

# Postgraduate Certificate Arterial Hypertension and Diabetic Kidney Disease



## Postgraduate Certificate Arterial Hypertension and Diabetic Kidney Disease

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

Website: [www.techtute.com/us/medicine/postgraduate-certificate/arterial-hypertension-diabetic-kidney-disease](http://www.techtute.com/us/medicine/postgraduate-certificate/arterial-hypertension-diabetic-kidney-disease)

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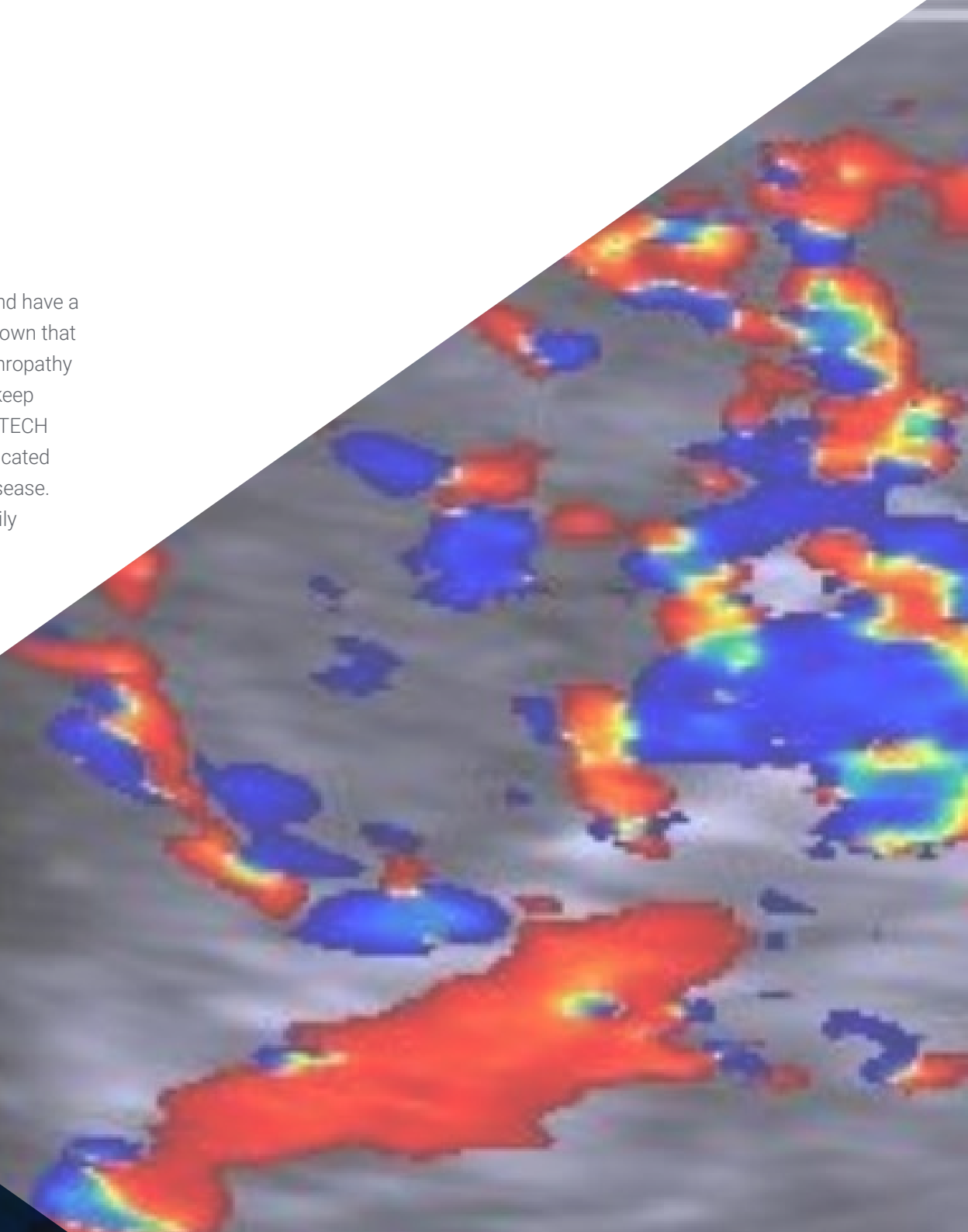
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# 01

# Introduction

Arterial Hypertension and Diabetic Kidney Disease share a close relationship and have a significant impact on people's well-being. In this regard, recent research has shown that strict control of blood pressure is essential to minimize the progression of nephropathy and reduce the risk of complications over time. Therefore, the physician must keep up to date in this field in order to perform a leading-edge praxis. Consequently, TECH has developed this program, which allows the student to delve into the sophisticated methods of diagnosis of HTN and advanced treatments for Diabetic Kidney Disease. In addition, its 100% online format will enable you to perfectly combine your daily professional activities with your studies.





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*Thanks to TECH, you will be up to date  
with the latest guidelines and diagnostic  
procedures in Arterial Hypertension”*

Recent research has shown that strict control of blood pressure in patients with diabetic nephropathy can delay the progression of the condition and minimize the risk of complications. It has also been found that reducing hypertension to target-specific levels can help preserve kidney function and decrease proteinuria. Consequently, keeping up to date on Hypertension and its relationship with Diabetic Kidney Disease is essential for the physician who wishes to be part of advanced multidisciplinary medical environments.

That is why TECH has created this program, which provides the student with the most advanced knowledge in this subject in only 180 hours. Throughout this educational period, you will identify the most sophisticated diagnostic methods for the rapid detection of HTN and you will learn more about the implications of arterial hypertension in CKD. Likewise, you will delve into the latest advances on the pathophysiology of Diabetic Kidney Disease and its advanced treatments.

All this, following a complete 100% online modality, which allows the student to access the contents of the program at any time and place, simply by needing a device with an internet connection. In addition, the *Relearning* method will be used, which ensures an unique and effective educational process in which you will consolidate your new knowledge at your own pace of study.

This **Postgraduate Certificate in Arterial Hypertension and Diabetic Kidney Disease** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ◆ Practical cases presented by specialists in Nephrology and Internal medicine
- ◆ 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



*Through this program, you will identify the leading treatments used in Diabetic Kidney Disease”*

“

*Study this program with the most prestigious teaching staff and the most complete syllabus in the educational market”*

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 academic year. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

*Learn in depth the procedures to manage hypertensive urgency and emergency in patients with cardiac and renal conditions.*

*Get up to date in Arterial Hypertension and Diabetic Renal Disease 100% online and without leaving your home.*





# 02 Objectives

The objective of this program is to provide physicians with the most up-to-date knowledge on Arterial Hypertension and Diabetic Renal Disease. In this way, they will be able to offer advanced care to their patients, both in the diagnosis and management of nephropathologies. In addition, they will complete their update through complete didactic materials available in various multimedia formats.







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*Enjoy the most up to date educational content available in innovative multimedia formats to optimize your study”*



## General Objectives

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- ◆ Care for patients with chronic kidney disease and its most frequent complications
- ◆ Care for patients with acute renal failure and its complications, as well as to understand the objective of initiating renal replacement therapy, its indications and management
- ◆ Have an overview of Nephrology as a specialty with its different branches of knowledge and a global approach to the patient
- ◆ Understand and learn the branches that are emerging within the specialty such as diagnostic and interventional nephrology, onconeurology, or cardioneurology





## Specific Objectives

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- ◆ Know in depth the novelties in the diagnosis and study of Arterial Hypertension
- ◆ Understand in depth the indication for the study of Secondary Arterial Hypertension
- ◆ Understand Diabetic Renal Disease as one of the most frequent causes of CKD
- ◆ Learn the management and indication of new nephroprotective drugs

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*You will learn about new treatments in Diabetic Renal Disease such as inhibitors of sodium-glucose cotransporter type 2”*

# 03

# Course Management

This program has a faculty composed of recognized specialists in the field of Nephrology. They have extensive skills in the treatment of renal disorders, surgery and dialysis therapies. Consequently, the knowledge acquired by the students will be in tune with the latest advances in the diagnosis and management of Arterial Hypertension and Diabetic Renal Disease.







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*This program is taught by specialists in Nephrology with extensive hospital experience in prestigious centers”*

## International Guest Director

With an extensive professional career of over 30 years, Dr. David Mount has become a prestigious Nephrologist highly specialized in the area of Renal Medicine. In this sense, his clinical approach focuses on providing personalized clinical programs according to the individual characteristics of patients with chronic and acute conditions. Thanks to the application of multiple innovative techniques, he has managed to optimize both the quality of life of numerous individuals and their long-term recovery prognosis.

In this same line, he has carried out his functions in health institutions of international reference such as the Brigham and Women's Hospital in Massachusetts. Therefore, he has held strategic roles ranging from Renal Area Management or Management of the Inpatient Dialysis Unit to the Head of Clinical Services. In this way, he has focused on improving the standards of care for users with renal diseases, implementing cutting-edge protocols to maximize therapeutic processes such as hemodialysis and minimize the usual associated risks such as the complication of vascular access.

It has also led the Digital Transformation of various healthcare institutions and implemented solutions such as Artificial Intelligence, Big Data and even Intelligent Systems to monitor the status of individuals in real time. These tools have managed to increase the accuracy in diagnoses and treatments of complex Kidney Diseases. Also, this avant-garde vision has made it possible to reduce hospitalization rates, which has improved the functioning of health systems by promoting a more efficient, accessible and high quality care model.

On the other hand, he has balanced these tasks with his facet as a Clinical Researcher. In fact, he has a vast scientific production in areas such as cutting-edge techniques for Renal Transplants, identification of Biomarkers and strategies for the prevention of Renovascular Hypertension.



## Dr. Mount, David

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- Clinical Chief of the Renal Division at Brigham and Women's Hospital in Massachusetts, United States
- Director of Dialysis Services at Brigham and Women's Hospital, Massachusetts
- System of Care Physician, VA Boston Healthcare System, Massachusetts
- Vanderbilt University Medical Center, Vanderbilt University Medical Center, Vanderbilt
- Nephrology Internship at Brigham and Women's Hospital, Massachusetts
- Internal Medicine Residency at Toronto General Hospital
- Doctor of Medicine from the University of Toronto
- Bachelor of Science in Biochemistry from the University of Ottawa

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



## Management



### Dr. Ribas Closa, Andrés

- ◆ Nephrologist at the Sant Jordi Clinic in Sant Andreu
- ◆ Nephrology Del Mar Hospital, Barcelona
- ◆ Expert in Clinical Ultrasound at the Francisco de Vitoria University
- ◆ Master's Degree in Infectious Diseases and Antimicrobial Treatment from the CEU Cardenal Herrera University
- ◆ Degree in Medicine from the Autonomous University of Barcelona



### Dr. Galcerán, Josep María

- ◆ Head of Nephrology Service at Fundació Althaia in Manresa
- ◆ Head of Nephrology Service at the Hospital de Palamós
- ◆ Professor of Nephrology at the International University of Catalonia
- ◆ Former President of the Catalan Societies of Nephrology and Arterial Hypertension
- ◆ Specialization in Nephrology by the Hospital de Bellvitge
- ◆ Postgraduate degree in Basic Nephrology from the University of Minnesota
- ◆ Degree in Medicine and Surgery from the University of Barcelona
- ◆ Member of: Spanish Society of Nephrology and Arterial Hypertension



## Professors

### Dr. Galcerán, Isabel

- ◆ Specialist in Nephrology at Del Mar Hospital of Barcelona
- ◆ Bachelor in Medicine and Surgery from the Autonomous University of Barcelona

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

# 04

## Structure and Content

This program will provide a complete update for the specialist in the pathophysiology of Arterial Hypertension, its diagnosis and the approach to Diabetic Renal Disease. In addition, this Postgraduate Certificate, whose content will be available in a 100% online format, will offer students the flexibility to access the material at any time and place, only requiring a device with an Internet connection.



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*Update yourself at your own pace of study thanks to the revolutionary Relearning system that only TECH offers”*



## Module 1. Arterial Hypertension (AH) and Diabetic Kidney Disease

- 1.1. Pathogenesis of Arterial Hypertension and cardiovascular risk
  - 1.1.1. Renin angiotensin system
  - 1.1.2. Cardiac remodeling in patients with hypertension
- 1.2. New developments in the diagnosis of AH
  - 1.2.1. ACC/AHA, ESC/ESH Guidelines
  - 1.2.2. Diagnostic Procedures in Arterial Hypertension
  - 1.2.3. Usefulness of the ABPM and the AMPA
- 1.3. Arterial Hypertension in Special Situations
  - 1.3.1. Resistant and refractory AH
  - 1.3.2. Spurious AH
  - 1.3.3. AH in Chronic Kidney Disease
- 1.4. Secondary Arterial Hypertension
  - 1.4.1. When is the study indicated? Etiologies
  - 1.4.2. Complementary examinations in secondary hypertension
  - 1.4.3. Secondary hyperaldosteronism Diagnosis
  - 1.4.4. Treatment in secondary hyperaldosteronism New developments
- 1.5. Hypertensive Emergency and Urgency
  - 1.5.1. Diagnosis of Hypertensive Emergency
  - 1.5.2. Management of hypertensive emergency/hypertensive emergency
- 1.6. Therapeutic developments in AH
  - 1.6.1. Renal Denervation in patients with AH refractory to treatment
  - 1.6.2. New aldosterone receptor antagonists
  - 1.6.3. PCSK9 Inhibitors
- 1.7. Diabetic Kidney Disease
  - 1.7.1. Definition. Histological Classification
  - 1.7.2. New developments in the Pathophysiology of Diabetic Kidney Disease
- 1.8. New Treatments in Diabetic Kidney Disease
  - 1.8.1. Inhibitors of sodium-glucose cotransporter type 2 (SGLT-2) Utility and practical aspects Diabetic and non-diabetic patients
  - 1.8.2. GLP-1-Agonists:



- 1.9. Carotid Ultrasound
  - 1.9.1. Intima-media thickness
  - 1.9.2. Atheroma plaques
  - 1.9.3. Cardiovascular risk according to carotid ultrasound findings
- 1.10. Renovascular Arterial Hypertension
  - 1.10.1. Renal Artery Stenosis
  - 1.10.2. Renal Doppler Indications
  - 1.10.3. Arteriography and angioplasty indications

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*During 6 weeks, you will be able to update your knowledge in this medical area and position yourself as a leading specialist”*

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 Certificate in Arterial Hypertension and Diabetic Kidney Disease guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate 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 Certificate in Arterial Hypertension and Diabetic Kidney Disease** 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.

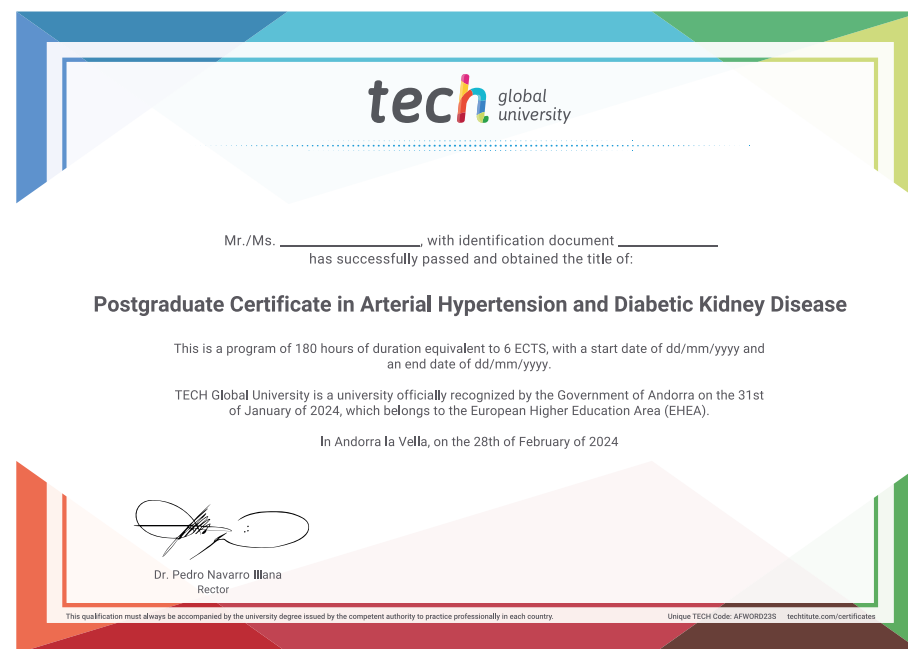
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Certificate in Arterial Hypertension and Diabetic Kidney Disease**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 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  
development languages  
virtual classroom



**Postgraduate Certificate**  
Arterial Hypertension and  
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