Postgraduate Certificate

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

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Postgraduate Certificate

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

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

Website: **www.techtitute.com/us/nursing/postgraduate-certificate/forensic-radiology-non-pathological-non-traumatic-human-skeleton**

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01

Introduction

Forensic Human Skeletal Radiology plays a crucial role in the identification and reconstruction of historical, archaeological and criminal events. In fact, advanced imaging techniques, such as Radiography and Computed Tomography, can reveal precise anatomical details, which help forensic experts determine an individual's age, sex, height and possibly ethnicity. These data are essential for establishing the identity of people who have died in unknown circumstances, as well as for better understanding human evolution in different historical periods. In this context, TECH has conceived this syllabus, completely digital and highly adaptable, with access to its resources from anywhere and at any time.

Thanks to this program in Forensic Radiology of the Non-Pathological and Non-Traumatic Human Skeleton, you will contribute significantly to the determination of age, sex and ancestral origin during investigations"

Forensic Radiology of the Non-Pathological and Non-Traumatic Human Skeleton plays a crucial role in the investigation and resolution of legal cases. In fact, by not focusing on specific pathologies or traumas, this technique provides a comprehensive view of the normal skeletal structure, facilitating the differentiation between individual variabilities and anomalies derived from external factors.

This program is a complete immersion in the complexities of Forensic Investigation. From an initial perspective, the various anatomical positions will be contextualized and the specific conditions necessary to obtain high quality radiological images will be explored in depth. This initial approach lays the foundation for a solid understanding of how to approach the most accurate radiological techniques, especially in the identification and analysis of pathology and trauma.

In addition, nurses will examine the most advanced tools in Osteological Anatomy and Osteopathology, using both multidimensional materials and radiological images to illustrate and understand the most intricate aspects of bone structure and its possible alterations. This combination of resources will provide practitioners with a comprehensive understanding of the conditions that can affect the human skeleton.

Finally, the course will foster interdisciplinarity by allowing the complementation of acquired knowledge with other areas of study and promoting synergy between Forensic Radiology and related fields. This integration will strengthen the ability of graduates to approach complex cases from a holistic perspective, facilitating effective collaboration with other professionals and enriching their practice.

Therefore, this academic program will be offered in a 100% online format, allowing participants the freedom to adapt it to their schedules and locations, with no time restrictions. They will only need an electronic device with Internet access. In addition, it will be supported by the avant-garde Relearning methodology, pioneer in TECH, which emphasizes the repetition of fundamental concepts to guarantee an effective and natural comprehension of the didactic materials.

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 of the Non-Pathological and Non-Traumatic Human Skeleton
- 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 use radiological images for comprehensive documentation, accurate comparisons and the establishment of biological profiles with greater certainty"

You will accurately identify the characteristics that differentiate normal from pathological variations, therefore enhancing your skills. What are you waiting for to enroll?"

You will deepen in the different radiological perspectives, understanding the importance of the correct disposition of the patient to obtain optimal images, which will later be crucial in the forensic field.

You will use the most advanced tools in Osteological Anatomy and Osteopathology, using ultidimensional materials and especially radiological images to understand the bone structure.

The program's teaching staff includes professionals from the sector who contribute their work experience to this specializing 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.

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Objectives

The main objective of this program is to provide nurses with a deep and specialized knowledge in the use of radiological techniques for the identification and forensic analysis of bone structures in normal conditions. Therefore, through a combination of theory and practice, the program will specialize professionals in the contextualization of various anatomical positions, imaging conditions and the use of advanced tools in Osteological Anatomy and Osteopathology.

You will effectively apply the knowledge acquired in Radiological Analysis in the Forensic field, contributing to the clarification of legal 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

You will acquire skills to adapt different radiological image analysis techniques, promoting a comprehensive understanding of morphoanatomical variations"

03

Course Management

The faculty behind this program are highly qualified and experienced experts in the field of Forensic Radiology and Osteological Anatomy.
In fact, these professionals possess a deep theoretical knowledge of radiological techniques and the anatomical features of the human skeleton, with extensive practical experience in applying this knowledge in real forensic investigations. Therefore, their commitment to teaching and their ability to effectively convey complex concepts ensure a stimulating and enriching learning environment for graduates.

Each faculty member in this program has an extensive academic and practical background, backed by years of experience in the application of specialized radiological techniques in the forensic field"

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. 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

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 (FUESMEN)
- Radiology Technician at the Red Cross

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Structure and Content

From a contextualization of anatomical positions and optimal conditions for radiological imaging, to the detailed analysis of the most accurate radiological techniques to identify and evaluate pathologies and trauma, this university program will cover every crucial aspect of Forensic Skeletal Radiology. In addition, nurses will explore advanced tools in Osteological Anatomy and Osteopathology, supported by multidimensional materials and real case studies, which will allow them to thoroughly understand normal bone structure as well as possible abnormalities.

You will delve into different techniques of radiological images to compare bone pathologies and morphoanatomical variations, for an accurate interpretation in a forensic context"

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

The holistic approach of this academic will allow you to develop key competencies to apply knowledge in the Forensic Analysis of the Human Skeleton, neither Pathological and Traumatic"

05

Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**

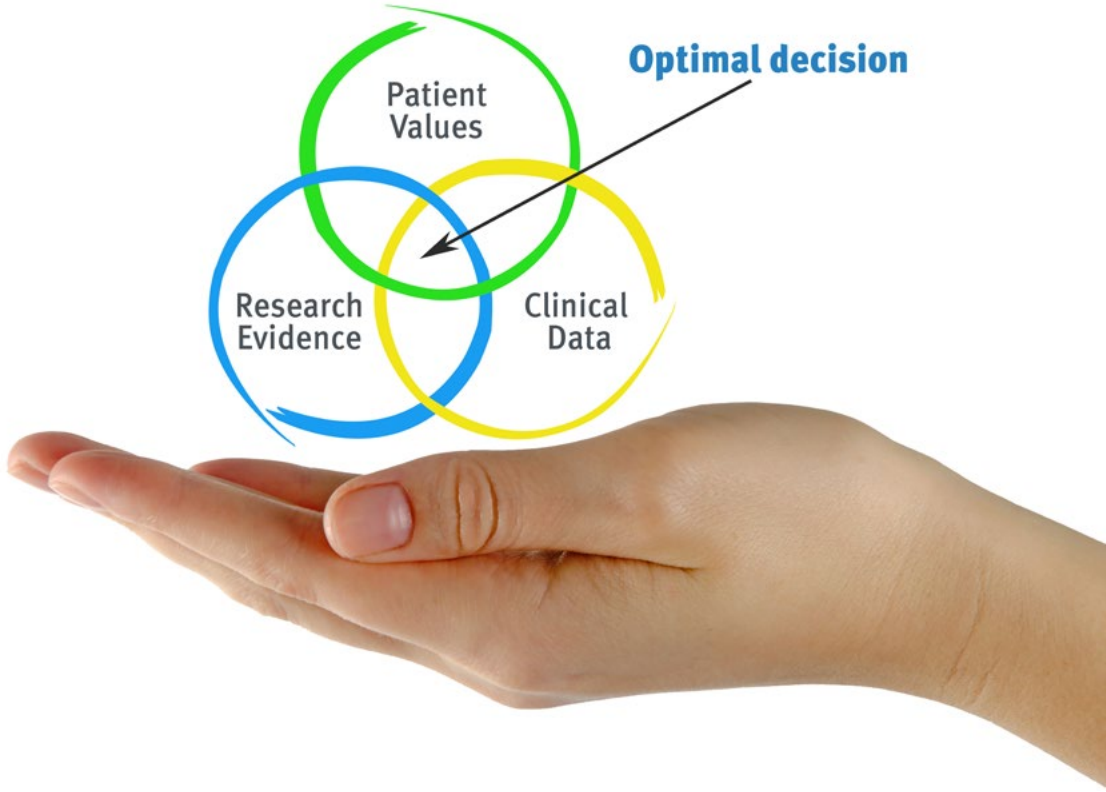
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

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 Nursing School we use the Case Method

In a given situation, what should a professional do? 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. Nurses learn better, faster, and more sustainably over time.

With TECH, nurses can experience a learning methodology 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, in an attempt to recreate the real conditions in professional nursing practice.

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:

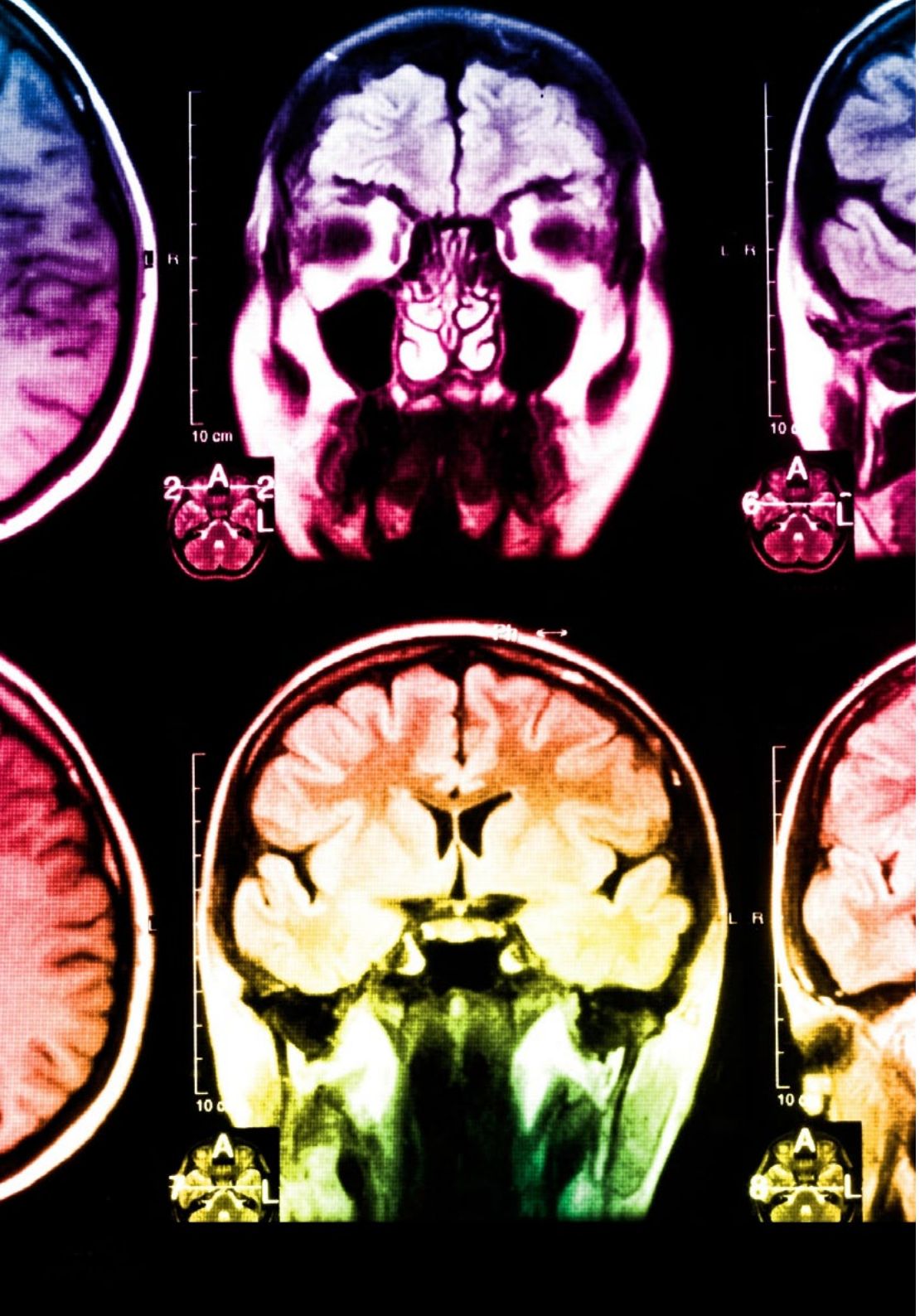
1. Nurses who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on practical skills that allow the nursing professional to better integrate knowledge acquisition into the hospital setting or primary care.
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 case studies with a 100% online learning system based on repetition combining a minimum of 8 different elements in each lesson, which is a real revolution compared to the simple study and analysis of cases.

The nurse 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 we have trained more than 175,000 nurses with unprecedented success in all specialities regardless of practical workload. 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 really 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.

Nursing Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, 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 them as many times as you want.

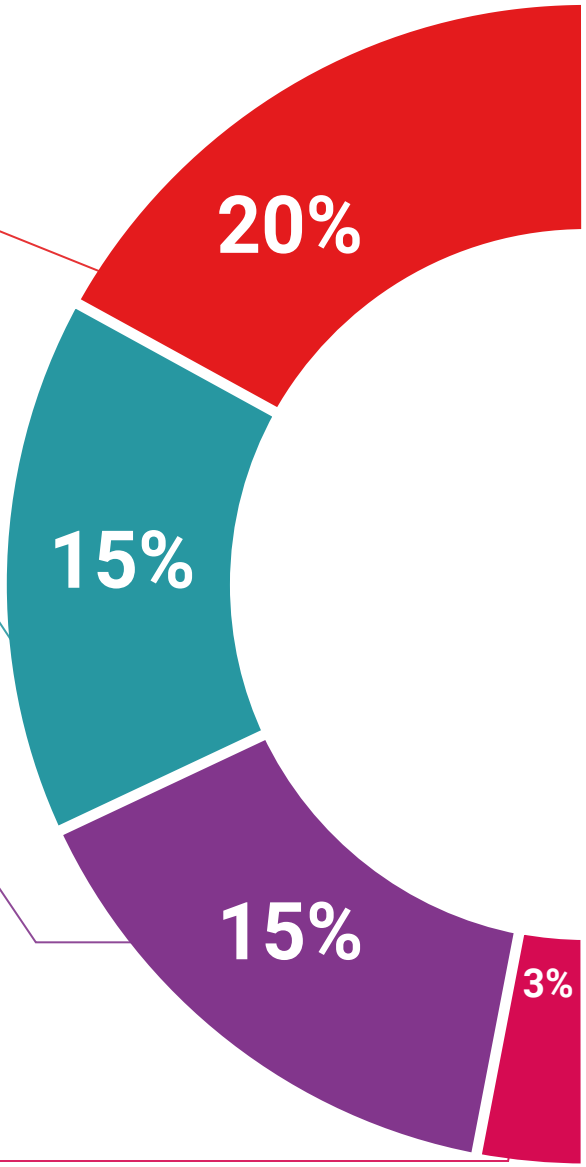
Interactive Summaries

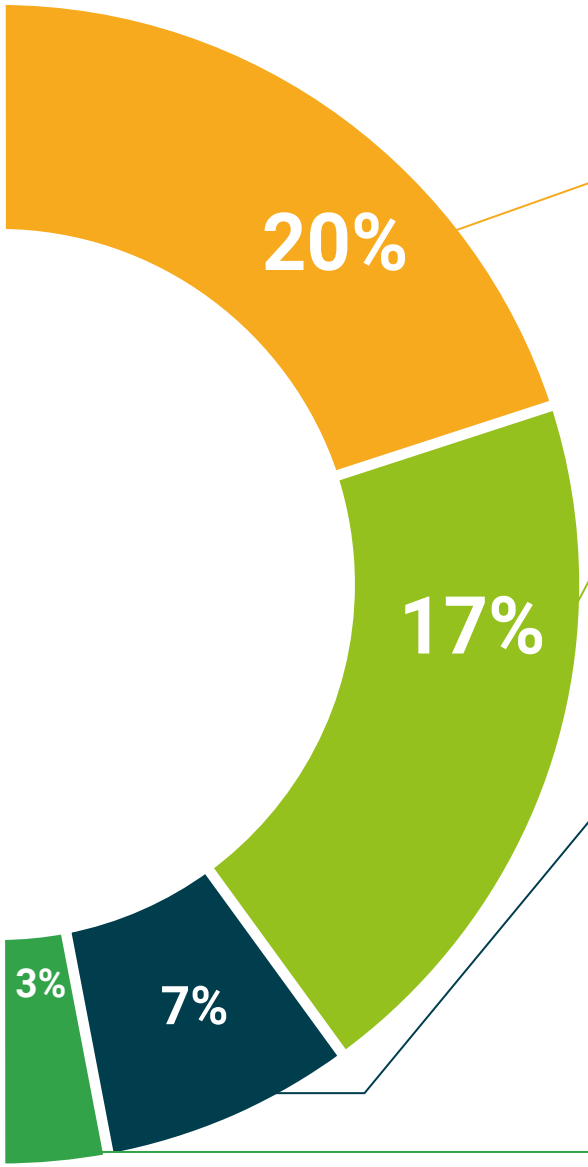
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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

The student's knowledge is periodically assessed and re-assessed throughout the program, through evaluative and self-evaluative activities and exercises: in this way, students can check how they are doing in terms of achieving their goals.

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 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.

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**


tech global university

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

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

This is a private qualification of 180 hours of duration equivalent to 6 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

Dr. Pedro Navarro Illana
Dean

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates

*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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Postgraduate Certificate

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