Postgraduate Diploma

Software Applied to Digital Dentistry

tech global university

tech global university

Postgraduate Diploma

Software Applied to Digital Dentistry

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

Website: **www.techtitute.com/us/dentistry/postgraduate-diploma/postgraduate-diploma-software-applied-digital-dentistry**

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01

Introduction

Digital Dentistry is a constantly evolving and growing field that is transforming the way dental treatments are performed. In fact, the use of Software applied to this field has become essential for the design and fabrication of dental prostheses, diagnostic imaging, record-taking, and analysis of facial data. It is all the more urgent for dentists to consolidate their update in these digital techniques, which is the reason for the creation of this program. With it, you will go through the basics of Digital Radiology, illumination techniques in Dentistry or CBCT technology, as well as open and closed source design software. All this and more in only 450 hours through a 100% online educational journey.

It's time to consolidate your update on the latest digital techniques in Dentistry. What are you waiting for to enroll?"

By combining information technology with dental health care, it is possible to provide more accurate treatment and a more satisfying patient experience. Not surprisingly, through the latest advances in 3D scanning and printing technology, dentists and dental technicians can now use specialized software to design and fabricate high-quality dental prostheses with never-before-seen efficiency.

This is why dental centers are increasingly demanding more and more dental professionals specialized in the latest software techniques applied to this health field, something that has led TECH to design this program. In this way, the dentist will be in a position to become a reference in Digital Dentistry by going through the design and fabrication of dental prostheses digitally, including crowns, bridges, inlays, onlays and other types of restorations.

In addition, the Postgraduate Diploma is taught completely online, which allows students to take it from anywhere and at any time, without interrupting their daily work. In this sense, the flexibility of the syllabus will clearly work in favor of the dentists, since the educational resources will be at their complete disposal 24 hours a day in the Virtual Campus. The role of the teacher team, made up of eminent experts in Digital Dentistry, will also be a determining factor in your educational experience.

This **Postgraduate Diploma in Software Applied to Digital Dentistry** contains the most complete and up-to-date scientific program on the market. Its most outstanding features are:

- The development of case studies presented by experts in Software applied to Digital Dentistry.
- 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

Don't miss the opportunity to apply the most innovative PIC Photogranulometry techniques to your daily practice thanks to TECH"

It delves in a 100% online way in the types of digital files in Dentistry and its different formats. Enroll now!"

Sign up to enhance your skills in the use of open source and closed source design software through dynamic video tutorials or case studies.

Position yourself as a state-of-the-art dentist in only 450 hours and become proficient in the design of dental bridges with Exocad.

The program's teaching staff includes professionals from the field 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. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

02

Objectives

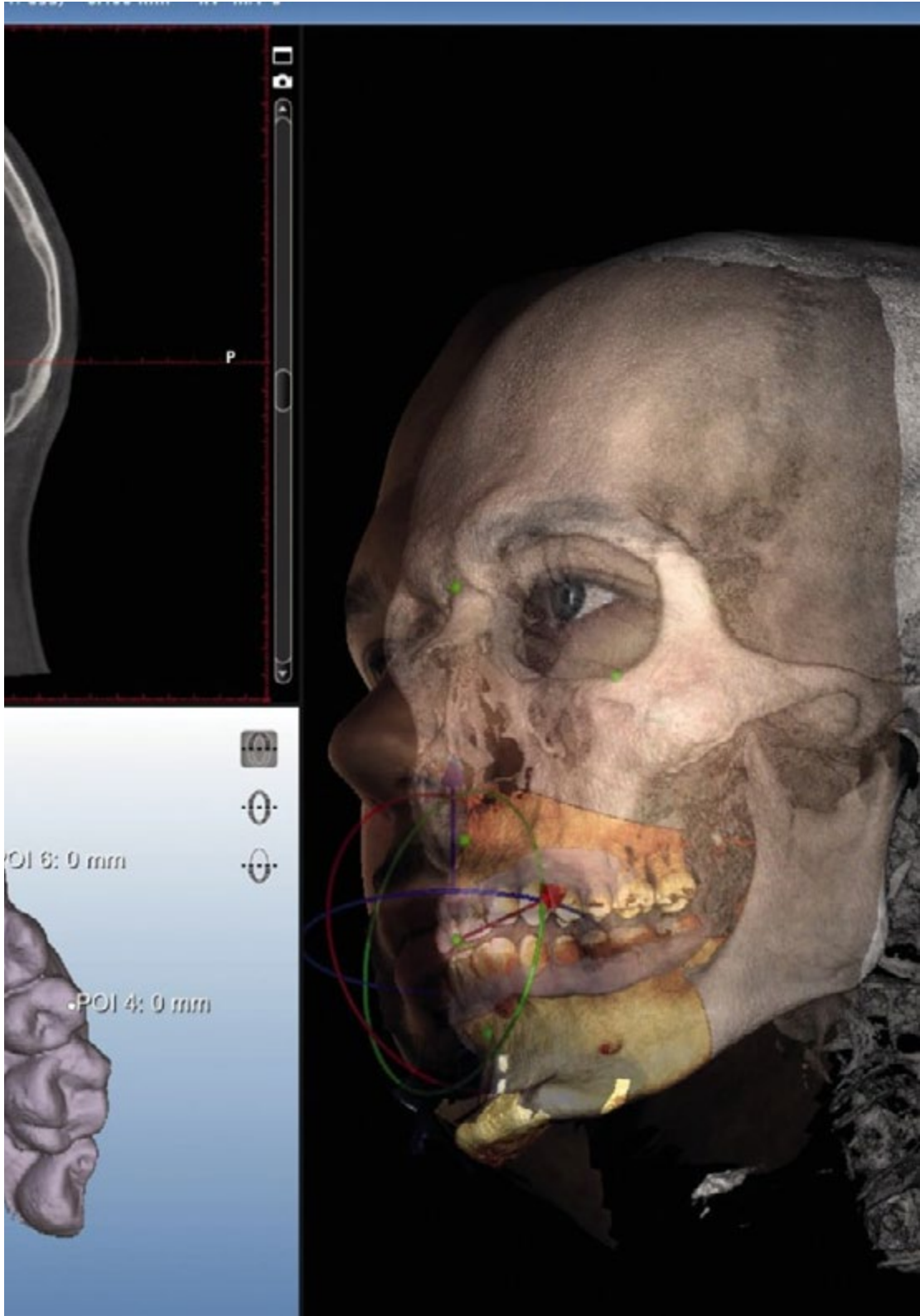
The main objective that TECH has set with this Postgraduate Diploma is to prepare dental professionals with the best guarantees in the use of technological tools and specific software for their daily practice. In fact, the study program aims to provide students with advanced knowledge and skills in order to apply innovative technologies in the diagnosis, planning and treatment of oral pathologies and dysfunctions. And always based on the latest technological advances.

Achieve the objectives of this university program to master the fundamentals of digitization in Dentistry as an expert"

General Objectives

- 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

Are you going to pass up the opportunity to enroll in a Postgraduate Diploma that will boost your skills in load cell design with Blender?"



Specific Objectives

Module 1. Equipment digitization

- Understand the basic concepts of digitization and its importance in clinical practice
- Know the different types of equipment that can be digitized and the technologies used for this purpose
- Examine the use of specialized digitizing equipment and software, such as 3D scanners, digital cameras, CAD/CAM software, among others
- Develop skills in editing and manipulating digital data obtained from digitized equipment
- Understand the ethical and legal implications of digitization of equipment, including data privacy and intellectual property
- Integrate digitized equipment into clinical practice
- Interpret and use digital data obtained from digitized equipment for clinical decision making

Module 2. *Closed* source design software

- Understand the basic concepts of closed source design software and its importance in the creation of software solutions
- Use closed source design software for the creation of graphical, user interface and user experience designs
- Develop skills in editing and manipulating graphic elements, such as images, shapes and typefaces
- Understand the basic concepts of programming and how they relate to the use of closed source design software

Module 3. *Open* source design software

- Know the main features of open source design software, including its interface, functions and tools
- Develop skills in editing and manipulating graphic elements, such as images, shapes and typefaces
- Understand the basics of programming and how they relate to the use of open source design software
- Understand the philosophy of open source software and how it differs from other types of software
- Understand the ethical and legal implications of using open source design software, including software licensing and copyrights

03

Course Management

Experts in Implantology and Dentistry will be responsible for launching the student's professional career in the field of Digital Dentistry Software. In this line, this teacher has extensive clinical experience in leading dental centers, where they have implemented innovative digital techniques that have provided excellent results. In addition, through the Virtual Campus, students will be able to resolve all doubts about the syllabus designed by these professors with the help of tutors.

Let yourself be guided to success in your clinical practice by experts in Implantology and Digital Dentistry"

Guest Director

Mr. 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

Co-direction

Mr. Roisentul, 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
- Director of training courses for dentists
- Winner of numerous awards and honorable mentions

Professors

Ms. Maturana, María

- CAD Area Manager at Ztech Digital & Esthetics-Denteo
- 3D dental prostheses designer at the Angel Lorenzo Chiscano Laboratory
- 3D dental prosthesis designer at Ledesma Dental S.L
- Expert in dental prosthesis in Luis Somoza Dental Laboratory

Ms. López, Inés

- Laboratory Manager and Cad Designer in Dentalesthetic
- Cad Designer at Denteo Cad Cam Iberia
- Cad Designer at AlignTechnology
- Superior Technician of Dental Prosthesis

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Structure and Content

The structure and content of the Postgraduate Diploma is characterized by its flexibility and adaptability to the needs and learning pace of the students. In this sense, the curriculum is divided into thematic modules that comprehensively address the concepts and tools necessary for the application of technology in dental practice. In addition, the program incorporates the Relearning methodology, which consists of the directed reiteration of the concepts of the syllabus through dynamic educational resources, which allows the students to consolidate and delve deeper into their knowledge in an effective and fast way.

Enjoy a unique syllabus in the field of Dentistry that emphasizes the need to digitize the profession"

Module 1. Equipment digitization

1.1. Video Evolution
- 1.1.1. Why Be Digital
- 1.1.2. Multidisciplinary
- 1.1.3. Time/Expenses
- 1.1.4. Advantages/Costs

1.2. Digital Flow
- 1.2.1. File Types
- 1.2.2. Types of Meshes
- 1.2.3. Reliability
- 1.2.4. Comparison of Systems

1.3. Digital Camera and Cell Phone
- 1.3.1. Lighting Techniques in Dentistry
- 1.3.2. Clinical Dental Photography
- 1.3.3. Aesthetic Dental Photography Techniques
- 1.3.4. Image Editing

1.4. Digital Radiology
- 1.4.1. Types of Dental Radiographs
- 1.4.2. Digital Radiology Technology
- 1.4.3. Take Digital Dental Radiographs
- 1.4.4. AI Interpretation of Dental Radiographs

1.5. CBCT
- 1.5.1. CBCT Technology
- 1.5.2. Interpretation of CBCT Images
- 1.5.3. Diagnostic CBCT Imaging
- 1.5.4. CBCT Applications in Implant Dentistry
- 1.5.5. CBCT Applications in Endodontics

1.6. Dental Scanner
- 1.6.1. Scanning of the Dentition and Soft Tissues
- 1.6.2. Digital Modeling in Dentistry
- 1.6.3. Design and Fabrication of Digital Dental Prostheses
- 1.6.4. Applications of the Dental Scanner in Orthodontics

1.7. Dynamic Stereoscopy
- 1.7.1. Dynamic Stereoscopic Imaging
- 1.7.2. Interpretation of Dynamic Stereoscopic Images
- 1.7.3. Integration of Dynamic Stereoscopy into the Dental Work Flow
- 1.7.4. Ethics and Safety in the Use of Dynamic Stereoscopy

1.8. PIC Photogranulometry
- 1.8.1. PIC Phonogranulometry Technology
- 1.8.2. Interpretation of Phonogranulometric Records PIC
- 1.8.3. Applications of PIC Phonogranulometry in Dental Occlusion
- 1.8.4. Advantages and Disadvantages of the PIC Phonogranulometry

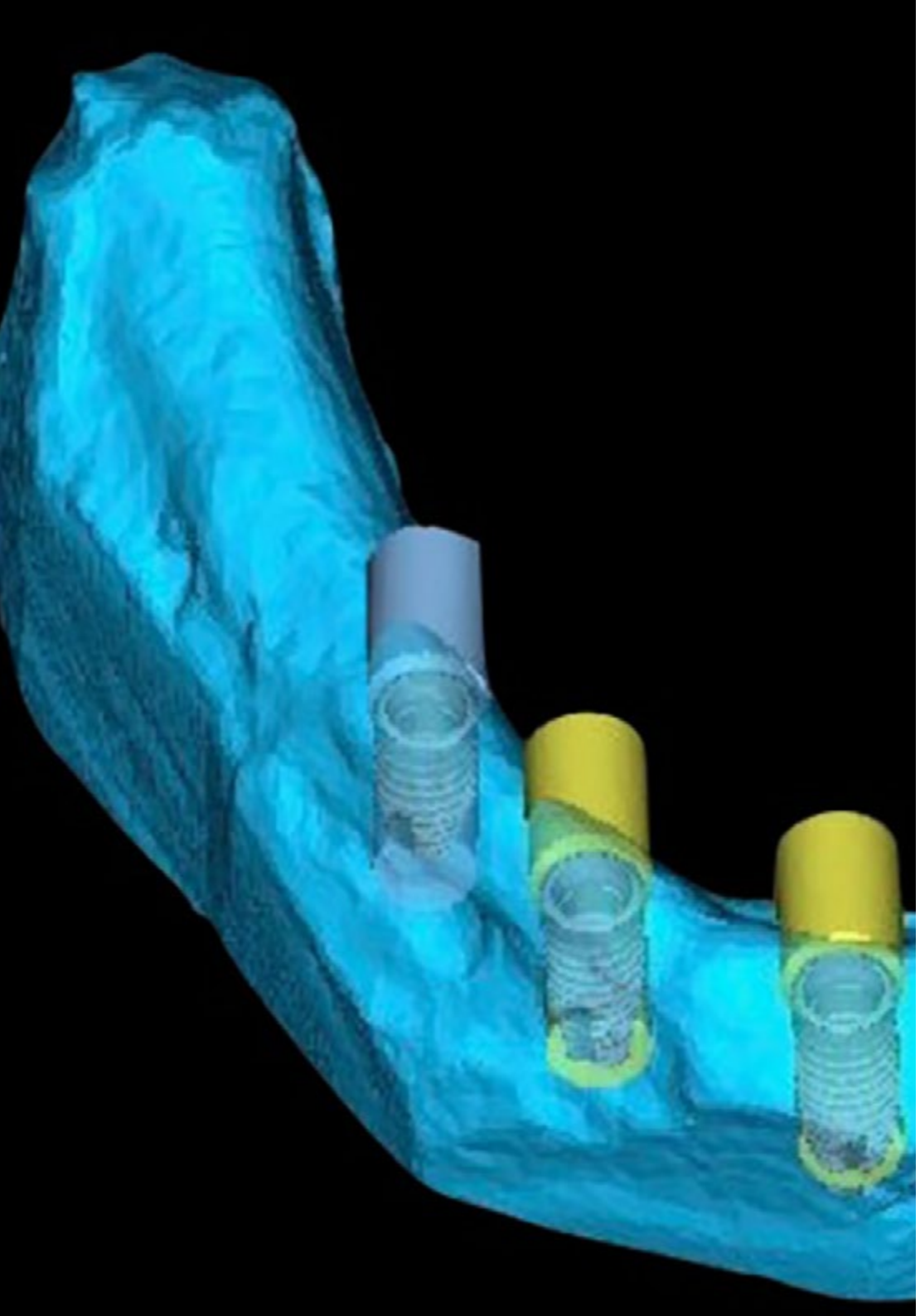
1.9. Facial Scanner
- 1.9.1. Facial Scanner Recording
- 1.9.2. Facial Data Analysis and Assessment
- 1.9.3. Integration of the Facial Scanner in the Dental Work Flow
- 1.9.4. Future of Facial Scanning in Dentistry

1.10. Files
- 1.10.1. Types of Digital Files in Dentistry
- 1.10.2. Digital File Formats
- 1.10.3. File Storage and Management
- 1.10.4. Security and Privacy of Digital Files

Module 2. Closed source design software

2.1. Exocad Design
- 2.1.1. Data Upload
- 2.1.2. Work Order
- 2.1.3. CAD design, File Import
- 2.1.4. CAD Design, Design Tools

2.2. Exocad Design of Temporary Crowns
- 2.2.1. Work Order
- 2.2.2. Material Selection
- 2.2.3. Crown Design
- 2.2.4. File Export



2.3. Exocad Bridge Design
- 2.3.1. Work Order
- 2.3.2. Material Selection
- 2.3.3. Bridge Design
- 2.3.4. File Export

2.4. Inlay Design with Exocad
- 2.4.1. Work Order
- 2.4.2. Material Selection
- 2.4.3. Inlay Design
- 2.4.4. File Export

2.5. Design of Crowns on Implants with Exocad
- 2.5.1. Work Order
- 2.5.2. Material Selection
- 2.5.3. Crown Design on Implants
- 2.5.4. File Export

2.6. Blender Design of Geller Models
- 2.6.1. File Import
- 2.6.2. Geller Model Design
- 2.6.3. Geller Model Tools
- 2.6.4. Geller Model Manufacturing

2.7. Blender Design of Discharge Cell Design
- 2.7.1. File Import
- 2.7.2. Geller Model Design
- 2.7.3. Geller Model Tools
- 2.7.4. Geller Model Manufacturing

2.8. Blender Design of Occlusal Guard
- 2.8.1. File Import
- 2.8.2. Geller Model Design
- 2.8.3. Geller Model Tools
- 2.8.4. Geller Model Manufacturing

2.9. Blender Design of Occlusal Map
- 2.9.1. Blender Software Functions and Tools for Occlusal Mapping
- 2.9.2. Occlusal Map
- 2.9.3. Occlusal Map Interpretation
- 2.9.4. Occlusal Map Analysis

2.10. Design with Blender for 3D Printing Model Preparation
- 2.10.1. Data Science
- 2.10.2. Model Selection
- 2.10.3. Digital Model Repair
- 2.10.4. Model Labeling and Export

Module 3. Open source design software

3.1. Mesh Meshmixer Design
- 3.1.1. Meshmixer Software Functions and Tools on Meshes
- 3.1.2. Mesh Import
- 3.1.3. Mesh Repair
- 3.1.4. Model Printing

3.2. Mirror Copy Meshmixer Design
- 3.2.1. Functions and Tools of the Meshmixer Mirroring Software
- 3.2.2. Tooth Design
- 3.2.3. Model Export
- 3.2.4. Mesh Adjustment

3.3. Screw-In Temporary Meshmixer Design
- 3.3.1. Functions and Tools of the Meshmixer Software in Bolting
- 3.3.2. Bolt-On Design
- 3.3.3. Screwed Fabrication
- 3.3.4. Adjustment and Placement of Bolting

3.4. Meshmixer Design with Eggshell Provisional
- 3.4.1. Eggshell Meshmixer Software Functions and Tools
- 3.4.2. Eggshell Design
- 3.4.3. Eggshell Manufacturing
- 3.4.4. Adjustment and Placement of Eggshells

3.5. Libraries
- 3.5.1. Import of Libraries
- 3.5.2. Different Uses
- 3.5.3. Autosave
- 3.5.4. Data Recovery

3.6. Design with BSB of Tooth-Supported Splints
- 3.6.1. Basis of Use
- 3.6.2. Types
- 3.6.3. Guided Surgery Systems
- 3.6.4. Fabrication

3.7. Crown and Bridge Design
- 3.7.1. File Import
- 3.7.2. Crown Design
- 3.7.3. Bridge Design
- 3.7.4. File Export

3.8. Denture
- 3.8.1. File Import
- 3.8.2. Denture Design
- 3.8.3. Tooth Design
- 3.8.4. File Export

3.9. Model Editing
- 3.9.1. Functions and Tools of the BSB Software in Immediate Implant
- 3.9.2. Immediate Implant Design
- 3.9.3. Immediate Implant Fabrication
- 3.9.4. Immediate Implant Fabrication

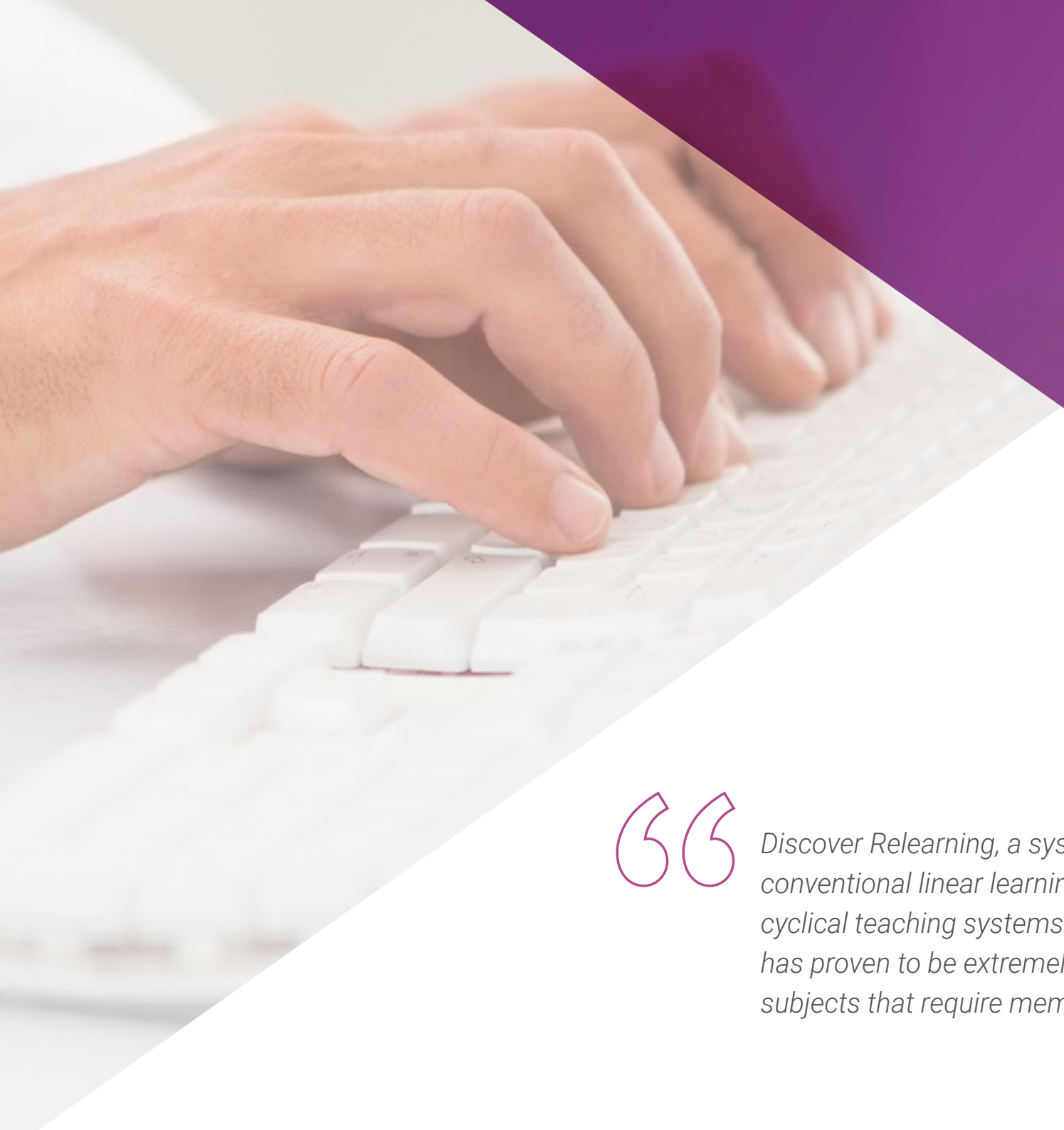
3.10. Chairside Splints
- 3.10.1. Functions and Tools of BSB Software in Surgical Splinting
- 3.10.2. Surgical Splint Design
- 3.10.3. Fabrication of Surgical Splint
- 3.10.4. Adjustment and Placement of Surgical Splint

05

Methodology

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

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

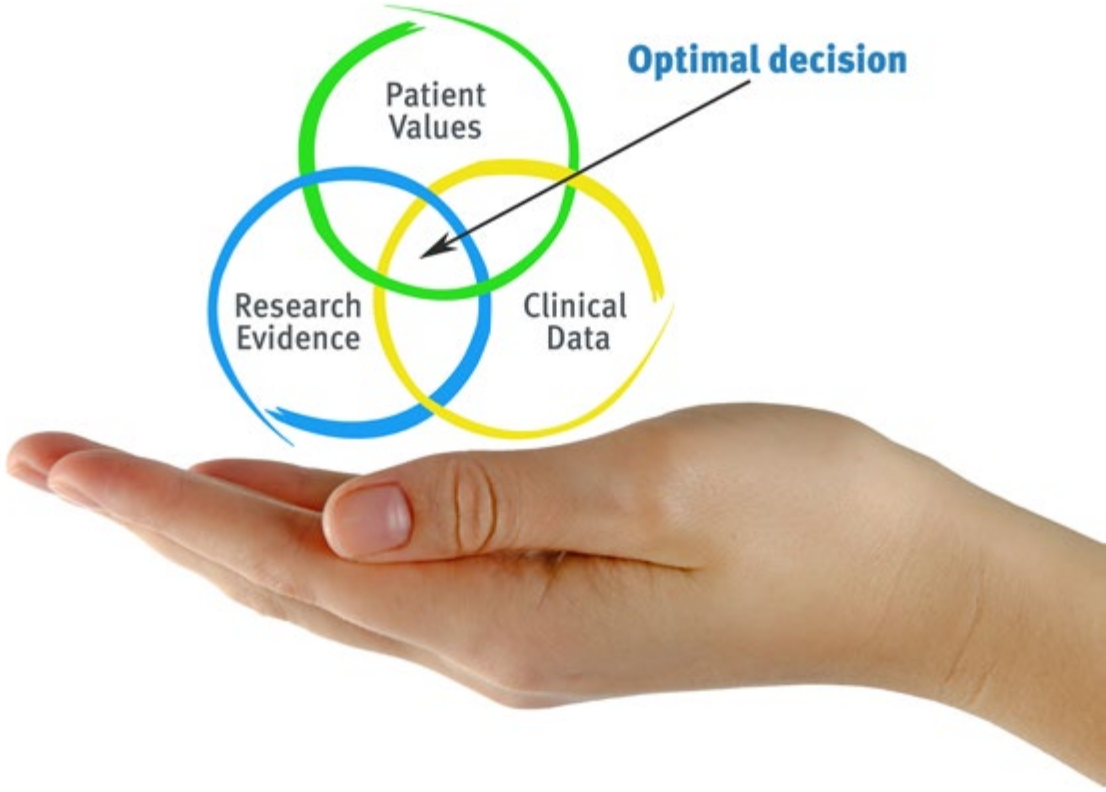


Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

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.

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:

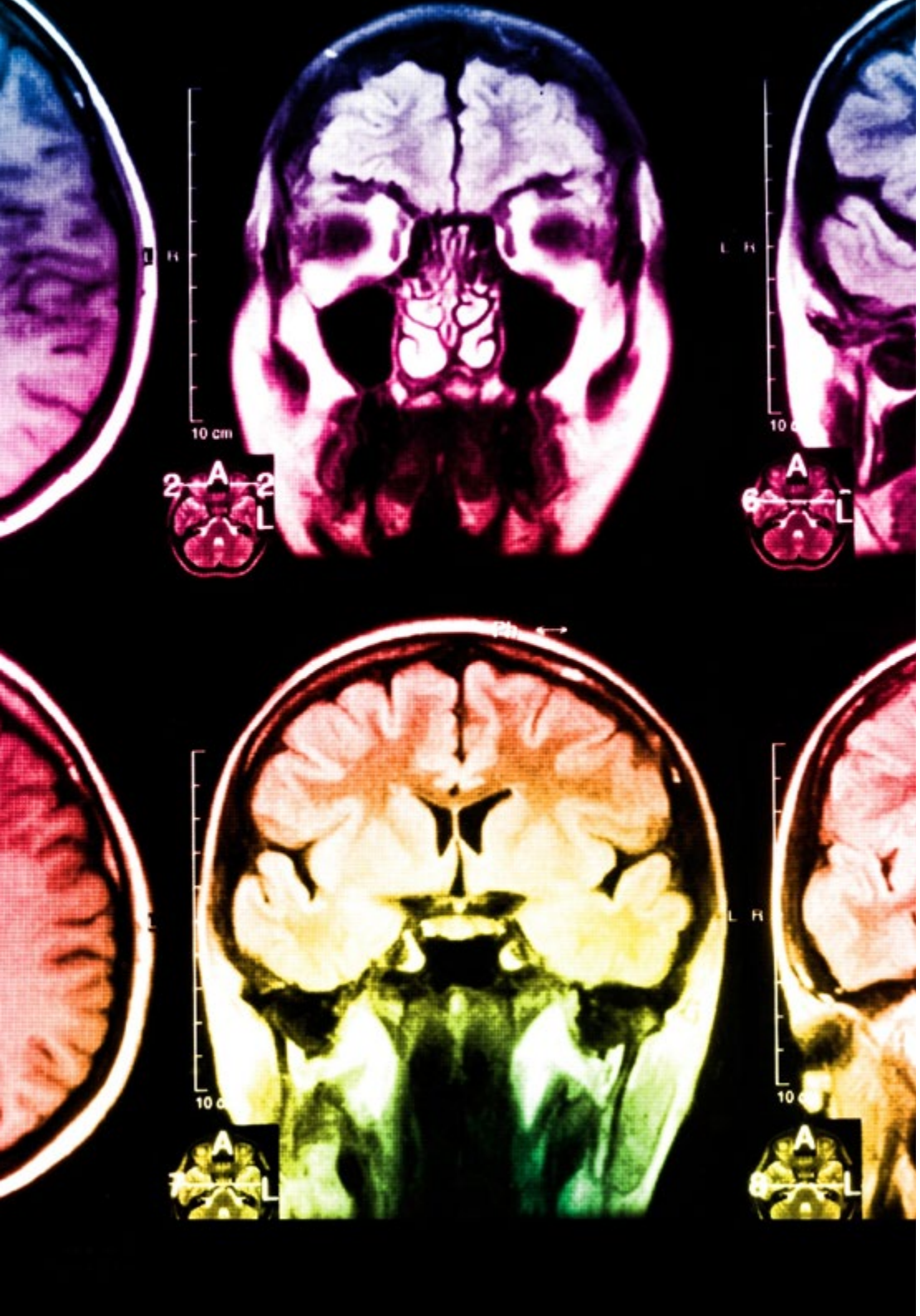
1. Dentists who follow this method not only grasp concepts, but also develop their mental capacity by means of exercises to evaluate real situations and apply their knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas 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.

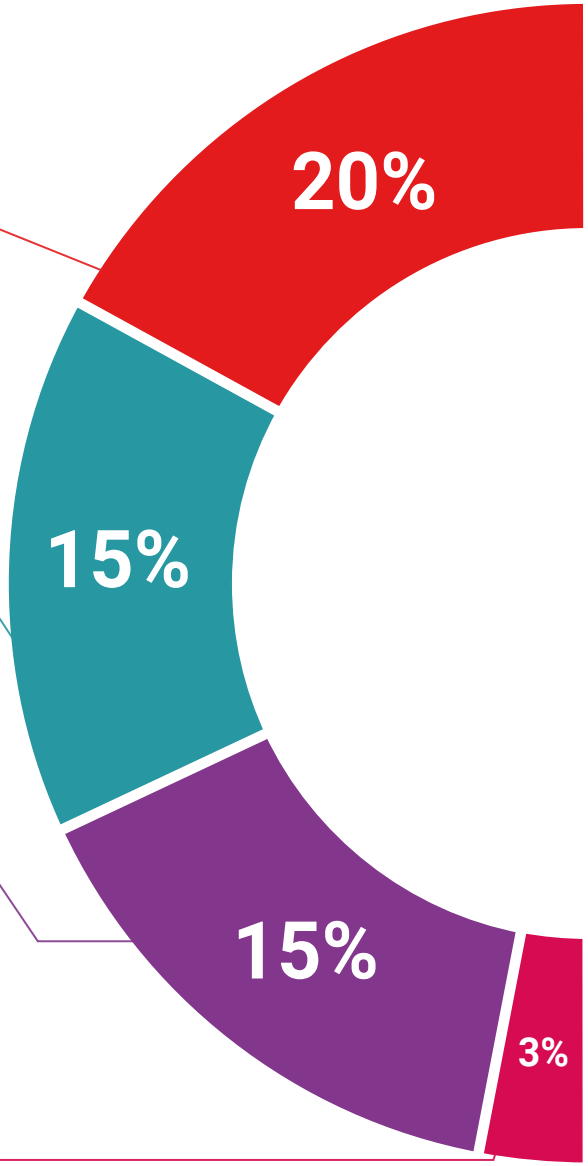
Interactive Summaries

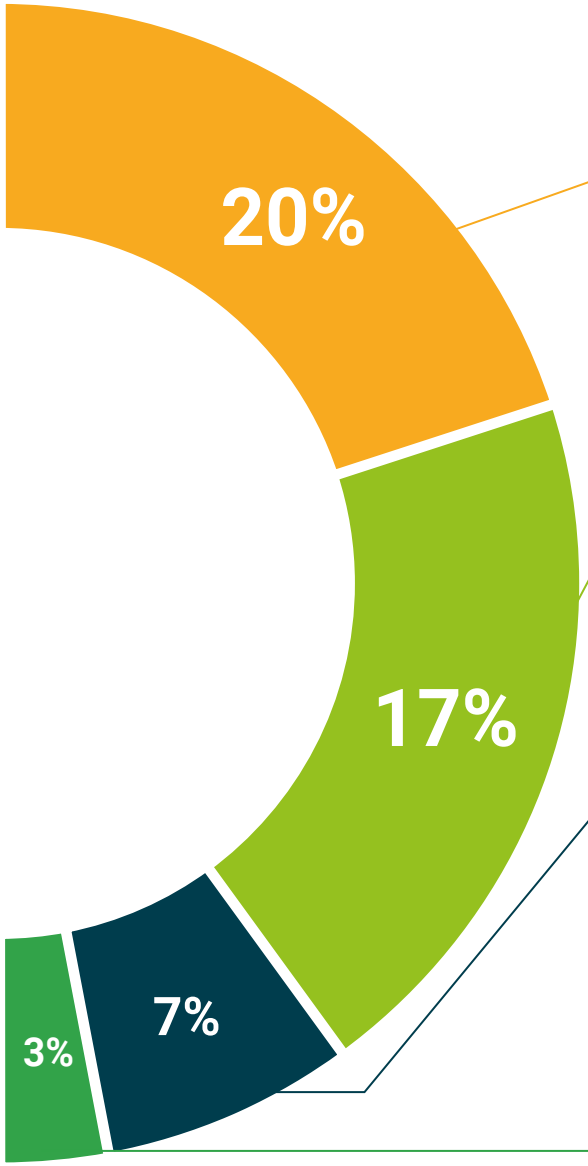
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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 Software Applied to Digital Dentistry guarantees students, in addition to the most rigorous and up-to-date education, access to a qualification issued by TECH Global University.

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 Software Applied to Digital Dentistry** 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.

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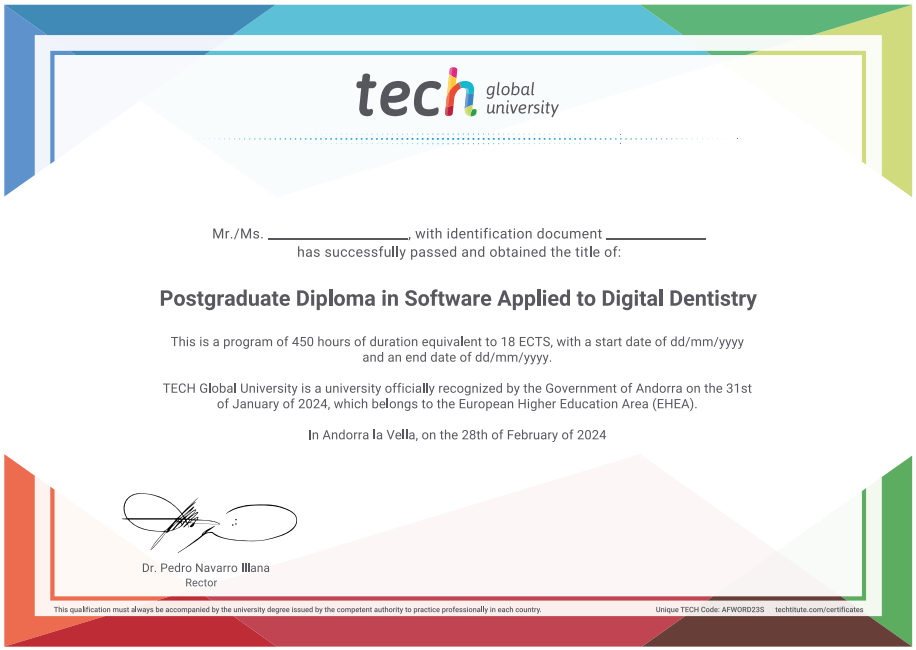
tech global university

Mr./Ms. _____, with identification document _____
has successfully passed and obtained the title of:

Postgraduate Diploma in Software Applied to Digital Dentistry

This is a program of 450 hours of duration equivalent to 18 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
Rector

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates

*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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