

# Postgraduate Diploma

## Bone and Lipid Endocrinology



## Postgraduate Diploma Bone and Lipid Endocrinology

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

Website: [www.techtitute.com/us/medicine/postgraduate-diploma/bone-lipid-endocrinology](http://www.techtitute.com/us/medicine/postgraduate-diploma/bone-lipid-endocrinology)

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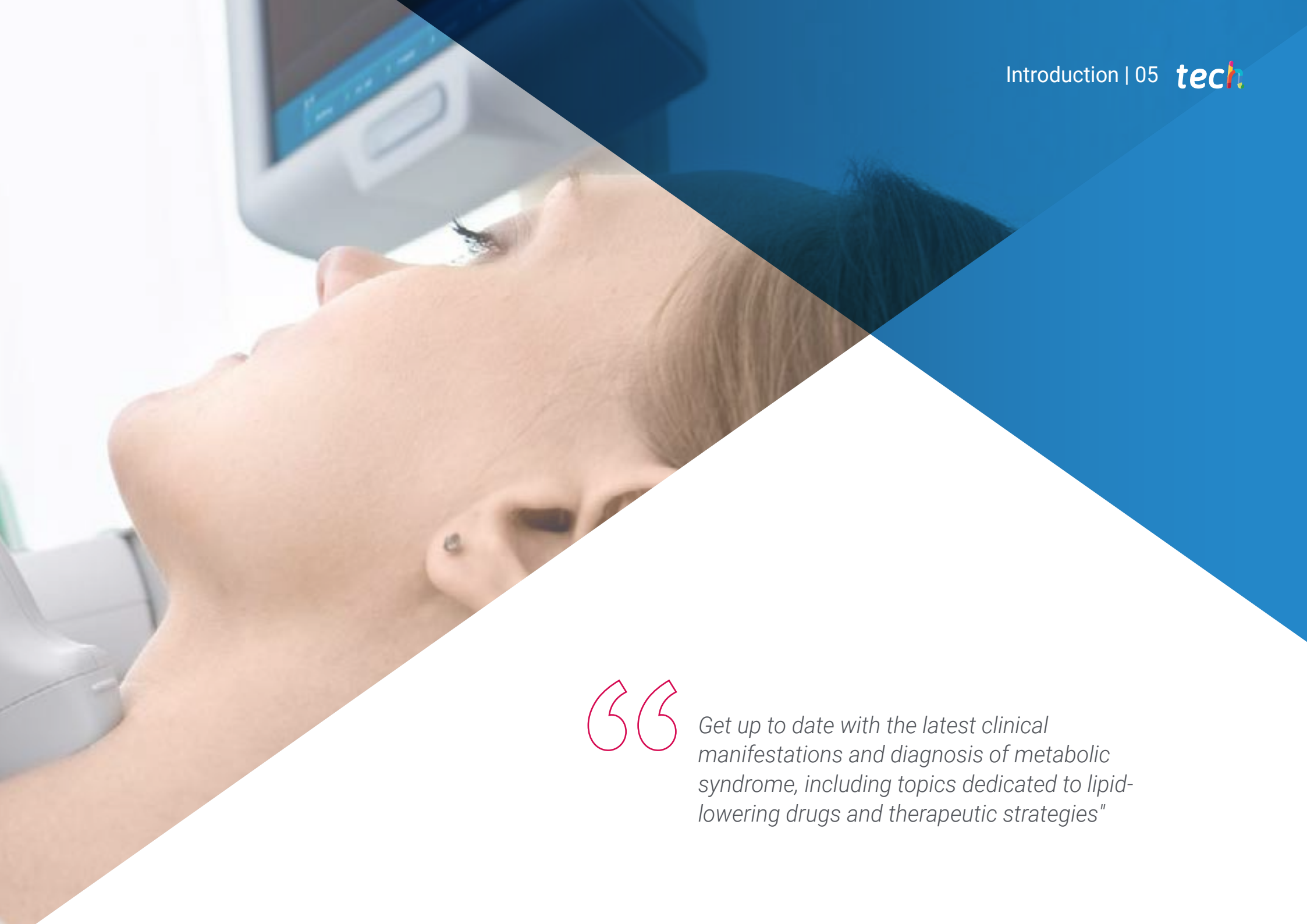
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# 01

# Introduction

Obesity is one of the main conditions faced by the specialist dedicated to Endocrinology. This, together with other pathologies related to bone and lipids, represent a preferential field of study to develop all kinds of advances and new approaches to disorders such as hyperthyroidism, multiple endocrine neoplasms, osteomalacia or osteoporosis. That is why the specialist must make an effort to update periodically, so TECH has developed this complete university program that delves into all these conditions, with the avant-garde prism of a teaching team of high academic and clinical quality.





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*Get up to date with the latest clinical manifestations and diagnosis of metabolic syndrome, including topics dedicated to lipid-lowering drugs and therapeutic strategies”*

There are multiple endocrine disorders that are related to bone or lipids. Some of them, such as obesity or hyperthyroidism, have a relatively high incidence in society, so it is to be expected that the specialist will face them assiduously in their daily work.

On the one hand, scientific advances in the approach to pathologies affecting the thyroid gland and metabolism have led to the modernization of all the processes involved in their treatment. On the other hand, new discoveries in the biology of mineral metabolism, the pathophysiology of metabolic syndrome or the pathogenesis of lysosomal storage diseases have established an unprecedented framework for action to combat some of the most prevalent endocrine pathologies.

For this reason, TECH has brought together a team of experts with extensive experience in different areas of the endocrinology specialty, focusing their efforts on bringing together the most important advances and developments in Bone and Lipid Endocrinology. In this program, the specialist will have access to a complete update on the most relevant issues in this field, including an entire module dedicated to obesity, metabolic syndromes and dyslipidemias.

Being perfectly aware of the high level of labor and professional demands of the specialist, TECH presents this Postgraduate Diploma in a 100% online format, without classes or fixed schedules of any kind. This gives a distinctive freedom to assume the teaching load at the best pace, being able to adapt it to the changing work or personal responsibilities of the specialist.

The **Postgraduate Diploma in Bone and Lipid Endocrinology** 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 Endocrinology
- ♦ The graphic, schematic, and eminently 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 for experts and individual reflection work
- ♦ Content that is accessible from any fixed or portable device with an Internet connection



*Incorporate the latest advances in disorders of intermediary and bone metabolism into your daily practice, with topics focusing on Wilson's disease, osteomalacia, Paget's disease and other bone dysplasias"*



“

*You will set your own pace of study, without the usual constraints of schedules or traditional classes. The teaching staff has prepared a multitude of videos with summaries and details of the most important keys to the program"*

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 training programmed to train 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 academic year. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

*Maintain your high level of professional practice thanks to the exhaustive contents of this program, elaborated by experts in Endocrinology from the most prestigious hospitals.*

*A large amount of didactic material in the form of complementary readings and real clinical cases awaits you in a modern virtual classroom, adapted to your most demanding expectations.*



# 02 Objectives

Knowing that access to scientific and rigorous content is of prime necessity for all endocrinology specialists, TECH has devoted all its resources to ensure that this Postgraduate Diploma contains the most cutting-edge material. The contents on Bone and Lipid Endocrinology are as rigorous as possible, as they combine the clinical experience of the teaching staff with the most current scientific theses.





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*You will fulfill your professional goal of updating your knowledge in Bone and Lipid Endocrinology in the most convenient and effective way possible, backed by the largest Spanish-language online university in the world"*



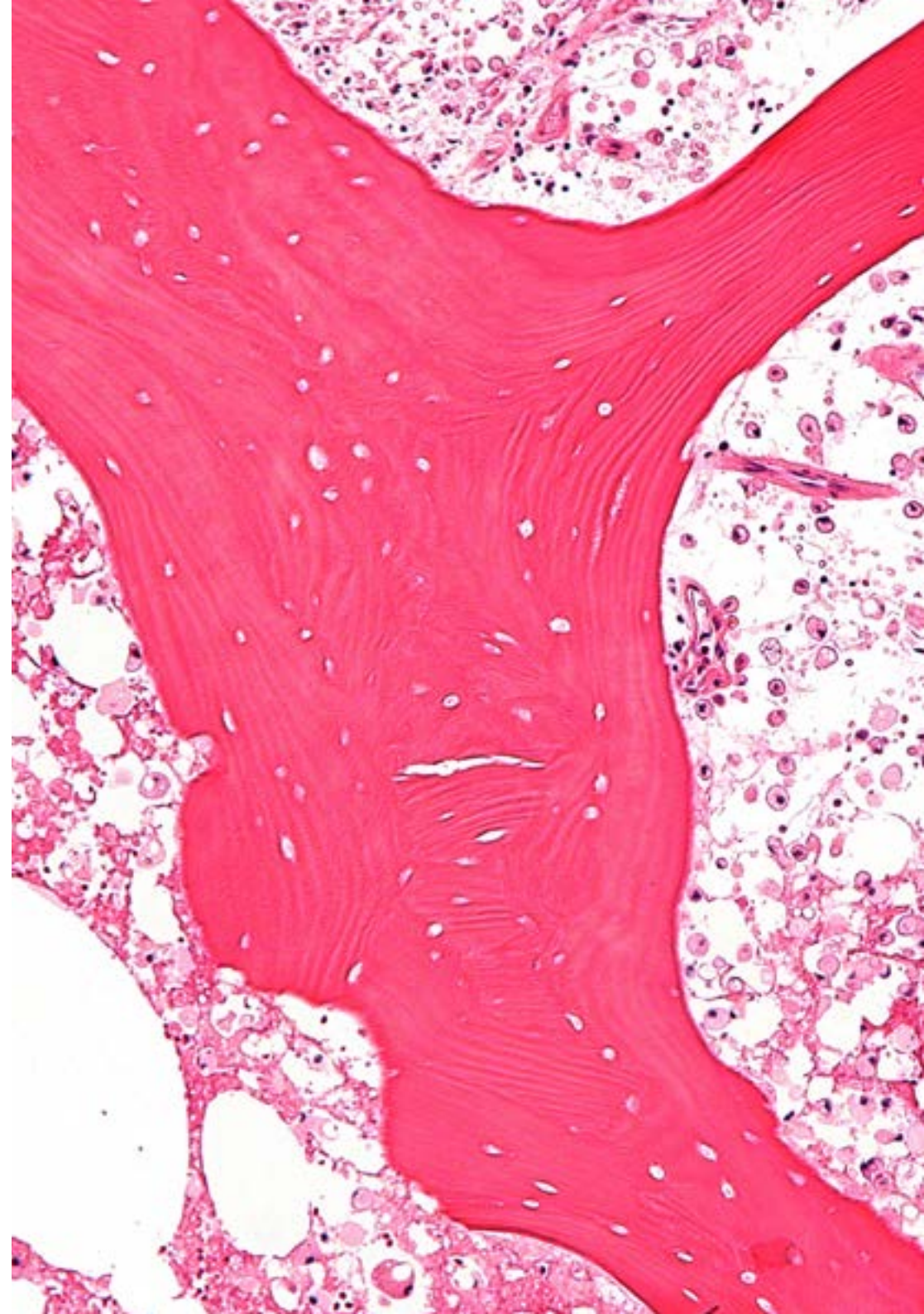
## General Objective

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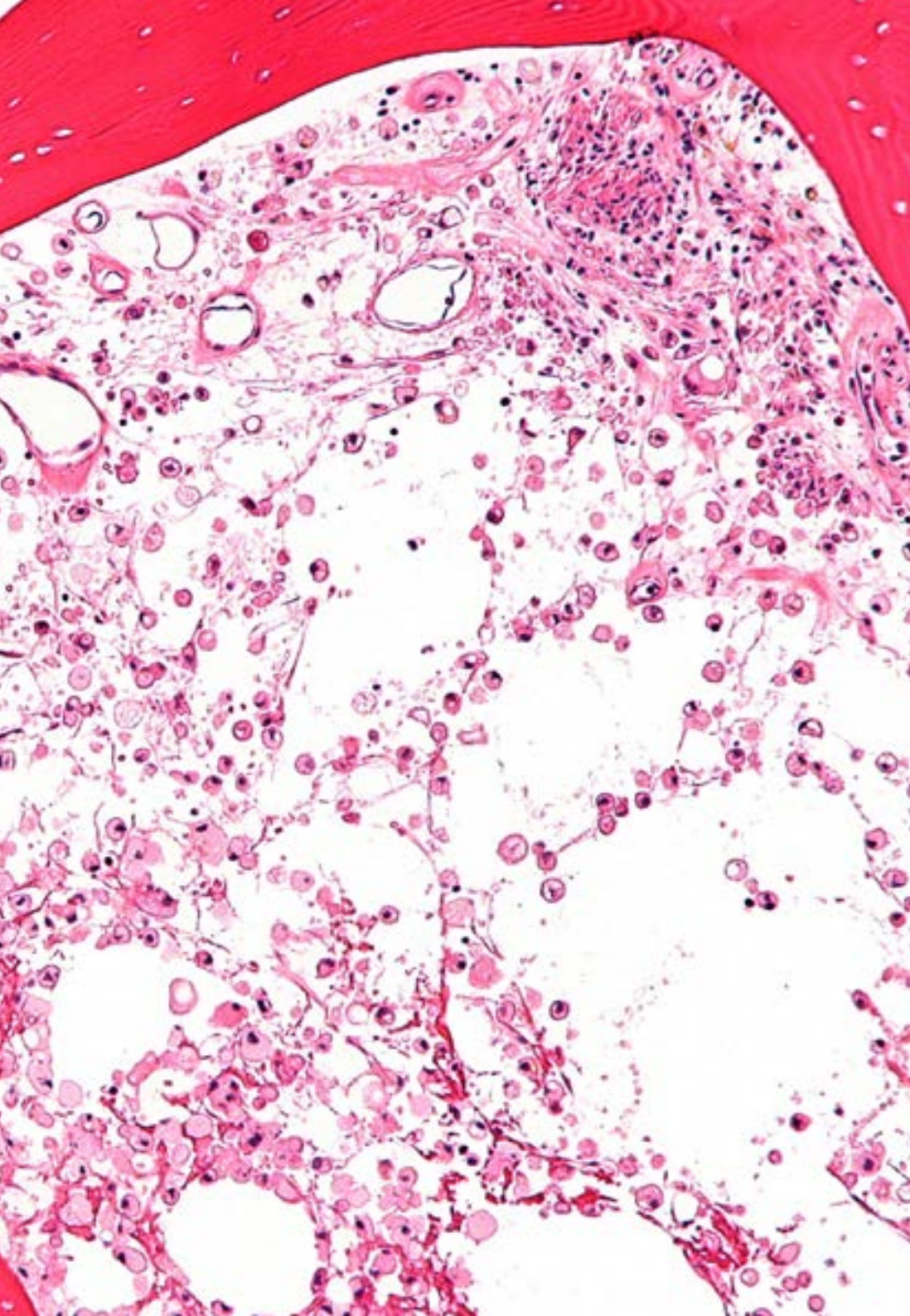
- Be able to accurately interpret currently available clinical information and associate it effectively in clinical practice

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*You will have at your disposal a technical team of professionals ready to answer any questions that may arise throughout the program”*







## Specific Objectives

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### Module 1. Thyroid Gland, Parathyroid Gland and MEN

- ♦ Update knowledge of the main pathologies affecting the thyroid gland and to know the main diagnostic algorithms in these diseases
- ♦ Deepen in the laboratory findings that can lead to the diagnosis of the main parathyroid diseases
- ♦ Interpret the clinical findings that should make us suspect the existence of multiple endocrine neoplasia

### Module 2. Obesity, Metabolic Syndrome and Dyslipidemia

- ♦ Update knowledge on obesity and its pharmacological treatments
- ♦ Delve into the approach and classification of the metabolic syndrome, as well as the profound impact it is having on the healthcare landscape
- ♦ Discuss and interpret the findings in lipid profiling and the development of therapeutic knowledge that has been generated in recent years in this field

### Module 3. Disorders of Intermediate Metabolism and Bone Metabolism

- ♦ Update knowledge in this heterogeneous field of pathologies, especially in the clinical and diagnostic concept
- ♦ Provide and expand knowledge about the skeletal system and related diseases in this area

03

# Course Management

Given the high degree of specialization required for a broad and extensive approach to Bone and Lipid Endocrinology, TECH has entrusted the drafting of this program to the most prestigious professionals in this field. This implies that the contents of this program respond both to the most urgent challenges faced by the Specialist and to the most current theory and postulates.





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*You will have the constant support of a professional teaching team, highly qualified and ready to help you at all times”*



## International Guest Director

Awarded on multiple occasions for her contribution to the field of Medicine, Dr. Susan Samson is a prestigious physician highly specialized in **Endocrinology, Diabetes** and **Metabolism**. In fact, she has devoted most of her professional career to optimizing the overall well-being of patients with endocrine disorders, ranging from *Diabetes Mellitus* to Hyperthyroidism.

Therefore, she has carried out her duties in health institutions of international reference such as the Mayo Clinic Hospital in the United States. Among her main achievements, she has developed innovative **evaluation methodologies** based on the latest scientific evidence. This has enabled healthcare professionals to design **personalized** and more effective **treatments**, taking into account the specific needs of each user. At the same time, it has implemented various monitoring programs based on emerging technologies such as **Telemedicine** and even **Artificial Intelligence**. Thanks to this, it has enabled **real-time monitoring** of the clinical status of numerous individuals with **chronic diseases** to improve their quality of life.

On the other hand, she has balanced these tasks with her role as **President of the American Association of Clinical Endocrinology**. In this way, she has contributed significantly to the creation of **care protocols** for people with different conditions. She has also collaborated with regulatory agencies to develop **health policies** to address the optimization of care for patients with long-term conditions.

In her commitment to clinical excellence, she has led several **scientific research** projects in areas ranging from addressing **Pituitary Pathologies** or **Acromegaly** to **Cushing's Disease**. Likewise, these findings have driven advances to maximize the quality of care. In this sense, her work has been rewarded in the form of awards, such as the "Rising Star Award" given by the Baylor College of Medicine for her outstanding leadership.



## Dr. Samson, Susan

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- ♦ President of the Department of Endocrinology at Mayo Clinic Hospital in Florida, United States
- ♦ President of the American Association of Clinical Endocrinology
- ♦ Director of the Baylor St. Luke's Pituitary Center in Texas
- ♦ Internship in Endocrinology, Diabetes and Metabolism at Baylor College of Medicine
- ♦ M.D. from Queen's University
- ♦ Doctor of Philosophy with specialization in Molecular Biology, University of Calgary.
- ♦ Member of the Royal College of Physicians and Surgeons of Canada

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

## Management



### **Dr. Gargantilla Madera, Pedro**

- ◆ Chief of Internal Medicine Service of El Escorial University Hospital
- ◆ Professor of the Francisco de Vitoria University
- ◆ Science communicator and regular contributor to various media (RNE, Abc Digital, Huffington post, Cinco Noticias)
- ◆ Member of the Association of Medical Writers and Artists (ASEMEYA)
- ◆ Master's Degree in Clinical Unit Management

## Professors

### Dr. Montoro Lara, Juan

- ♦ Specialist in Internal Medicine at the University Hospital El Escorial
- ♦ Clinical Teaching Collaborator at the Francisco de Vitoria University
- ♦ Clinical Teaching Collaborator at the Autonomous University of Madrid
- ♦ Master's Degree in Emergency Medical Care
- ♦ Master's Degree in Hyperbaric Medicine
- ♦ University Expert in Clinical Ultrasound

### Dr. Martín de Francisco, Elisa

- ♦ Medical Specialist in Geriatrics at El Escorial Hospital in Madrid
- ♦ Medical Specialist in Geriatrics at the Infanta Elena Hospital in Valdemoro
- ♦ Degree in Medicine and Surgery from the Complutense University of Madrid
- ♦ MIR in Geriatrics at the Getafe University Hospital

### Dr. Pérez Blanco, Carmen

- ♦ Specialist Physician in Endocrinology and Nutrition at El Escorial Hospital
- ♦ Specialist in Endocrinology and Nutrition at Hospital 12 de Octubre and Hospital de Getafe
- ♦ Doctorate in Medicine from the Autonomous University of Madrid.
- ♦ Specialty in Endocrinology and Nutrition via MIR at the University Hospital of Getafe
- ♦ Master's Degree in Bases for the Care and Education of People with Diabetes at the University of Barcelona
- ♦ Diploma in the Treatment of diabetes mellitus type 2: future experts in diabetes at the Autonomous University of Barcelona
- ♦ Online Master's in Clinical Nutrition in Medicine at the CEU-Cardenal Herrera University

### Dr. García Tobaruela, Almudena

- ♦ Assistant Physician in the Internal Medicine Department of El Escorial Hospital, Madrid
- ♦ Internal Medicine Service Safety Officer
- ♦ Assistant Physician in the Emergency Department of La Paz Hospital, Madrid
- ♦ Degree in Medicine and Surgery from the Autonomous University of Madrid.
- ♦ Specialist in Internal Medicine with training at La Paz University Hospital in Madrid

### Dr. Cuenca Abarca, Ana

- ♦ Attending Physician of Internal Medicine at El Escorial Hospital
- ♦ Medical Specialist in Internal Medicine at Puerta de Hierro University Hospital
- ♦ Clinical Teaching Collaborator for the Francisco de Vitoria University
- ♦ Medical Degree from the University of Castilla-La Mancha 2003 - 2009
- ♦ PhD in Medicine and Surgery from the Autonomous University of Madrid.

### Dr. Albi Rodríguez, Salomé

- ♦ Assistant, Pediatrics Department, 12 de Octubre University Hospital, Madrid
- ♦ University Degree in Medicine and Surgery from the Complutense University of Madrid
- ♦ Doctor in Medicine and Surgery at the Autonomous University of Madrid.
- ♦ Specialty of Pediatrics and Specific Areas

# 04

## Structure and Content

In order to guarantee the maximum efficiency of all the contents of this Postgraduate Diploma, TECH has reinforced them following the most effective pedagogical methodology, relearning. Thanks to this technique, in which TECH is a pioneer, the specialist is brought up to date in a natural and progressive way, without having to invest many hours in modernizing and deepening the contents of this program.







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*You will be able to access the virtual classroom 24 hours a day, and you can even download the entire syllabus for later offline consultation”*

## Module 1. Thyroid Gland, Parathyroid Gland and MEN

- 1.1. Physiology and Thyroid Function Tests
- 1.2. Goiter and the Euthyroid Patient Syndrome
- 1.3. Hypothyroidism
- 1.4. Hyperthyroidism
- 1.5. Tiroiditis
- 1.6. Thyroid Nodule and Thyroid Cancer
- 1.7. Biology of Mineral Metabolism
  - 1.7.1. Parathyroid Hormone
  - 1.7.2. Vitamin D
  - 1.7.3. Regulation of Mineral Metabolism
  - 1.7.4. Laboratory Assessment of Mineral Metabolism
- 1.8. Hypoparathyroidism and Pseudohypoparathyroidism
- 1.9. Hyperparathyroidism
  - 1.9.1. Primary
  - 1.9.2. Secondary
- 1.10. Multiple Endocrine Neoplasms
  - 1.10.1. Type 1 MEN
  - 1.10.2. Type 2 MEN

## Module 2. Obesity, Metabolic Syndrome and Dyslipidemia

- 2.1. Epidemiology and Measurement of the Obesity
- 2.2. Adipocyte, Etiology and Consequences of Obesity
- 2.3. Epidemiology and Etiology of Metabolic Syndrome
- 2.4. Pathophysiology of Metabolic Syndrome
- 2.5. Clinical Manifestations and Diagnosis of Metabolic Syndrome
  - 2.5.1. Relationship of Metabolic Syndrome with AHT
  - 2.5.2. Relationship of Metabolic Syndrome to Heart Failure



- 2.6. Prevention and Treatment of Metabolic Syndrome
  - 2.6.1. Importance of Lifestyle
  - 2.6.2. Vasculoprotective and Etiopathogenic Treatment
- 2.7. Lipoprotein Metabolism and Classification of Dyslipidemias
- 2.8. Lipid-Lowering Drugs and Therapeutic Strategies
- 2.9. Dyslipidemia Management in Different Clinical Situations
  - 2.9.1. Familial Dyslipidemia
  - 2.9.2. Woman
  - 2.9.3. Elderly people
  - 2.9.4. Diabetes and Metabolic Syndrome
  - 2.9.5. Secondary Prevention
- 2.10. Non-Pharmacological Methods
  - 2.10.1. Lifestyle
  - 2.10.2. Functional food
  - 2.10.3. Medicinal Plants

### Module 3. Disorders of Intermediate Metabolism and Bone Metabolism

- 3.1. Hemochromatosis
- 3.2. Wilson's Disease
- 3.3. Porphyrias
- 3.4. Purine and Pyrimidine Metabolism Disorders
- 3.5. Lysosomal Storage Diseases
  - 3.5.1. Pathogenesis.
  - 3.5.2. Tay-Sachs Disease
  - 3.5.3. Fabry Disease
  - 3.5.4. Gaucher Disease
  - 3.5.5. Niemann-Pick Disease
  - 3.5.6. Mucopolysaccharidosis
  - 3.5.7. Pompe Disease
  - 3.5.8. Lysosomal Acid Lipase Deficiency
- 3.6. Inherited Disorders of Carbohydrate Metabolism
  - 3.6.1. Glycogenosis
  - 3.6.2. Galactose Metabolism Disorders
  - 3.6.3. Fructose Metabolism Disorders
- 3.7. Inherited Membrane Transport Disorders
  - 3.7.1. Cystinuria
  - 3.7.2. Lysinuria
  - 3.7.3. Citrulinemia
  - 3.7.4. Hartnup Disease
  - 3.7.5. Cystinosis
- 3.8. Osteomalacia, Rickets and Osteogenesis Imperfecta
  - 3.8.1. Bone Remodeling
  - 3.8.2. Osteomalacia
  - 3.8.3. Rickets
  - 3.8.4. Osteogenesis Imperfecta
- 3.9. Osteoporosis
  - 3.9.1. Epidemiology
  - 3.9.2. Pathophysiology
  - 3.9.3. Microbiological
  - 3.9.4. Treatment
  - 3.9.5. Osteoporosis Secondary to Glucocorticoids
- 3.10. Paget's Disease and Other Bone Dysplasias
  - 3.10.1. Paget's Osteopathy
  - 3.10.2. Sclerosing Bone Disorders
  - 3.10.3. Defective Mineralization
  - 3.10.4. Fibrous Dysplasia
  - 3.10.5. McCube-Albright Syndrome

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. 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 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 Bone and Lipid Endocrinology guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma qualification 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 Bone and Lipid Endocrinology** 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.

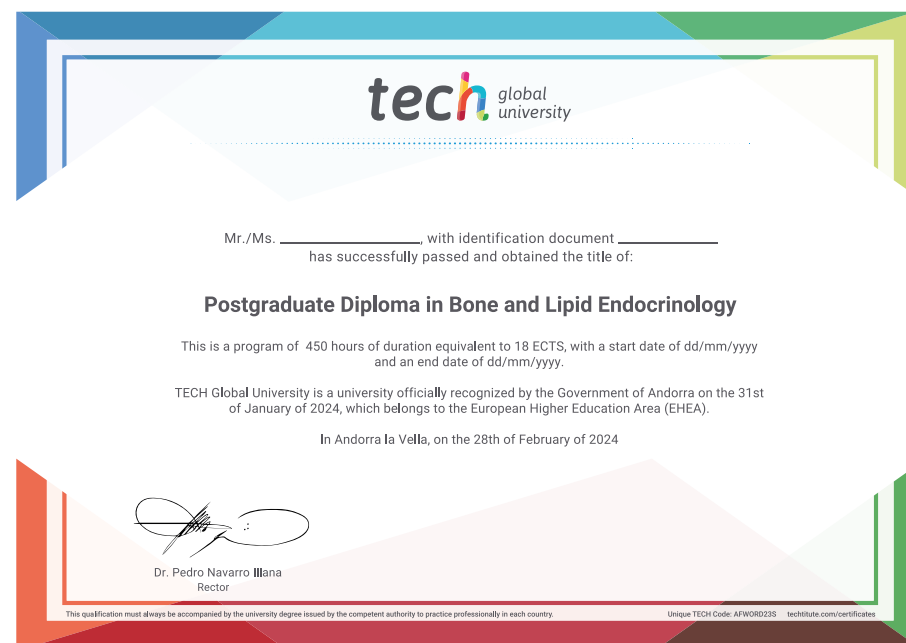
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Bone and Lipid Endocrinology**

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.

future

health

confidence people

education information tutors

guarantee accreditation teaching

institutions technology learning

community commitment

personalized service innovation

knowledge present quality

online treatment

development languages

virtual classroom

**tech** global  
university

**Postgraduate Diploma**

Bone and Lipid Endocrinology

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



# Postgraduate Diploma

## Bone and Lipid Endocrinology

