

# Postgraduate Certificate

Radiodiagnosis of Pathologies Related to  
Forensic Investigation



## Postgraduate Certificate Radiodiagnosis of Pathologies Related to Forensic Investigation

- » 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/radiodiagnosis-pathologies-related-forensic-investigation](http://www.techtute.com/us/medicine/postgraduate-certificate/radiodiagnosis-pathologies-related-forensic-investigation)

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# 01

# Introduction

Industry 4.0 has completely revolutionized the field of Forensic Radiology, introducing technological advances that improve accuracy, efficiency and analysis capacity in this branch. An example of this is Computed Axial Tomography, which allows the detection of internal injuries such as hemorrhages. In this sense, physicians analyze radiological images in search of relevant findings that can be used to determine the causes of death. Therefore, through their scientific evidence, they contribute to the resolution of cases ranging from crimes to child abuse or domestic violence. Given the importance of this discipline, TECH has developed a university program for specialists who wish to equip themselves with the most innovative radiological tools. All in a 100% online mode and based on the disruptive Relearning method.





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*This program, based on Relearning, will allow you to evaluate with great precision a variety of pathologies and medical anomalies in radiological images”*

According to the latest European Drug Report, a record 303 tons of cocaine were seized by European Union member states in recent years. This reflects the fact that the illegal transport of drugs continues to be a public health problem on an international scale. In addition, many drug carriers decide to ingest the packages in order to evade detection at border checkpoints or airports. As a result, when they break, they release a moral quantity of substances that can lead to acute intoxication and even death.

Faced with this reality, TECH implements a program in Radiodiagnosis of Pathologies Related to Forensic Investigation. The syllabus will provide techniques to detect drugs hidden in the body of the deceased through radiological images. Likewise, the didactic materials will delve into the Stages of Bone Repair within the forensic context. This will enable graduates to determine the chronology of injuries and estimate the time elapsed since the injuries. In relation to this, the syllabus will delve into the correct handling of Ultrasound for professionals to identify pathologies such as anomalies in abdominal organs or cardiac conditions. Throughout the program, specialists will strengthen their skills for interpretation of images obtained during autopsies and post mortem examinations. In this way, they will detect signs of trauma, disease or abuse that may have legal implications.

To strengthen the mastery of the contents, this specialization applies the innovative Relearning system, which promotes the assimilation of complex concepts through the natural and progressive reiteration of the same. The program also includes materials in various formats, such as infographics and explanatory videos. All this in a convenient 100% online mode, which allows each person to adjust their schedule to their responsibilities.

This **Postgraduate Certificate in Radiodiagnosis of Pathologies Related to Forensic Investigation** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ The development of practical cases presented by experts in Forensic Radiology
- ♦ 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 self-assessment process can be carried out to improve learning
- ♦ Its special emphasis on innovative methodologies
- ♦ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ♦ Content that is accessible from any fixed or portable device with an Internet connection



*You will take this program in a 100% online mode, making it easy for you to take it while you carry out your full-time healthcare activity"*

“*Are you looking to incorporate the most modern imaging techniques into your daily practice? Get it with this 6-week program”*

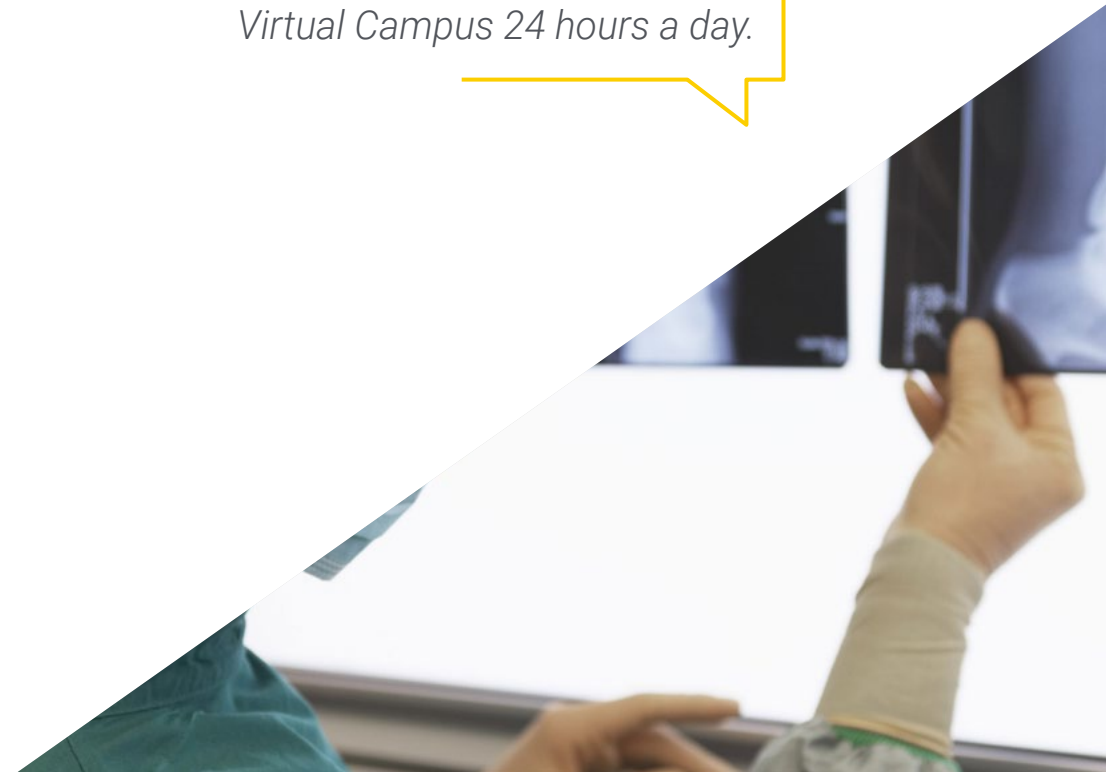
The program's teaching staff includes professionals from the field who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

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

*You will delve into the Radiodiagnosis of Child Abuse and will be able to identify injuries that serve as forensic evidence.*

*You will have at your fingertips the most modern educational resources, with free access to the Virtual Campus 24 hours a day.*



# 02 Objectives

Upon completion of this university program, graduates will have a thorough understanding of the techniques of Radiodiagnosis of Pathologies Related to Forensic Investigation. At the same time, practitioners will strengthen their skills in both detecting and evaluating relevant radiological findings such as fractures, gunshot wounds or sharps injuries. In this way, practitioners will be able to establish the nature of deaths and document their radiological findings accurately to contribute to court cases.





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*You will acquire new skills for the interpretation of radiological images and identify specific pathologies to establish the causes of deaths”*



## General Objectives

- ♦ Identify pathologies or injuries in the body of individuals or corpses with ease, allowing them to contribute in investigations either of criminal acts, identification or cases of negligence of health professionals
- ♦ Objectively demonstrate the different findings, helping in the clarification of criminal acts, turning the assessment of body damage, necropsy and skeletal study into a more scientific and reliable procedure
- ♦ Support identification and individualization processes
- ♦ Specify the different radiodiagnostic aids of pathologies linked to the legal world







## Specific Objectives

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- Identify the different pathologies through different radiodiagnostic means
- Help to guide an adequate diagnosis at the time of making an approach or giving an expert opinion
- Serve as a support technique to individualize and therefore identify an individual
- Guide cause and manner of death

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*A contextualized and realistic learning process that will immerse you in the reality of an area of medicine with important challenges”*

# 03

# Course Management

In order to preserve intact the quality that distinguishes its university programs, TECH has carried out a rigorous selection process to form the teaching staff of this Postgraduate Certificate. In this way, it has managed to bring together in this program the best experts in the field of Forensic Radiology. These professionals have a long professional career, where they have worked in prestigious organizations. In addition, they remain at the forefront of technological advances in this specialty to ensure that their medical practice is excellent. Consequently, graduates will enjoy an enriching and immersive educational experience.





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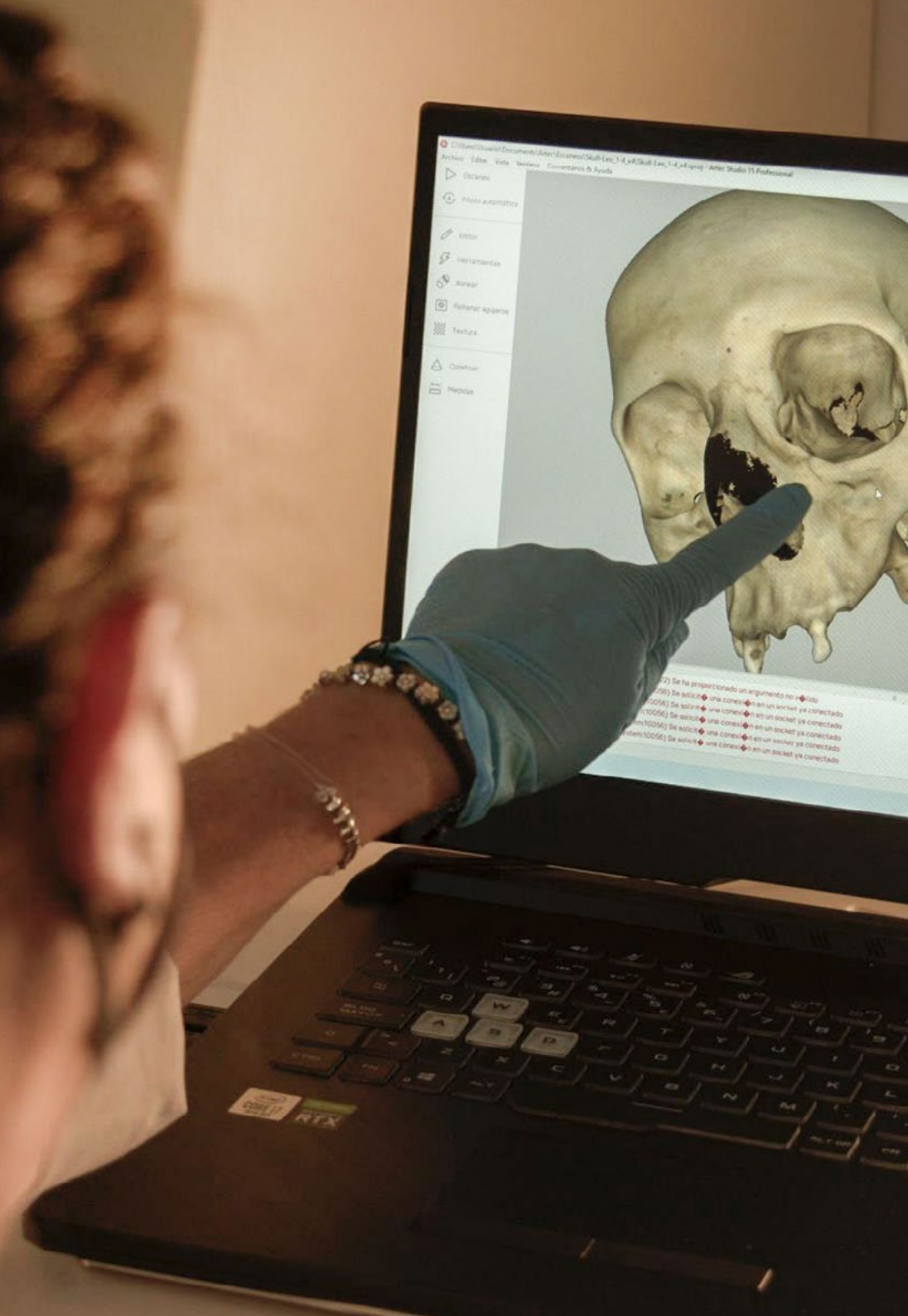
*The diversity of competencies of this teaching team will generate a dynamic learning atmosphere. You will specialize with the best experts!"*

## Management



### Dr. Ortega Ruiz, Ricardo

- PhD in Biomedical Engineering from the Polytechnic University of Madrid, specializing in Diagnostic Imaging
- Director of the Laboratory of Archaeology and Forensic Anthropology of the Institute of Professional Training in Forensic Sciences
- Investigator of Crimes against Humanity and War Crimes in Europe and the Americas
- Judicial Expert in Human Identification
- International Observer in Drug Trafficking Crimes in Iberoamerica
- Collaborator in police investigations for the search of missing persons in foot or canine tracking with Civil Protection
- Instructor of adaptation courses in Basic Scale to Executive Scale aimed at the Scientific Police
- Master's Degree in Forensic Sciences applied to the Search for Missing Persons and Human Identification Cranfield University
- Master's Degree in Archeology and Heritage with the Specialty of Forensic Archeology for the Search of Missing Persons in Armed Conflict



## Professors

### Dr. Galezo Chavarro, Diana

- ◆ Technician Responsible of the South Regional of the National Institute of Legal Medicine and Forensic Sciences
- ◆ Forensic specialist in the Regional Clinical, Psychology, Odontology and Forensic Psychiatry Group
- ◆ Expert in support to the certification process in Clinical Forensics
- ◆ Expert in Forensic Sciences and Probation Technique at the Libre University
- ◆ Expert in Search for Missing Persons in Iberoamerica

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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 university program will address the relevance of imaging to detect the different pathologies in the forensic field. The academic itinerary will provide an exhaustive classification of the main traumatic fractures according to aspects such as the state of the skin or its location. Likewise, the syllabus will delve into the Stages of Bone Repair so that graduates can determine the elapsed time of the injury and obtain valuable information on the cause of death. The didactic materials will analyze the operation of the most sophisticated radiological equipment, such as Magnetic Resonance Imaging. Therefore, physicians will develop advanced skills to interpret the photographs properly.



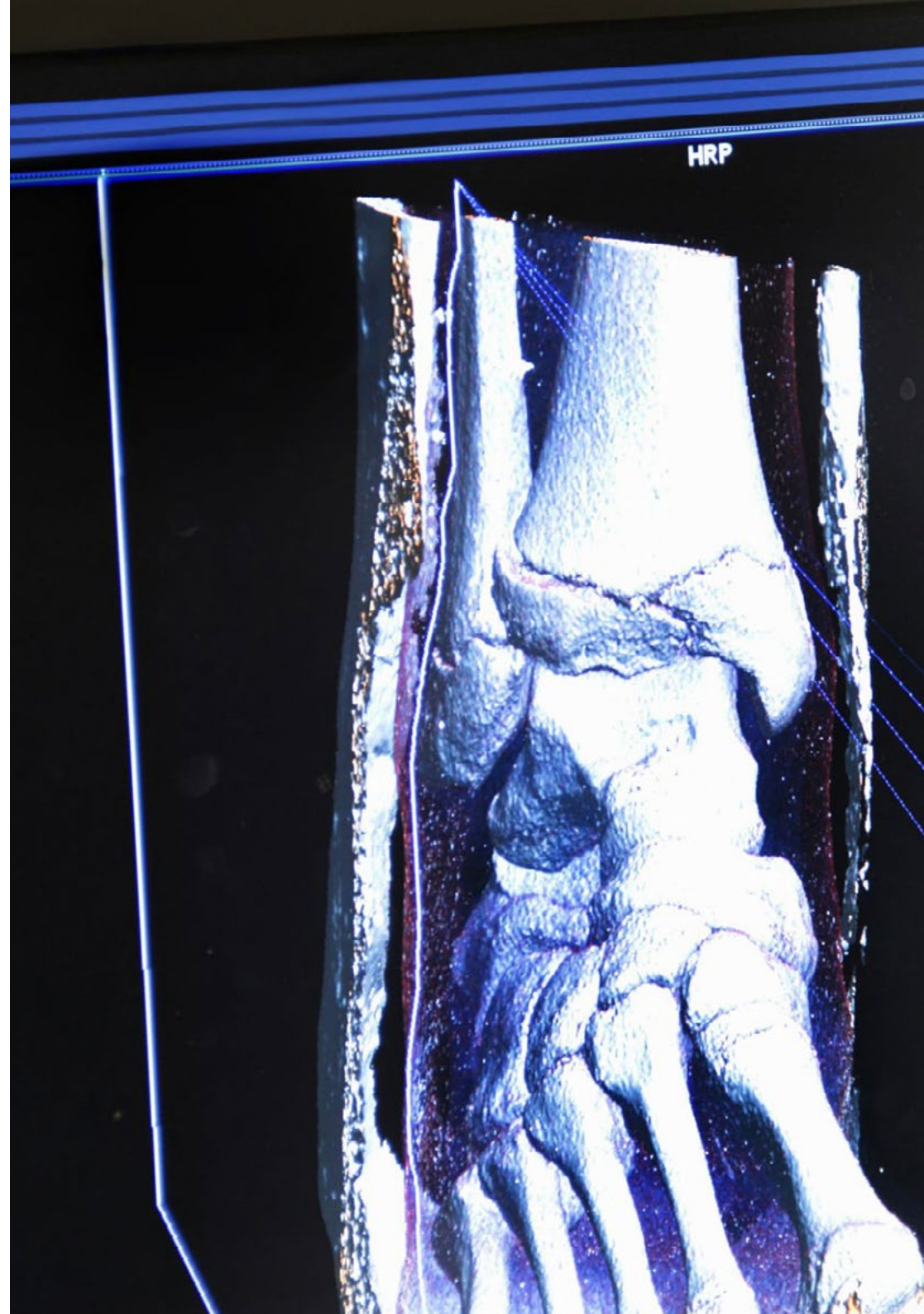


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*An intensive and exclusive syllabus  
where you will learn the latest scientific  
postulates on Diagnostic Angiography”*

## Module 1. Radiodiagnosis of Pathologies Related to Forensic Investigation

- 1.1. Classification of Traumatic Fractures in the Forensic Context
  - 1.1.1. Classification According to Skin Condition
  - 1.1.2. Classification According to Location
  - 1.1.3. Classification According to Fracture Trace
- 1.2. Stages of Bone Repair in the Forensic Context
  - 1.2.1. Inflammatory Phase
  - 1.2.2. Repair Phase
  - 1.2.3. Remodeling Phase
- 1.3. Child Maltreatment and its Radiodiagnosis in a Forensic Context
  - 1.3.1. Simple Radiography
  - 1.3.2. Axial Tomography
  - 1.3.3. Magnetic Resonance
- 1.4. Illegal Transport of Narcotics and Radiodiagnostics in a Forensic Context
  - 1.4.1. Simple Radiography
  - 1.4.2. Axial Tomography
  - 1.4.3. Magnetic Resonance
- 1.5. Simple Radiographic Technique for Identification of Alterations within a Forensic Context
  - 1.5.1. Cranial Pathologies
  - 1.5.2. Thoracic Pathologies
  - 1.5.3. Extremity Pathologies
- 1.6. Ultrasound Technique for Identification of Pathologies within a Forensic Context
  - 1.6.1. Abdominal
  - 1.6.2. Obstetric
  - 1.6.3. Thoracic
- 1.7. Computed Tomography and Identification of Pathologies in a Forensic Context
  - 1.7.1. Cranial
  - 1.7.2. Thoracic
  - 1.7.3. Abdominal



- 1.8. Magnetic Resonance Imaging and Pathology Identification in a Forensic Context
  - 1.8.1. Cranial
  - 1.8.2. Thoracic
  - 1.8.3. Abdominal
- 1.9. Diagnostic Angiography in a Forensic Context
  - 1.9.1. Cranial
  - 1.9.2. Abdominal
  - 1.9.3. Extremities
- 1.10. Virtopsia, Radiology in Forensic Medicine
  - 1.10.1. MRI
  - 1.10.2. Tomography
  - 1.10.3. Radiography



*Access the contents of this program through your computer, tablet, mobile or download them to review them without being connected to the Internet. Take advantage of these benefits and sign up now!"*

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.

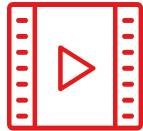
*Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*

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

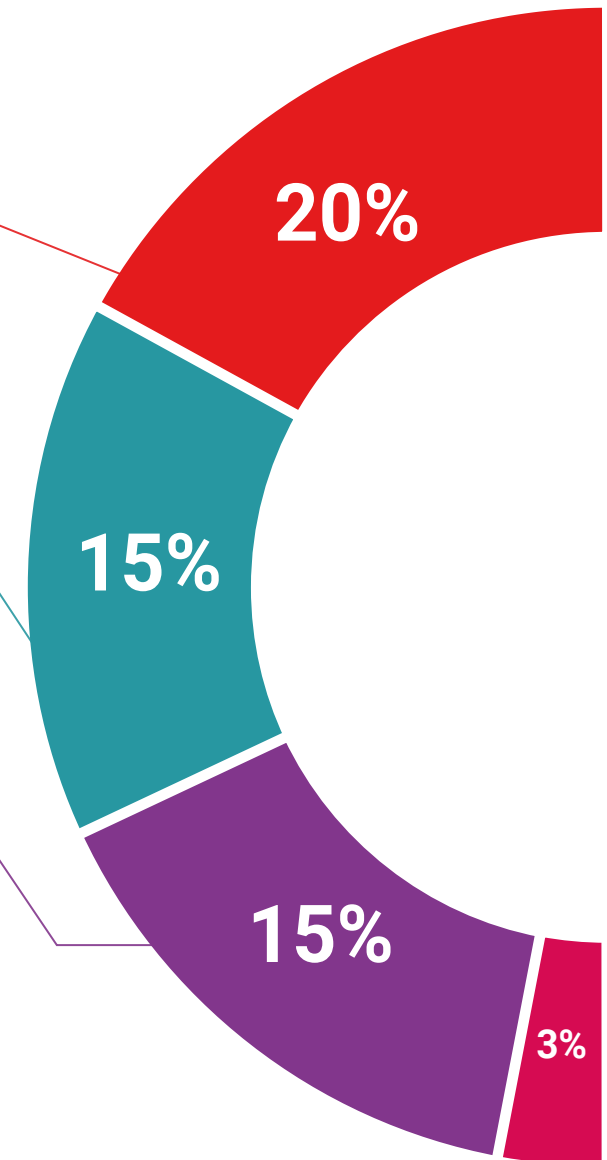
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

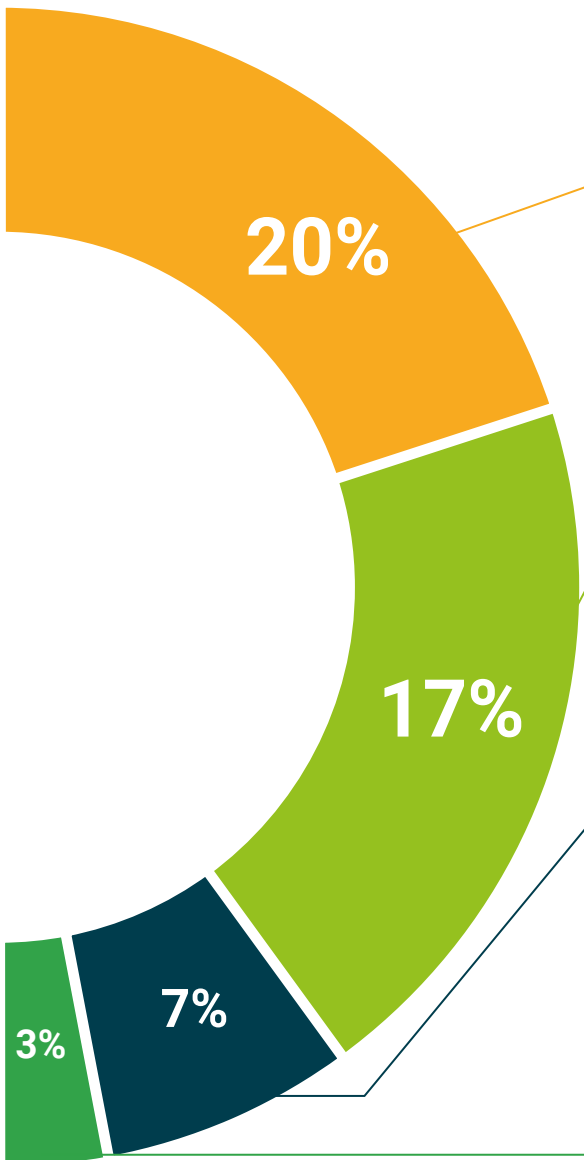
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### 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 Radiodiagnosis of Pathologies Related to Forensic Investigation guarantees, in addition to the most accurate and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.







*Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork"*

This private qualification will allow you to obtain a **Postgraduate Certificate in Radiodiagnosis of Pathologies Related to Forensic Investigation** 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 Radiodiagnosis of Pathologies Related to Forensic Investigation**

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.



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