



Postgraduate Diploma

Guided Bone Regeneration

» 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-guided-bone-regeneration

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tech 06 | Introduction

This, along with the great scientific and technical development that has occurred within this field, explains why a large percentage of research and subsequent publications in the dental world have focused on this subject. This makes the overall impact factor much higher than that of any other area of dentistry.

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This has meant that dental prosthesis treatments have undergone an important conceptual change due to the clinical success and predictability of dental implants. This has provided the possibility of offering the patient, in many cases, a third dentition on the jaws. This is capable of replacing the lost teeth both functionally and aesthetically without treatment or overloading of the neighboring teeth, and in a fixed form.

Thus, in the prosthodontic treatment of patients with tooth loss, we have to combine the classic concepts and knowledge of oral rehabilitation with the new concepts of implant anchorage, distribution of forces (biomechanics) and preservation of osseointegration (the principle by which the titanium implant is joined to the bone).

The knowledge acquired will allow the student to face working life from a more qualified position, giving them a clear advantage when it comes to finding a job, since they will be able to offer the application of the latest technological and scientific advances in implant-prosthetic rehabilitation.

This **Postgraduate Diploma in Guided Bone Regeneration** contains the most complete and up-to-date scientific program on the market. The most important features of the program include:

- Clinical cases presented by experts in the different dental specialties.
- The graphic, schematic and eminently practical contents of which they are composed provide scientific and practical information on the disciplines that are essential for professional practice.
- Latest information on Bone Guided Regeneration.
- Algorithm-based interactive learning system for decision-making in the presented clinical situations.
- With special emphasis on evidence-based dentistry and research methodologies in Guided Bone Regeneration.
- Content that is accessible from any fixed or portable device with an Internet connection.



Expand your knowledge through the Postgraduate Diploma in Guided Bone Regeneration, in a practical way and adapted to your needs"

Introduction | 07 tech



This Postgraduate Diploma may be the best investment you can make when choosing a refresher program for two reasons: in addition to updating your knowledge in Guided Bone Regeneration, you will obtain a Postgraduate Diploma from TECH Global University"

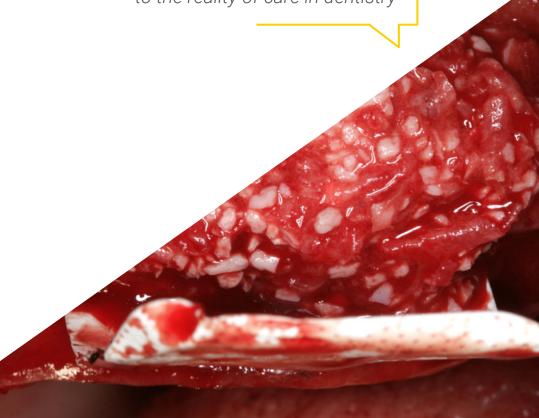
Forming part of the teaching staff is a group of professionals in the world of Dentistry, who bring their work experience to this course, as well as a group of renowned specialists, recognized by esteemed scientific communities.

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 training program to train in real situations.

This program is designed around Problem Based Learning, whereby the student will must try to solve the different professional practice situations that arise during the course. For this reason, you will be assisted by an innovative, interactive video system created by renowned and experienced experts in the field of radiology with extensive teaching experience.

This program offers training in simulated environments, which provides an immersive learning experience designed to train for real-life situations

It includes clinical cases to bring the program's degree as close as possible to the reality of care in dentistry







tech 10 | Objectives

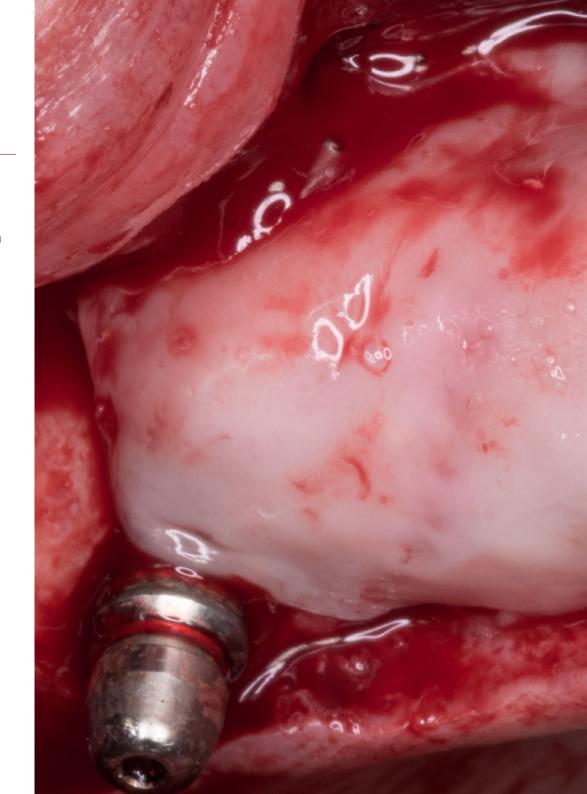


General Objectives

- Identify the amount of time required for the complete regeneration of a bone system after the dental implant procedure
- Apply post-surgical techniques for the recovery and progress of maxillary sinus elevation
- Analyze different proposals for quick action methods and surgical approaches to address complications in Implantology



Work with the most current information related to post-extraction and immediate implants in the posterior sectors, staying updated on aesthetic improvements through innovations with this technique"





Specific Objectives

Module 1. Diagnosis

- Explain the correct process for conducting the pre-surgical medical history
- Identify the surgical procedure to follow once the exams are completed
- Analyze and delve into the most common diseases found in the oral cavity
- Assist the patient in the event of a medical emergency
- Perform analytical processes for accurate medical diagnoses that serve as the starting point for the surgical procedure

Module 2. Biomaterials and Guided Bone Regeneration

- Define the biological bone mechanisms involved in guided bone regeneration
- Analyze the materials and composition of prostheses to avoid the use of processes that affect bone regeneration
- Describe post-surgical care to ensure proper recovery
- Identify the time required for complete bone regeneration after the oral implant procedure

Module 3. Maxillary Sinus Lift

- Explain the process for performing sinus lift surgical techniques, bone grafting from the ramus and mandibular symphysis
- Analyze the bone grafting procedure in sinus lift surgical techniques
- Describe the correct process for maxillary sinus elevation
- Dive deeper into the surgical procedure of maxillary sinus elevation
- Apply post-surgical techniques for the recovery and progress of the maxillary sinus lift

Module 4. Immediate Implantology

- Relate Implantology with the patient's medical pathologies and other dental specialties, as well as perform sample collection
- Apply techniques in Immediate Implantology
- Apply knowledge in single teeth, partial bridges, and rehabilitations with immediate load

Module 5. Implant Planning

- Describe the anatomy of the cranio-maxillary complex: surgical and implantological relevance
- Identify pharmacological interactions and explain the radiological techniques necessary for implantological diagnosis
- Analyze the techniques required for proper implant planning
- Organize the necessary tools and medications for the implantation procedure

Module 6. Complications in Implantology

- Identify surgical processes that went wrong in patients with oral difficulties and discomfort
- Be aware of common complications presented in improperly performed surgical processes and their possible immediate correction
- Identify materials suited to the patient's diagnosis to avoid affecting their recovery or causing future complications
- Analyze different approaches to rapid surgical action methods to solve complications in implantology



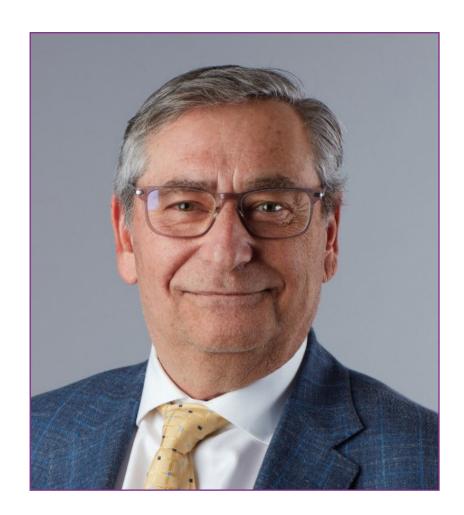


International Guest Director

As one of the foremost members of the dental field, Dr. Howard C. Tenenbaum has lectured internationally on topics as diverse as **Orofacial Pain, Bone Cell Biology and the treatment of Refractory Periodontal Disease**. He has received numerous recognitions, including **distinguished fellowships** from the International College of Dentists, the Academy of Dentistry International, the American College of Dentists and the Pierre Fauchard Academy.

He has also received **several awards** for his research work, distinguished by Johnson & Johnson, as well as for his teaching at Mount Sinai Hospital. Precisely her dental research accumulates an **H index of 52**, with thousands of citations to his articles, highlighting his work in the study of the effects of resveratrol on oxidative stress during experimental periodontitis in rats subjected to cigarette smoke inhalation.

He combines his academic responsibilities as professor of dentistry at the University of Toronto with his work as a dental specialist at the Mount Sinai Hospital in Canada. It was in this same center where he held various management positions, being head of research of the dental service and at the same time responsible for the same service. Throughout his career he has served on various committees and associations, including the editorial boards of The Open Orthopaedics Journal and The Open Journal of Dentistry.



Dr. C. Tenenbaum, Howard

- Professor of Dentistry, University of Toronto, Canada.
- Head of Research at the Mount Sinai Hospital Dental Service, Mount Sinai Hospital, Canada
- Professor of Periodontology, Tel Aviv University, Israel
- Professor of Periodontology, University of Manitoba, Canada
- Specialist at Princess Margaret Hospital, Toronto, Canada
- Head of Dentistry, Mount Sinai Hospital, Toronto, Canada
- Consultant to the U.S. Food and Drug Administration (FDA), U.S.A.
- Vice-Chairman of the Federal Advisory Committee on Dental Care of Canada
- Ph.D. in Oral Biology, University of Toronto, Canada
- Doctor of Dental Surgery from the University of Toronto, Canada
- Diploma in Periodontics, University of Toronto, Canada
- Fellowship of the International College of Dentists
- Fellowship of the Academy of Dentistry International

- Fellowship of the American College of Dentists
- Fellowship of the Pierre Fauchard Academy
- Member of: Editorial Board of The Open Orthopaedics Journal, Editorial Board of The Open Journal of Dentistry, College of Reviewers for the CIHR Canada Research Chairs Program, Canadian Dental Association, Canadian and International Association for Dental Research, American Society for Bone and Mineral Research, American Academy of Periodontology, Ontario Society of Periodontists



Thanks to TECH, you will be able to learn with the best professionals in the world"

Management



Dr. García-Sala Bonmatí, Fernando

- Degree in Dentistry
- Associate Professor, University of Valencia, Department of Stomatology
- Master's Degree in Advanced Oral Implantology from the European University of Madrid
- Certificate in Advances in Implantology and Oral Rehabilitation from the New York University College of Dentistry New York, USA
- Former professor and codirector of the Master's Degree in Advanced Oral Implantology at the European University of Valencia Valencia, Spain
- Former professor of Oral Surgical Pathology at the European University of Valencia. Valencia, Spain
- ITI (International team Implantology) member
- Member of the Spanish Society of Prosthetics, Stomatology and Aesthetics (SEPES)
- Fellowship in bone regeneration with Dr Carlo Tinti Brescia, Italy
- Training in Dr Zucchelli Mucogingival Surgery at the University of Bologna Bologna, Italy
- Training in Periodontal Regeneration, Dr Cortellini Florence, Italy
- Training in Bone Regeneration, Dr Urban Budapest, Hungary
- Various publications in JCR, national and international speaker
- Private Practice Surgery, Periodontics and Implants



Dr. Brotons Oliver, Alejandro

- Degree in Dentistry
- PhD in Dentistry from the University of Valencia
- Master's Degree in Oral Surgery and Implantology from the University of Valencia
- Certificate in Advances in Implantology and Oral Rehabilitation from the New York University College of Dentistry New York, USA
- Former professor and codirector of the Master's Degree in Advanced Oral Implantology at the European University of Valencia Valencia, Spain
- Former professor of Oral Surgical Pathology at the European University of Valencia. Valencia, Spain
- Former professor of Oral Surgery Pathology UCV Cardenal Herrera University Valencia, Spain
- Member of the Spanish Society of Prosthetics, Stomatology and Aesthetics (SEPES) and the Spanish Society of Oral Surgery (SECIB)
- Fellowship in bone regeneration with Dr Carlo Tinti Brescia, Italy
- Training in Bone Regeneration, Dr Urban Budapest, Hungary
- Various publications in JCR, national and international speaker
- Private Practice Surgery, Periodontics and Implants





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Module 1. Diagnosis

- 1.1. Clinical History: First Visit, Anamnesis and Patient Expectations
- 1.2. Medical Assessment of the Surgical Patient
 - 1.2.1. Complementary Tests in Implantology and Oral Surgery
- 1.3. Patient With Diseases of Risk in Implant Dentistry and Surgery: Medical Considerations and Dental Management
 - 1.3.1. Diabetic Patients
 - 1.3.2. The Immunocompromised Patient
 - 1.3.3. The Anticoagulated Patient
 - 1.3.4. The Medically Compromised Patient: Bisphosphonates
- 1.4. Anaesthetic Techniques in Surgery and Implantology
 - 1.4.1. Pharmaceuticals
 - 1.4.2. Loco-regional Anaesthesia Techniques in Surgery and Implantology
- 1.5. Sedation and General Anesthesia

Module 2. Biomaterials and Guided Bone Regeneration

- 2.1. Types of Bone Grafts and Biological Mechanisms of Bone Formation
 - 2.1.1. Classification, Advantages, and Disadvantages
 - 2.1.2. Osteogenesis, Osteoconduction, and Osteoinduction
- 2.2. Autologous Bone Grafts: Chin and Mandibular Ramus
- 2.3. Other Biomaterials in Bone Regeneration
 - 2.3.1. Homologous Grafts
 - 2.3.2. Heterologous Grafts
 - 2.3.3. Alloplastic Grafts
 - 2.3.4. Platelet-Rich Growth Factors
- 2.4. Membranes and Bone Guided Regeneration
 - 2.4.1. Non-Resorbable Membranes
 - 2.4.2. Resorbable Membranes



Module 3. Maxillary Sinus Lift

- 3.1. Diagnosis and Anatomical Review of the Maxillary Sinus
- 3.2. Crestal Sinus Lift Technique
 - 3.2.1. Sinus Lift with Osteotome Technique
 - 3.2.2. Minimally Invasive Sinus Lift via Crestal Approach
 - 3.2.2.1. Trauma-Free Drilling Kits
 - 3.2.2.2. Balloon Technique
- 3.3. Lateral Sinus Lift Technique
 - 3.3.1. Step-by-Step Description of the Technique
 - 3.3.2. Piezoelectric Systems
 - 3.3.3. Biomaterials in Maxillary Sinus Lift

Module 4. Immediate Implantology

- 4.1. Post-Extraction Implants
 - 4.1.1. Surgical Aspects of Immediate Implants
 - 4.1.1.1. Immediate Implant
 - 4.1.1.2. Early Implant
- 4.2. Immediate Implants in Posterior Areas
- 4.3. Immediate Aesthetics
 - 4.3.1. Emergence Profile Transmission
 - 4.3.2. Immediate Provisional Implants

Module 5. Implant Planning

- 5.1. Extraoral and Intraoral Examination
 - 5.1.1. Extraoral Examination: Symmetry, Facial Thirds, Extraoral Aesthetic Parameters
 - 5.1.2. Intraoral Examination: Hard Tissue, Soft Tissue, Occlusion and TMJ
- 5.2. Impression Taking and Study Models in Implantology
 - 5.2.1. Impression Materials and Techniques in Implant Diagnosis
 - 5.2.2. Facebow and Mounting in Semi-Adjustable Articulator

- 5.3. Diagnostic Waxing and Radiological Splints
 - 5.3.1. Waxing Techniques and Clinical Considerations
 - 5.3.2. Radiological Splints: Classification and Fabrication in the Laboratory
- 5.4. Radiological Diagnosis in Implantology
 - 5.4.1. Classification of Techniques
 - 5.4.2. 2D Planning
 - 5.4.3. Cone Beam Computed Tomography (CBCT): Planning Software
- 5.5. Photographic Records in Implantology
- 5.6. Treatment Plan Presentation. Strategies



In just 6 months you will have surpassed even your most ambitious educational expectations, which will lead you to the highest level of practice in Guided Bone Regeneration and implantology"



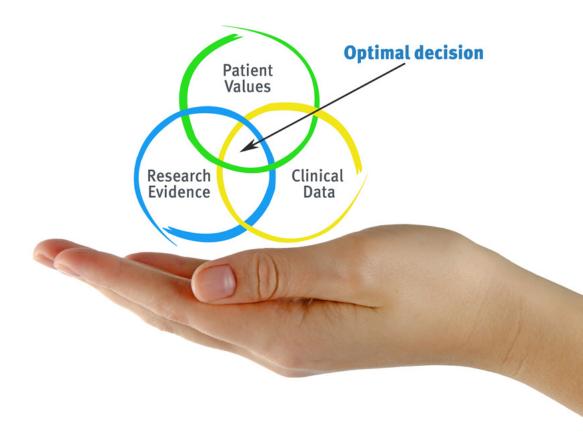


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At TECH we use the Case Method

In a given clinical situation, what would you do? Throughout the program you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, resolve the situation. There is abundant scientific evidence on the effectiveness of the method. Dentists learn better, faster, and more sustainably over time.

With TECH you can 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 potential 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. Students 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. The learning process has a clear focus on 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.



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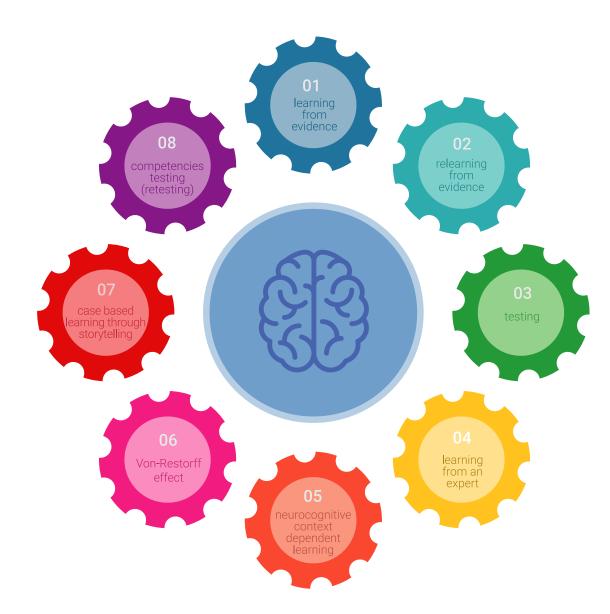
Re-Learning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

Our 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, which represent a real revolution with respect to simply studying and analyzing 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



Methodology | 27 tech

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

With this methodology we have trained more than 115,000 students with unprecedented success, in all clinical specialties regardless of the surgical load. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

Re-learning 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 to success

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

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

In this Postgraduate Diploma you will have access to the best educational material, prepared with you in mind:



Study Material

After a complex production process, we transform the best content into high-quality educational and audiovisual multimedia. We select the best syllabus and make it available to you. Everything you need to acquire in-depth knowledge of a discipline, from A to Z. Lessons written and chosen by specialists in each of the disciplines.



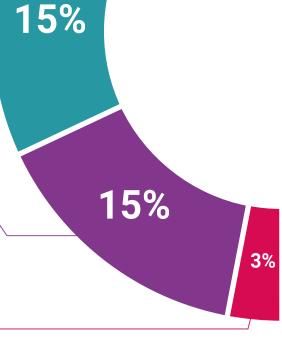
Surgical techniques and clinical procedures on video

We bring you closer to the newest techniques, to the latest scientific advances, to the forefront of medical developments. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



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 unique training system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



20%



Additional Reading

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

20% 17%

7%

Expert-Led Case Studies and Case Analysis

Through the narratives of expert professionals, it is possible to acquire a high degree of understanding of the most frequent problematic situations. The professional's healthcare practice is not alien to the context in which it takes place. If we want to train ourselves to improve our professional practice, this training must be situated within the context in which it takes place.



Testing & Re-testing

We periodically evaluate and re-evaluate your knowledge throughout this program through activities and evaluative exercises.



Classes

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



Quick Action Guides

One of the most important functions of our team is to select those contents considered essential and present them in the form of worksheets or quick action guides to facilitate their understanding.







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This program will allow you to obtain your **Postgraduate Diploma in Guided Bone Regeneration** 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 Guided Bone Regeneration

Modality: online

Duration: 6 months

Accreditation: 18 ECTS



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

Postgraduate Diploma in Guided Bone Regeneration

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



^{*}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.

tech global university

Postgraduate Diploma

Guided Bone Regeneration

- » Modality: online
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- » Credits: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

