

Postgraduate Certificate

Forensic Radiology of the Non-Pathological
and Non-Traumatic Human Skeleton



Postgraduate Certificate

Forensic Radiology of the Non-Pathological and Non-Traumatic Human Skeleton

- » 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/forensic-radiology-non-pathological-non-traumatic-human-skeleton

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01

Introduction

In a recent report, the United Nations reports that more than 458,000 homicides have been recorded worldwide in recent years. Although most of these are related to organized crime, many murders go unpunished due to the lack of thorough investigations. For this reason, the organization urges medical personnel to increase their knowledge in the field of forensic radiology and delve deeper into the structure of the human skeleton. In this way, physicians will contribute to identify unknown individuals and reveal the cause of their deaths. In this context, TECH implements a 100% online university program that will allow professionals to make the most accurate diagnoses using state-of-the-art imaging equipment.



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Thanks to this 100% online program, you will perform the most rigorous and detailed analysis of radiological images of the Human Skeleton to clarify the causes of death”

Forensic Radiology of the Human Skeleton is becoming increasingly important in the medical field. Among the main reasons for this is that it enables the identification of corpses without identity, which is crucial in events such as natural catastrophes, mass accidents or cases of missing persons. In this line, radiological equipment provides physicians with precise images to analyze the anatomy of individuals and to estimate relevant aspects of individuals and estimate relevant aspects such as their sex, age, height or physical complexion. In turn, these photographs enable clinicians to detect bone fractures, trauma marks or even transcendent congenital abnormalities. This is especially useful in determining the reasons for the deaths and determining the circumstances that led to the deaths.

Given its importance, TECH is developing an innovative program in Forensic Radiology of the Non-Pathological and Non-Traumatic Human Skeleton aimed at medical professionals. The academic itinerary will address in detail the different elements that make up the Locomotor System, so that graduates can detect anomalies or the presence of foreign bodies such as metals. Likewise, the didactic contents will delve into the most common pathologies and traumas in the bone structures. This will help professionals to easily detect them in radiological images derived from sophisticated equipment such as CT scans. At the same time, they will optimize their skills for the analysis of bone lesions and signs of metabolic diseases.

TECH has designed a rigorous educational program, based on the revolutionary Relearning method. This educational system involves the reiteration of the key concepts of the syllabus to ensure a thorough understanding of the content. Accessibility is also a key factor, as graduates will only require an electronic device connected to the Internet to access the Virtual Campus and enjoy the contents of the course. Undoubtedly, it is an ideal opportunity for doctors to effectively update their knowledge in the demanded field of Forensic Radiology.

This **Postgraduate Certificate in Forensic Radiology of the Non-Pathological and Non-Traumatic Human Skeleton** 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



TECH offers you a university program characterized by its quality and flexibility. Take it comfortably even from your Smartphone or Tablet!"



You will analyze in depth the particularities of the Human Skull to detect lesions that allow you to reconstruct the events that led to the death of a person"

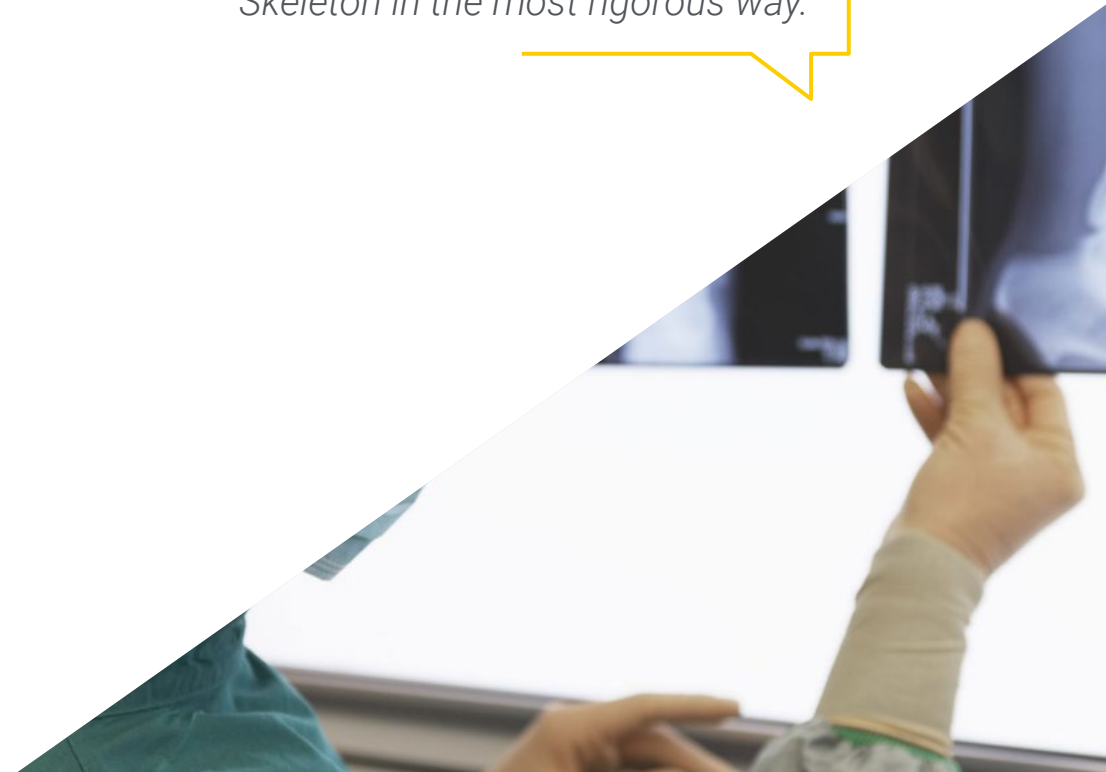
The program's teaching staff includes professionals from the field who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

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 develop advanced skills for interpretation of radiological images that will help you produce the most accurate forensic reports.

TECH's exclusive Relearning system will allow you to update your knowledge in Forensic Radiology of the Human Skeleton in the most rigorous way.



02 Objectives

Through 150 teaching hours, practitioners will have a solid understanding of the fundamentals of Forensic Radiology of the Non-Pathological and Non-Traumatic Human Skeleton. At the same time, they will be highly familiar with the most innovative imaging techniques in forensic environments, such as Magnetic Resonance Imaging or Computed Tomography. Thanks to this, they will enhance their skills in the interpretation of radiological images, so they will be able to detect the different traumas and pathologies of deceased individuals. In addition, they will elaborate the clearest reports to effectively communicate radiological findings to investigators and authorities.



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You will optimize your skills in interpreting and analyze radiological images of the human skeleton, therefore locating anomalies of great importance for forensic investigations"



General Objectives

- ◆ Properly identify the different bones of the skeletal system, in their composition, form and function, enabling it to detect appropriate conditions or associated trauma and possible consequences for the proper maintenance of vital and locomotor functions of the individual
- ◆ Interpret radiological images of the human body, bone structures in various radiographic projections and imaging modalities, important for differential diagnosis
- ◆ Recognize the main bone diseases and lesions in radiological images, enabling students to recognize radiological signs of common bone diseases such as fractures, osteoarthritis or osteoporosis, as well as bone tumors and metabolic bone diseases
- ◆ Determine the fundamental principles of radiology and medical imaging technology for solid understanding of the physical and technical principles behind the different radiological imaging modalities, how images are generated, the distinctive features of each technique, and their specific clinical applications in the diagnosis and evaluation of the Human Skeleton





Specific Objectives

- Contextualize the various anatomical positions, imaging conditions and the specific approach of the most accurate radiological techniques for the analysis of pathology and trauma
- Examine the most advanced tools in osteological anatomy and osteopathology, illustrated with both multidimensional materials and radiological images
- Adapt different radiological image analysis techniques to compare bone pathologies and morphoanatomical variations
- Enable complementation and interdisciplinarity with the knowledge already acquired and the knowledge that will be provided in the following modules

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The university program will include practical exercises based on real case studies and detailed videos to ensure the success of your update”

03

Course Management

Remaining loyal to its philosophy of offering university programs of excellence, TECH brings together in this program the best experts in the field of Forensic Radiology. These professionals make up the faculty of this program, so they have designed teaching materials of full quality and applicability for graduates. In this way, they share their solid knowledge of forensic radiographic analysis of the Human Skeleton and their extensive years of work experience. Therefore, graduates have the guarantees they demand to optimize their medical practice and enjoy an educational experience that will broaden their professional horizons.



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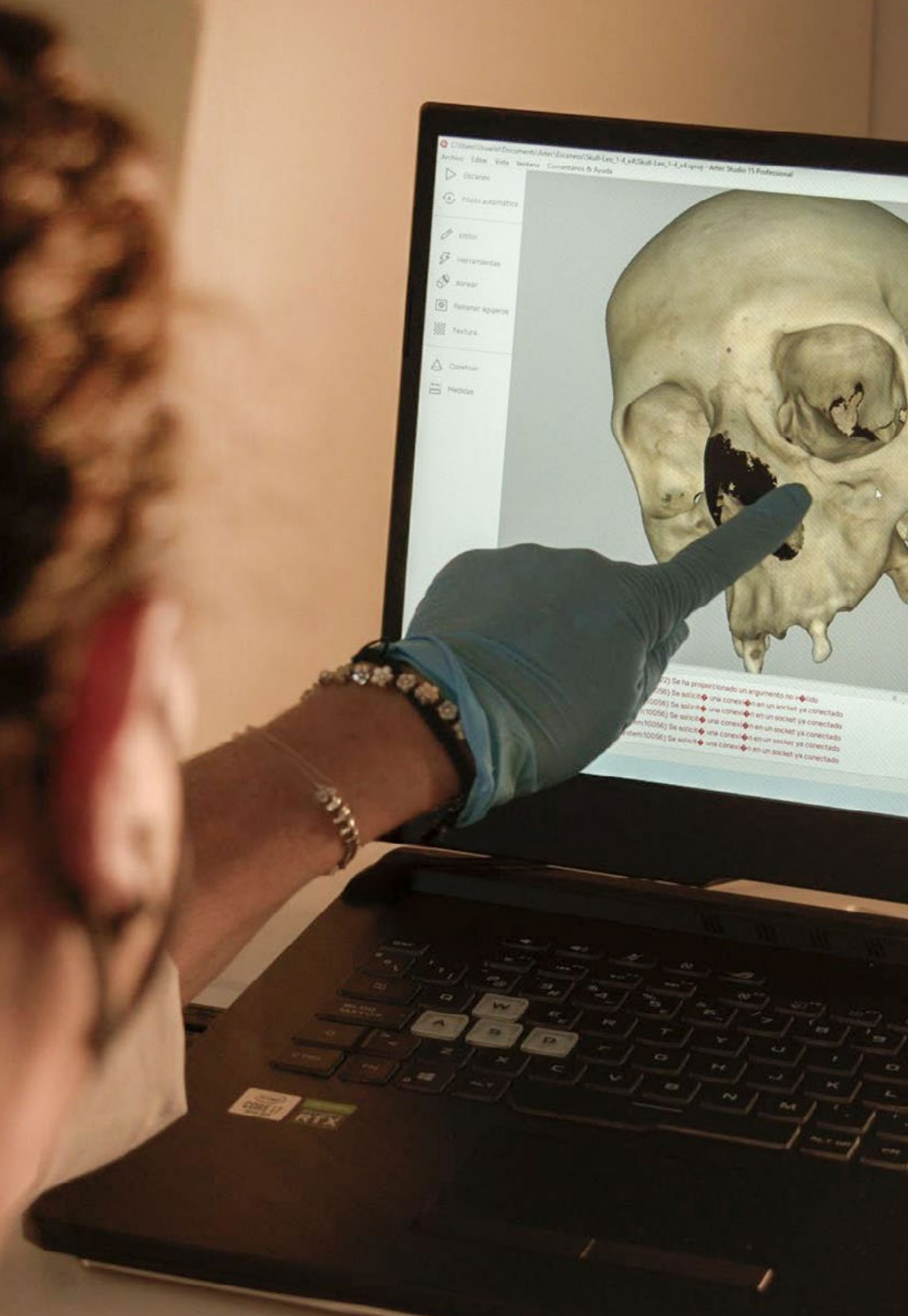
The faculty will be available to advise you throughout the program and share with you their extensive work experience in the field of Forensic Radiology”

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

Ms. Leyes Merino, Valeria Alejandra

- ◆ Conventional Radiology Technician in High Imaging at Hospital Teodoro J. Schestakow
- ◆ Radiology Technician at Hospital Teodoro J. Schestakow
- ◆ Conventional Radiology Technician in High Imaging
- ◆ Expert in Densitometry at the Nuclear Medicine Foundation (FUJESMEN)
- ◆ Radiology Technician at the Red Cross

Dr. Lini, Priscila

- ◆ Director of the Laboratory of Bioanthropology and Forensic Anthropology of Mato Grosso do Sul
- ◆ Legal Advisor at the Federal Prosecutor's Office at the Federal University of Latin American Integration
- ◆ Technical Collaborator at the Public Defender's Office of the State of Mato Grosso do Sul
- ◆ Master's Degree in Law from the Pontifical Catholic University of Paraná
- ◆ Bachelor's Degree in Biological Sciences from Instituto Prominas
- ◆ Law Degree from State University of Western Paraná
- ◆ Specialization in Physical and Forensic Anthropology from the Institute of Professional Training in Forensic Sciences

04

Structure and Content

With this program, physicians will obtain advanced skills to make the most accurate diagnoses through radiological images. For this purpose, the syllabus will provide a comprehensive overview of the main components of the Locomotor System. Therefore, graduates will have a solid understanding of the structure of the human skeleton that will lead them to detect anomalous characteristics in medical snapshots. In addition, the syllabus will delve into the most common pathologies and traumas in the bony elements (such as Osteoporosis, Arthritis or Chondrosarcomas). Physicians will also develop practical skills to optimize images and achieve high resolution.

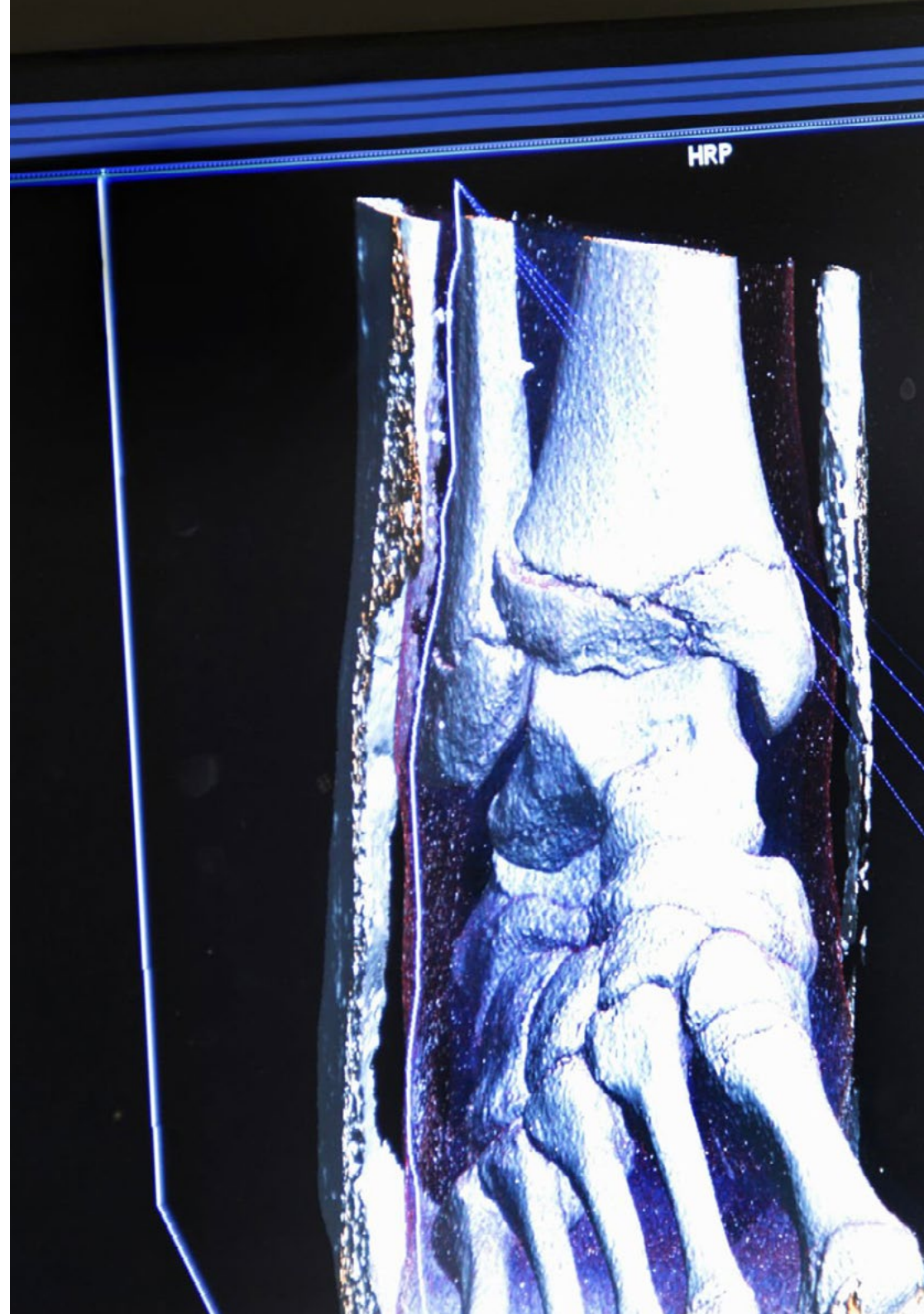


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The most complete and current syllabus in the academic market, which will help you identify specific radiological findings to clarify the causes of death"

Module 1. Forensic Radiology of the Non-Pathological and Non-Traumatic Human Skeleton

- 1.1. Forensic Radiology of the Locomotor System
 - 1.1.1. Muscular System
 - 1.1.2. Articular System
 - 1.1.3. Skeletal System
- 1.2. Forensic Radiology of the Human Skeleton
 - 1.2.1. Axial Skeleton
 - 1.2.2. Appendicular Skeleton
 - 1.2.3. Upper and Lower Extremities
- 1.3. Anatomical Plans and Axes of Movement in Forensic Investigation
 - 1.3.1. Coronal Plan
 - 1.3.2. Sagittal Plan
 - 1.3.3. Transverse Plan
 - 1.3.4. Bone Classification
- 1.4. Forensic Radiology of the Human Skull
 - 1.4.1. Facial Bones
 - 1.4.2. Neurocranium
 - 1.4.3. Associated Pathologies
- 1.5. Forensic Radiology of the Spine
 - 1.5.1. Cervical Vertebrae
 - 1.5.2. Thoracic Vertebrae
 - 1.5.3. Lumbar Vertebrae
 - 1.5.4. Sacral Vertebrae
 - 1.5.5. Associated Pathologies and Traumas
- 1.6. Forensic Radiology of the Coxal Bones
 - 1.6.1. Ilium/Ischium/Sacral Complex
 - 1.6.2. Public Symphysis
 - 1.6.3. Associated Pathologies and Traumas



- 1.7. Forensic Upper Extremity Radiology
 - 1.7.1. Long Bones
 - 1.7.2. Bone Complexes of the Hands
 - 1.7.3. Pathologies and Traumas
- 1.8. Forensic Radiology of the Lower Extremities
 - 1.8.1. Long Bones
 - 1.8.2. Bone Complexes of the Feet
 - 1.8.3. Pathologies and Traumas
- 1.9. Forensic Pathologies and Traumas through Diagnostic Imaging
 - 1.9.1. Congenital Pathologies
 - 1.9.2. Acquired Pathologies
 - 1.9.3. Trauma and its Variants
- 1.10. Interpretation of Radiographic Images in the Forensic Field
 - 1.10.1. Radiolucent Bodies
 - 1.10.2. Radiopaque Bodies
 - 1.10.3. Gray Scales

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The didactic material of this academic itinerary will allow you to delve into a more visual way in the Anatomical Plans and Axes of Movement of Forensic Investigation. Enroll 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.

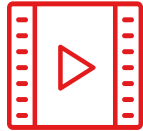
Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.

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

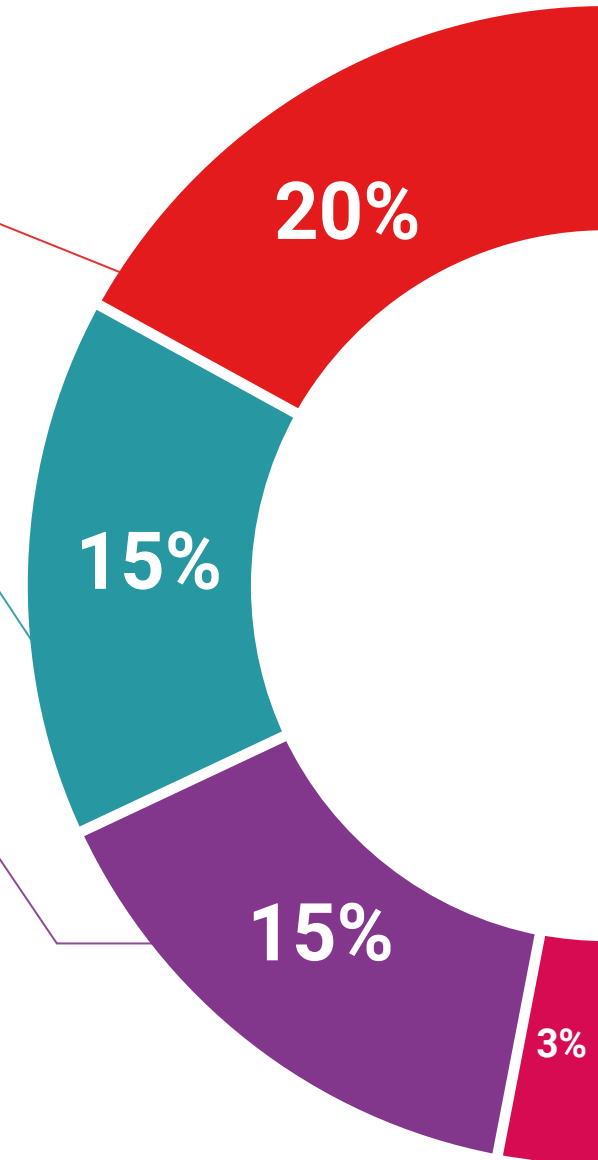
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

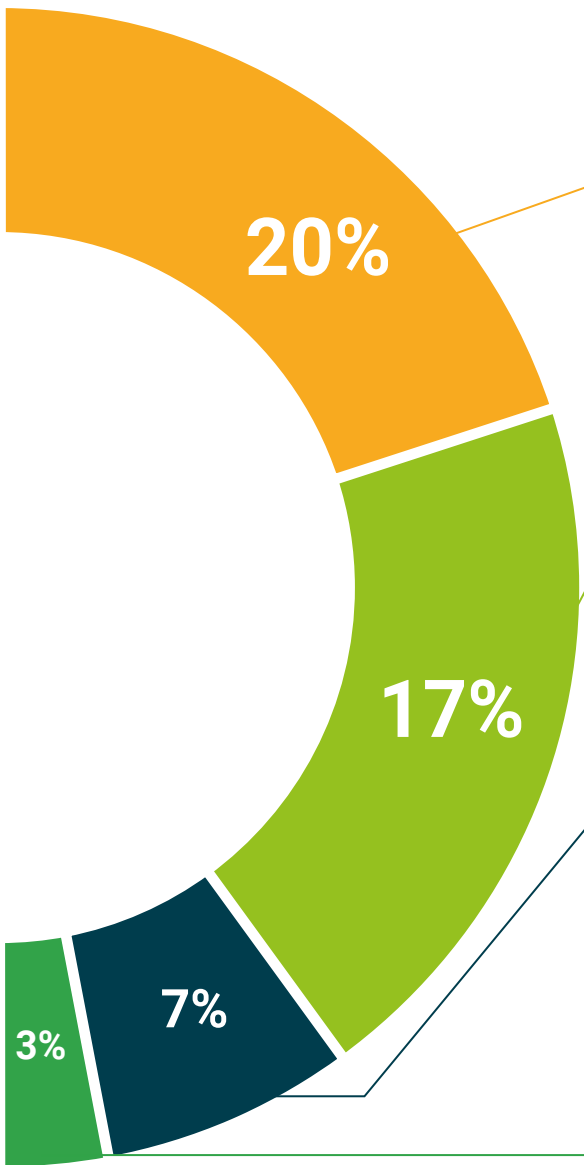
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



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 Forensic Radiology of the Non-Pathological and Non-Traumatic Human Skeleton guarantees, in addition to the most accurate 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 private qualification will allow you to obtain a **Postgraduate Certificate in Forensic Radiology of the Non-Pathological and Non-Traumatic Human Skeleton** 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 Forensic Radiology of the Non-Pathological and Non-Traumatic Human Skeleton**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



future
health confidence people
education information tutors
guarantee accreditation teaching
institutions technology learning

community commi
personalized service innovation
knowledge present
online
development languages
virtual classroom

tech global
university

Postgraduate Certificate

Forensic Radiology of the Non-
Pathological and Non-Traumatic
Human Skeleton

- » Modality: online
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Postgraduate Certificate

Forensic Radiology of the Non-Pathological
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