Postgraduate Diploma

Forensic Radiology in Human Identification

tech global university

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Postgraduate Diploma
Forensic Radiology in Human Identification

- Modality: **online**
- Duration: **6 months**
- Certificate: **TECH Global University**
- Accreditation: **18 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Website: www.techtitute.com/us/nursing/postgraduate-diploma/postgraduate-diploma-forensic-radiology-human-identification

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01

Introduction

When there are many deaths due to natural disasters, the presence of dead bodies is disturbing for the affected communities. In view of this, the World Health Organization stresses the importance of human identification in order to give respect to the victims, as well as to provide information to their families so that they can accept their losses and begin the mourning process. Forensic Radiology is an indispensable tool for the recognition of bodies, as it provides detailed information about their anatomical characteristics. For this reason, TECH is developing a revolutionary online university program, which will equip nurses with a thorough understanding of how to perform image analysis in order to ensure that snapshots are obtained efficiently.

You will gain a deep understanding of the structure of the human skeleton and biological identification through this Postgraduate Diploma, based on a 100% online methodology"

The emergence of the so-called Industry 4.0 has considerably impacted the Forensic Radiology sector, driving the development of more advanced healthcare imaging technologies. An example of this is Magnetic Resonance Imaging, which provides high-resolution images that allow detailed visualization of internal structures of the human body (such as soft tissues). This tool also detects lesions as well as anomalies or pathologies that are relevant for the recognition of individuals. For example, the presence of a metallic prosthesis. In this way, professionals obtain valuable information that contributes significantly to establish the identity of the deceased.

Faced with this reality, TECH implements a Postgraduate Diploma in Forensic Radiology in Human Identification. Aimed at nursing personnel, the main objective of this program is that these professionals keep themselves technologically updated and master the basic principles to identify injuries in the body of individuals. Therefore, the syllabus will deal with the particularities of the human skeleton, as well as biological identification. In this sense, the specialization will provide the keys to the operation of innovative tools, among which Computed Tomography, Virtopsias or X-Rayox Tubes stand out. Likewise, the didactic materials will offer a detailed classification of traumatic fractures in the forensic context that will enable graduates to detect possible cases of child abuse and even illegal drug transportation.

Regarding the learning system, this course is taught completely online, providing professionals with the necessary flexibility to adapt to their schedules. Additionally, the *Relearning*methodology, based on the repetition of key concepts to fix the knowledge, will facilitate effective and long-lasting learning. This combination of accessibility and innovative pedagogical approach will ensure that graduates will acquire practical skills to optimize both their clinical work and clinical care.

This **Postgraduate Diploma 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
- 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

450 hours of intensive study that will lay the foundation for your professional growth and take you to the pinnacle of Nursing"

You will delve into the Stages of Bone Repair to determine the time elapsed since the occurrence of an injury and contribute to establishing the chronology of events"

Are you looking to enrich your practice with the most innovative techniques for post mortem evaluations? This university program will address in detail the Virtopsia, the latest trend in this area.

Thanks to TECH's Relearning system, you will assimilate the essential concepts in a fast, natural and precise way.

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.

02

Objectives

Upon completion of this program, nurses will be characterized by a high degree of specialization in the field of Forensic Radiology. Therefore, they will have a better understanding of the procedures used in Human Identification practices. In tune with this, they will develop practical skills to optimize the care of human bodies during the different imaging processes. In turn, they will have advanced notions on the interpretation of photographs that will help them to document radiological findings accurately in reports. In this way, they will be qualified to carry out effective interdisciplinary collaborations and contribute to the recognition of individuals.

You will stand out for having a solid understanding of the most innovative radiology techniques used in Human Identification. A wide range of career opportunities will be open to you!"

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
- Identify pathologies or injuries in the body of individuals or corpses with ease, allowing them to contribute in investigations either of criminal acts, identification or cases of negligence of health professionals
- Objectively demonstrate the different findings, helping in the clarification of criminal acts, turning the assessment of body damage, necropsy and skeletal study into a more scientific and reliable procedure
- Specify the different radiodiagnostic aids of pathologies linked to the legal world
- Identify and recognize the different types of maxillofacial trauma and the different dental alveolar trauma
- Differentiate the different traumas according to their location
- Interpret by imaging and know how to differentiate a healthy anatomical structure from an anatomical structure injured by trauma

Specific Objectives

Module 1. Forensic Radiology in Human Identification

- 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

Module 2. Radiodiagnosis of Pathologies Related to Forensic Investigation

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

Module 3. Forensic Radiodiagnosis of Maxillofacial Trauma

- Evaluate the different injured anatomical and dental structures through imaging
- Examine the different alveolodental traumas
- Support the importance of radiodiagnostic techniques in the analysis of the trauma of the individual to be studied
- Present support to the other disciplines to characterize the individual's trauma

Your goal of professional improvement will be much closer thanks to this academic pathway, which will equip you with the skills required to be more efficient in your profession"

03

Course Management

TECH's priority is to offer first-class educational experiences to all. Therefore, it makes a great effort to select the teaching staff that makes up its university programs. In this case, it has brought together in this Postgraduate Diploma the best professionals in the field of Forensic Radiology in Human Identification. They are characterized by their extensive experience in research and application in this field of specialization, which has allowed them to be part of prestigious hospitals at international level. In this way, they pour into this program all their knowledge to contribute to the professional development of the graduates.

An experienced teaching team will provide you with the latest advances in the radiographic interpretation of Le Fort Fractures"

Management

Dr. Ortega Ruiz, Ricardo

- Investigator of Crimes against Humanity and War Crimes
- 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 by 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. Delgado García-Carrasco, Diana Victoria

- Forensic expert specialized in Odontology by the College of Stomatologists and Odontologists of the First Region
- Forensic Odontologist at the Forensic Anatomical Institute
- Master's Degree in Dental Sciences from the Complutense University of Madrid
- Official Master's Degree in Forensic Sciences with specialization in Criminalistics and Forensic Anthropology from the Autonomous University of Madrid
- Degree in Dentistry from the Alfonso X El Sabio University
- University Expert in Legal and Forensic Dentistry Expertise

Dr. Galezo Chavarro, Diana

- Forensic specialist in the Regional Clinical, Psychology, Odontology and Forensic Psychiatry Group
- Expert in support to the certification process in Clinical Forensics
- Expert in Forensic Sciences and Probation Technique at the Libre University
- Expert in Search for Missing Persons in Iberoamerica


Parada Cardiaca
SOLICITAR AYUDA, LLAMAR:
PREPARAR EL LUGAR:
SOPORTE VITAL:
SIEMENS
EOS

04

Structure and Content

Through this Postgraduate Diploma, graduates will obtain a holistic vision of Forensic Radiology in Human Identification. To this end, the academic itinerary will focus on the exhaustive analysis of the human skeleton and biological identification. In this way, professionals will be highly qualified to estimate the age, height and muscular complexion of individuals. Likewise, the syllabus will deal with the main pathologies related to Forensic Investigation, through state-of-the-art techniques such as Ultrasound. This will contribute to the identification of internal injuries, anatomical anomalies or diseases that may have contributed to the death of the subjects.

You will have access to the most complete and updated syllabus in the academic market, which will allow you to make substantial progress in your career as a Nurse"

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

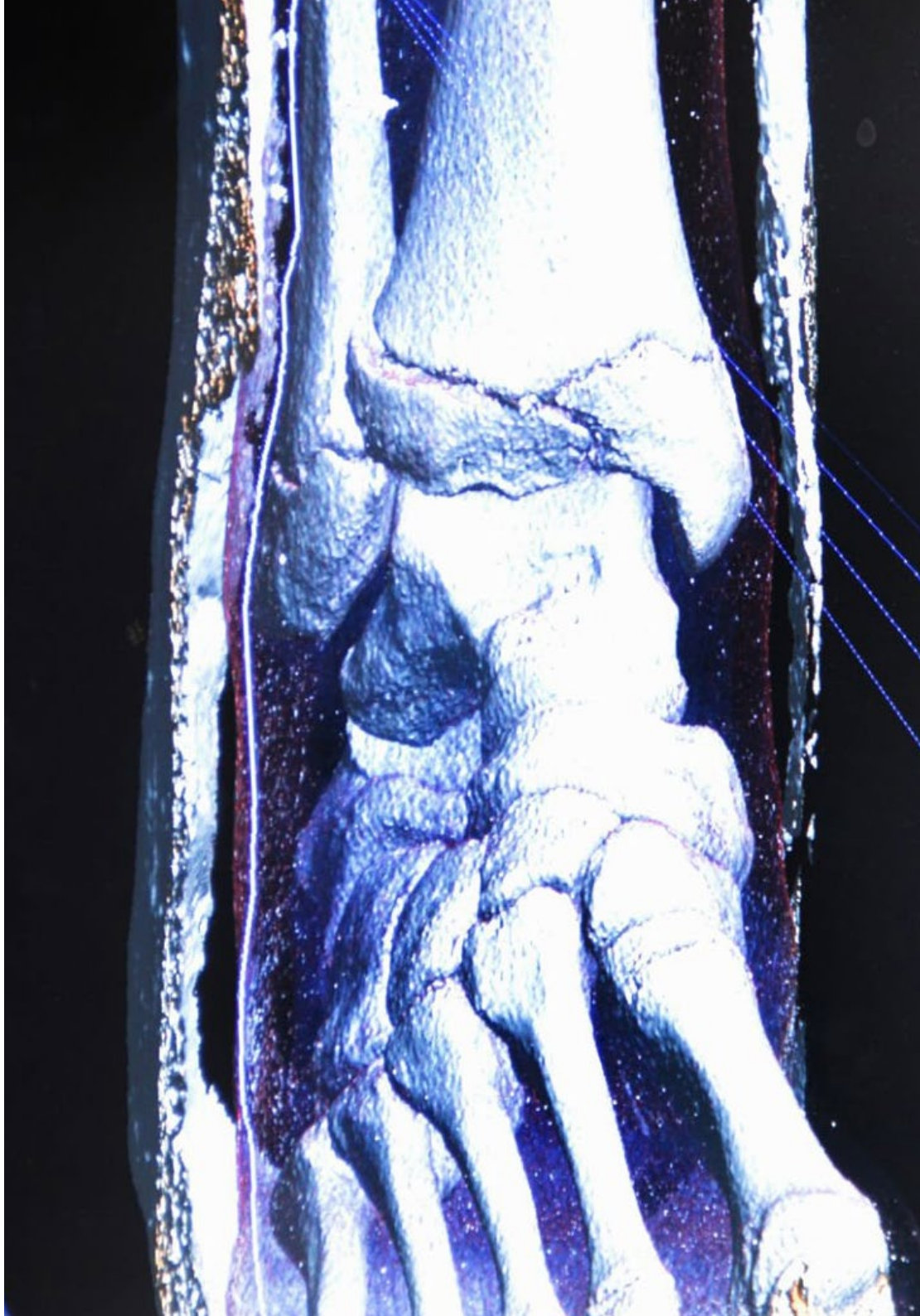
1.2. The Human Skeleton and Biological Identification (I): Osteological Sexual Characterization in Adults
- 1.2.1. Sexual Characterization Through the Skull
- 1.2.2. Sexual Characterization Through the Hip
- 1.2.3. Osteological Sex Characterization from Other Bones

1.3. The Human Skeleton and Biological Identification (II): Osteological Sexual Characterization in Individuals in Maturing 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): Determination of Age 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. Determination of age 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

Module 2. Radiodiagnosis of Pathologies Related to Forensic Investigation

2.1. Classification of Traumatic Fractures in the Forensic Context
- 2.1.1. Classification According to Skin Condition
- 2.1.2. Classification According to Location
- 2.1.3. Classification According to Fracture Trace

2.2. Stages of Bone Repair in the Forensic Context
- 2.2.1. Inflammatory Phase
- 2.2.2. Repair Phase
- 2.2.3. Remodeling Phase

2.3. Child Maltreatment and its Radiodiagnosis in a Forensic Context
- 2.3.1. Simple Radiography
- 2.3.2. Axial Tomography
- 2.3.3. Magnetic Resonance

2.4. Illegal Transport of Narcotics and Radiodiagnostics in a Forensic Context
- 2.4.1. Simple Radiography
- 2.4.2. Axial Tomography
- 2.4.3. Magnetic Resonance

2.5. Simple Radiographic Technique for Identification of Alterations within a Forensic Context
- 2.5.1. Cranial Pathologies
- 2.5.2. Thoracic Pathologies
- 2.5.3. Extremity Pathologies

2.6. Ultrasound Technique for Identification of Pathologies within a Forensic Context
- 2.6.1. Ultrasound
- 2.6.2. Obstetric
- 2.6.3. Wall

2.7. Computed Tomography and Identification of Pathologies in a Forensic Context
- 2.7.1. Cranial
- 2.7.2. Wall
- 2.7.3. Ultrasound

2.8. Magnetic Resonance Imaging and Pathology Identification in a Forensic Context
- 2.8.1. Cranial
- 2.8.2. Wall
- 2.8.3. Ultrasound

2.9. Diagnostic Angiography in a Forensic Context
- 2.9.1. Cranial
- 2.9.2. Ultrasound
- 2.9.3. Extremities

2.10. Virtopsia, Radiology in Forensic Medicine
- 2.10.1. Resonance
- 2.10.2. Tomography
- 2.10.3. Radiography

Module 3. Forensic Radiodiagnosis of Maxillofacial Trauma

3.1. Forensic Maxillofacial Trauma: Fractures of the Upper Third of the Face
- 3.1.1. Fractures of the Frontal Bone
- 3.1.2. Fractures of the Walls of the Frontal Sinuses
- 3.1.3. Fractures of the Temporal/Parietal Bone

3.2. Forensic Maxillofacial Trauma: Fractures of the Middle Third of the Face
- 3.2.1. Nasal Fractures
- 3.2.2. Orbital Fractures
- 3.2.3. Fractures of the Naso-Orbito-Ethmoidal Complex
- 3.2.4. Fractures of the Zygomatic Bone

3.3. Forensic Maxillofacial Trauma: Fractures of the Lower Third of the Face.
- 3.3.1. Fracture of the Mandibular Symphysis / Parasymphysis
- 3.3.2. Fracture of the Mandibular Body
- 3.3.3. Mandibular Angle Fracture
- 3.3.4. Mandibular Ramus Fracture
- 3.3.5. Fracture of the Mandibular Condyle

3.4. Forensic Maxillofacial Trauma: Le Fort Fractures
- 3.4.1. Le Fort I Fractures
- 3.4.2. Le Fort II Fractures
- 3.4.3. Le Fort III Fractures
- 3.4.4. Le Fort IV Fractures

3.5. Forensic Maxillofacial Trauma: Alveolodental Fractures
- 3.5.1. Coronary Fracture
- 3.5.2. Corono-Radicular Fracture
- 3.5.3. Root Fracture
- 3.5.4. Alveolar Fracture
- 3.5.5. Avulsion

3.6. Radiographic Techniques for the Study of Maxillofacial Trauma in the Forensic Context.
- 3.6.1. X-Ray
- 3.6.2. Computerized Axial Tomography
- 3.6.3. Other Radiographic Techniques

3.7. Radiographic Techniques for the Study of Alveolar Tooth Trauma in the Forensic Context
- 3.7.1. X-Ray
- 3.7.2. Computerized Axial Tomography
- 3.7.3. Other Radiological Techniques

3.8. Radiographic Interpretation of Maxillofacial Trauma in the Forensic Context: Isolated Fractures.
- 3.8.1. Radiographic Interpretation of Trauma to the Upper Third of the Face.
- 3.8.2. Radiographic Interpretation of Trauma of the Middle Third of the Face
- 3.8.3. Radiographic Interpretation of Trauma of the Lower Third of the Face

3.9. Radiographic Interpretation of Maxillofacial Trauma Within the Forensic Context Le Fort Fractures
- 3.9.1. Radiographic Interpretation in Le Fort I Fractures.
- 3.9.2. Radiographic Interpretation in Le Fort II Fractures.
- 3.9.3. Radiographic Interpretation in Le Fort III Fractures.
- 3.9.4. Radiographic Interpretation in Le Fort IV Fractures.

3.10. Radiographic Techniques for the Study of Alveolar Tooth Trauma in the Forensic Context
- 3.10.1. Coronary Fracture
- 3.10.2. Corono-Radicular Fracture
- 3.10.3. Alveolar Fracture
- 3.10.4. Root Fracture
- 3.10.5. Avulsion

A high quality university program that will give you the flexibility to combine it with your most demanding daily responsibilities. Enroll now!"

05

Methodology

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

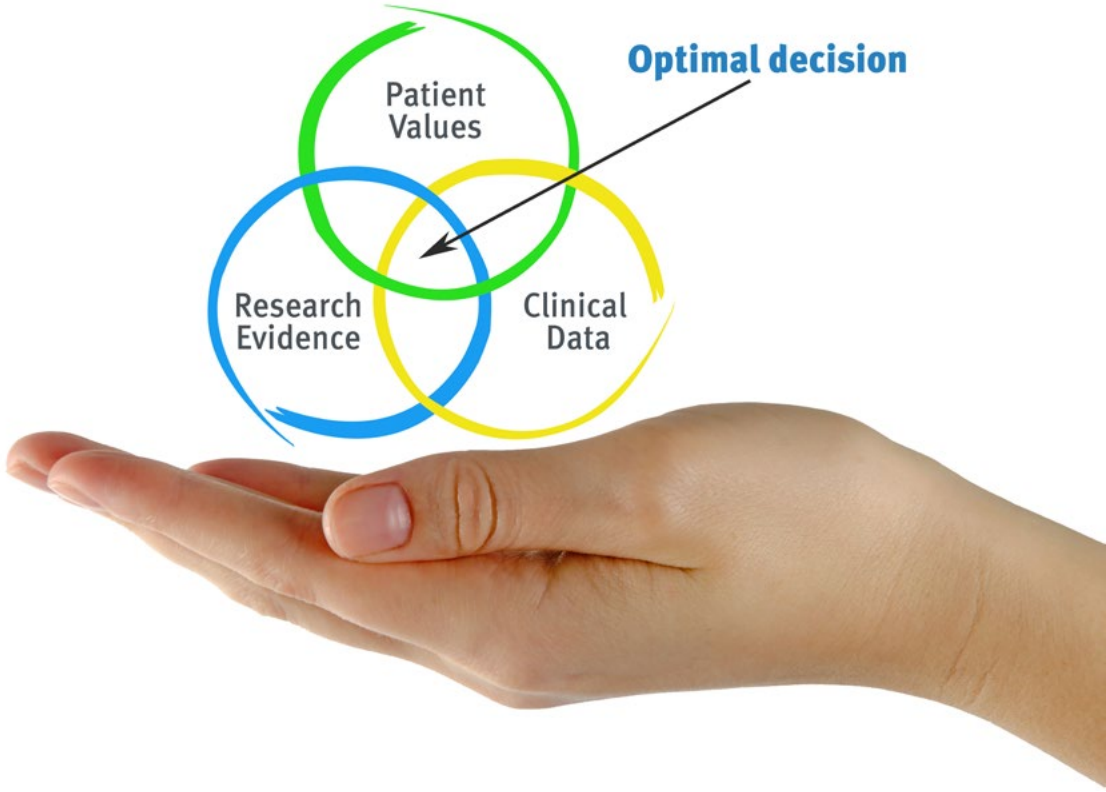
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

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:

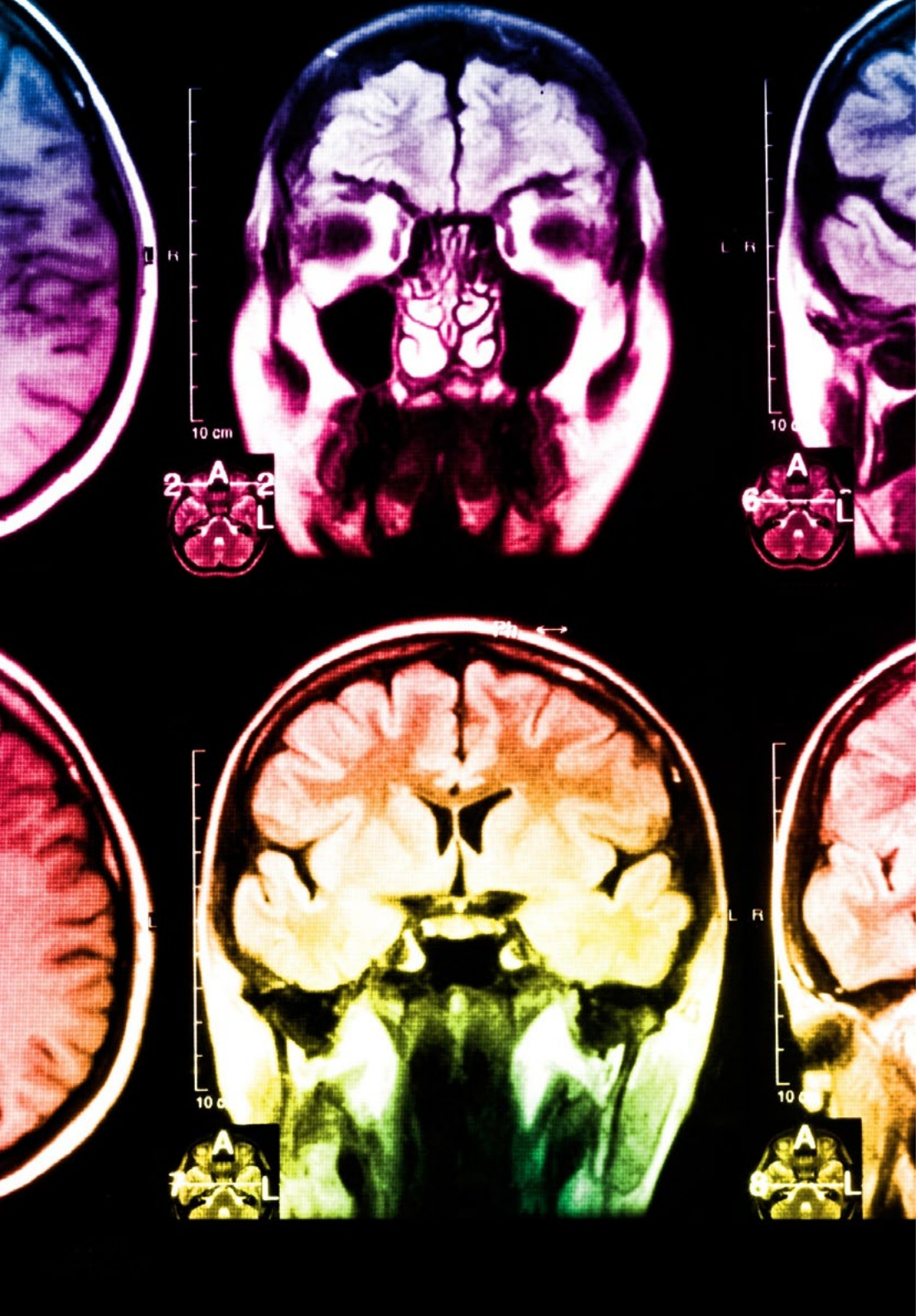
1. Nurses who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on practical skills that allow the nursing professional to better integrate knowledge acquisition into 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 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.

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.

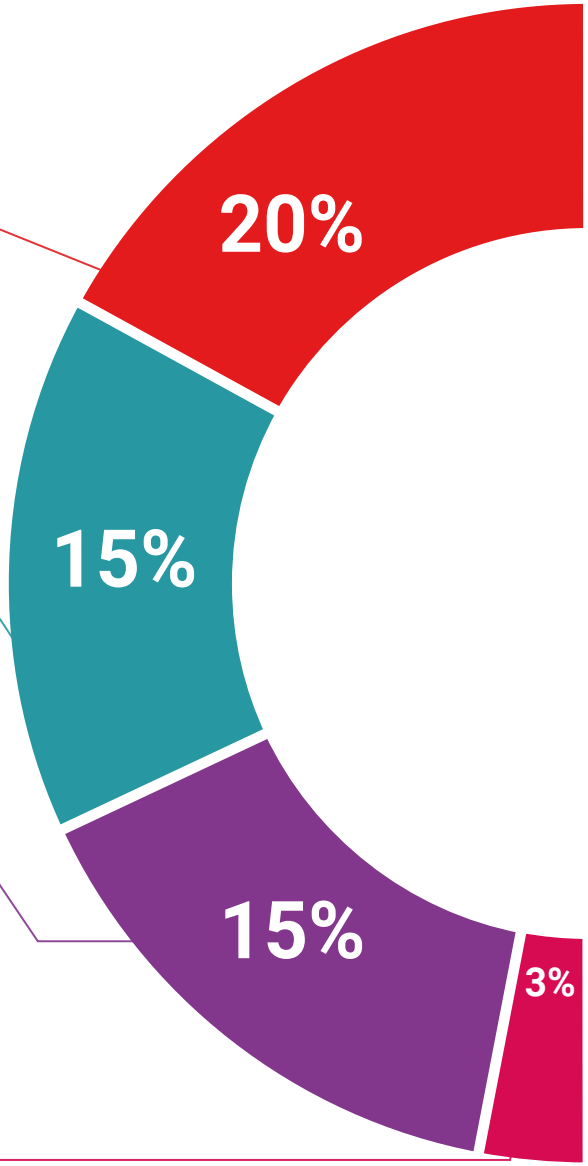
Interactive Summaries

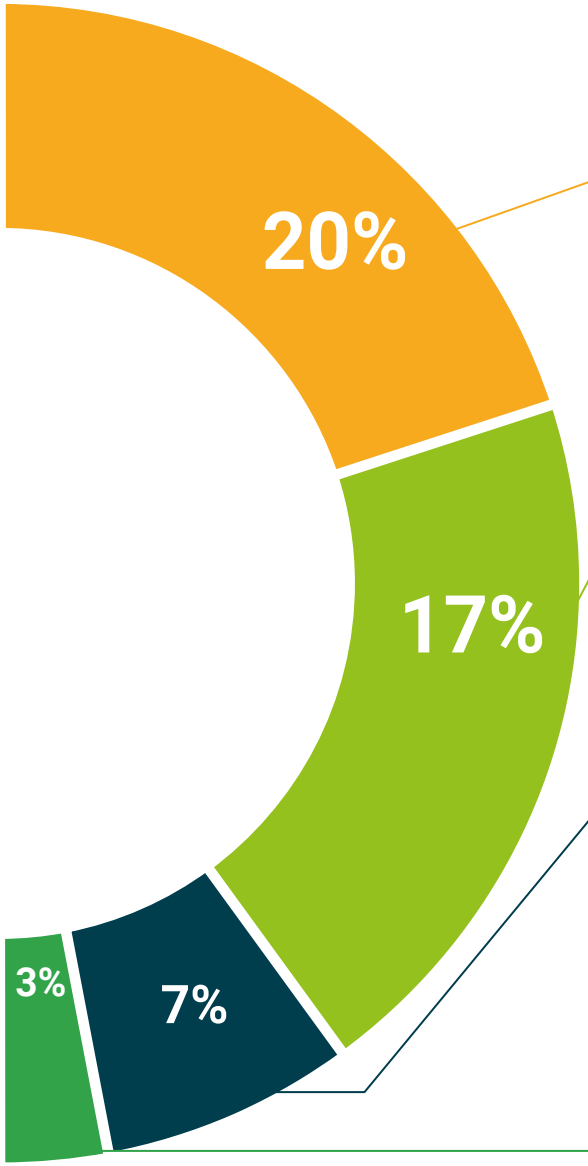
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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

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 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 Diploma in Forensic Radiology in Human Identification guarantees students, in addition to the most rigorous and up-to-date education program, access to a Postgraduate Diploma issued by TECH Global University.

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

This program will allow you to obtain a **Postgraduate Diploma 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 title**, 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 Diploma in Forensic Radiology in Human Identification**

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Accreditation: **18 ECTS**


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

Postgraduate Diploma in Forensic Radiology in Human Identification

This is a program of 450 hours of duration equivalent to 18 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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