

Postgraduate Certificate

Diagnostic and Interventional Nephrology



Postgraduate Certificate Diagnostic and Interventional Nephrology

- » 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/post-graduate-certificate/diagnostic-and-interventional-nephrology

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01

Introduction

Thanks to the progress and perfection of new technologies, a significant impact has been generated in the field of Nephrology over time. Therefore, the implementation of advanced diagnostic procedures and minimally invasive treatments has been facilitated, which has led to a better identification and approach to renal diseases. It is for this reason that it is essential for the physician to keep up to date with the latest advances that simplify the intervention of these conditions. In this context, TECH has developed this program, which provides the specialist with an in-depth study of the latest methods for detecting ARF or continuous and fluid renal replacement techniques. All this, 100% online and from home.



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Delve into the up-to-date methods to diagnose ARF thanks to this Postgraduate Certificate in Diagnostic and Interventional Nephrology"

The integration of advanced interventional techniques in the field of nephrology has had a significant impact on the therapeutic approach to renal diseases. Previously, many renal conditions required invasive open surgeries, which implied prolonged hospitalization and increased risks for patients. However, thanks to the advancement of minimally invasive methods, world-class surgical outcomes are offered while optimizing the recovery of individuals. Therefore, keeping up to date in this field is essential for the specialist who wishes to position himself at the forefront of Nephrology.

Consequently, TECH has carried out this Postgraduate Certificate, through which the student will inquire into the most recent advances in Diagnostic and Interventional Nephrology. Through this educational experience, students will learn about the latest protocols for the detection of renal disorders or the sophisticated continuous renal replacement techniques. Likewise, you will learn about the latest procedures for antibiotic administration in the critically ill patient in renal replacement therapy.

Since this degree is offered a 100% online format, students will have the possibility to adapt their Studies to their schedule and daily responsibilities without time restrictions. In addition, the program approach includes the implementation of the *Relearning* learning methodology, which provides physicians with a solid and lasting understanding of key concepts.

This **Postgraduate Certificate in Diagnostic and Interventional Nephrology** contains the most complete and up-to-date scientific program on the market. Its most notable features are:

- ♦ 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



Identify, with this program, the latest treatments that are effective for the ARF patient"



Learn about the latest machines, doses and anticoagulation mechanisms needed to apply continuous renal replacement techniques"

Get up to date in Diagnostic and Interventional Nephrology with renowned specialists in the field.

Study 100% online and without the need to move from your own home.

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.



02 Objectives

The main purpose of this program is to provide physicians with the most updated knowledge to carry out an accurate and advanced diagnosis of renal diseases, as well as a sophisticated therapy adapted to the needs of each patient. In this way, they will be able to offer the most effective and innovative interventional treatments in the field of Nephrology.





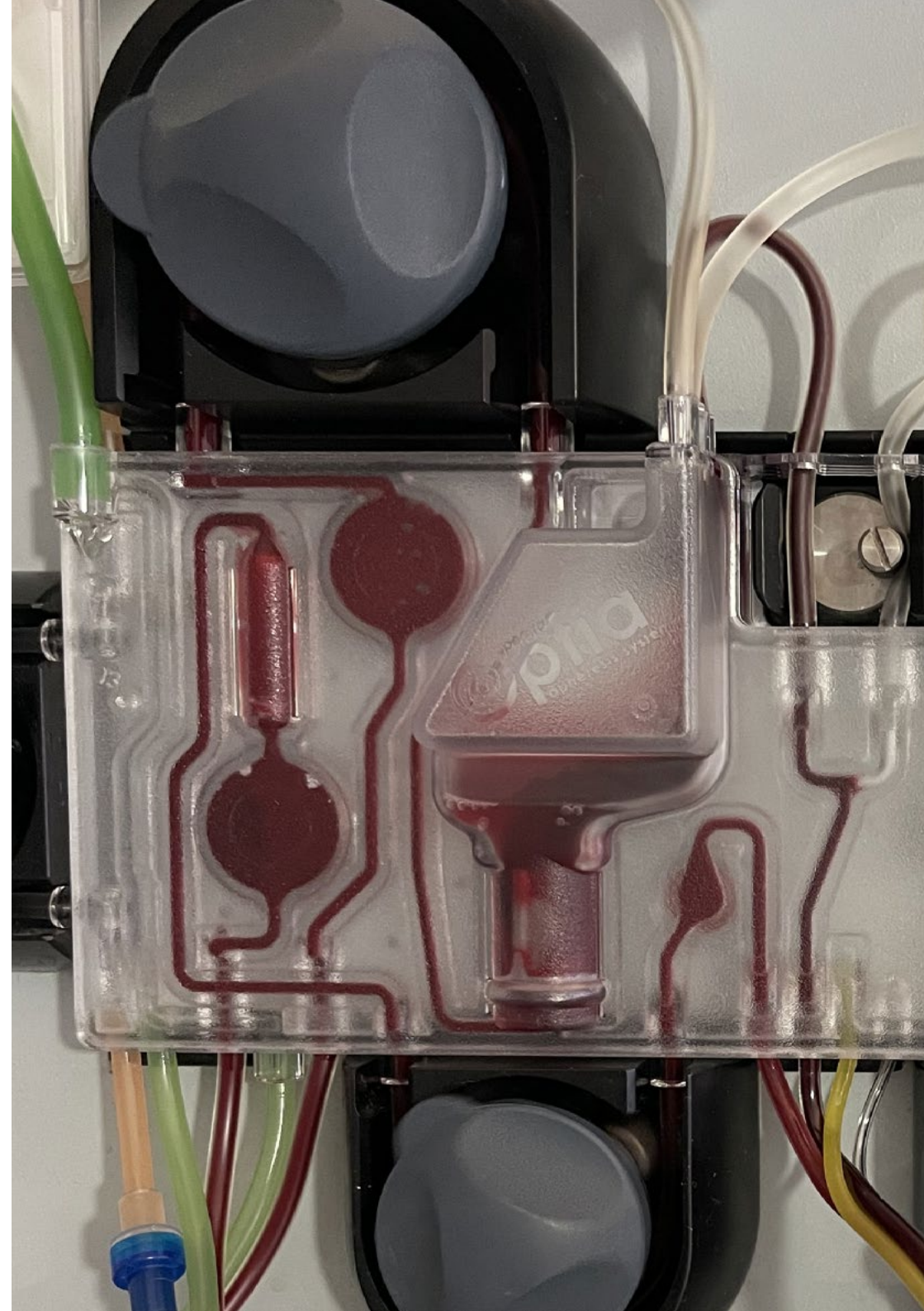
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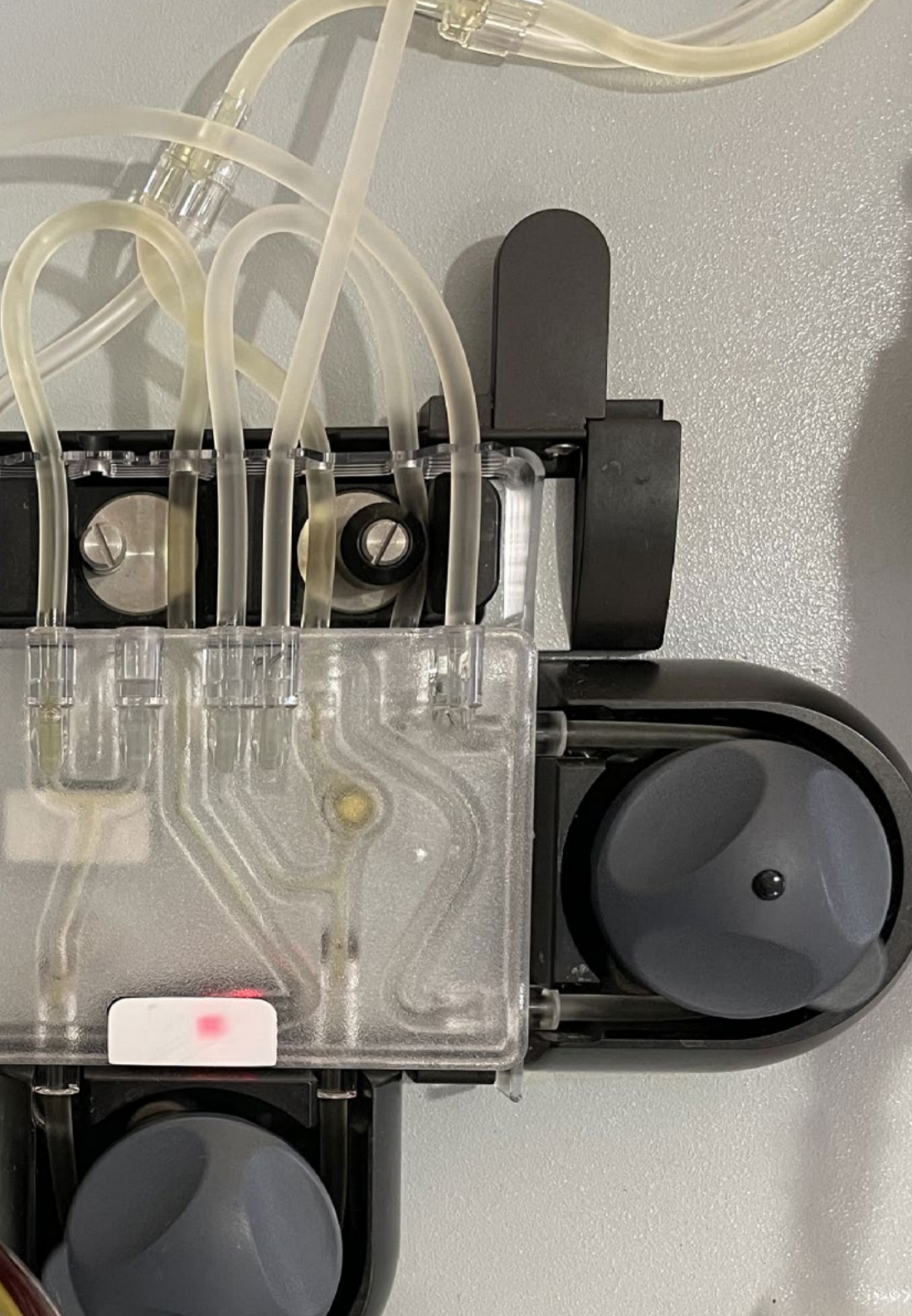
You will have at your fingertips interactive summaries and multimedia resources with which you will learn the most advanced aspects of this medical area"



General Objectives

- 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

- ♦ Learn the latest developments in the diagnosis of acute renal failure. Know the prognostic urinary biomarkers
- ♦ Learn in depth about Acute Kidney Injury as a syndrome, understanding its approach
- ♦ Learn the different renal replacement techniques in patients with acute renal failure. Their advantages and disadvantages
- ♦ Understand the particularities of nutrition management and antibiotic dosage in patients with acute kidney injury



Position yourself as a leading nephrologist enjoying the best educational methodology in the academic panorama"

03

Course Management

This Postgraduate Certificate has an educational team composed of outstanding professionals in the field of Nephrology. These specialists, who are actively working in prestigious hospitals, have extensive skills in the management of renal diseases, surgical procedures and dialysis therapies. As a result, the knowledge that students will acquire will be aligned with the latest advances in this area, in order to apply it in their daily practice.





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This teaching staff is made up of experts with extensive experience in the field of Nephrology, and with whom you will be up to date on the latest developments in sepsis and renal replacement therapy"

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

- 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”

Address



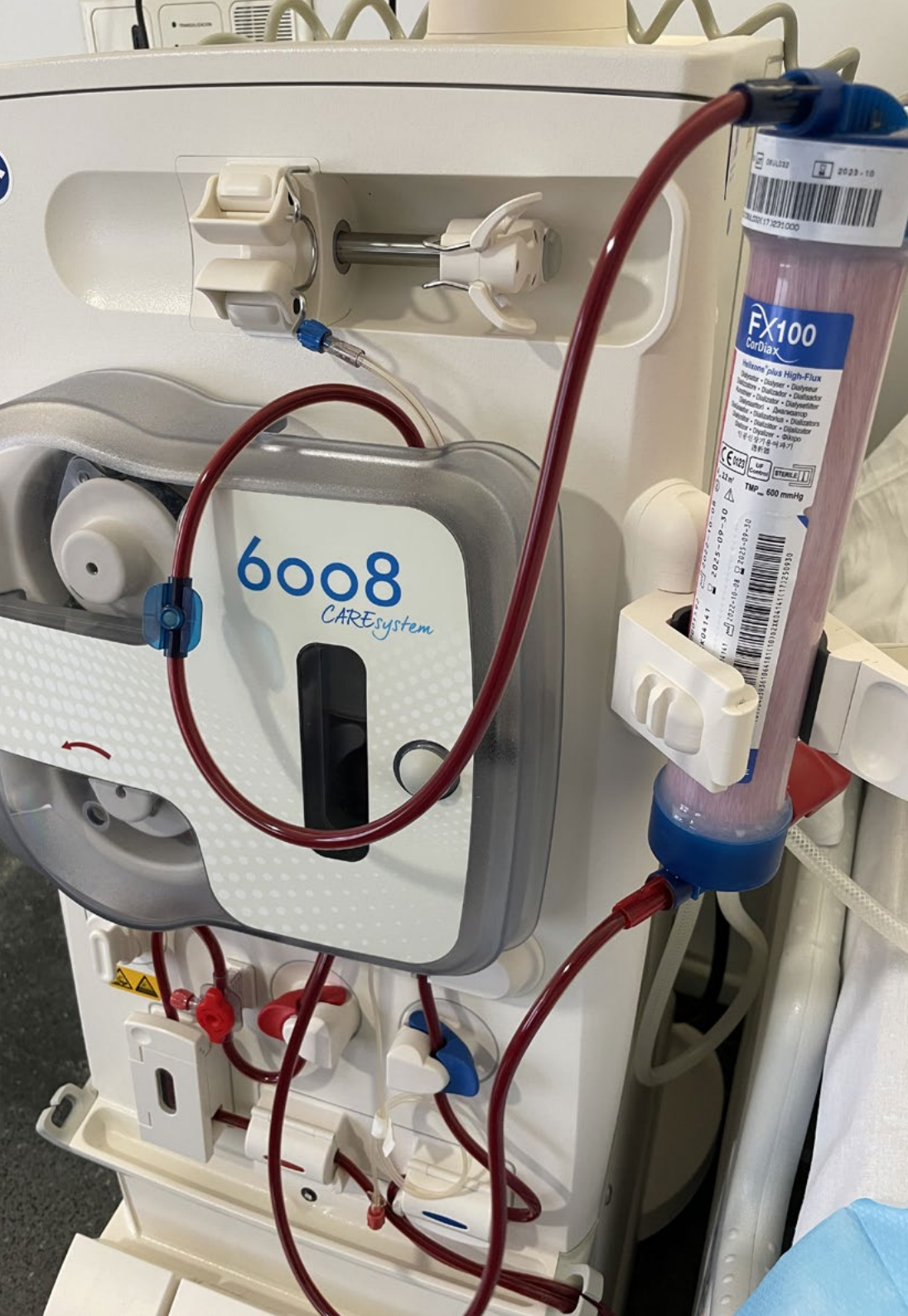
Dr. Ribas Closa, Andrés

- ♦ 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. Angulo, 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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A unique, key, and decisive educational experience to boost your professional development”

04

Structure and Content

This program offers a syllabus that covers relevant topics in the field of nephrological diagnosis and surgery. Up to date content will be presented, including the latest procedures for the detection of conditions or the application of hybrid renal replacement techniques in different types of patients. In addition, the program is 100% online, which enables students to study from anywhere they wish and 24 hours a day.



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With TECH, you will delve into the latest nutritional strategies to ensure the well-being of the patient with Acute Renal Failure”

Module 1. Acute Renal Failure (ARF)

- 1.1 New Diagnostics and Classification
 - 1.1.1. Acute Renal Insufficiency Markers KIM-1, TIMP-2
 - 1.1.2. Classification of ARF Nomenclature
 - 1.1.3. Inflammation in ARF Kidney-Heart, Kidney-Lung Interaction
- 1.2 Diagnostic and Therapeutic Protocol of ARF
 - 1.2.1. Water balance and ARF
 - 1.2.2. Dyselektrolythemia in patients with ARF. Hyperkalemia in the critically ill patient
 - 1.2.3. Utility of diuretics in ARF
 - 1.2.4. Utility of albumin as a colloid in ARF
- 1.3 Acute Renal Failure and Renal Replacement Therapy
 - 1.3.1. Early vs. late initiation of renal replacement therapy
 - 1.3.2. Indications for renal replacement therapy
- 1.4 Continuous Renal Replacement Techniques (CRRT)
 - 1.4.1. Indication Machines
 - 1.4.2. Guideline, effluent dose
 - 1.4.3. Utility of replacement liquid Prefilter. Postfilter
 - 1.4.4. TCRR circuit anticoagulation
- 1.5 Renal Replacement Hybrid Techniques
 - 1.5.1. Definition
 - 1.5.2. Uses. Evidence of its usefulness in the critically ill patient.evidence of Coagulopathy in Critical Patients
 - 1.5.3. Advantages and Disadvantages of the Hybrid Techniques
- 1.6 Intermittent Hemodialysis in the Critically Ill Patient
 - 1.6.1. Intermittent Hemodialysis in the Critically Ill Patient
 - 1.6.2. Dialysis Dosis regimen
 - 1.6.3. Ultrafiltration in the hemodynamically unstable patient
- 1.7 Respiratory Dialysis
 - 1.7.1. Pathophysiology of ARDS
 - 1.7.2. Protective mechanical ventilation
 - 1.7.3. Usefulness of ECCO2R membranes





- 1.8 Kidney and Sepsis
 - 1.8.1. New developments in Sepsis and Septic Shock
 - 1.8.2. Principles of antimicrobial prescribing in ARF
 - 1.8.3. Renal replacement therapy in the patient with septic shock
- 1.9 Nutrition in the Acute Renal Failure Patient
 - 1.9.1. Protein-caloric malnutrition
 - 1.9.2. Hypercatabolism in the Critically Ill Patient
- 1.10 Antibiotics in the Critically Ill Patient undergoing Renal Substitutive Treatment
 - 1.10.1. Determinants of antibiotic distribution (V_d , proteins)
 - 1.10.2. Adjustment of the main drugs according to pharmacokinetics/pharmacodynamics
 - 1.10.3. Adjustment of drugs according to the dialysis technique employed

“*Enroll and study through the Relearning method, which will allow you to acquire up to date concepts with less effort and more performance*”

05 Methodology

This 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 sustainable over time.

With TECH the psychologist experiences 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 assess 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

TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

The psychologist will learn through real cases and by solving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.



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

With this methodology, more than 250,000 physicians have been prepared with unprecedented success in all clinical specialties regardless of surgical load. Our educational 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 adapted in 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

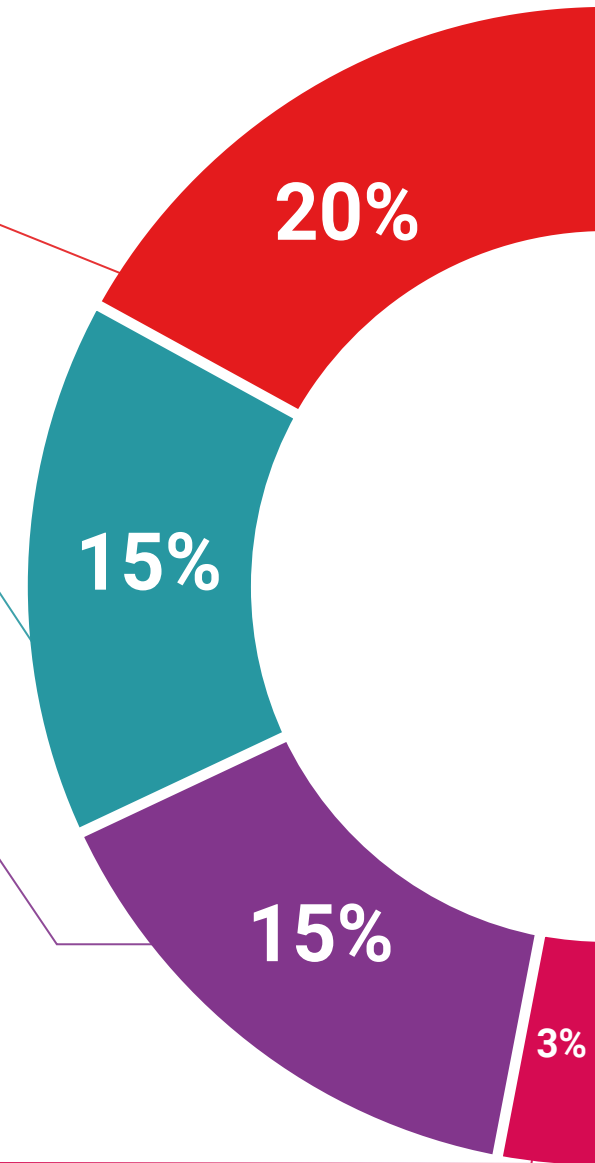
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

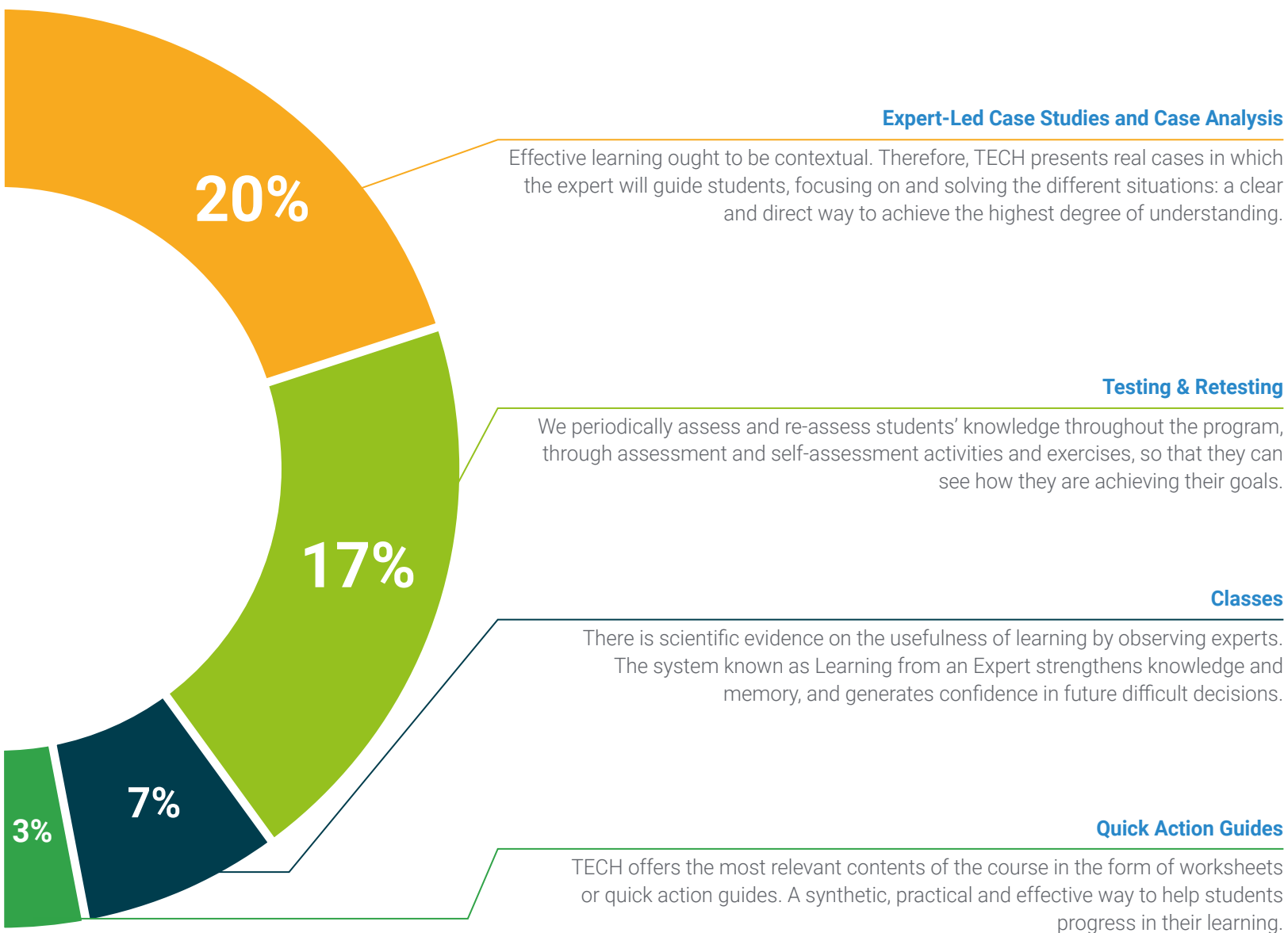
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



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.





06 Certificate

The Postgraduate Certificate in Diagnostic and Interventional Nephrology 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 Diagnostic and Interventional Nephrology** 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 Diagnostic and Interventional Nephrology**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**





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