspects of sustainability, efficiency, and scalability”

04

Teaching Objectives

Through this program, engineers will acquire key skills to perform competently in the field of Additive Manufacturing. In this regard, students will be able to select appropriate materials, configure printing parameters, optimize designs, and manage post-processing processes. In addition, they will gain a comprehensive technical overview that will enable them to integrate additive technologies into complex industrial environments, improving efficiency, product customization, and innovation in manufacturing processes.



An abstract geometric structure made of white sticks, resembling a complex lattice or a modern architectural design, is shown in the background. The structure is composed of numerous white sticks of varying lengths and angles, creating a complex, three-dimensional pattern. The background is a gradient of light blue and white, with a dark blue diagonal band running across the top right corner.

“

You will understand the behavior of materials used in Additive Manufacturing and their influence on both the quality and functionality of manufactured parts”



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





Specific Objectives

Module 1. 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 2. 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 3. 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



You will have access to the syllabus and multimedia resource library from day one. Forget about fixed schedules!"

05

Career Opportunities

This university program from TECH represents a unique opportunity for engineers looking to update their skills and master the key elements of Additive Manufacturing. Thanks to a technical and specialized approach, graduates will expand their ability to apply 3D printing technologies in industrial environments, improving their career prospects in booming sectors such as automotive, aeronautics, and product engineering.



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You will train as a 3D Printing Specialist Technician and operate Additive Manufacturing equipment in manufacturing institutions”

Graduate Profile

Graduates of this program will be highly qualified professionals capable of applying additive manufacturing technologies in industrial settings, optimizing production processes through the efficient use of materials and advanced 3D Printing systems. At the same time, they will be prepared to design, assess, and improve technical parts, lead innovative projects, and contribute to the development of sustainable solutions in the manufacturing industry.

Are you looking to work as an Additive Manufacturing Parts Designer? This university program will provide you with the keys to achieving this in just a few months.

- ♦ **Technological Adaptation in Production Processes:** Ability to incorporate advanced Additive Manufacturing and 3D Printing technologies into production processes, increasing efficiency and quality in product development.
- ♦ **Industrial Problem-Solving:** Ability to apply analytical thinking to identify and solve technical challenges, optimizing manufacturing through innovative solutions based on 3D printing technologies.
- ♦ **Commitment to Sustainability and Innovation:** Responsibility in implementing ethical and sustainable principles in the use of advanced technologies, ensuring the efficiency and economic and environmental viability of production processes.
- ♦ **Interdisciplinary Collaboration:** Ability to communicate and work effectively with multidisciplinary teams, facilitating the integration of additive manufacturing into the industrial value chain and promoting knowledge transfer between technical and design areas





After completing the program, you will be able to apply your knowledge and skills in the following positions:

- 1. Engineer specialized in Additive Manufacturing and 3D Printing:** Responsible for integrating and managing advanced 3D printing solutions in industrial environments to improve production efficiency and promote innovation in product design.
- 2. Additive Manufacturing Data Management Engineer:** Responsible for collecting, analyzing, and protecting technical data generated in 3D printing processes, ensuring optimization and traceability in manufacturing.
- 3. Engineer specializing in Rapid Prototyping with Additive Manufacturing:** Responsible for creating and validating prototypes using 3D printing technologies, enabling rapid iterations and accurate evaluations prior to large-scale production.
- 4. Additive Manufacturing Project Consultant:** Coordinator dedicated to the implementation of 3D printing solutions in the industrial field, collaborating with multidisciplinary teams to adapt technologies to the specific needs of each sector.
- 5. Internal Advisor on Additive Manufacturing Technologies:** Manager in manufacturing companies who provides training and specialized workshops on the use of 3D technologies, raising the technological competence of staff and promoting innovation.
- 6. Supervisor of Industrial Innovation Projects:** Leader of initiatives that integrate additive manufacturing solutions, optimizing production processes and resources to boost industrial competitiveness.



You will assess the feasibility and impact of integrating additive technologies in different areas of companies"

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.



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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.

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*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.

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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.

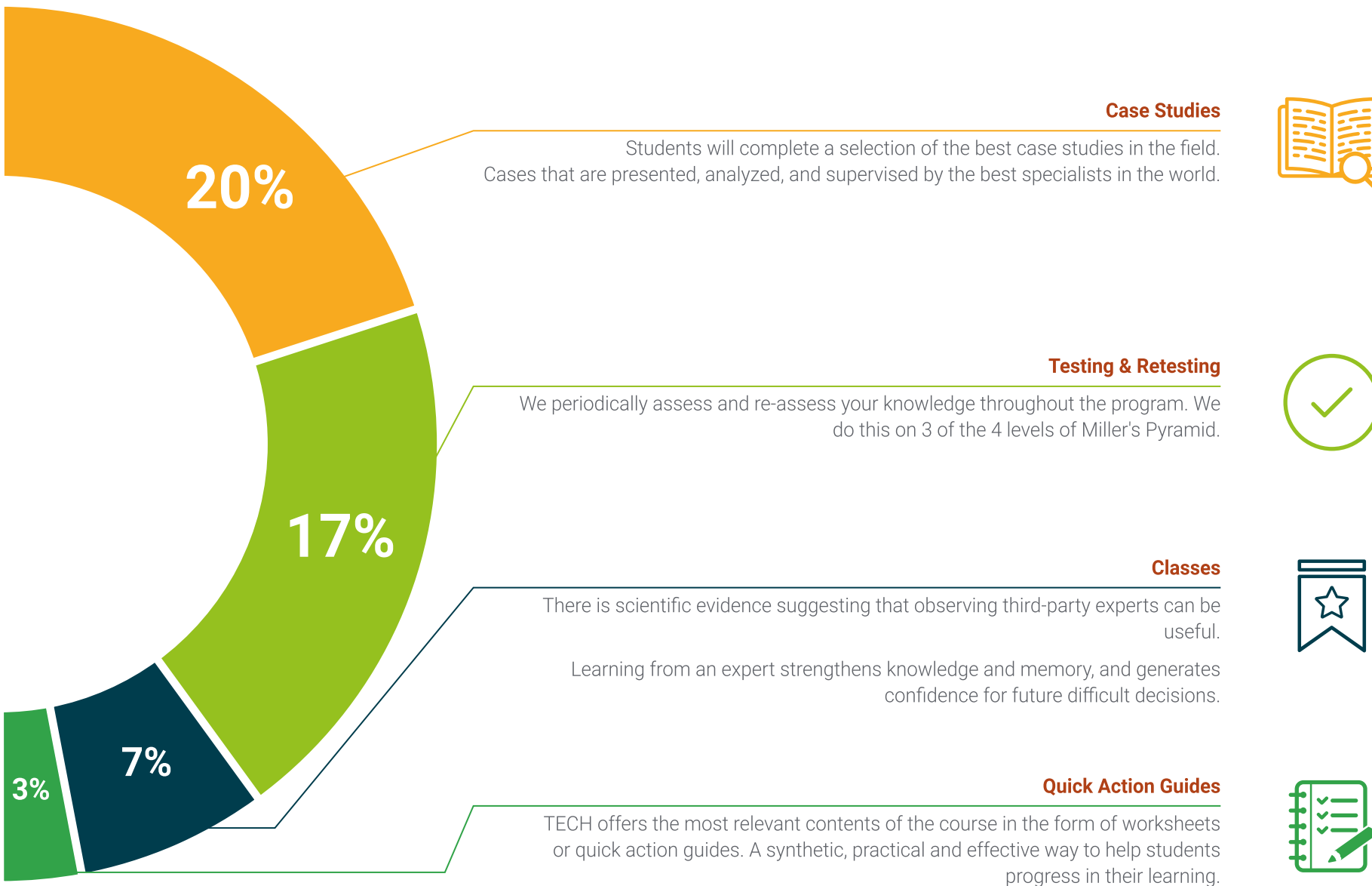
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



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

The fundamental premise of TECH is based on making the most complete and up-to-date university programs available to anyone on the educational market. For this reason, it carries out an exhaustive process to establish its teaching staff. As a result, this Postgraduate Diploma brings together the most prominent experts in Key Elements of Additive Manufacturing. In this way, they have developed a myriad of teaching content characterized by its high quality and full applicability to the demands of today's job market. As a result, students will immerse themselves in a high-intensity experience that will allow them to significantly broaden their professional horizons.

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You will have access to an academic program designed by a teaching staff highly specialized in Additive Manufacturing, which will guarantee your successful learning”

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. A. 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. 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

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



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

08

Certificate

The Postgraduate Diploma in Key Elements of Additive Manufacturing guarantees students, in addition to the most rigorous and up-to-date education, access to a diploma for the Postgraduate Diploma 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 **Postgraduate Diploma in Key Elements of Additive Manufacturing** 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.

Title: **Postgraduate Diploma in Key Elements of Additive Manufacturing**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**





Postgraduate Diploma Key Elements of Additive Manufacturing

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

Postgraduate Diploma

Key Elements of Additive Manufacturing

