



Postgraduate Certificate

Clinical Presentation of Renal Lithiasis

» Modality: online

» Duration: 12 weeks

» Certificate: TECH Global University

» Accreditation: 12 ECTS

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/medicine/postgraduate-certificate/clinical-presentation-renal-lithiasis

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According to a new report by the World Health Organization, Kidney Stones affect more than 500 million people worldwide. In fact, the institution predicts that, in most industrialized countries, up to 20% of adults will develop Renal Lithiasis at some point in their lives, with a greater impact on men than on women. This increase has been influenced by environmental and genetic factors, as well as by changes in diet and limited access to drinking water in certain regions. Furthermore, it is estimated that recurrence of stones can occur in 50% of cases within the first 10 years. This highlights the need for more effective medical and preventive intervention plans.

In this context, TECH has created an innovative Postgraduate Certificate in Clinical Presentation of Renal Lithiasis. Designed by leading urologists, the educational program will delve into issues ranging from the particularities of renal physiology and modern imaging studies to identify Kidney Stones to the most sophisticated treatments for optimal management. At the same time, the teaching materials will provide professionals with various strategies for incorporating emerging technological tools into their clinical practice to further maximize the precision of their surgical interventions and reduce recovery time for patients. Thanks to this, graduates will obtain advanced technical skills to detect the symptoms associated with this disease, also using cutting-edge imaging technologies.

Furthermore, to consolidate mastery of the teaching content, this university program is based on the disruptive Relearning system, which promotes the assimilation of complex concepts through their natural and progressive reiteration. Similarly, the syllabus is enriched by materials in various multimedia formats such as interactive summaries, real clinical case studies and detailed videos.

This **Postgraduate Certificate in Clinical Presentation of Renal Lithiasis** 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 Urology
- The graphic, schematic and eminently practical contents with which it is conceived gather scientific and practical information on those disciplines that are indispensable for professional practice
- Practical exercises where the process of 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



With the revolutionary Relearning method powered by TECH, you will update your knowledge in an efficient and immediate way. Forget about memorizing!"



You will master the most sophisticated imaging and laboratory analysis techniques to establish holistic diagnoses related to Kidney Stones"

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 prepare for 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 course. For this purpose, students will be assisted by an innovative interactive video system created by renowned and experienced experts.

You will select the most appropriate therapeutic approaches, both surgical and pharmacological, according to the clinical profile of the patients.

You will delve into the chronic complications derived from urologic conditions, with special attention to Renal Failure.







tech 10 | Why Study at TECH?

The world's best online university, according to FORBES

The prestigious Forbes magazine, specialized in business and finance, has highlighted TECH as "the best online university in the world" This is what they have recently stated in an article in their digital edition in which they echo the success story of this institution, "thanks to the academic offer it provides, the selection of its teaching staff, and an innovative learning method oriented to form the professionals of the future".

The best top international faculty

TECH's faculty is made up of more than 6,000 professors of the highest international prestige. Professors, researchers and top executives of multinational companies, including Isaiah Covington, performance coach of the Boston Celtics; Magda Romanska, principal investigator at Harvard MetaLAB; Ignacio Wistumba, chairman of the department of translational molecular pathology at MD Anderson Cancer Center; and D.W. Pine, creative director of TIME magazine, among others.

The world's largest online university

TECH is the world's largest online university. We are the largest educational institution, with the best and widest digital educational catalog, one hundred percent online and covering most areas of knowledge. We offer the largest selection of our own degrees and accredited online undergraduate and postgraduate degrees. In total, more than 14,000 university programs, in ten different languages, making us the largest educational institution in the world.



The most complete syllabus





World's
No.1
The World's largest
online university

The most complete syllabuses on the university scene

TECH offers the most complete syllabuses on the university scene, with programs that cover fundamental concepts and, at the same time, the main scientific advances in their specific scientific areas. In addition, these programs are continuously updated to guarantee students the academic vanguard and the most demanded professional skills. and the most in-demand professional competencies. In this way, the university's qualifications provide its graduates with a significant advantage to propel their careers to success.

A unique learning method

TECH is the first university to use Relearning in all its programs. This is the best online learning methodology, accredited with international teaching quality certifications, provided by prestigious educational agencies. In addition, this innovative academic model is complemented by the "Case Method", thereby configuring a unique online teaching strategy. Innovative teaching resources are also implemented, including detailed videos, infographics and interactive summaries.

The official online university of the NBA

TECH is the official online university of the NBA. Thanks to our agreement with the biggest league in basketball, we offer our students exclusive university programs, as well as a wide variety of educational resources focused on the business of the league and other areas of the sports industry. Each program is made up of a uniquely designed syllabus and features exceptional guest hosts: professionals with a distinguished sports background who will offer their expertise on the most relevant topics.

Leaders in employability

TECH has become the leading university in employability. Ninety-nine percent of its students obtain jobs in the academic field they have studied within one year of completing any of the university's programs. A similar number achieve immediate career enhancement. All this thanks to a study methodology that bases its effectiveness on the acquisition of practical skills, which are absolutely necessary for professional development.









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Google Premier Partner

The American technology giant has awarded TECH the Google Premier Partner badge. This award, which is only available to 3% of the world's companies, highlights the efficient, flexible and tailored experience that this university provides to students. The recognition not only accredits the maximum rigor, performance and investment in TECH's digital infrastructures, but also places this university as one of the world's leading technology companies.

The top-rated university by its students

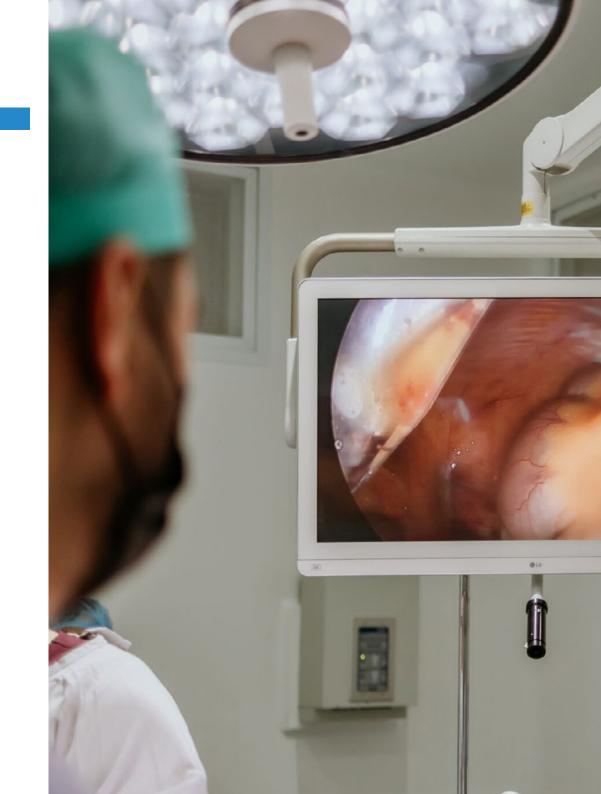
Students have positioned TECH as the world's toprated university on the main review websites, with a highest rating of 4.9 out of 5, obtained from more than 1,000 reviews. These results consolidate TECH as the benchmark university institution at an international level, reflecting the excellence and positive impact of its educational model.



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Module 1. Clinical Presentation of Renal Lithiasis

- 1.1. Renal Physiology
 - 1.1.1. Renal Physiology
 - 1.1.2. Estimated Glomerular Filtration Rate
 - 1.1.3. Kidney Pathophysiology
- 1.2. Pathophysiology of Acute Obstruction
 - 1.2.1. Pathophysiology at the Cortical Level
 - 1.2.2. Pathophysiology at the Medullary Level
 - 1.2.3. Pathophysiology at the Renoureteral Level
- 1.3. Pathophysiology of Chronic Obstruction
 - 1.3.1. Pathophysiology at the Cortical Level
 - 1.3.2. Pathophysiology at the Medullary Level
 - .3.3. Pathophysiology at the Renoureteral Level
- 1.4. Imaging Studies in Renal Lithiasis
 - 1.4.1. Plain and Contrast Radiography
 - 1.4.2. Ultrasound, Magnetic Resonance Imaging, Computed Tomography
 - 1.4.3. Functional Tests: Renogram, Whitaker Test
- 1.5. Clinical Features, Diagnosis and Treatment of Uncomplicated Renal Colic
 - 1.5.1. Clinical Features of Uncomplicated Renal Colic
 - 1.5.2. Diagnosis
 - 1.5.3. Treatment
- 1.6. Treatment of Complicated Renal Colic
 - 1.6.1. Diagnosis
 - 1.6.2. Urinary Diversion
 - 1.6.3. Other Measures
- 1.7. Types of Double J Catheters
 - 1.7.1. Evolution Over Time of Double J Ureteral Catheters
 - 1.7.2. Indications, Complications and Adverse Effects
 - 1.7.3. New Designs of Ureteral Catheters. Biodegradable and Drug-Releasing





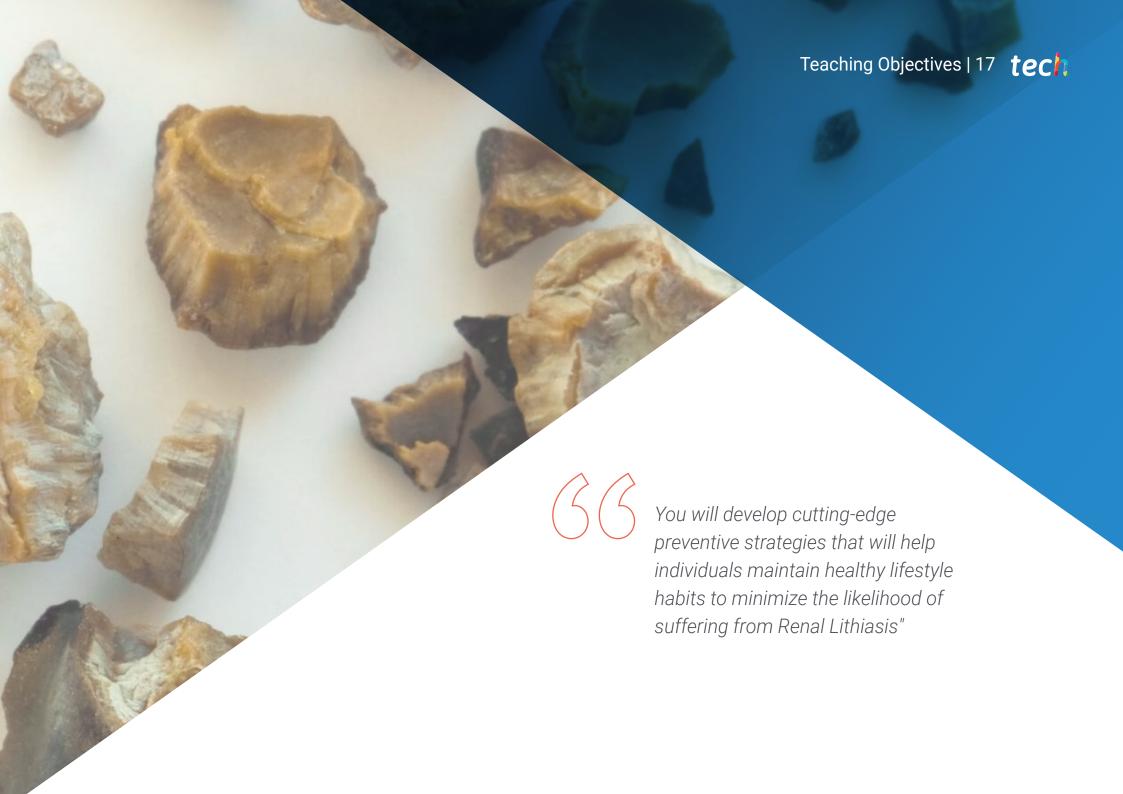
Syllabus | 15 tech

- 1.8. Renal Lithiasis, Infection and Sepsis
 - 1.8.1. Risk of Infection and Sepsis in Renal Lithiasis (Non-struvite)
 - 1.8.2. Diagnostic Techniques
 - 1.8.3. Recommendations for Management and Treatment
- 1.9. Patient Follow-up after Urinary Kidney Stone
 - 1.9.1. Epidemiology and Impact of Renal Colic
 - 1.9.2. Expulsive Treatment: Evidence and Opportunity Cost
 - 1.9.3. Patient Management in Special Situations
- 1.10. Clinical Guidelines Applied to Renal Colic
 - 1.10.1. European Guidelines
 - 1.10.2. American Guidelines
 - 1.10.3. Publications in PubMed



The interactive summaries will allow you to consolidate the concepts of Estimated Glomerular Filtration Rate in a dynamic and enjoyable way"





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General Objectives

- Identify the fundamental physical and chemical aspects involved in the formation of kidney stones
- Delve into the classification of kidney stones according to the etiological factors that generate them
- Establish the diagnostic foundations based on the study of kidney stones
- Determine the key diagnostic aspects based on the study of urine
- Delve into the metabolic study of patients with renal lithiasis
- Define the classifications of patients at risk of Urolithiasis, considering factors that may contribute to the formation of stones
- Assess the various associated metabolic conditions and their specific treatments
- Acquire a comprehensive approach to the dietary and clinical management of the lithiasic patient
- Address the etiology and pathophysiology of non-calcium lithiasis, identifying its distinctive characteristics
- Define the medical treatment options available for each type of condition
- Assess the role of genetics and microbiota in the management of Urolithiasis
- Establish guidelines for pH control and coordination of Urolithiasis units
- Evaluate renal physiology and pathophysiology, as well as the mechanisms of obstruction
- Delve into the most widely used diagnostic imaging methods in Renal Lithiasis
- Define therapeutic approaches to renal colic
- Identify the complications associated with lithiasis and propose management strategies based on international clinical guidelines

- Analyze the historical evolution of Extracorporeal Shock Wave Lithotripsy
- Assess the physical principles, types of energy and those of Extracorporeal Shock Wave Lithotripsy
- Examine the results, complications and post-procedure follow-up, as well as the latest advances in this technology
- Establish recommendations based on clinical guidelines and develop radiation protection strategies in the context of Endourology
- Analyze the historical evolution of endourology and its current applications, focusing on technological and surgical advances
- Examine renal and ureteral anatomy relevant to endourology, establishing its importance in the execution of procedures
- Assess the criteria for the selection of surgical techniques and energy sources in Endourology
- Identify the endourological approaches and specific equipment used in semirigid ureteroscopy
- Delve into the historical evolution of flexible ureteroscopy and its development
- Evaluate the standard and extended indications for Retrograde Intrarenal Surgery
- Examine the materials, surgical techniques and advanced technologies used in Retrograde Intrarenal Surgery
- Identify intraoperative and postoperative complications, establishing strategies for their prevention and management, with a focus on the application of ALARA principles
- Analyze the different patient positions in percutaneous nephrolithotomy





Specific Objectives

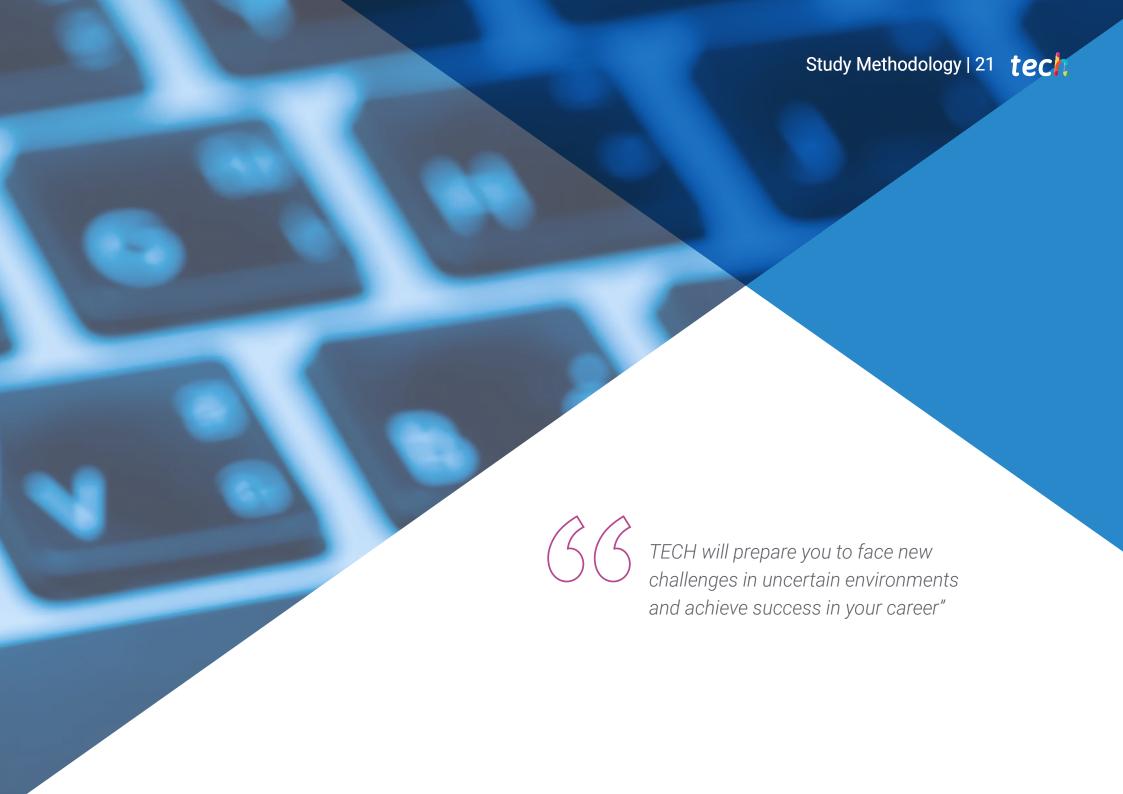
- Analyze renal physiology and pathophysiology related to Lithiasis
- Master imaging techniques and functional tests in the diagnosis of Renal Colic
- Determine the criteria for the treatment of the different types of Renal Colic and its complications
- Identify and apply international clinical guidelines in the management of patients with Renal Lithiasis



You will be able to identify the different clinical manifestations of Kidney Stones, as well as the predisposing factors for their development"







The student: the priority of all TECH programs

In TECH's study methodology, the student is the main protagonist.

The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

With TECH's asynchronous educational model, it is students who choose the time they dedicate to study, how they decide to establish their routines, and all this from the comfort of the electronic device of their choice. The student will not have to participate in live classes, which in many cases they will not be able to attend. The learning activities will be done when it is convenient for them. They can always decide when and from where they want to study.







The most comprehensive study plans at the international level

TECH is distinguished by offering the most complete academic itineraries on the university scene. This comprehensiveness is achieved through the creation of syllabi that not only cover the essential knowledge, but also the most recent innovations in each area.

By being constantly up to date, these programs allow students to keep up with market changes and acquire the skills most valued by employers. In this way, those who complete their studies at TECH receive a comprehensive education that provides them with a notable competitive advantage to further their careers.

And what's more, they will be able to do so from any device, pc, tablet or smartphone.



TECH's model is asynchronous, so it allows you to study with your pc, tablet or your smartphone wherever you want, whenever you want and for as long as you want"

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Case Studies and Case Method

The case method has been the learning system most used by the world's best business schools. Developed in 1912 so that law students would not only learn the law based on theoretical content, its function was also to present them with real complex situations. In this way, they could make informed decisions and value judgments about how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

With this teaching model, it is students themselves who build their professional competence through strategies such as Learning by Doing or Design Thinking, used by other renowned institutions such as Yale or Stanford.

This action-oriented method will be applied throughout the entire academic itinerary that the student undertakes with TECH. Students will be confronted with multiple real-life situations and will have to integrate knowledge, research, discuss and defend their ideas and decisions. All this with the premise of answering the question of how they would act when facing specific events of complexity in their daily work.



Relearning Methodology

At TECH, case studies are enhanced with the best 100% online teaching method: Relearning.

This method breaks with traditional teaching techniques to put the student at the center of the equation, providing the best content in different formats. In this way, it manages to review and reiterate the key concepts of each subject and learn to apply them in a real context.

In the same line, and according to multiple scientific researches, reiteration is the best way to learn. For this reason, TECH offers between 8 and 16 repetitions of each key concept within the same lesson, presented in a different way, with the objective of ensuring that the knowledge is completely consolidated during the study process.

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.





A 100% online Virtual Campus with the best teaching resources

In order to apply its methodology effectively, TECH focuses on providing graduates with teaching materials in different formats: texts, interactive videos, illustrations and knowledge maps, among others. All of them are designed by qualified teachers who focus their work on combining real cases with the resolution of complex situations through simulation, the study of contexts applied to each professional career and learning based on repetition, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neuroscience points to the importance of taking into account the place and context where the content is accessed before starting a new learning process. Being able to adjust these variables in a personalized way helps people to remember and store knowledge in the hippocampus to retain it in the long term. This is a model called Neurocognitive context-dependent e-learning that is consciously applied in this university qualification.

In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

Likewise, this very complete Virtual Campus will allow TECH students to organize their study schedules according to their personal availability or work obligations. In this way, they will have global control of the academic content and teaching tools, based on their fast-paced professional update.



The online study mode of this program will allow you to organize your time and learning pace, adapting it to your schedule"

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.

Study Methodology | 27 tech

The university methodology top-rated by its students

The results of this innovative teaching model can be seen in the overall satisfaction levels of TECH graduates.

The students' assessment of the teaching quality, the quality of the materials, the structure of the program and its objectives is excellent. Not surprisingly, the institution became the top-rated university by its students according to the global score index, obtaining a 4.9 out of 5.

Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is at the forefront of technology and teaching.

You will be able to learn with the advantages that come with having access to simulated learning environments and the learning by observation approach, that is, Learning from an expert.

As such, the best educational materials, thoroughly prepared, will be available in this program:



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.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



Practicing Skills and Abilities

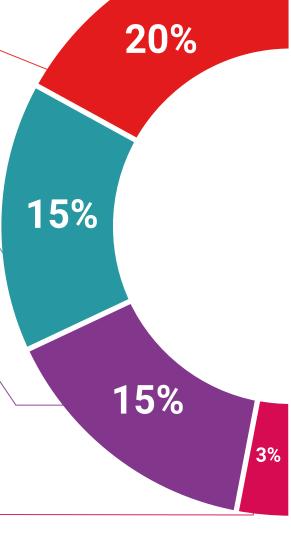
You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.



Interactive Summaries

We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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





Additional Reading

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

Case Studies

Students will complete a selection of the best case studies in the field. Cases that are presented, analyzed, and supervised by the best specialists in the world.

Testing & Retesting



We periodically assess and re-assess your knowledge throughout the program. We do this on 3 of the 4 levels of Miller's Pyramid.

Classes



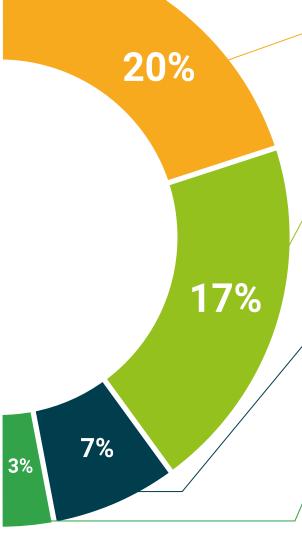
There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an expert strengthens knowledge and memory, and generates confidence for 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.







Management



Dr. Servera Ruiz de Velasco, Antonio

- Director of Endourology and Lithiasis at the Hospital of Manacor
- Urology Specialist at Juaneda Miramar Hospital
- Internship in Laparoscopic Pelvic and Retroperitoneal Surgery at Heidelberg University Hospital
- Scientific Researcher
- Director of 6 international Clinical Trials
- Internship in Robotic Surgery at the Institut Mutualiste Montsouris
- Internship in Laparoscopic and Percutaneous Surgery at the Italian Hospital of Buenos Aires
- PhD in Health Sciences from the University of the Balearic Islands
- Degree in Medicine and Surgery from the University of Zaragoza
- Member of the European College of Urology

Professors

Dr. García Fadrique, Gonzalo

- Director of the Urologic Oncology Unit at Manises Hospital
- President of the Valencian Community Urology Association
- Expert in Laparoscopic Surgery
- Specialist Urology Physician at La Fe Hospital
- Clinical Researcher
- PhD in Health Sciences with specialization in Urology from the Catholic University of Valencia
- Master's Degree in Advanced Prostate Cancer from the University of Salamanca
- Bachelor's Degree in Medicine from the University of Valencia
- Certification as Fellow of the European Board of Urology
- Member of: European Association of Urology, Spanish Association of Urology and Association of Urology of the Valencian Community

Dr. Sanz del Pozo, Mónica

- Urologist at Miguel Servet University Hospital
- Physician at Quirón Zaragoza Clinic
- Pelvic Floor Specialist
- Lithiasis Residency at Puigvert Foundation
- Internship in Laparoscopy and Pediatric Surgery at the University Hospital Complex of Pontevedra
- PhD in Health Sciences from San Jorge University
- Master's Degree in Urologic Oncology from CEU Cardenal Herrera University
- Master's Degree in Clinical Medicine from Camilo José Cela University
- Degree in Medicine and Surgery from the Complutense University of Madrid

Dr. Sebastián González, Mariano

- Head of the Endourology, Lithiasis and Laser Section at the Italian Hospital of Buenos Aires
- Director of the Laser Area of the Urology Department at the Italian Hospital of Buenos Aires
- Specialist in Endourology and Lithiasis Diseases
- Staff Physician, Renal Transplant Section at the Italian Hospital of Buenos Aires
- Residency in Urology at the Italian Hospital of Buenos Aires
- PhD in Urology from the Argentine Society of Urology
- Degree in Medicine from the H.A. Barceló Foundation
- Member of: Argentine Society of Urology, Endourological Society, International Society of Urology, Ecuadorian Society of Urology, Venezuelan Society of Urology, Mexican Society of Urology and Urological Association of Central America and the Caribbean

Dr. Serrano Frango, Patricia

- Specialist in Urology at the Reina Sofia Hospital
- Specialist in Lithiasis and Endourology at the Miguel Servet University Hospital
- Evaluator for the Accreditation Committee of the Health Professions Commission of Aragon
- Clinical Researcher
- Doctor of Health Sciences from the University of Zaragoza
- Bachelor of Medicine and Surgery

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Dr. Soria González, Federico

- Head of the Experimental Surgery Service at the Ramón y Cajal University Hospital
- President of the Animal Experimentation Ethics Committee
- Specialist in Endourology and Minimally Invasive Surgery applied to Urology
- Veterinarian at the Jesús Usón Minimally Invasive Surgery Center
- Clinical Researcher in Endoscopy at the Jesús Usón Minimally Invasive Surgery Center
- PhD in Animal Health and Medicine from the University of Extremadura
- Bachelor's Degree in Veterinary Medicine from the University of Extremadura
- Member of: Spanish Association of Veterinary Specialists in Small Animals, Spanish Society of Veterinary Surgery and Official College of Veterinarians

Dr. Mora Christian, Jorge Alberto

- Specialist in Lithiasis, Endourology and Functional Pathology in Clinical Urology Bilbao
- Doctor in the Urology Department at Cruces University Hospital
- Urologist at Galdakao-Usánsolo Hospital
- Specialist in Advanced Renal Surgery
- Residency in Urology at Cruces University Hospital
- PhD in Medicine and Surgery from the Central University of Venezuela
- Master's Degree in Update in Urological Surgery from the Cardenal Herrera University
- University Expert in Lower Urinary Tract Surgery from the Cardenal Herrera University
- Certification as a Fellow of the European Board of Urology





Dr. Sureda Riera, Joan

- Urologist at the Hospital of Manacor
- Surgical SAP Instructor at the Clinical Hospital of Barcelona
- Specialist in Advanced Prostate Cancer Management
- Residency in Reconstructive Urology at the Urological Institute of London
- Master's Degree in Localized, Advanced and Metastatic Prostate Cancer from the University of Salamanca
- Master's Degree in Research Design and Analysis in Health Sciences from the Autonomous University of Barcelona
- Degree in Medicine and Surgery from the University of Barcelona
- Certification as a Fellow of the European Board of Urology
- Member of the Spanish Society of Radiation Oncology



All the lecturers on this program have extensive experience, offering you an innovative perspective on the main advances in this field of study"





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This private qualification will allow you to obtain a diploma for the **Postgraduate Certificate in Clinical Presentation of Renal Lithiasis** 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** private qualification, 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 Clinical Presentation of Renal Lithiasis

Modality: online

Duration: 12 weeks

Accreditation: 12 ECTS



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

Postgraduate Certificate in Clinical Presentation of Renal Lithiasis

This is a private qualification of 360 hours of duration equivalent to 12 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024





Postgraduate Certificate **Clinical Presentation** of Renal Lithiasis

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