

# Postgraduate Certificate

## Forensic Radiological Techniques of Bone and Dental Trauma



## Postgraduate Certificate Forensic Radiological Techniques of Bone and Dental Trauma

- » 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-radiological-techniques-bone-dental-trauma](http://www.techtute.com/us/nursing/postgraduate-certificate/forensic-radiological-techniques-bone-dental-trauma)

# Index

01

Introduction

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*p. 4*

02

Objectives

---

*p. 8*

03

Course Management

---

*p. 12*

04

Structure and Content

---

*p. 16*

05

Methodology

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*p. 20*

06

Certificate

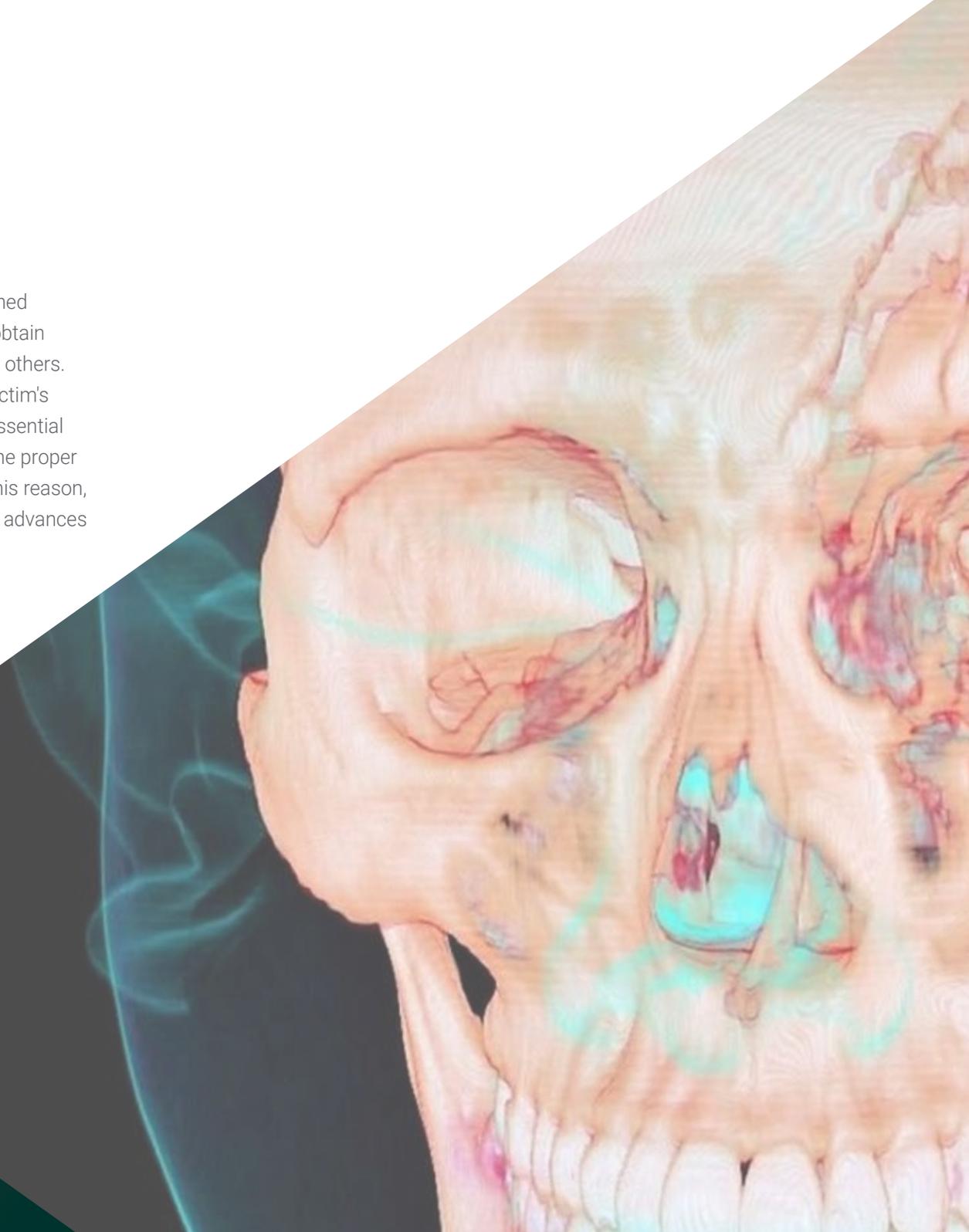
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*p. 28*

# 01

# Introduction

With the advent of Industry 4.0, the field of Forensic Radiology has been enriched with the implementation of multiple imaging tools. In this way, professionals obtain highly useful snapshots to identify fractures, dislocations or avulsions, among others. Likewise, their radiological findings contribute to clarifying the motive of the victim's death and favor the resolution of criminal investigations. In this context, it is essential that nursing staff remain at the technological forefront in this field to ensure the proper handling of dead bodies and, therefore, excellence in their daily practice. For this reason, TECH is developing a 100% online university program that will cover the latest advances that have been made in this area.





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*Thanks to this 100% online program, you will master the most cutting-edge techniques to ensure the safe and efficient performance of radiological procedures”*

In a recent publication, the United Nations reveals that, in recent years, there have been more than 48,830 deaths caused by blunt weapons.

The organization also recognizes that a large number of these homicides have gone unpunished due to lack of evidence. For this reason, it urges nursing professionals to extend their knowledge of the most sophisticated forensic radiological procedures. A sample of the most innovative tools in this field is the X-Ray. This instrument is especially useful for locating bone fractures and other skeletal injuries. In this way, professionals can accurately determine the nature of the fractures and establish the reasons for the deaths.

With this in mind, TECH is implementing a revolutionary program in Forensic Radiological Techniques of Bone and Dental Trauma geared toward nurses. The syllabus will offer an exhaustive classification of the elements of blunt injuries, analyzing the most commonly used blunt objects. At the same time, the syllabus will delve into the types of injuries caused by weapons, including total or partial amputations. In this sense, the didactic materials will delve into the operation of radiological instruments such as Computerized Axial Tomography. Thanks to this, graduates will optimize their assistance work and will be enriched with the most effective techniques in the positioning of the bodies during imaging.

To reinforce these contents, the methodology of this program reinforces its innovative character. TECH will offer a 100% online educational environment, where the only requirement is that students have an electronic device with Internet access to expand their knowledge and acquire new skills to enrich their clinical practice. In addition, this university program will employ the revolutionary Relearning methodology, based on the repetition of key concepts to fix knowledge and facilitate learning. Therefore, the combination of flexibility and a robust pedagogical approach makes it highly accessible.

This **Postgraduate Certificate in Forensic Radiological Techniques of Bone and Dental Trauma** 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 obtain skills to recognize signs of bone and dental trauma through 150 hours of the best digital teaching”*

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*You will deepen in the marks on the human skeleton of injuries caused by blunt mechanics, identifying the weapons or objects used”*

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.

*Do you want to delve into the most advanced radiological techniques? Achieve it with this 6-week university program.*

*With the Relearning method, developed by TECH, you will consolidate the key concepts offered by this university education.*



# 02

# Objectives

Upon completion of this university program, nursing personnel will have a solid understanding of the basic principles of Forensic Radiology. Likewise, professionals will know how innovative radiological tools such as X-Rays or Computed Axial Tomography work. This will allow them to optimize their daily practice, mobilizing human bodies with precision during radiological processes. Along the same lines, graduates will enhance their communication skills to document radiological findings in a thorough and clear manner.



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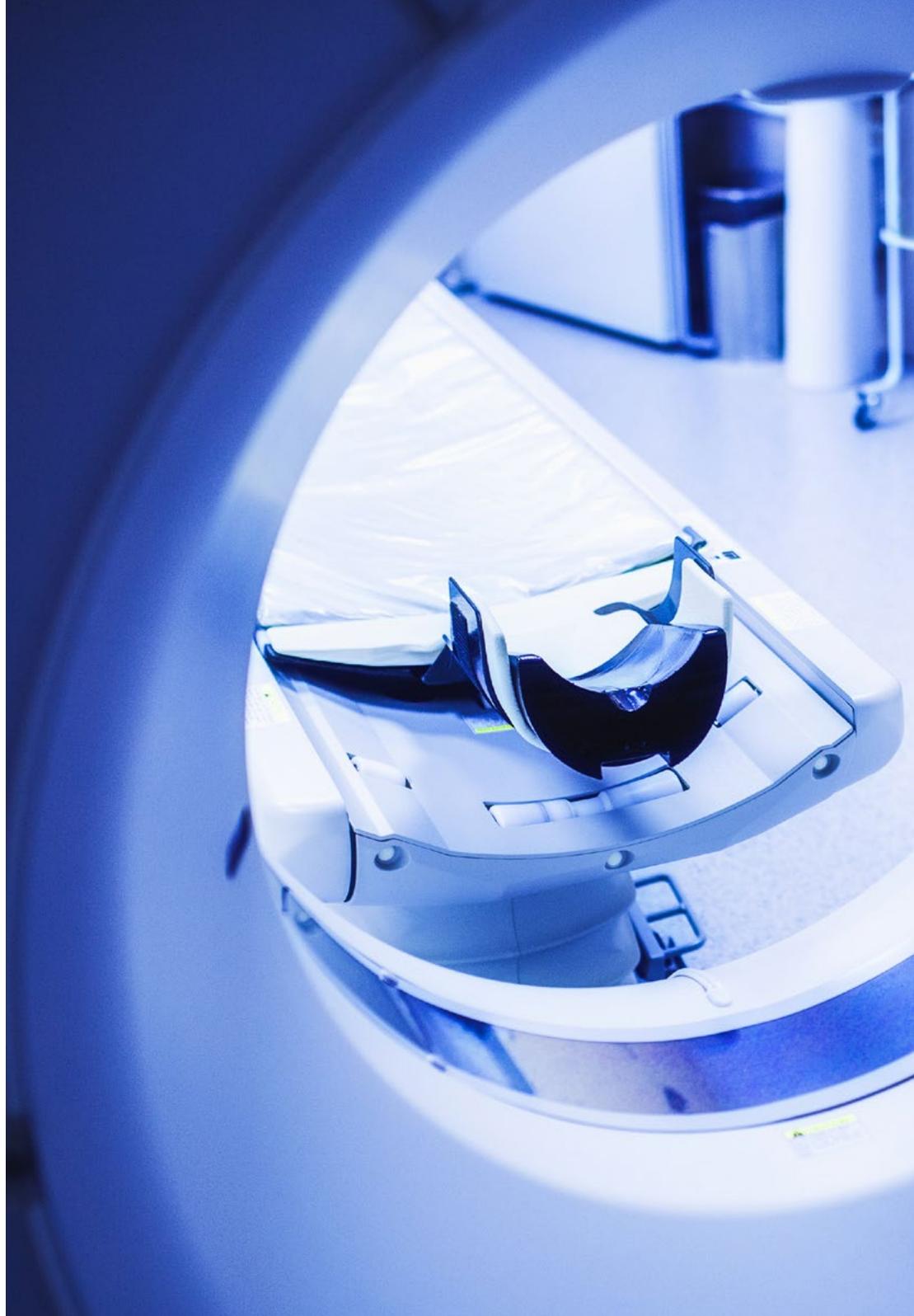
*You will optimize your competencies for the preparation of the patient's body, therefore ensuring the quality of the radiological images obtained”*



## General Objectives

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- ◆ Identify and recognize the different types of elements that generate blunt injuries in the individual
- ◆ Evaluate the physical and mechanical characterization behind each element to know how it works
- ◆ Recognize the different injury characteristics based on the type of weapon, mechanical application and nature of the tissue
- ◆ Define the extent of injuries to the tissues of the individual





## Specific Objectives

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- ◆ Identify and recognize the different types of elements that generate blunt injuries in the individual
- ◆ Evaluate the physical and mechanical characterization behind each element to know how it works
- ◆ Recognize the different injury characteristics based on the type of weapon, mechanical application and nature of the tissue
- ◆ Define the extent of injuries to the tissues of the individual

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*You will be highly specialized with the most modern radiological techniques, among which Computed Axial Tomography stands out”*

03

# Course Management

TECH's priority is to provide students with the most complete and up-to-date academic experiences in the market, in order to improve their careers. For this reason, TECH carefully selects the members of its teaching staff. On this occasion, this program brings together true references in the field of Forensic Radiology. These professionals have worked in the most leading international hospital centers. Thanks to their exhaustive knowledge and skills, they have contributed to the clarification of numerous cases of deaths caused by bone or dental trauma.



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*You will enjoy personalized advice from the teaching team, composed of professionals 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

### 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

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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

By means of 150 teaching hours, this university program will focus on the classification of blunt injury elements. For this purpose, the academic itinerary will delve into the analysis of the most used weapons, as well as their most frequent injuries. In this sense, the syllabus will delve into the operation of advanced radiographic tools such as X-rays or Computed Axial Tomography. This will allow nurses to optimize their care of cadavers, guaranteeing their correct position during radiodiagnostic processes. This will ensure that the images obtained are characterized by their high quality and accuracy.



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*A high intensity syllabus that will provide you with cutting-edge strategies to recognize Blunt Injury Mechanics”*

## Module 1. Forensic Radiological Techniques of Bone and Dental Trauma with Blunt Objects

- 1.1. Classification of Blunt Profile Injury Elements
  - 1.1.1. Blunt Weapons
  - 1.1.2. Blunt Objects
  - 1.1.3. Blunt Mechanical Force Injuries
  - 1.1.4. Structural Injuries
  - 1.1.5. Short Blunt Injuries
- 1.2. Injury Mechanics of Blunt Elements
  - 1.2.1. Blunt Weapons
  - 1.2.2. Blunt Objects
  - 1.2.3. Blunt Mechanical Force Injuries
  - 1.2.4. Injuries Through Structures
  - 1.2.5. Short Blunt Injuries
- 1.3. Injury Typologies of Blunt weapons
  - 1.3.1. Superficial Injuries
  - 1.3.2. Deep Injuries
  - 1.3.3. Total or Partial Amputation Injuries
- 1.4. Types of Injuries Caused by Blunt Objects
  - 1.4.1. Superficial Injuries
  - 1.4.2. Deep Injuries
  - 1.4.3. Total or Partial Amputation Injuries
- 1.5. Injury Typologies Due to Blunt Injury Mechanics
  - 1.5.1. Superficial Injuries
  - 1.5.2. Deep Injuries
  - 1.5.3. Total or Partial Amputation Injuries
- 1.6. Injury Typologies of Blunt Structures and Short-Contusive Elements
  - 1.6.1. Superficial Injuries
  - 1.6.2. Deep Injuries
  - 1.6.3. Total or Partial Amputation Injuries



- 1.7. Marks on the Skeleton of Injuries Due to Blunt Mechanics
  - 1.7.1. Blunt Weapons
  - 1.7.2. Blunt Objects
  - 1.7.3. Blunt Mechanical Force Injuries
  - 1.7.4. Injuries Through Structures
  - 1.7.5. Short Blunt Injuries
- 1.8. Radiological Techniques for the Study of Blunt Force Injuries
  - 1.8.1. X-Ray
  - 1.8.2. Computerized Axial Tomography
  - 1.8.3. Other Radiographic Techniques
- 1.9. Radiobiological Techniques for the Study of Injuries of Blunt Objects and Structures
  - 1.9.1. X-Ray
  - 1.9.2. Computerized Axial Tomography
  - 1.9.3. Other Radiographic Techniques
- 1.10. Radiobiological Techniques for the Study of Blunt Mechanical Injuries and Short Blunt Elements
  - 1.10.1. X-Ray
  - 1.10.2. Computerized Axial Tomography
  - 1.10.3. Other Radiographic Techniques

“*TECH provides you with interactive summaries, detailed videos and clinical cases so that you can easily keep up to date with the most innovative Forensic Radiological Techniques. 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.



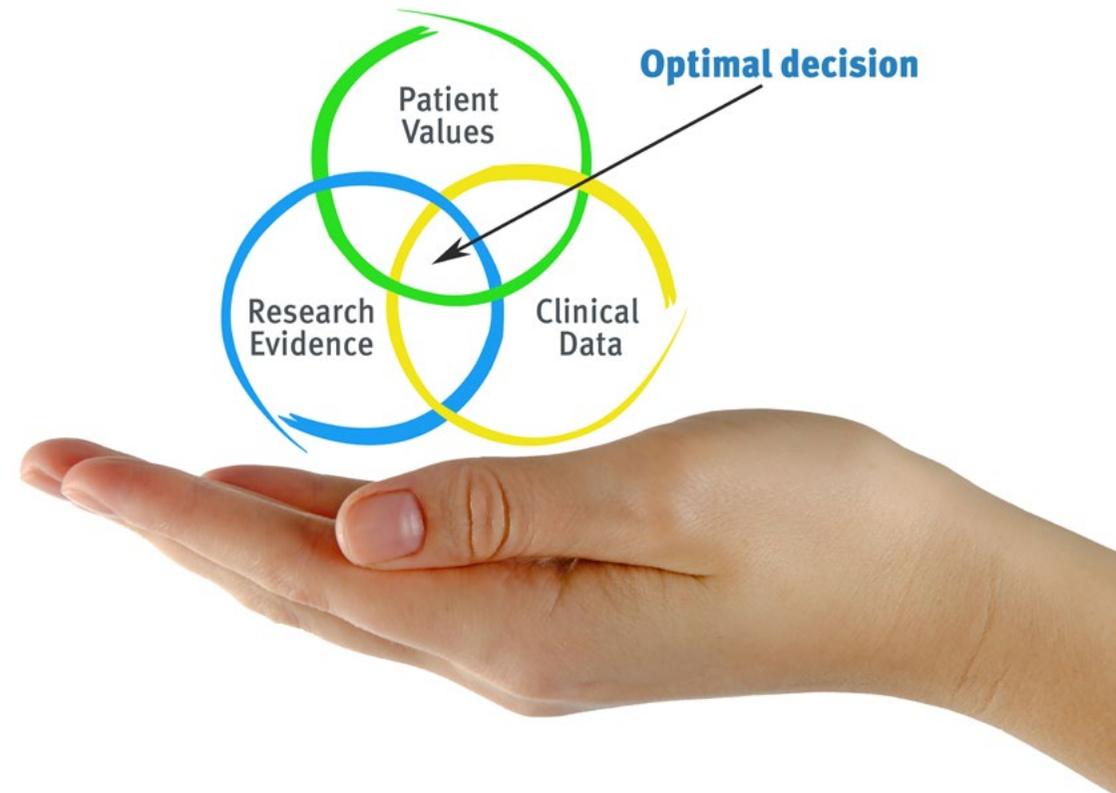
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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH 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.

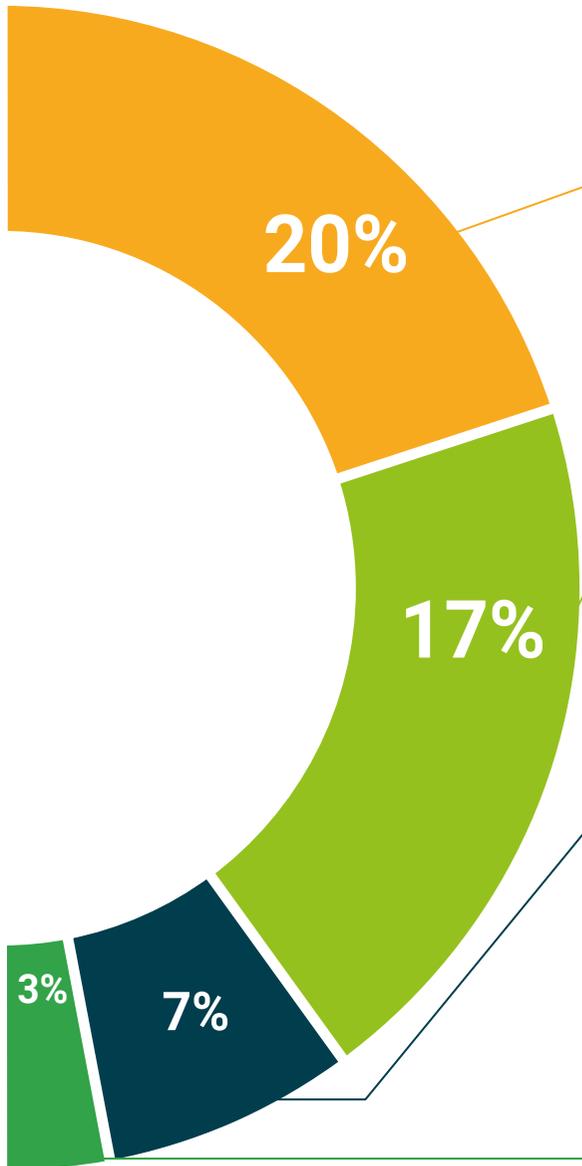
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



### 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 Radiological Techniques of Bone and Dental Trauma 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 Radiological Techniques of Bone and Dental Trauma** 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 Radiological Techniques of Bone and Dental Trauma**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**





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