Postgraduate Diploma

Forensic Radiology in Human Identification

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tech *global university*

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/medicine/postgraduate-diploma/postgraduate-diploma-forensic-radiology-human-identification**

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01
Introduction

In a new report, the United Nations Organization highlights its concern about the annual number of enforced disappearances around the world, recognizing that there are more than 52,000 unidentified persons in the facilities of forensic services. In this regard, medical professionals can contribute significantly to the recognition of these human bodies and help families clarify the whereabouts of their loved ones. To help in this cause, it is necessary for specialists to update their knowledge frequently and obtain the skills to handle the latest radiological equipment. For this reason, TECH implements a pioneering online university program that brings together the most sophisticated techniques in the area of forensic imaging.

"

With this 100% online Postgraduate Diploma, you will master the most innovative Ultrasound techniques to identify damage to internal organs and provide relevant evidence to clarify the causes of death"

One of the main challenges for Forensic Radiology specialists lies in the anatomical complexity of the maxillofacial region. Although imaging techniques have advanced considerably thanks to technologies such as Computed Tomography, there are still technical limitations in the detection of specific lesions. For example, maxillofacial trauma may involve dense bone fractures or soft tissue injuries that can be difficult to appreciate. Given this reality, clinicians have a responsibility to deepen their understanding of both oral physiology. Only then will they be able to recognize both normal features and anatomical variants and obtain transcendental findings through radiological imaging.

To contribute to this task, TECH has developed an exclusive Postgraduate Diploma in Forensic Radiology in Human Identification.
 Designed by references in this field, the syllabus will analyze in depth the use of more sophisticated radiodiagnostic tools (including MRI, Virtopsias or Ultrasound). In turn, graduates will gain advanced practical skills to detect anatomical particularities relevant to the identification of individuals, such as diseases, traumas or anomalies. In this regard, the specialization will provide the keys to establish the age of individuals based on the ossification of cartilage. The academic materials will also delve into the Stages of Bone Repair, so that experts can determine the time elapsed from injury to death.

On the other hand, this program is taught in a 100% online mode, allowing the specialists to enter the program comfortably. In this way, the only thing they will need to update their knowledge is a device with Internet access (using their cell phone, computer or *tablet*). The program also offers the most avant-garde methodology on the market today: *Relearning*. This teaching system is based on the reiteration of the most important contents to guarantee a natural learning process that will last in the memory of the graduates.

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

" *You will be able to determine the ages of individuals from details such as the closure of bony epiphyses and cranial sutures"*

" *You will delve into the procedure of Diagnostic Angiography to visualize blood vessels in different parts of the body, such as arteries and veins"*
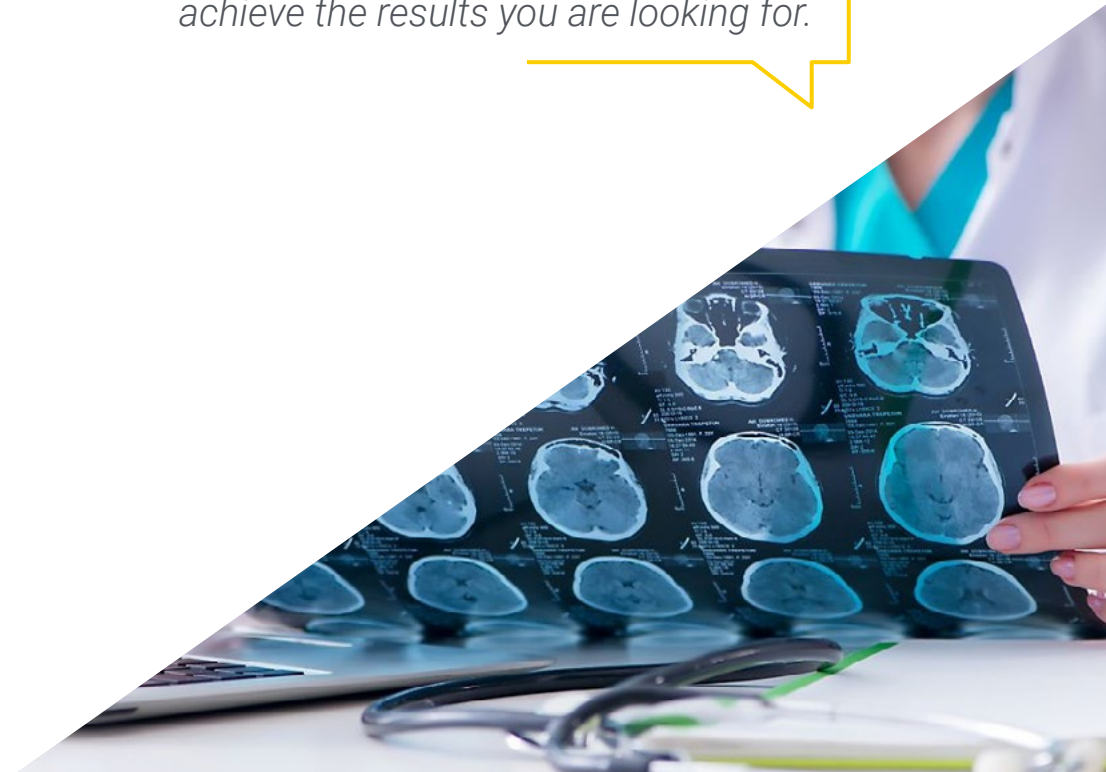
Delve into Forensic Maxillofacial Trauma at the best digital university in the world according to Forbes.

Thanks to TECH's revolutionary Relearning methodology, you will integrate all the knowledge in an optimal way to successfully achieve the results you are looking for.

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 university program, graduates will stand out for having a solid understanding of the fundamentals related to Human Identification in the forensic context. At the same time, specialists will develop advanced skills to interpret and analyze radiological images with high accuracy. In this way, practitioners will be able to locate anatomical features, pathologies or distinctive marks important for the recognition of victims. In addition, they will enrich their daily practice by incorporating the most innovative techniques for the analysis of maxillofacial and alveolodental traumas.

You will master the most modern techniques of Forensic Radiology to obtain the most rigorous images and detect relevant peculiarities for the identification of persons"

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

You will achieve your objectives in a few months thanks to the most dynamic practical content on Radiodiagnosis of pathologies related to Forensic Investigation"

03

Course Management

In order to preserve intact the excellent quality that defines its university programs, TECH has brought together in this Postgraduate Diploma the best specialists in the field of Forensic Radiology in Human Identification. These professionals make up the teaching team, so they have poured into the teaching materials both their solid knowledge of this discipline and their extensive professional background. Committed to teaching, they will convey to the graduates the latest technological trends in the healthcare sector and help them develop advanced competencies for their appropriate use.

" *A unique, key, and decisive educational experience to boost your professional development"*

Management

Dr. Ortega Ruiz, Ricardo

- Director of the Laboratory of Archeology and Forensic Anthropology of the Institute of Forensic Sciences
- 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

Professors

Dr. Delgado García-Carrasco, Diana Victoria

- General Dentist in Primary Care Management of the Community of Madrid
- Forensic expert specialized in Odontology by the College of Dentist and Stomatologists 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 Forensic Dentistry and Forensic Expert in Forensic Dentistry

Dr. Galezo Chavarro, Diana

- Technician Responsible of the South Regional of the National Institute of Legal Medicine and Forensic Sciences
- 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

Structure and Content

This Postgraduate Diploma will provide specialists with the necessary skills to master the most innovative radiological techniques for Human Identification. To achieve this, the academic itinerary will delve into the analysis of the human skeleton and the procedures for biological detection.

Therefore, graduates will be able to locate individual characteristics of people in radiological images (such as anatomical variations or medical implants). The contents will also delve into the radiodiagnosis of pathologies linked to forensic investigation. In line with this, the program will analyze the specificities of situations of child abuse and illegal transport of narcotics.

"
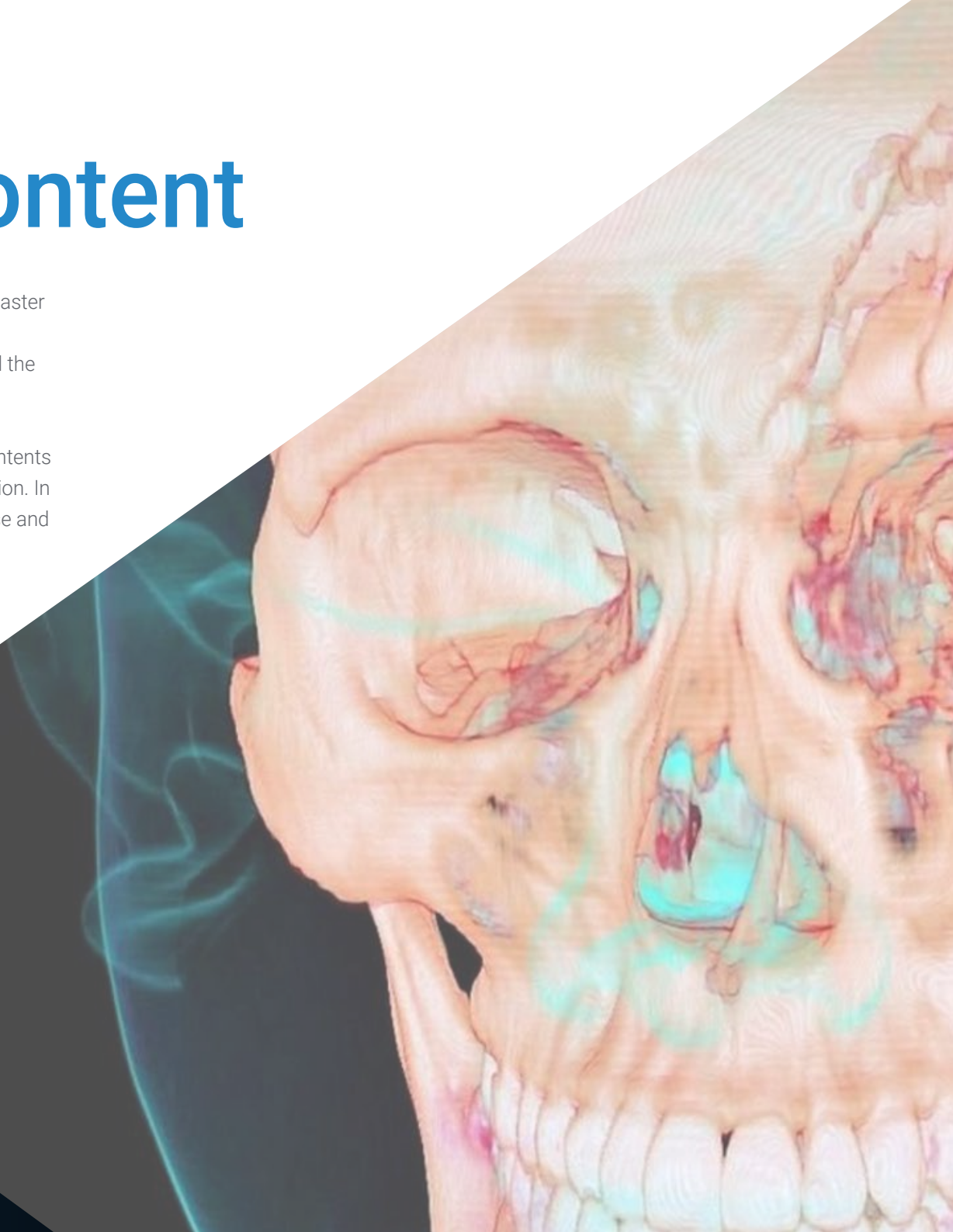
A complete and up-to-date syllabus configured as a high specialization tool of exceptional quality"

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 AntemortemTraumas
    1.9.2. Characterization of PerimortemTraumas
    1.9.3. Characterization of PostmortemTrauma

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. Remodelling Phase

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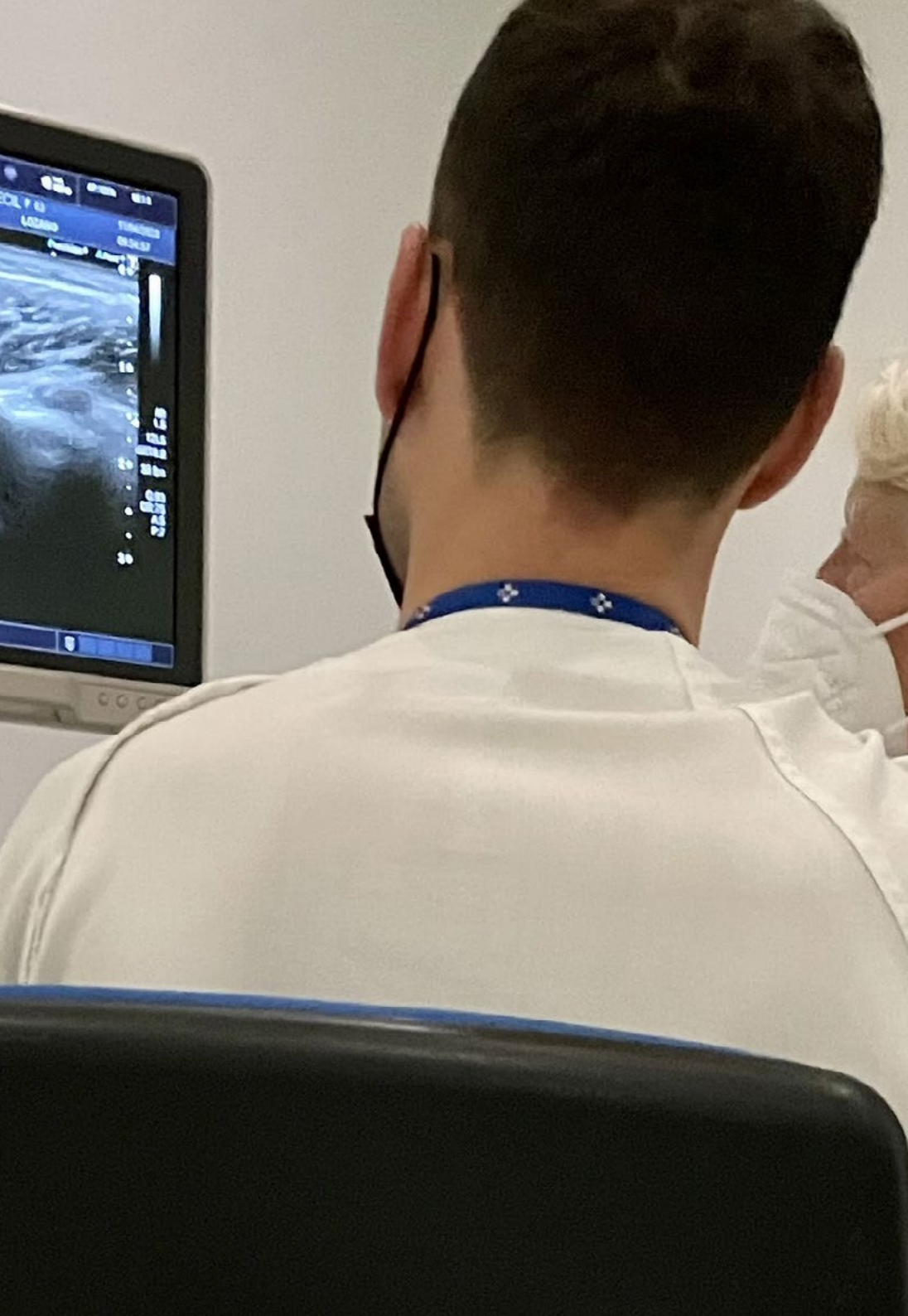   2.3.2. Axial Tomography
    2.3.3. Magnetic Resonance

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

TECH gives you access to one of the best virtual libraries, so that you can enjoy continuous updating. What are you waiting for to enroll?"

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 we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.

According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions in the physician's professional practice.

Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method"

The effectiveness of the method is justified by four fundamental achievements:

1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.

2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.

3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.

4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.

Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.

Professionals will learn through real cases and by resolving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.

01 learning from evidence

02 relearning from evidence

03 testing

04 learning from an expert

05 neurocognitive context dependent learning

06 Von-Restorff effect

07 case based learning through storytelling

08 competencies testing (retesting)

At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology, more than 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

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

In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by TECH's learning system is 8.01, according to the highest international standards.

This program offers the best educational material, prepared with professionals in mind:

Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.

Surgical Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.

Interactive Summaries

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

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

Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.

20%

15%

15%

3%

20%

17%

7%

3%

Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.

Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.

Classes

There is scientific evidence on the usefulness of learning by observing experts. The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.

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.
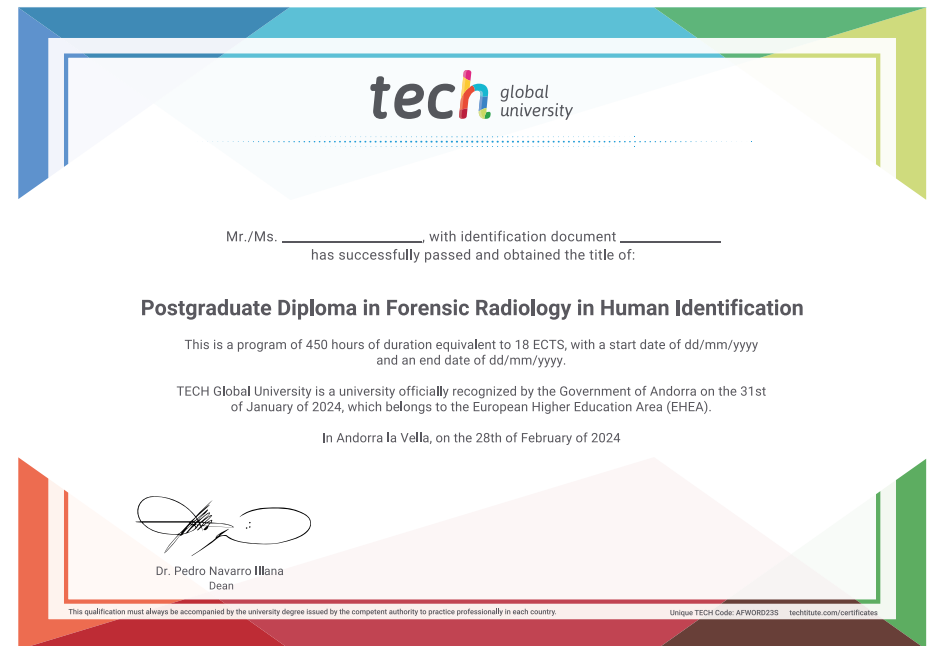
This **TECH Global University** title, is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Forensic Radiology in Human Identification**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**

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tech global university

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

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*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.

Postgraduate Diploma
Forensic Radiology in Human Identification

» Modality: **online**
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» Certificate: **TECH Global University**
» Accreditation: **18 ECTS**
» Schedule: **at your own pace**
» Exams: **online**

Postgraduate Diploma
Forensic Radiology in Pathologies by Compared Anatomy

tech global university