

Postgraduate Certificate

Forensic Radiology in Human Identification





Postgraduate Certificate Forensic Radiology in Human Identification

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

Website: www.techtute.com/us/nursing/postgraduate-certificate/forensic-radiology-human-identification

Index

01

Introduction

p. 4

02

Objectives

p. 8

03

Course Management

p. 12

04

Structure and Content

p. 16

05

Methodology

p. 20

06

Certificate

p. 28

01

Introduction

Forensic Radiology plays a crucial role in Human Identification, providing a detailed internal view of the body and allowing experts to analyze bone structures and unique features, which can help establish an individual's identity. Therefore, this approach offers the ability to identify the remains of an individual in extreme conditions, such as fires or natural disasters, where visual identification is impossible. In addition, Forensic Radiology is an invaluable tool in cases of incomplete or highly deteriorated skeletal remains, providing crucial clues for identification based on dental characteristics, metallic implants, prostheses or previous bone injuries. In this context, TECH has developed an innovative academic plan, relying on a 100% online model and the revolutionary Relearning methodology.



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With this 100% online program, you will deepen your knowledge of human anatomy, forensic pathology and postmortem identification methods, enabling you to deal with complex cases during forensic investigation”

By utilizing advanced imaging techniques, such as Radiography and Computed Tomography, Forensic Radiology becomes critical in cases of incomplete or mutilated skeletal remains, as it can reveal vital information about age, sex, previous illnesses or injuries, as well as distinctive features that help establish the identity of the individual.

This is how this program was born, which will address a wide range of content to provide students with a comprehensive understanding of this crucial discipline. In addition, it will delve into the biological characterization of the individual through the analysis of parameters such as sex, age, height, ancestry and complexion, based on radiological images.

The study will also prepare nurses to adapt radiological techniques to live individuals in situations where information cannot be obtained in any other way. This includes the application of advanced imaging methods in cases of trauma or internal injuries, where Radiology provides crucial data for medical treatment.

Finally, the program will prepare professionals to apply radiological techniques in deceased individuals, in situations where it is not possible to access organic tissue in a conventional manner, such as in cases of charring or severe alterations of human decomposition. In fact, this ability will be fundamental for the reconstruction of events and the determination of causes of death in forensic investigations. Likewise, the use of Forensic Radiology will serve as a support for other disciplines, providing complementary information and improving the accuracy and reliability of forensic results.

In terms of methodology, TECH offers a fully online educational environment, a suitable solution for busy professionals who wish to progress in their careers. It also employs the Relearning teaching method, which is based on the repetition of fundamental concepts to consolidate knowledge and facilitate the learning process. This combination of flexibility and a solid pedagogical approach undoubtedly makes it a highly accessible resource.

This **Postgraduate Certificate in Forensic Radiology in Human Identification** 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 in Human Identification
- ♦ 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



Forensic Radiology will provide you with a precise and non-invasive methodology for Human Identification, contributing to the resolution of judicial cases and the return of the identity of missing individuals”

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You will apply radiological techniques in cases of charring, advanced decomposition or other conditions that make conventional analysis difficult. What are you waiting for to enroll?"

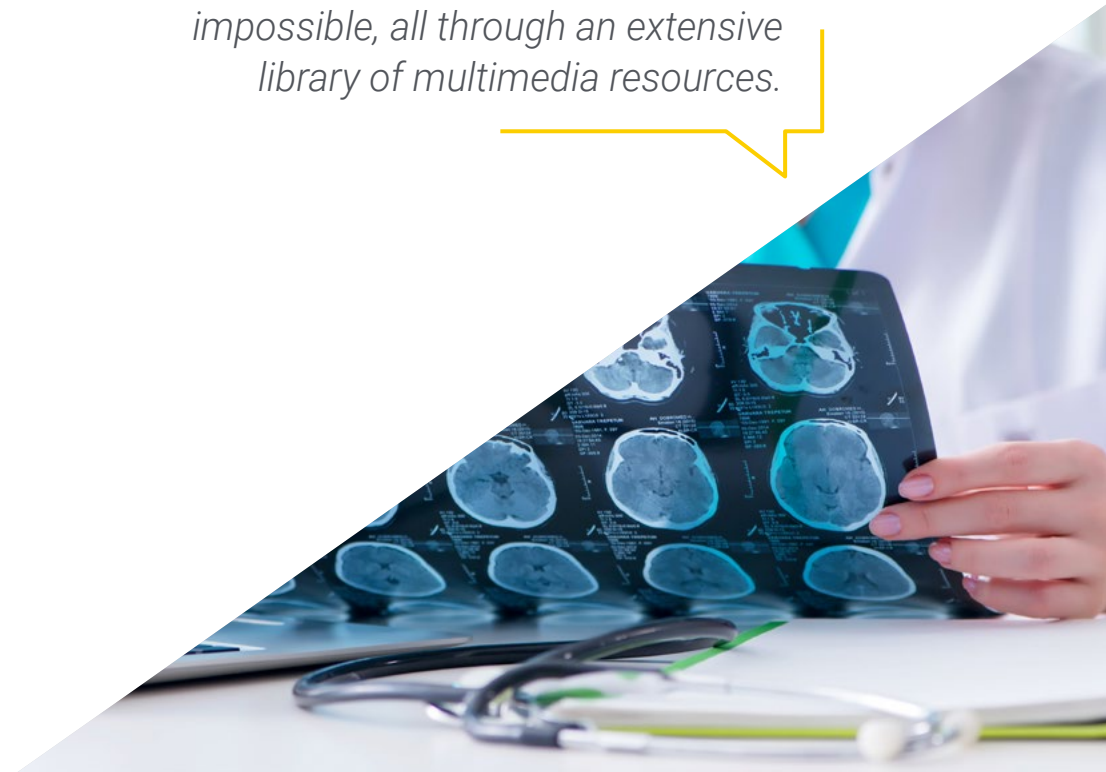
The program's teaching staff includes professionals from the sector who contribute their work experience to this specializing program, as well as renowned specialists from leading societies and prestigious universities.

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.

You will interpret anatomical and biometric signs, allowing you to accurately establish individual profiles, contributing to accurate identification in forensic settings.

You will use radiological methods safely and accurately in situations where obtaining data is otherwise difficult or impossible, all through an extensive library of multimedia resources.



02

Objectives

The main objective of this program will be to provide nurses with comprehensive specialization in the use of radiological techniques for the accurate identification of individuals in forensic settings. Therefore, professionals will be specialized to apply advanced knowledge in anatomy, Radiology and Forensic Medicine to biologically characterize individuals by interpreting medical images and analyzing radiological findings. In addition, graduates will be equipped with practical skills to adapt radiological techniques to different scenarios, whether in living individuals where obtaining information is complex, or in people with other unfeasible methodologies.



“

You will interpret medical images to determine key biological attributes, such as sex, age, height, ancestry and complexion, using advanced image analysis methods”



General Objectives

- ◆ Identify the nature of biological maturation of the individual based on birth, growth and bone consolidation
- ◆ Evaluate the characterization of the individual based on sexual dimorphism
- ◆ Establish identifying parameters based on height, complexion by activity and markers of ancestry
- ◆ Define the different pathologies and bone traumas in the human skeleton



The ability of Forensic Radiology to provide accurate data, combined with its non-invasiveness and speed in obtaining results, makes it an essential tool for professionals like you"





Specific Objectives

- ◆ Provide information regarding the biological characterization of the individual based on sex, age, height, ancestry or complexion
- ◆ Adapt the different radiological techniques to living individuals in which information cannot be obtained in any other way
- ◆ Apply radiological techniques to deceased individuals from whom information cannot be obtained without altering the organic tissue or because it is not possible to have access to the interior of the tissue, as in cases of carbonization or in alterations of human decomposition
- ◆ Support other disciplines to characterize the individual in its context

03

Course Management

The faculty behind this program is composed of highly qualified and experienced experts in various areas related to Forensic Radiology and Human Identification. In fact, they come from fields such as Biomedical Engineering and Radiodiagnostics, bringing a wide range of knowledge and practical experience to their teaching. In addition, these mentors have a solid academic background and a significant track record in the forensic field, which will allow them to transmit theory, real cases and practical situations.



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The faculty's commitment to research and ongoing development in Forensic Radiology in Human Identification will ensure you the most up-to-date and relevant specialization”

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



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DR. S. HORTON
PHYSICIAN CLINIC

04

Structure and Content

This program will cover a wide range of essential contents for the specialization of competent nurses in this field. Therefore, professionals will analyze the theoretical and practical fundamentals of Forensic Radiology, understanding the advanced medical imaging techniques used for the biological characterization of individuals in forensic situations. In addition, they will delve into topics such as radiological anatomy, the interpretation of X-rays and CT scans, as well as the application of these techniques in the determination of individual attributes, such as sex, age, height, ancestry and complexion.



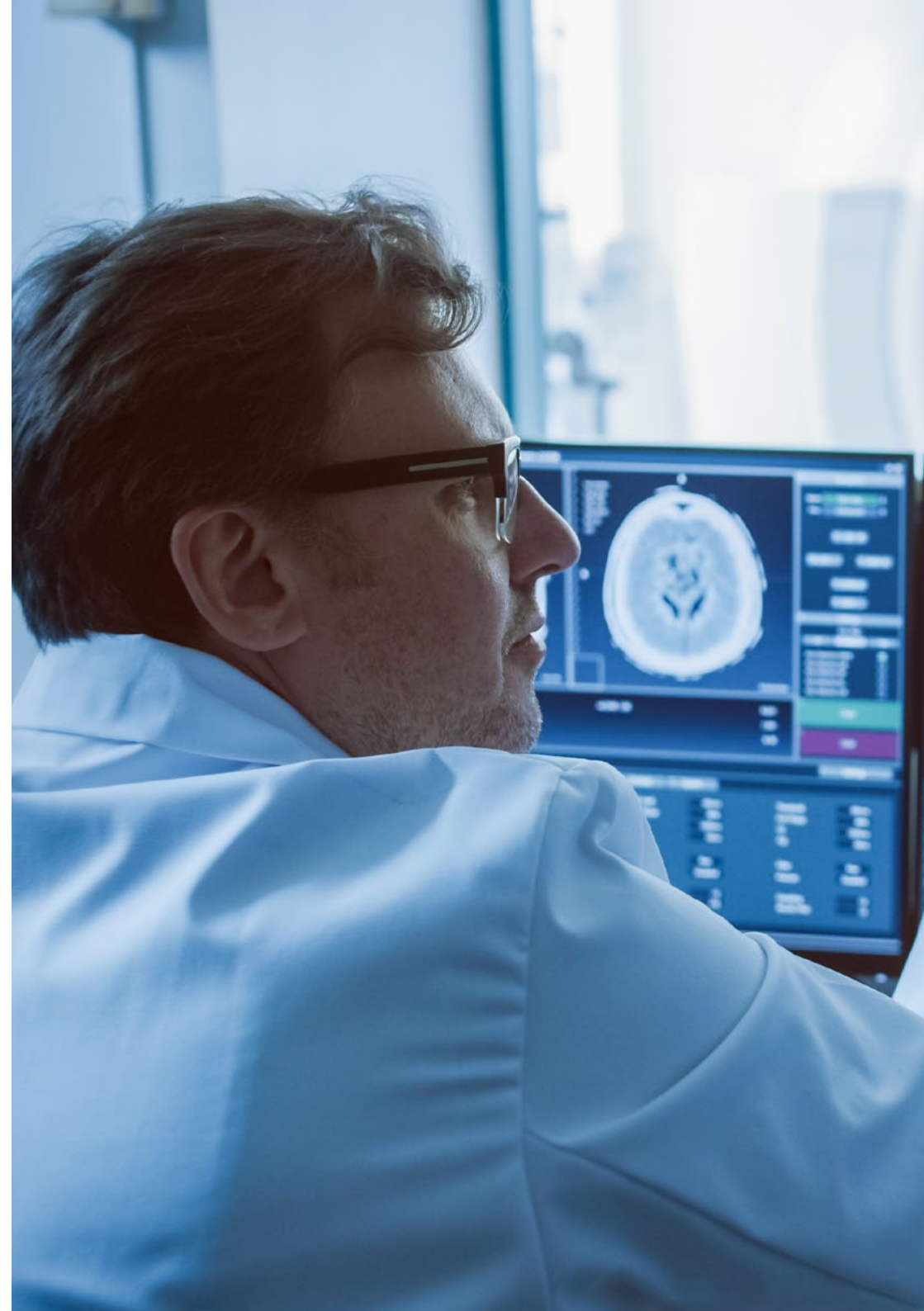


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You will use advanced medical imaging methods, such as X-rays and CT scans, to interpret and analyze images to identify lesions, abnormalities and distinguishing features”

Module 1. Forensic Radiology in Human Identification

- 1.1. Human Identification in the Forensic Context
 - 1.1.1. In Police Cases
 - 1.1.2. In Judicial Cases
 - 1.1.3. In Crimes Against Humanity and War Crimes
 - 1.1.4. In Major Disasters
- 1.2. The Human Skeleton and Biological Identification (I): Osteological Sexual Characterization in Adults
 - 1.2.1. Sexual Characterization Through the Skull
 - 1.2.2. Sexual Characterization Through the Hip
 - 1.2.3. Osteological Sex Characterization from Other Bones
- 1.3. The Human Skeleton and Biological Identification (II): Osteological Sexual Characterization in Individuals in Developing Stages
 - 1.3.1. Sexual Characterization Through the Skull
 - 1.3.2. Sexual Characterization Through the Hip
 - 1.3.3. Osteological Sex Characterization from Other Bones
- 1.4. The Human Skeleton and Biological Identification (III): Age Determination at Death in Adult Individuals
 - 1.4.1. Age Determination from the Closure of Bone Epiphyses and Cranial Sutures
 - 1.4.2. Age Determination from Cartilage Ossification
 - 1.4.3. Age Determination from the Modification of Bone Regions
- 1.5. The Human Skeleton and Biological Identification (IV): Age Determination at Death in Maturing Individuals
 - 1.5.1. Age Determination from Morphometrics
 - 1.5.2. Age Determination by Bone Birth
 - 1.5.3. Age Determination by Epiphyseal and Fontanel Closure
- 1.6. The Human Skeleton and Biological Identification (V): Determination of Stature and Muscular Build
 - 1.6.1. Estimation of Stature of Anatomical Nature
 - 1.6.2. Estimation of Stature of Physiological Nature
 - 1.6.3. Bone Biomechanics and Adaptation to Physical Activity
 - 1.6.4. Development of Muscular Complexion





- 1.7. Human Dentition for the Calculation of Age at Death
 - 1.7.1. The Dentition in Maturing Individuals
 - 1.7.2. Dentition in Adult Individuals
 - 1.7.3. Dental Alterations and Pathologies
- 1.8. Biomechanics and Mechanical Forces Applied to Bone Trauma
 - 1.8.1. Osteological Growth and Development
 - 1.8.2. Mechanical Forces Applied to the Human Skeleton
 - 1.8.3. Bone Adaptation to Exercise
- 1.9. Bone Trauma due to Temporality
 - 1.9.1. Characterization of Antemortem Traumas
 - 1.9.2. Characterization of Perimortem Traumas
 - 1.9.3. Characterization of Postmortem Trauma
- 1.10. Trauma by Type of Injury
 - 1.10.1. Classification by Type of Injury
 - 1.10.2. Classification by Type of Weapon
 - 1.10.3. Classification by Type of Object and Structure

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You will address ethical and legal aspects related to the use of Radiology in the forensic context, as well as the integration of Forensic Radiology with other disciplines to identify individuals in different scenarios”

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.



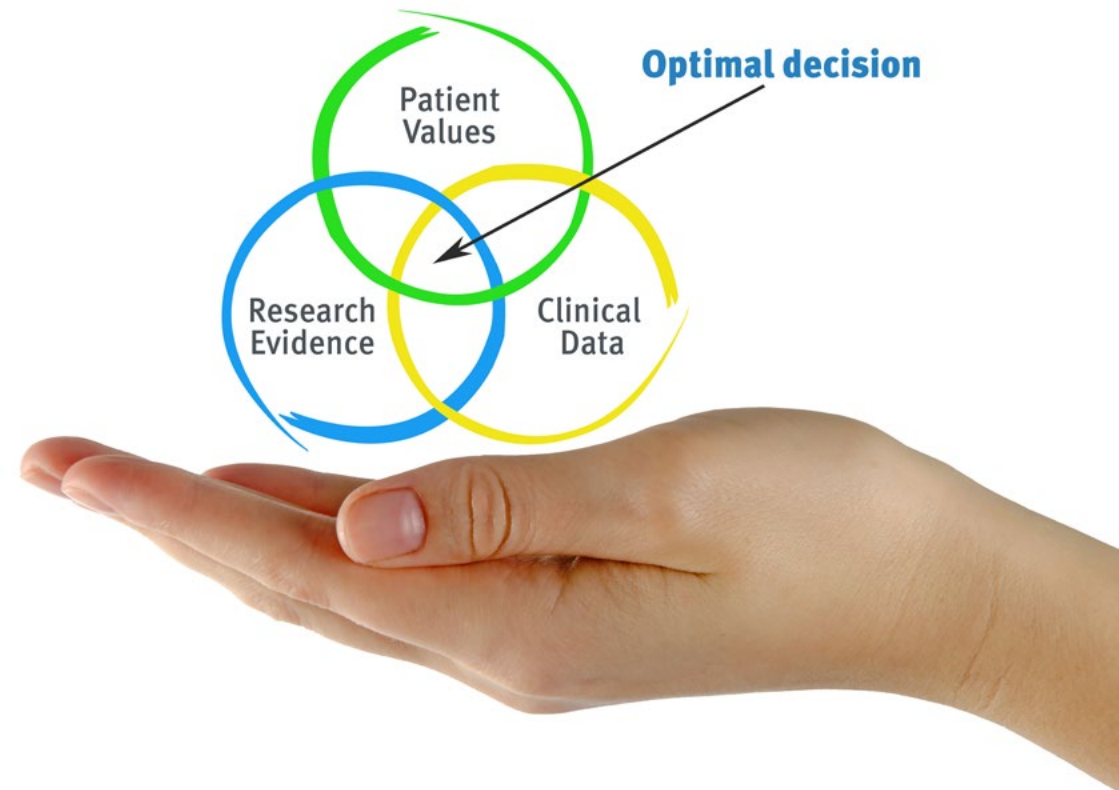
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Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

At TECH 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.

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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. 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

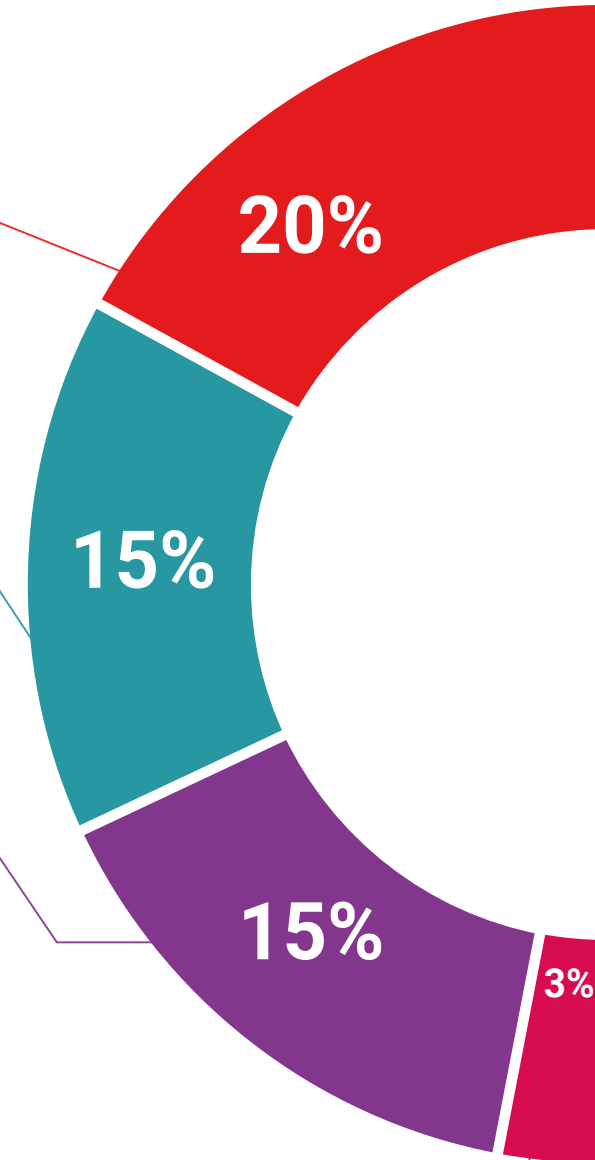
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

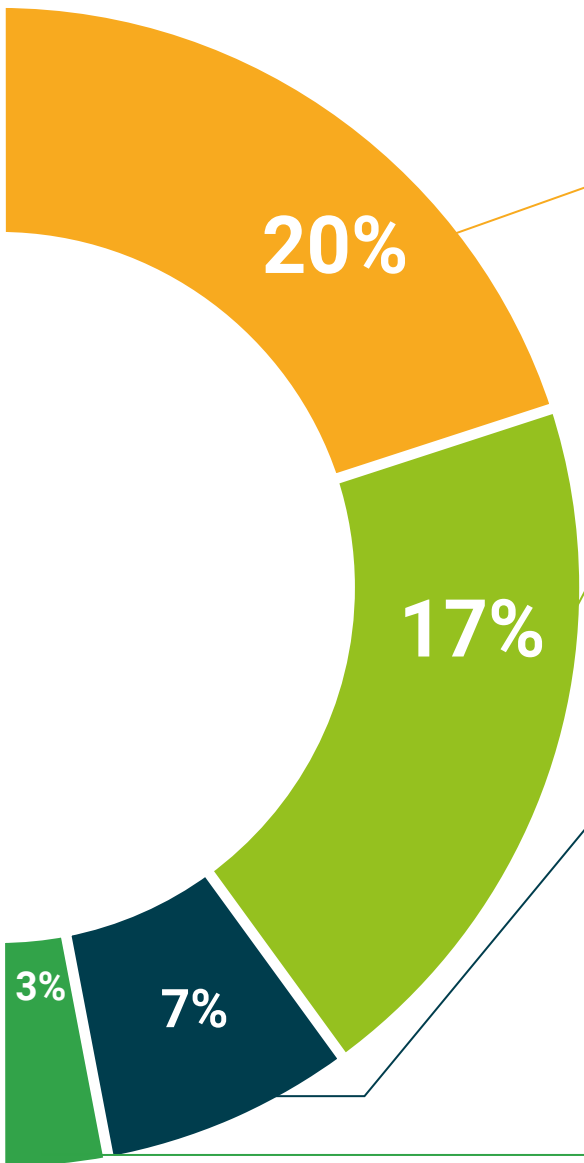
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



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 in Human Identification guarantees students, in addition to the most rigorous and up-to-date education program, 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 in Human Identification** 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 in Human Identification**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



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community commitment
personalized service innovation
knowledge present
development language
classroom



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