

# Postgraduate Diploma

## Dento-skeletal and Temporomandibular Joint Pathology





## Postgraduate Diploma Dento-skeletal and Temporomandibular Joint Pathology

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

Website: [www.techtute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-dento-skeletal-temporomandibular-joint-pathology](http://www.techtute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-dento-skeletal-temporomandibular-joint-pathology)

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# 01

# Introduction

Dento-skeletal malocclusion is a pathology that apparently only seems to cause visible and physical effects on the patient, although the truth is that it can also have a serious influence on sleep disorders or malformations of the Temporomandibular Joint, a fundamental tool for carrying out activities as common and everyday as speaking or chewing. Given the importance of this system, TECH has developed this program that gathers the latest information from the medical sector related to oral medicine and maxillofacial surgery. This is an intensive program distributed over 450 hours in which the graduate will be able to enjoy, completely online, the best theoretical and practical content designed by experts in the sector.





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*If you are looking for a degree that adapts to your academic needs and your time, this is the perfect option for you. Moreover, if you get a degree from it, you shouldn't think twice about it”*

The human body functions just as if it were a machine. As soon as a gear fails, the system will be impaired, which can lead to serious errors. This example is perfectly applicable to maxillofacial physiology. In this case, dento-skeletal malocclusions, apart from producing a very high aesthetic impact and demanded by many patients, also affect other pathologies that can influence in the reduction of their quality of life, such as, for example, in the treatment of sleep apnea or affecting the Temporomandibular Joint, which plays a fundamental role in many basic bodily functions such as eating, speaking or facial expression.

For this reason, and in order to offer specialists in this area of medicine a degree that would allow them to acquire a broad knowledge and update on the latest strategies and techniques in the intervention of patients suffering from this type of conditions, TECH has developed this comprehensive program in Dento-Skeletal and Temporomandibular Joint Pathology.

It is an exhaustive and intensive 100% program in which the specialist will find all the necessary information to perfect his medical skills in only 6 months and thanks to the use of the most avant-garde pedagogical methodology and the most advanced tools. You will be able to delve into surgical techniques and the diagnosis of pathologies from wherever you are and through a degree that is accessible 24 hours a day and from any device with an internet connection.

This **Postgraduate Diploma in Dento-skeletal and Temporomandibular Joint Pathology** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ The examination of case studies presented by experts in Oral and Maxillofacial Surgery
- ♦ 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



*You will acquire the most comprehensive and up-to-date knowledge on the epidemiology of apnea snoring and hypnoapneas, so that you can diagnose it more quickly”*

“Are you up-to-date with the latest developments in dento-skeletal preoperative planning? With this Postgraduate Diploma you will be able to delve into the specifications of its phases and its key aspects”

The program's teaching staff includes professionals from the sector who contribute their work experience to this training 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 throughout the program. For this purpose, students will be assisted by an innovative, interactive video system created by renowned and experienced experts.

*This Postgraduate Diploma will allow you to learn in detail about the complications of dento-skeletal of dento-skeletal malocclusions, and the most innovative and effective strategies to act if necessary.*

*You will have a virtual classroom available 24 hours a day and from any device with internet connection, so that you can take advantage of your free time during the consultation.*



# 02 Objectives

The density that can arise from creating an agenda related to Dento-Skeletal and Temporomandibular Joint Pathology concerned TECH. For this reason, this university, together with its team of experts, worked to design a Postgraduate Diploma that would allow graduates to meet and surpass their academic objectives in less time than they expected. Everything, through the transfer of the most innovative and effective tools and techniques, as well as the achievement of a current, dynamic and quality agenda, perfect for perfecting your medical skills in just 6 months.





A close-up photograph of a surgical procedure. The image shows a surgical incision with various tissues and structures exposed. Surgical instruments, including a retractor and a dissector, are visible, holding back muscle and soft tissue to provide a clear view of the underlying structures. The background is a blue surgical drape.

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*If your objective is to handle videosomnoscopy in detail, this program will make you an expert in the latest techniques used by the best professionals”*



## General Objectives

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- ♦ Review the cerviofacial anatomy, a basic starting point for the entire Professional Masters Degree program
- ♦ Learn the anatomy and physiology of the relevant glands
- ♦ Build a knowledge base on a highly prevalent disorder such as sleep apneas, in which maxillofacial surgeons are among the specialists who can offer therapeutic options
- ♦ Update knowledge on facial traumatology, including its main causes and diagnostic techniques
- ♦ Know about malignant pathologies divided by anatomical regions that can affect the head and neck
- ♦ Know the different reconstructive techniques





## Specific Objectives

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### Module 1. Dento-Skeletal Malocclusion

- ◆ Perfect the diagnosis of the different types of malocclusions
- ◆ Provide examples, exploring preoperative planning to patient discharge
- ◆ Introduce orthodontic concepts in the treatment of this pathology
- ◆ Learn about topical issues, including the latest planning techniques
- ◆ Provide the student with the tools to know how to oversee cases and the best surgical techniques for each patient
- ◆ Learn about the latest advances in orthognathic surgery
- ◆ Know the different support techniques to improve facial profilometry

### Module 2. Obstructive Sleep Apnea Syndrome

- ◆ Know how to interpret a polysomnography, polygraphy or videosomnography report, in order to diagnose and offer individualized therapeutic options for patients
- ◆ Be aware of other non-surgical treatments for sleep apneas, in order to be able to offer them to patients, as appropriate: mandibular advancement devices, positional therapy, positional therapy
- ◆ Know the different surgical techniques available. Pharyngoplasty Avance Gene XII Pair Stimulator Maxillomandibular Advancement
- ◆ Understand the systems and protocols for a multidisciplinary approach to these patients

### Module 3. Temporomandibular Joint Pathology

- ◆ To know the different exploration and diagnostic techniques, as well as indications for treatment
- ◆ Focus on pathologies affecting the temporomandibular joint, joint alterations due to problems in condylar development and growth
- ◆ Learn about the articular alterations related to the different dentofacial deformities
- ◆ Focus on the management of this disease and the different treatments currently available, their indications, contraindications, techniques and complications
- ◆ Explore pathologies unrelated to disc displacement (dislocations, tumors, rheumatologic diseases...) which which are requisite knowledge for any specialist who is going to work with the temporomandibular joint



*You will be able to delve into the diagnosis of the pathology of the Temporomandibular Joint and its specifications through a module specifically dedicated to this section”*

03

# Course Management

Both the management and the teaching team of this Postgraduate Diploma are composed of a group of young professionals in Maxillofacial Surgery who, despite their young age, have extensive experience in the management of patients with different and complex pathologies. Furthermore, this is a committed group that will be at the graduate's disposal whenever needed to resolve any doubts that may arise during the academic experience or to moderate the debates that may arise in the Virtual Classroom.





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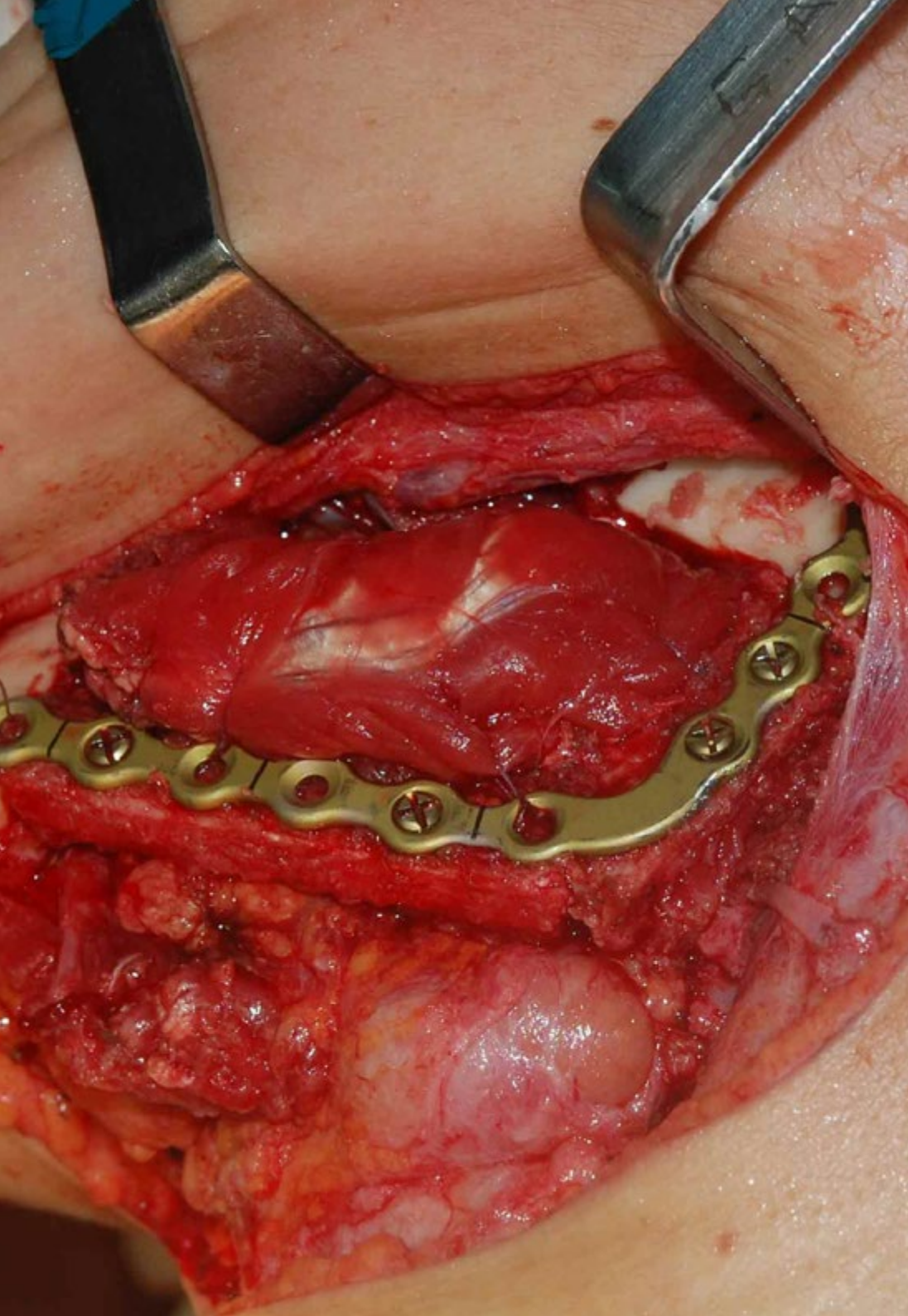
*A program that gives you the opportunity to grow professionally with prestigious specialists in the field of Maxillofacial Surgery at a national level”*

## Management



### Dr. Pingarrón Martín, Lorena

- ♦ Head of the Maxillofacial Surgery Service at Rey Juan Carlos University Hospital, General de Villalba Hospital and Infanta Elena Hospital
- ♦ Maxillofacial Surgeon in Private Practice at the Fundación Jiménez Díaz
- ♦ *Fellow of the European Board of Oral-Maxillofacial-Surgery, 2014*
- ♦ Responsible for the design and management of animal experimentation procedures: Category B+C+D
- ♦ Specialist in Oral and Maxillofacial Surgery at the Autonomous University of Madrid. La Paz University Hospital
- ♦ PhD in Medicine and Surgery, Autonomous University of Madrid, 2013 Outstanding Cum Laude
- ♦ Degree in Medicine in the University of Miguel Hernández de Elche and Complutense University of Madrid
- ♦ Member International Society for Oral and Maxillofacial Surgery
- ♦ Member of the Spanish Society of Oral and Maxillofacial Surgery
- ♦ Chairman of the HURJC Investigation Committee
- ♦ Vocal Research Institute IIS-FJD, Universidad Autónoma Madrid
- ♦ HURJC Teaching Committee Member
- ♦ Member of the Oncology Institute FJD, Head and Neck Unit
- ♦ Member of the Multidisciplinary Sleep Unit HURJC
- ♦ Member of the HURJC Head and Neck Tumors Committee
- ♦ Reviewer Journal "Laryngoscope". ISI IndexedJournal; Factor Impacto 1.617
- ♦ Reviewer "AfricanJournal of Biotechnology". ISI IndexedJournal; Factor Impacto 0.565



## Professors

### Dr. Barba Recreo, Paula

- ◆ Doctor Specialist in Oral and Maxillofacial Surgery
- ◆ Head Association the Maxillofacial Surgery Department at the Hospital Universitario Rey Juan Carlos
- ◆ Head Association the Maxillofacial Surgery Service, Villalba General: Hospital
- ◆ PhD from the Autonomous University of Madrid
- ◆ Bachelor in Medicine and Surgery from the University of Zaragoza

### Dr. Merino Domingo, Francisco Javier

- ◆ FEA of the Oral and Maxillofacial Surgery Unit of the HU Nuestra Señora del Rosario
- ◆ Associate Professor of the Maxillofacial Surgery Medicine at Alfonso X El Sabio University
- ◆ Researcher at the I+12 Research Institute
- ◆ Doctorate in Medical-Surgical Research Sciences from the Complutense University of Madrid
- ◆ Specialist in Oral and Maxillofacial Surgery via MIR at the 12th October University Hospital in Madrid
- ◆ Member of the Spanish Society of Ocular and Maxillofacial Plastic Surgery
- ◆ Member of the Spanish Society of Head and Neck
- ◆ Member of the European Association for Cranio-Maxillo-Facial Surgery

### Dr. Page Herraiz, Inés

- ◆ FEA Oral and Maxillofacial Surgery at Rey Juan Carlos Hospital, General Hospital of Villaba and Infanta Elena Hospital
- ◆ Degree in Medicine from the University of Alcalá, Spain
- ◆ Specialist in Oral and Maxillofacial Surgery Ramón y Cajal University Hospital
- ◆ Postgraduate Diploma in Orthognathic Surgery. University of Alcalá
- ◆ University Master's Degree in Aesthetic and Anti-Aging Medicine Complutense University of Madrid
- ◆ Communications and posters for National and European Congresses of Oral and Maxillofacial Surgery

# 04

## Structure and Content

Finding a program that combines dynamism, current events, variety and the most comprehensive and accurate information on the Maxillofacial Surgery sector was an impossible task until TECH and its team decided to design this Postgraduate Diploma. It is a program that not only provides the convenience and versatility of its convenient 100% online format, but also includes hours of additional material in different formats: high quality detailed videos, images, dynamic summaries, research articles, complementary readings and much more. All of this, allowing the medical specialist to obtain from this program the most enriching academic experience of his or her career.





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*Everything you need to know to perfect your patient intervention strategies using atrocentesis you will find in this degree: indications and contraindications”*

## Module 1. Dento-Skeletal Malocclusion

- 1.1. Dental Malocclusion:
  - 1.1.1. Diagnosis
  - 1.1.2. Cephalometry: record taking
  - 1.1.3. 3D Photos
- 1.2. Pre-Surgical Orthodontics
- 1.3. Preoperative Planning
  - 1.3.1. Surgery Modeling vs. Digital Planning
  - 1.3.2. Jaw First vs. Maxillary First
  - 1.3.3. Preoperative preparation
  - 1.3.4. Operating Room Equipment
  - 1.3.5. Post-Operative
- 1.4. Surgical Technique
  - 1.4.1. Maxilla: Le fort I, Le fort segmented
  - 1.4.2. Jaw BSSO and Hinds
  - 1.4.3. Chin
- 1.5. Other Techniques
  - 1.5.1. SARPE vs. MARPE
  - 1.5.2. Surgery first
  - 1.5.3. Surgery only
  - 1.5.4. Preformed Plates and Cutting Guides
- 1.6. Complications
  - 1.6.1. Intra-Operative
  - 1.6.2. Post-Operatives
  - 1.6.3. Secuelas
- 1.7. Distraction:
  - 1.7.1. Mandibular
  - 1.7.2. Lift
- 1.8. Fractured OTG

- 1.9. Aesthetic Refinement
  - 1.9.1. Chin Wing
  - 1.9.2. Malar Osteotomy
  - 1.9.3. Chin, Straps
  - 1.9.4. v-y ( Soft Tissue Techniques)
  - 1.9.5. Bichat Balls
- 1.10. Invisaling, O-ARM, Neuronavigator

## Module 2. Obstructive Sleep Apnea Syndrome

- 2.1. Snoring, Apneas, Hypoapneas
  - 2.1.1. Epidemiology
- 2.2. Diagnosis Sleep Disorders
  - 2.2.1. Polysomnography
  - 2.2.2. Polygraph
- 2.3. Sleep Medicine
- 2.4. Treatment with Positive Pressure Machines
- 2.5. Videosomnoscopy
- 2.6. Surgical Treatments
  - 2.6.1. Intraoral Devices
  - 2.6.2. Positional Therapy
  - 2.6.3. Myofunctional Therapy
- 2.7. Soft Tissue Surgical Techniques
  - 2.7.1. Pharyngoplasty
  - 2.7.2. Base of the Tongue
  - 2.7.3. Other Surgical Techniques
- 2.8. Surgical Techniques on Hard Parts
  - 2.8.1. Apophysis Geni Advancement
  - 2.8.2. Other Surgical Techniques
- 2.9. Maxillary-Mandibular Advancement
- 2.10. Multidisciplinary Approach
  - 2.10.1. Sleep Apneas Syndrome Patient
  - 2.10.2. Other Sleep Disorders

**Module 3. Temporomandibular Joint Pathology**

- 3.1. Embryology, Anatomy and Physiology of the Temporomandibular Joint
  - 3.1.1. Temporomandibular Joint Embryology
  - 3.1.2. Temporomandibular Joint Anatomy
  - 3.1.3. Temporomandibular Joint Physiology
- 3.2. Diagnosis of Pathologies of the Temporomandibular Joint
  - 3.2.1. Medical History
  - 3.2.2. Physical Examination
  - 3.2.3. Diagnostic Imaging
- 3.3. Temporomandibular Disorders
  - 3.3.1. Temporomandibular Joint Dysfunction Syndrome
  - 3.3.2. Myofascial Pain Syndrome
- 3.4. Dentofacial and Temporomandibular Joint Deformity
  - 3.4.1. TMJ and Class II
  - 3.4.2. TMJ and Class III
  - 3.4.3. TMJ and Open Anterior Bite Treatment
- 3.5. Condylar Growth Disorders
  - 3.5.1. Mandibular Condyle Hyperplasia
  - 3.5.2. Condylar Hypoplasia
  - 3.5.3. Mandibular Condyle Agenesis
- 3.6. Temporomandibular Joint Treatment
  - 3.6.1. Conservative Treatment
  - 3.6.2. Treatment Indications
  - 3.6.3. Therapeutic Success Criteria
  - 3.6.4. Therapeutic Failure
- 3.7. Minimally Invasive Temporomandibular Joint Surgery
  - 3.7.1. Arthrocentesis
    - 3.7.1.1. Indications and Contraindications
    - 3.7.1.2. Surgical Technique
  - 3.7.2. Arthroscopy
    - 3.7.2.1. Indications and Contraindications
    - 3.7.2.2. Surgical Technique
  - 3.7.3. Complications from Minimally Invasive Surgery

- 3.8. Open Surgery of the Patellofemoral Joint
  - 3.8.1. Indications
  - 3.8.2. Contraindications
  - 3.8.3. Approaches
  - 3.8.4. Techniques
  - 3.8.5. Post-Surgery Physiotherapy
  - 3.8.6. Complications
- 3.9. Mandibular Dislocation
  - 3.9.1. Acute Dislocation
  - 3.9.2. Recurrent Dislocation
    - 3.9.2.1. Conservative Treatment
    - 3.9.2.2. Surgical Management
- 3.10. Other TMJ Pathologies
  - 3.10.1. TMJ Avascular Necrosis
  - 3.10.2. TMJ Synovial Chondromatosis
  - 3.10.3. TMJ Rheumatological Diseases
  - 3.10.4. TMJ Osteoarthritis
  - 3.10.5. TMJ Ankylosis
  - 3.10.6. TMJ Tumours



*The academic opportunity you were looking for to implement the best and most modern intervention strategies to your professional practice as a maxillofacial surgeon is before you. Your patients will thank you for it"*

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

What should a professional do in a given situation? 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. Gervas, 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 physician'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. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate 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.



## 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.

*Professionals will learn through real cases and by resolving 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, more than 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. 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 specialization, 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 (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.



#### Surgical Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current 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 on the usefulness of learning by observing experts. The system known as 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 Dento-skeletal and Temporomandibular Joint Pathology 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 Dento-skeletal and Temporomandibular Joint Pathology** 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 Dento-skeletal and Temporomandibular Joint Pathology**

Modality: **online**

Duration: **6 months**

Credits: **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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