

# Postgraduate Diploma

## Digital Dental Diagnostics





## Postgraduate Diploma

### Digital Dental Diagnostics

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

Website: [www.techitute.com/us/dentistry/postgraduate-diploma/postgraduate-diploma-digital-dental-diagnostics](http://www.techitute.com/us/dentistry/postgraduate-diploma/postgraduate-diploma-digital-dental-diagnostics)

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# 01

# Introduction

In recent decades, Digitization has revolutionized dental diagnostics, allowing imaging and visualization of oral structures with unprecedented accuracy. In fact, Digital Photography has become a key tool, facilitating case documentation and treatment planning with greater efficiency. It is for this reason that dentists specialized in the latest techniques of Digital Dental Diagnostics are highly sought after, and with TECH they will find the ideal opportunity to update themselves in this area. In this way, they will go from the handling of the camera, digital storage and design and specific programs in Digital Cephalometry to the visual articulator and Occlusion. All this 100% online and with an absolutely flexible format.



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*Get up-to-date with TECH on the basics of cephalometric analysis and learn more about its importance in the diagnosis of orthodontic treatments”*

In dentistry, technology has enabled pre-planning and 3D visualization of the dental anatomy and adjacent structures. This has resulted in a precise and conservative preparation of the tooth structure. Similarly, intraoral scanners and 3D printers are being used for the fabrication of dental restorations such as veneers, inlays and onlays, facilitating precise adaptation to the natural tooth structure. Undoubtedly, this is a revolution in this health science, and the updating of dentists in these tools is practically mandatory.

For this reason, this Postgraduate Diploma has been created, with which dental professionals will be able to manage digital technologies useful in clinical practice. To do so, they will go through digital record taking, the fabrication of customized dental prostheses using CAD/CAM systems, 3D printing techniques suitable for Digital Dentistry or the selection of appropriate materials. Furthermore, they will also emphasize the virtual planning of restorations and the use of virtual articulator technologies in the assessment and diagnosis of dental Occlusion disorders.

Undoubtedly, this is an extremely complete Postgraduate Diploma that will add enormous value to the dentist's curriculum. In addition, it is taught in a convenient online mode, which allows students to take the program from anywhere and at any time. With only a device with an Internet connection, the student will have unlimited access to the contents designed by a recognized teacher team with vast experience in Digital Dentistry.

This **Postgraduate Diploma in Digital Dental Diagnostics** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ The development of case studies presented by experts in Digital Dental Diagnostics
- ♦ 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
- ♦ 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



*Become an expert at home in the use of MODJAW for Orthodontic treatment planning"*



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*Launch your career applying CAD/CAM technology for minimally invasive preparations in Digital Dentistry after completing the Postgraduate Diploma"*

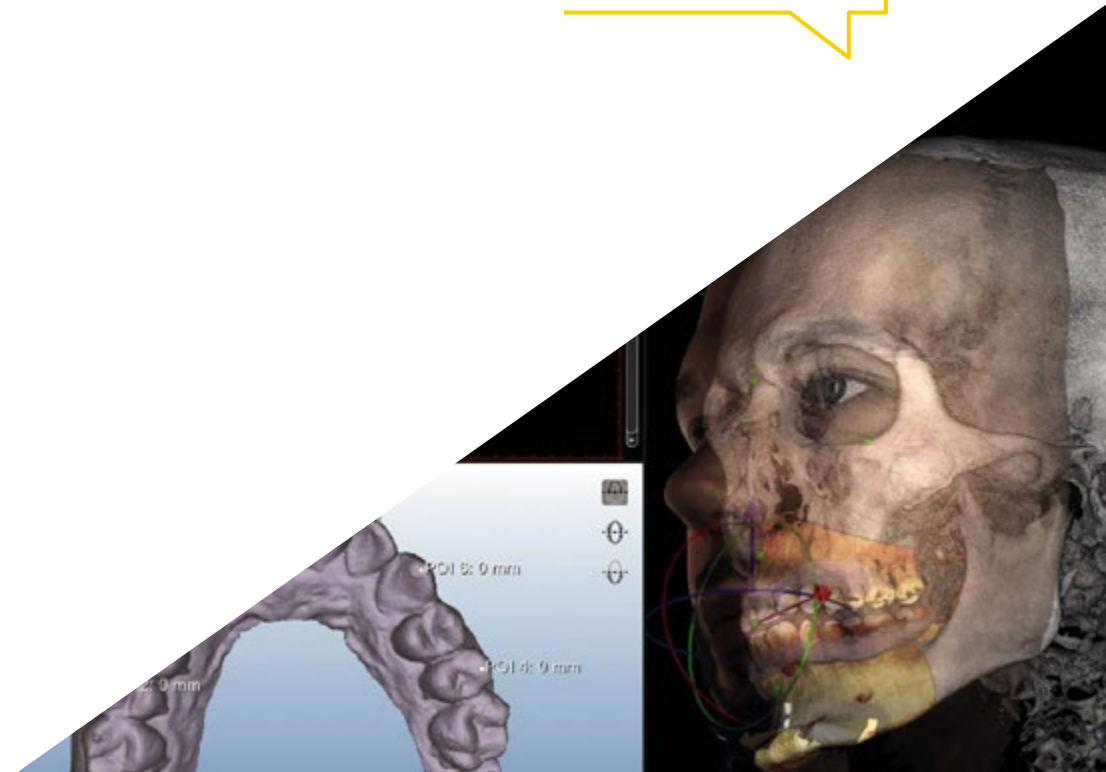
The program's teaching staff includes professionals from the sector who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

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

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the educational year. This will be done with the help of an innovative system of interactive videos made by renowned experts.

*Solve useful case studies on the First It veneer system or the Carving Sequence.*

*Benefit from the dynamism of a catalog of interactive resources that focus on enhancing essential skills for your daily practice.*



# 02

# Objectives

The Postgraduate Diploma is intended to provide dental professionals with an up-to-date and complete vision in the field of Digital Dentistry. The purpose of this is none other than to enable them to develop their skills and competencies in the application of digital technologies in their daily practice, taking them to a new level of professional excellence. To this end, TECH has brought together the latest technological advances for Digital Dental Diagnosis, so that the students will complete the Postgraduate Diploma as true references in this field, and will also be able to start a research career.





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*Master each and every one of the different types of cephalometric analysis and the interpretation of the data obtained using Relearning”*



## General Objectives

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- ♦ Increase the professional's knowledge of the application of digital technologies in the diagnosis, treatment and planning of clinical cases
- ♦ Know the techniques of digital orthodontics and computer-guided implant planning
- ♦ Develop skills in interdisciplinary communication and collaboration in teamwork, using digital technology as a tool
- ♦ Examine the application of acquired knowledge in clinical practice, in this way improving the quality of patient care



*Don't wait any longer to get all the keys to the management of digital tools for the capture of data related to Dental Occlusion"*





## Specific Objectives

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### Module 1. Cephalometric analysis and photography

- ◆ Comprehend the basic concepts of cephalometric analysis and its importance in the diagnosis and planning of orthodontic and/or maxillofacial treatments
- ◆ Become familiar with the different types of cephalometric analysis and the interpretation of the data obtained
- ◆ Know the different types of cameras and lighting equipment used in clinical photography
- ◆ Effectively communicate the results of cephalometric analysis and photography to the patient and the interdisciplinary team

### Module 2. Digital Flow Minimally invasive preparations, cam systems, laboratory and chairside

- ◆ Understand the basic principles of minimally invasive tooth preparation and its relationship to the preservation of natural tooth structure
- ◆ Identify the different CAM system options for the fabrication of dental restorations, both in the dental laboratory and in the dental office
- ◆ Develop skills in the use of chairside CAM systems, which allow the fabrication of dental restorations on the same day of the patient's appointment

### Module 3. Virtual articulator and occlusion

- ◆ Understand the basic principles of dental occlusion and the importance of centric relation in the diagnosis and treatment of occlusion
- ◆ Employ digital tools for the capture of data related to dental occlusion, including the capture of images and the use of specific software
- ◆ Detect the different types of virtual articulators and their use in the planning and design of dental occlusion treatments
- ◆ Use virtual articulators for the planning and design of dental occlusion treatments

03

# Course Management

In line with its commitment to high educational standards, TECH has assembled a team of highly qualified teachers with extensive experience in the field of Digital Dentistry. Not only do they have a meritorious educational background, but they have also worked in dental centers of international reference, so their valuable professional background will be one of the greatest assets for the students of the program.







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*Take your clinical practice to the next level by dedicating as little as 450 hours while benefiting from practical tips on Digital Dental Diagnostics”*



## Management



### Dr. Ulman, Darío

- ◆ Dentist Specializing in Implant Dentistry and Orthodontics
- ◆ Dentist in own practice
- ◆ International Intraoral Scanner Trainer
- ◆ Speaker Corner FONA
- ◆ Director of training courses for dentists
- ◆ Degree in Dentistry



### Dr. Roisental, Alejandro

- ◆ Director of the Oral and Maxillofacial Surgery Unit of Ziv Medical Center
- ◆ Clinical Instructor, Bar-Ilan University School of Medicine
- ◆ Regional Delegate for Asia of the Latin American Association of Buccomaxillofacial Surgery and Traumatology
- ◆ President of the Israeli Association of Oral and Maxillofacial Surgeons
- ◆ Winner of numerous awards and honorable mentions



## Professors

### Ms. Roisental, Juliana

- ◆ Manager and Dental Hygienist at Roisental Dental
- ◆ Dental Hygienist at MaccabbiDent
- ◆ Dental hygienist at the ICHILOV Medical Center
- ◆ Teacher and Responsible for studies related to Photography and Dental Hygiene
- ◆ Course in Graphic Design

### Mr. Badía Montoya, Alberto Luis

- ◆ Dentist Specializing in Orthodontics
- ◆ Creator and Developer of Orthokit
- ◆ Graduate in Dentistry from the University of Granada
- ◆ Master's Degree in Orthodontics from the University of Oviedo
- ◆ Member of: AAO,WFO, AESOR and SEDO

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

# 04

## Structure and Content

The syllabus of the program in Digital Dental Diagnostics includes all the technological advances that are being applied in dental clinics, so each topic will be extremely useful for the students. One of the advantages of the program is its flexibility, which allows students to adapt their study pace to their personal and professional lives. In addition, this program uses the Relearning methodology, which consists of the directed reiteration of the concepts of the syllabus through dynamic educational resources, such as explanatory videos or interactive diagrams.





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*Access the syllabus with the most global and up-to-date vision of Digital Dental Diagnosis. Don't even think about it!"*

## Module 1. Cephalometric analysis and photography

- 1.1. Basics of Photography
  - 1.1.1. The Non-Digital Image
  - 1.1.2. The Digital Image
  - 1.1.3. The Detail
  - 1.1.4. Advice
- 1.2. Photography in Science
  - 1.2.1. Photography Uses
  - 1.2.2. Case Documentation
  - 1.2.3. Hospital Photography
  - 1.2.4. Social Media
- 1.3. Photography in Dentistry
  - 1.3.1. Photography in Orthodontics
  - 1.3.2. Photography in Implant Dentistry
  - 1.3.3. Photography in Periodontics
  - 1.3.4. Photography in Dental Esthetics
- 1.4. Dental Photography Purposes
  - 1.4.1. Patient Communication
  - 1.4.2. Laboratory Communication
  - 1.4.3. Legal Communication
  - 1.4.4. Artistic
- 1.5. The Photographic Camera
  - 1.5.1. Cameras Types
  - 1.5.2. Camera Parts
  - 1.5.3. Phone Camera
  - 1.5.4. Lenses
- 1.6. Camera Elements
  - 1.6.1. Flashes
  - 1.6.2. Light Control
  - 1.6.3. Exhibitions
  - 1.6.4. A Learning Curve

- 1.7. Handling Photography
  - 1.7.1. Diaphragm
  - 1.7.2. Speed
  - 1.7.3. Focus
  - 1.7.4. Match
- 1.8. Digital Development, Storage and Design
  - 1.8.1. Image Storage
  - 1.8.2. Formats
  - 1.8.3. Digital Development
  - 1.8.4. Program Design
- 1.9. BSB Digital Cephalometry
  - 1.9.1. Fundamentals of Digital Cephalometry in Dentistry
  - 1.9.2. Scanning Technologies in Digital Cephalometry
  - 1.9.3. Interpretation of Digital Cephalometric Data
  - 1.9.4. Clinical Applications of Digital Cephalometry
- 1.10. Digital Cephalometry Programs (Ortokid)
  - 1.10.1. Program Installation
  - 1.10.2. Patient Discharge
  - 1.10.3. Placement of Reference Points
  - 1.10.4. Study Selection

## Module 2. Digital Flow Minimally invasive preparations, cam systems, laboratory and chairside

- 2.1. First Fit Veneer System
  - 2.1.1. Record Taking
  - 2.1.2. Web Loading
  - 2.1.3. Mockup
  - 2.1.4. Milling Sequence



- 2.2. Cementation in the Clinic
  - 2.2.1. Types of Dental Cements and Their Properties
  - 2.2.2. Selection of the Appropriate Dental Cement for Each Clinical Case
  - 2.2.3. Cementation Protocol for Veneers, Crowns and Bridges
  - 2.2.4. Preparation of the Tooth Surface Prior to Cementation
- 2.3. Laboratory
  - 2.3.1. Digital Dental Materials: Types, Properties and Applications in Dentistry
  - 2.3.2. Fabrication of Ceramic Veneers and Crowns with CAD/CAM Systems
  - 2.3.3. Fabrication of Fixed Bridges Using CAD/CAM Systems
  - 2.3.4. Fabrication of Removable Prosthesis Using CAD/CAM Systems
- 2.4. 3D Printing
  - 2.4.1. Types of 3D Printers Used in Digital Dentistry
  - 2.4.2. Design and 3D Printing of Studio and Working Models
  - 2.4.3. 3D Printing of Surgical Guides and Surgical Splints
  - 2.4.4. 3D Printing of Models for the Manufacture of Surgical Guides and Surgical Splints
  - 2.4.5. 3D Printing of Models for the Fabrication of Dental Prosthesis
- 2.5. XY Resolution and Z Resolution
  - 2.5.1. Selection and Use of Materials for Digital Dental Restorations
  - 2.5.2. Integration of Digital Dentistry in the Clinic
  - 2.5.3. XY Resolution and Z Resolution 3D Printers
  - 2.5.4. Virtual Planning of Dental Restoration
- 2.6. Resin Types
  - 2.6.1. Model Resins
  - 2.6.2. Sterilizable Resins
  - 2.6.3. Temporary Tooth Resins
  - 2.6.4. Resins for Definitive Teeth
- 2.7. Millers
  - 2.7.1. Milling Machines for Direct Restorations
  - 2.7.2. Milling Machines for Indirect Restorations
  - 2.7.3. Milling Cutters for Fissure Sealing and Caries Prevention
  - 2.7.4. Orthodontic Milling Cutters
- 2.8. Sinterizers
  - 2.8.1. Synthesizers and Their Role in the Preparation of Conservative Dental Crowns
  - 2.8.2. Application of CAD/CAM Technology for the Preparation of Minimally Invasive Preparations in Digital Dentistry
  - 2.8.3. New Digital Techniques and Technologies for Minimally Invasive Preparation of Dental Inlays and Onlays
  - 2.8.4. Virtual Tooth Preparation Software Systems and Their Use in Minimally Invasive Preparation Planning
- 2.9. Model Pro Model Manufacturing
  - 2.9.1. Accurate Model Fabrication Using Intraoral Scanning Technology for Minimally Invasive Preparations
  - 2.9.2. Minimally Invasive Preparation Planning Using Digital Models and CAD/CAM Technology
  - 2.9.3. Fabrication of Models for the Preparation of Minimally Invasive Dental Veneers
  - 2.9.4. Digital Models and Their Role in the Preparation of Conservative Dental Crowns
- 2.10. Dental Printers vs. Generic Printers
  - 2.10.1. Dental Printers versus Generic Printers
  - 2.10.2. Comparison of the Technical Characteristics of Dental and Generic Printers for the Fabrication of Dental Restorations
  - 2.10.3. Dental Printers and Their Role in Minimally Invasive Preparation of Customized Dentures
  - 2.10.4. Generic Printers and Their Adaptability to the Fabrication of Dental Prosthesis

### Module 3. Virtual articulator and occlusion

- 3.1. Virtual Articulator
  - 3.1.1. Virtual Articulator and Its Use in the Planning of Dental Prosthesis in Digital Dentistry
  - 3.1.2. New Techniques and Digital Technologies for the Use of Virtual Articulators in Digital Dentistry
  - 3.1.3. Occlusion in Digital Dentistry and Its Relation with the Use of Virtual Articulator
  - 3.1.4. Digital Occlusion Planning and the Use of the Virtual Articulator in Aesthetic Dentistry

- 3.2. TEKSCAN
  - 3.2.1. File Import
  - 3.2.2. Implant Placement
  - 3.2.3. Splint Design
  - 3.2.4. Stl Export
- 3.3. TEETHAN
  - 3.3.1. File Import
  - 3.3.2. Implant Placement
  - 3.3.3. Splint Design
  - 3.3.4. Stl Export
- 3.4. Different Virtual Articulators
  - 3.4.1. The Most Important
  - 3.4.2. Development and Application of Virtual Articulator Technologies in the Assessment and Treatment of Temporomandibular Disorders (TMD)
  - 3.4.3. Application of Virtual Articulator Technologies in the Planning of Dental Prostheses in Digital Dentistry
  - 3.4.4. Use of Virtual Articulator Technologies in the Assessment and Diagnosis of Dental Occlusion Disorders in Digital Dentistry
- 3.5. Design of Dental Restorations and Prostheses with Virtual Articulator
  - 3.5.1. Use of Virtual Articulator in the Design and Fabrication of Removable Partial Dentures in Digital Dentistry
  - 3.5.2. Design of Dental Restorations with Virtual Articulator for Patients with Dental Occlusion Disorders in Digital Dentistry
  - 3.5.3. Total Denture Design with Virtual Articulator in Digital Dentistry: Planning, Execution and Follow-Up
  - 3.5.4. Use of Virtual Articulator in Interdisciplinary Orthodontic Planning and Design in Digital Dentistry
- 3.6. MODJAW
  - 3.6.1. Use of MODJAW in Orthodontic Treatment Planning in Digital Dentistry
  - 3.6.2. Application of MODJAW in the Assessment and Diagnosis of Temporomandibular Disorders (TMD) in Digital Dentistry
  - 3.6.3. Use of MODJAW in the Planning of Dental Prostheses in Digital Dentistry
  - 3.6.4. MODJAW and Its Relationship to Dental Aesthetics in Digital Dentistry
- 3.7. Positioning
  - 3.7.1. Files
  - 3.7.2. Tiara
  - 3.7.3. Butterfly
  - 3.7.4. Models
- 3.8. Transaction Log
  - 3.8.1. Protrusion
  - 3.8.2. Opening
  - 3.8.3. Lateralities
  - 3.8.4. Chewing
- 3.9. Location of Mandibular Axis
  - 3.9.1. Centric Relation
  - 3.9.2. Maximum Opening without Displacement
  - 3.9.3. Click Log
  - 3.9.4. Bite Restructuring
- 3.10. Export to Design Programs
  - 3.10.1. Use of Export to Design Programs in Orthodontic Treatment Planning in Digital Dentistry
  - 3.10.2. Application of Export to Design Programs in Dental Prostheses Treatment Planning in Digital Dentistry
  - 3.10.3. Export to Design Programs and Their Relationship with Dental Aesthetics in Digital Dentistry
  - 3.10.4. Export to Design Programs in the Assessment and Diagnosis of Dental Occlusion Disorders in Digital Dentistry



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*You will only need a PC or Tablet with an Internet connection to benefit from a program of international caliber on Digital Dental Diagnostics”*

# 05

# Methodology

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

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





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



## At TECH we use the Case Method

In a given situation, what should a professional do? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

*With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.*



According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions in the dentist's professional practice.

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*Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method”*

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

1. Dentists who follow this method not only grasp concepts, but also develop their mental capacity by means of exercises to evaluate real situations and apply their 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.



## Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.

*The student will learn through real cases and by solving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.*





At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology we have trained more than 115,000 dentists with unprecedented success, in all specialties regardless of the workload. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

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

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

The overall score obtained by TECH's learning system is 8.01, according to the highest international standards.



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



### Study Material

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

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



### Educational Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances, and to the forefront of medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.



### Interactive Summaries

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

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



### Additional Reading

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







#### Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### Testing & Retesting

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



#### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.  
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.



06

# Certificate

The Postgraduate Diploma in Digital Dental Diagnosis guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Global University.



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

This program will allow you to obtain your **Postgraduate Diploma in Digital Dental Diagnostics** endorsed by **TECH Global University**, the world's largest online university.

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

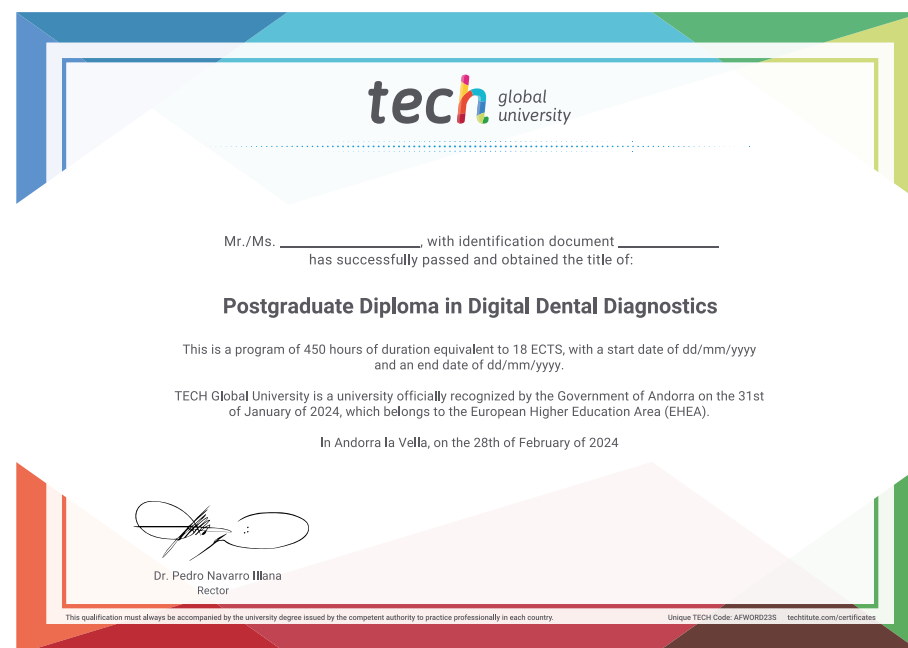
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Digital Dental Diagnostics**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**



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



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