Postgraduate Certificate
Radiomics

tech *technological university*

Postgraduate Certificate
Radiomics

- » Modality: **online**
- » Duration: **6 weeks**
- » Certificate: **TECH Technological University**
- » Dedication: **16h/week**
- » Schedule: **at your own pace**
- » Exams: **online**

Website: **www.techtitute.com/in/medicine/postgraduate-certificate/radiomics**

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01
Introduction

Radiomics makes it possible to obtain meaningful data from radiological images, making it a discipline that can have a significant impact on the health of many people. Collecting valuable information about a patient's health using this method is very useful, as it facilitates diagnosis and treatment. Thus, this area is one of the most important within Nuclear Medicine. This qualification, therefore, offers its students the possibility of specializing in this area, so that they can offer their patients more efficient care to solve their health problems.

" *Radiomics is booming. Specialize now and become an expert highly sought after by the best Nuclear Medicine services in the country"*

Nuclear Medicine is a growing discipline. Every year, new treatments and techniques emerge that make it easier for physicians to diagnose and ensure that patients receive appropriate care. Thus, one of the fastest growing areas within this field is Radiomics.

Radiomics enables healthcare professionals to obtain meaningful patient health data from radiological images. Thanks to these data it is possible to prevent pathologies, to know the evolution of a disease or, simply, to have information on the state of health of people.

For this reason, it is a growing area and professionals who specialize in it achieve success very quickly. This Postgraduate Certificate in Radiomics provides students with all the knowledge and skills necessary to become experts in the field, so that they can apply everything they have learned in their Nuclear Medicine services.

Throughout this qualification students will be able to learn about issues such as machine learning or artificial intelligence applied to Radiomics, image biomarkers, multidimensionality in the image or the levels of evidence of the data obtained. For this reason, this program is the most complete on this subject and will make the professionals who complete it true experts.

In addition, thanks to TECH's innovative teaching methodology, students will be able to combine their studies with their professional careers, as this qualification follows a 100% online learning process, complemented by practical exercises and dynamic assignments.

This **Postgraduate Certificate in Radiomics** is the most complete and up-to-date scientific program on the market. Its most notable features are:

- The development of case studies presented by experts in Radiomics and Nuclear Medicine
- The graphic, schematic, and eminently practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Practical exercises where self-assessment can be used 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

Deepen your knowledge in Nuclear Medicine with this Postgraduate Certificate"

" *Incorporate Radiomics into your diagnostic processes and increase your prestige as a Nuclear Medicine professional"*

Update your knowledge in Nuclear Medicine. Enroll now.

Specialize and improve your diagnostics thanks to what you will learn in this qualification.
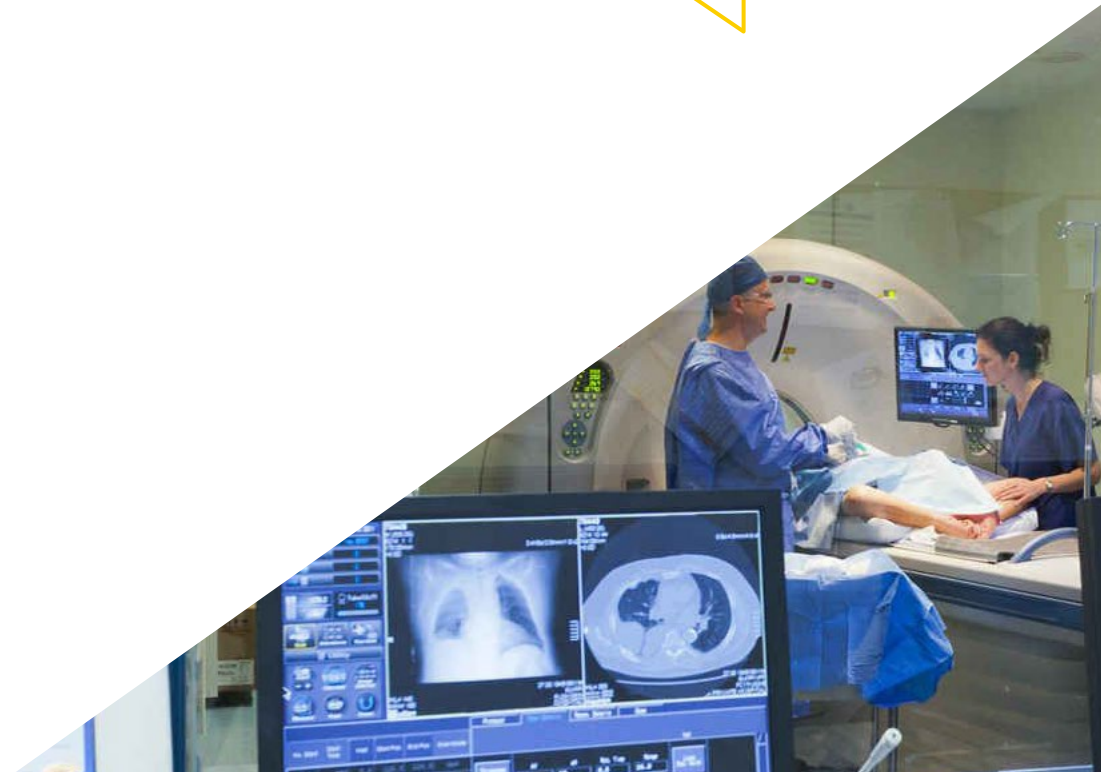
The program's teaching staff includes professionals from the sector who contribute their work experience to this training program, as well as renowned specialists from leading societies and prestigious universities.

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 training programmed to train 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 academic year. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

Objectives

The main goal of this Postgraduate Certificate in Radiomics is to turn students into true experts in this method of obtaining information through radiological images, so that they can improve the care of their patients. Thus, thanks to this technique, physicians will be able to perform a detailed monitoring of patients, while being able to prevent the onset of other pathologies.

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"
Your professional goals will be much closer thanks to this Postgraduate Certificate in Radiomics"

General Objectives

- Update the specialist in Nuclear Medicine
- Perform and interpret functional tests in an integrated and sequential manner
- Achieve diagnostic guidance for patients
- Assist in deciding the best therapeutic strategy, including radiometabolic therapy, for each patient

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Specific Objectives

- Obtain diagnostic, response predictive and prognostic biomarkers
- Provide the patient with personalized precision therapy

> *This qualification will make you a great expert in Radiomics"*

03
Course Management

In order to obtain all the necessary knowledge to work in the Radiomics area, TECH offers the students of this Postgraduate Certificate a first level teaching staff. This faculty will provide them with all the necessary skills to be able to obtain and analyze data from radiological images, improving the diagnosis and treatment of patients who require it. In this way, students will be able to learn directly from the best specialists in the field.
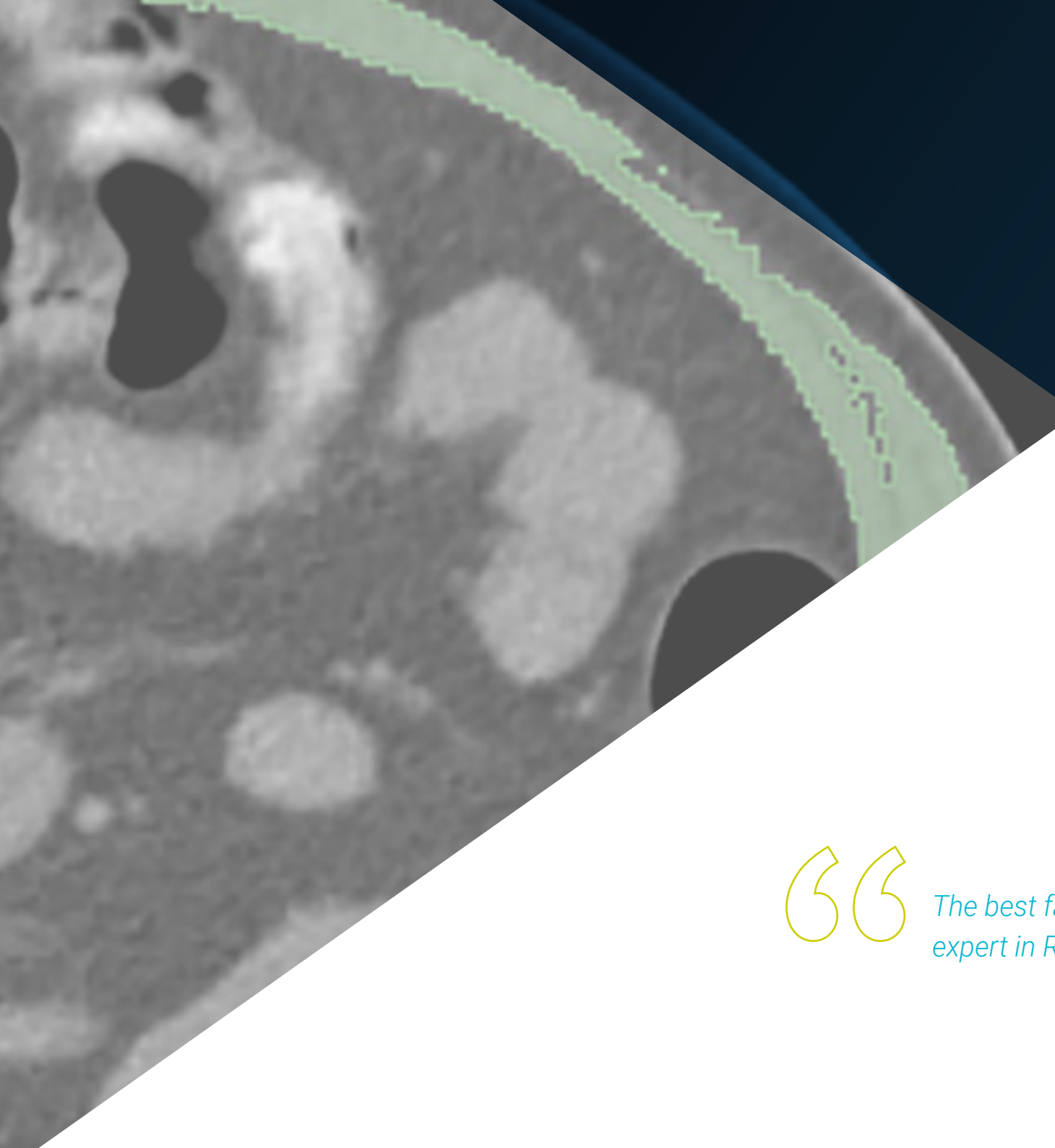
The best faculty will make you an expert in Radiomics"

Management

Dr. Mitjavila, Mercedes

- Head of Nuclear Medicine Service Puerta de Hierro University Hospital Majadahonda, Madrid
- Project Manager of the Nuclear Medicine Unit in the Diagnostic Imaging Department of the Alcorcón Foundation University Hospital
- Head of Service of Nuclear Medicine of the Puerta de Hierro Hospital, Majadahonda. Competitive examination BOCM
- Degree in Medicine and General Surgery from the University of Alcalá de Henares
- MIR in Nuclear Medicine Specialist by the MIR System
- PhD in Medicine and General Surgery from the University of Alcalá de Henares
- Interim Physician of the Nuclear Medicine Service of the Ramón y Cajal Hospital
- Interim Physician in the Nuclear Medicine Unit at Getafe University Hospital
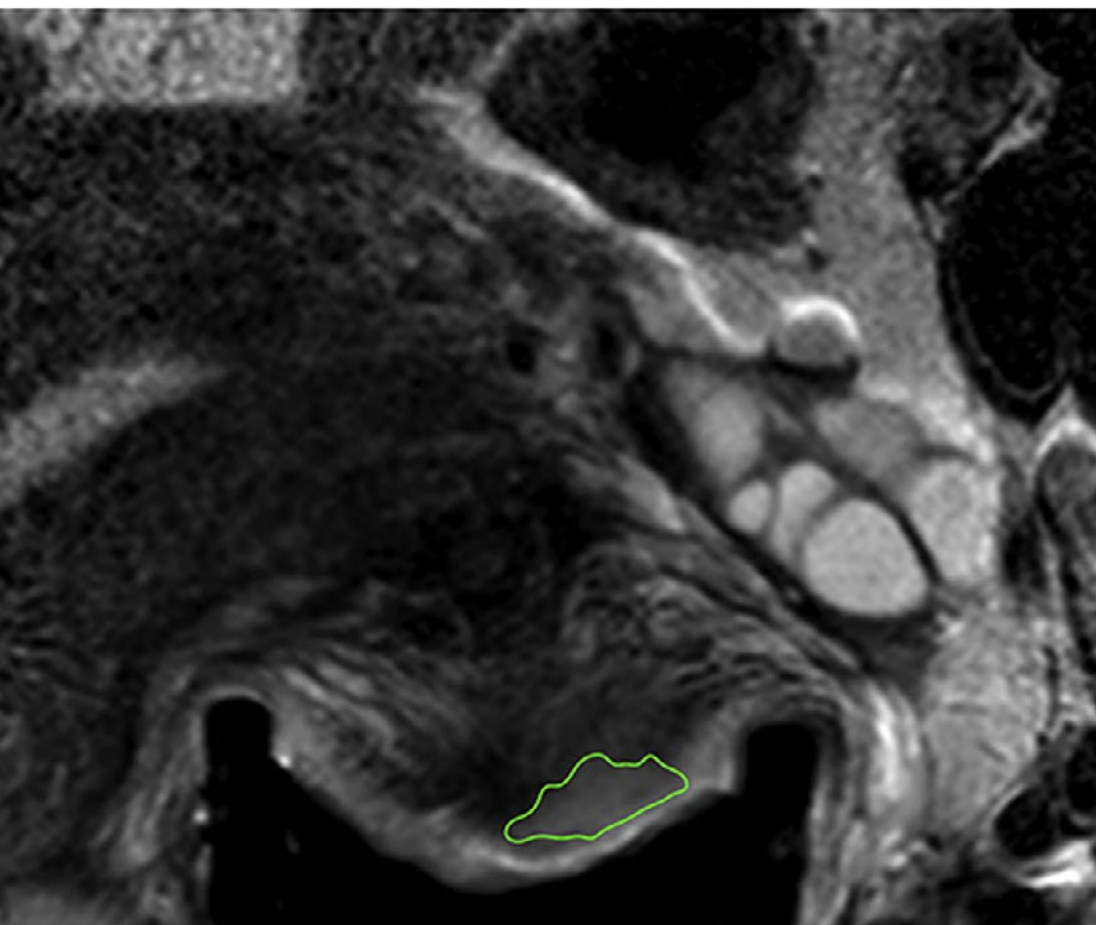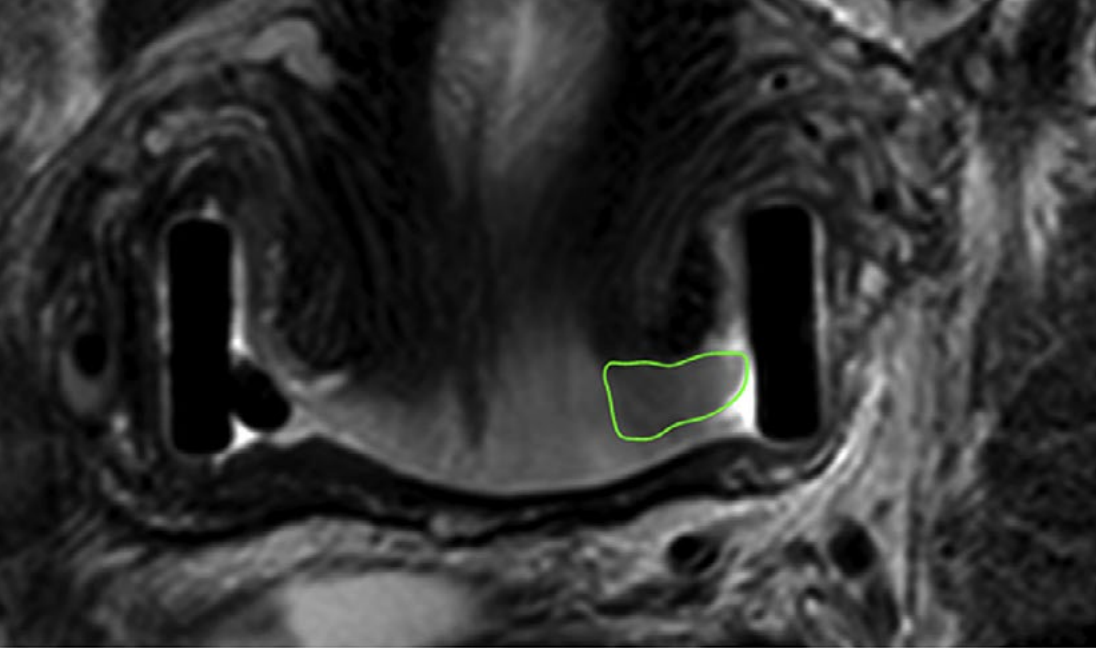
Professors

Mr. Herrero González, Antonio

- Data Analytics Manager (Big Data and Advanced Analytics Area)
- Director of Information Systems (IT) at General Hospital of Villalba
- Director of Information Systems (IT) in Rey Juan Carlos University Hospital
- Technical Engineering in Computer Systems. University of Salamanca
- Master's Degree in Management of Health Information and Communication Systems and Technologies. Carlos III Health Institute
- Master's Degree in Big Data Analysis. MB European University of Madrid

04
Structure and Content

This Postgraduate Certificate in Radiomics is structured in 1 module with which students will be able to learn everything about this discipline. Thus, upon completion they will master areas such as imaging biomarkers, artificial intelligence and machine learning or existing levels of evidence. With this knowledge, students will be able to work in the field of Radiomics with total efficiency, obtaining data with which to adequately treat patients.

The most innovative and specialized contents in Radiomics can be found in this Postgraduate Certificate"

Module 1. Radiomics

1.1. Artificial Intelligence, *Machine Learning*, *Deep Learning*

1.2. Radiomics Today

1.3. Imaging Biomarkers

1.4. Multidimensionality in Imaging

1.5. Applications: Diagnosis, Prognosis and Prediction of Response

1.6. Evidence Levels

1.7. Combination with Other "omics": Radiogenomics

The most complete syllabus on Radiomics is in this qualification"

Methodology

This training program provides you with 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 Harvard 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 multimedia content presentation training Exclusive system 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 your goals.

Classes

There is scientific evidence on the usefulness of learning by observing experts: The system termed Learning from an Expert strengthens knowledge and recall capacity, and generates confidence in the face of difficult decisions in the future.

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 Certificate in Radiomics guarantees you, in addition to the most rigorous and up-to-date training, access to a certificate issued by TECH Technological University.

> " *Successfully complete this training program and receive your university certificate without travel or laborious" paperwork"*

This **Postgraduate Certificate in Radiomics** contains the most complete and up-to-date scientific program on the market.

After the students has passed the assessments, they will receive their corresponding **PostgraduateCertificate diploma** issued by **TECH Technological University** via tracked delivery*.

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Certificate and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Certificate in Radiomics**

Official Nº of Hours: **150 h.**

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university

Awards the following
CERTIFICATE
to

Mr./Ms. _____, with identification number _____.
For having passed and accredited the following program

POSTGRADUATE DIPLOMA
in

Radiomics

This is a qualification awarded by this University, equivalent to 500 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
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 certificate is sued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

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