Postgraduate Certificate
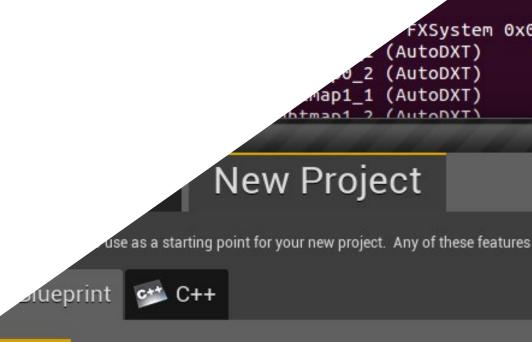## Linux Operating System for Medicine

Postgraduate Certificate
Linux Operating System for Medicine

Course Modality: **Online**

Duration: **2 months**

Certificate: **TECH Technological University**

Official Nº of hours: **175 h.**

Website: **www.techtitute.com/pk/medicine/postgraduate-certificate/linux-operating-system-medicine**
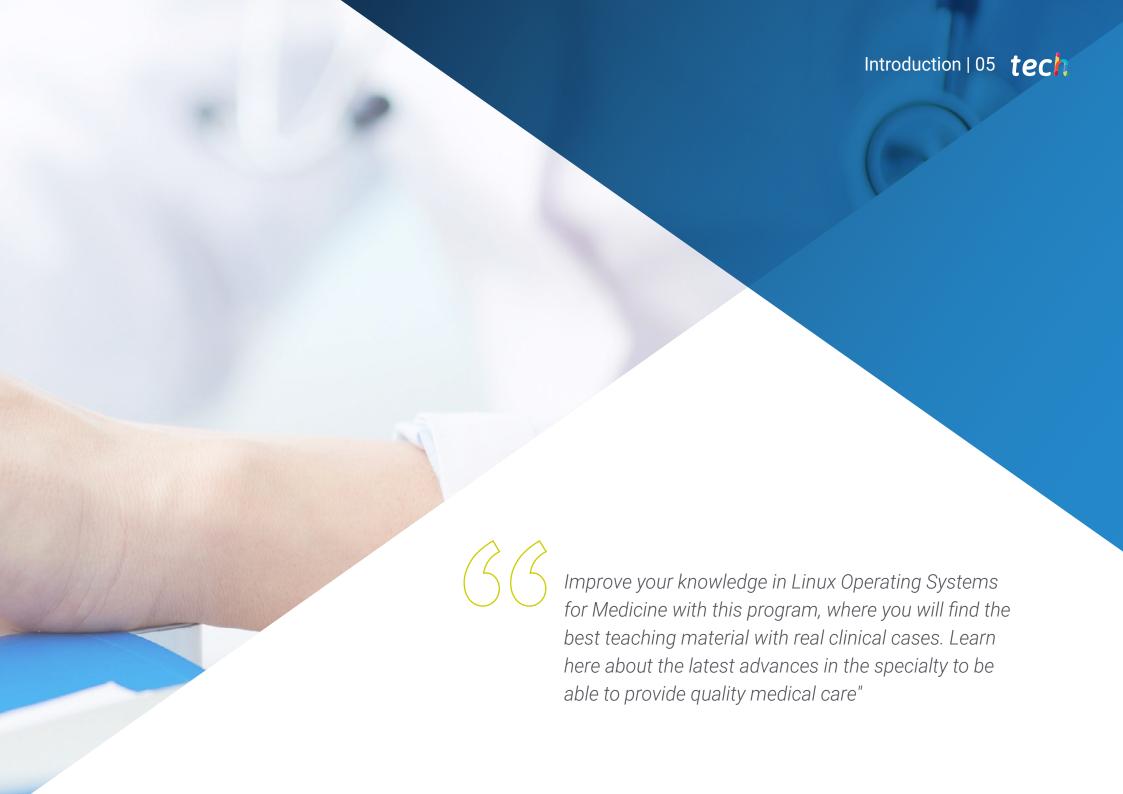
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01
Introduction

The concept of genomic or precision oncology is not entirely new; physicians have been using blood types to tailor blood transfusions for over a century. What is different today is the rapid growth of genomic data that can be collected quickly and cheaply from the patient and the community at large, and the potential to gain insights from sharing that data. The scale and complexity of genomic data dwarf the measurements traditionally used in laboratory testing.

tech

Improve your knowledge in Linux Operating Systems for Medicine with this program, where you will find the best teaching material with real clinical cases. Learn here about the latest advances in the specialty to be able to provide quality medical care"

A fundamental objective of the program is to familiarize students with and disseminate IT knowledge that is already applied in other areas, but which has a minimal implementation in the medical world, despite the fact that for Genomic medicine to become a reality, it is necessary to accurately interpret the huge volume of clinical information currently available and associate it with the biological data generated after a bioinformatics analysis. While this is a difficult challenge, it will allow the effects of genetic variation and potential therapies to be explored quickly, inexpensively and with greater precision than is currently possible.

Humans are not naturally equipped to perceive and interpret genomic sequences, to understand all the mechanisms, pathways and interactions that take place within a living cell, nor to make medical decisions with tens or hundreds of variables. To move forward, a system with superhuman analytical capabilities is required to simplify the work environment and show the relationships and proximities between variables. In genomics and biology, it is now recognized that it is better to spend resources on new computational techniques than on pure data collection, something that is possibly the same in medicine and, of course, oncology.

We have millions of data or publications, but when they are analyzed by physicians or biologists, the conclusions are totally subjective and relative to the available publications or data, which are prioritized arbitrarily. This generates partial knowledge, which is increasingly distanced from the genetic and biological knowledge available and supported by computation, so a giant step in the implementation of precision medicine is to reduce this distance through the massive analysis of available medical and pharmacological information.

This **Postgraduate Certificate in Linux Operating System for Medicine** contains the most complete and up-to-date scientific program on the market. The most important features include:

- Development of practical cases presented by experts in Linux Operating System for Medicine
- Its graphic, schematic and practical contents provide scientific and practical information on those disciplines that are essential for professional practice
- Latest information on Linux Operating System for Medicine
- Practical exercises where the self-assessment process can be carried out to improve learning
- Special emphasis on innovative methodologies on Linux Operating System for Medicine
- All of this will be complemented by 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

Update your knowledge with the program on Linux Operating System for Medicine"

This Postgraduate Certificate may be the best investment you can make in the selection of a refresher program for two reasons: in addition to updating your knowledge in the Linux Operating System for Medicine, you will obtain a qualification from TECH Technological University"

Increase your confidence in decision making by updating your knowledge through this program.

Take the opportunity to learn about the latest advances in Linux Operating System for Medicine and improve your patients care.

It includes in its teaching staff professionals belonging to the field of Linux Operating System for Medicine, who pour into this program the experience of their work, in addition to recognized specialists belonging to reference societies and prestigious universities.

Thanks to its multimedia content elaborated with the latest educational technology, this program will allow the professional a situated and contextual learning, that is to say, a simulated environment that will provide an immersive learning programmed to work in real situations.

The design of this program is centered on problem-based learning, through which the student must try to solve the different professional practice situations that arise throughout the program. For this, the student will be assisted by an innovative interactive video system created by recognized experts in the field of Linux Operating System for Medicine and with great teaching experience.

LINUX

02
Objectives

The Linux Operating System for Medicine program is oriented to facilitate the performance of the physician dedicated to the treatment of oncological pathology, in which it is necessary to accurately interpret the huge volume of clinical information currently available and associate it with the biological data generated after a bioinformatics analysis.

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This program will provide you with the skills to carry out your medical praxis with confidence and will help you to grow both personally and professionally"
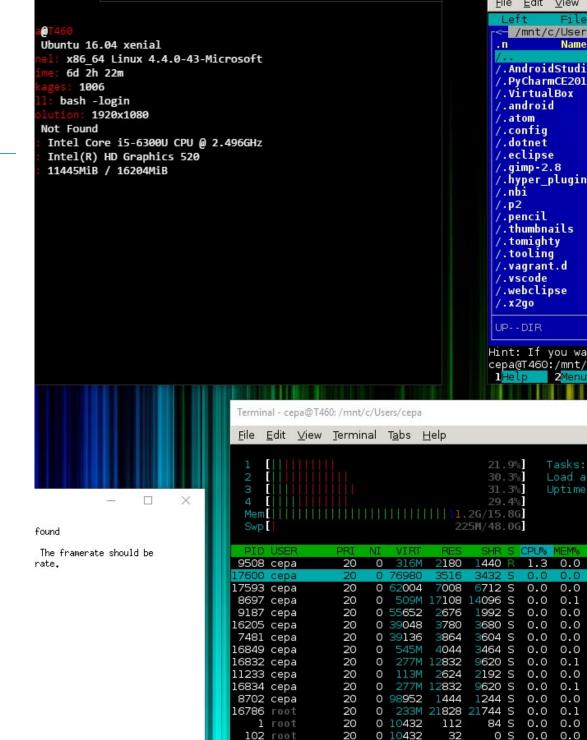
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General Objective

• Be able to accurately interpret the volume of clinical information currently available and associated with the biological data generated after a bioinformatic analysis

"

Update your knowledge with the program on Linux Operating System for Medicine"
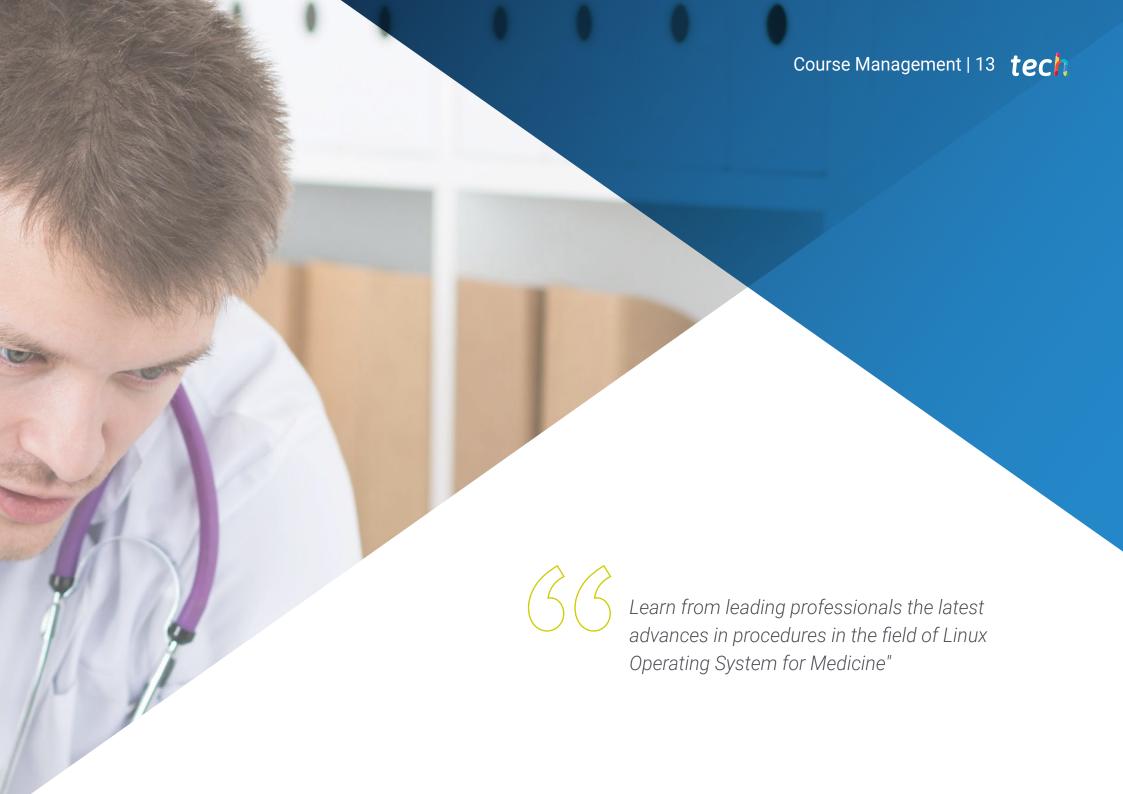
Specific Objectives

- Learn about the Linux operating system, which is currently essential in the scientific world both for the interpretation of biological data from sequencing and it also should be for medical text mining when handling large-scale data

- Provide the basics of accessing a Linux server and how to find and install packages to install software locally

- Describe basic Linux commands for: creating, renaming, moving, and deleting directories; listing, reading, creating, editing, copying, and deleting files

- Understand how permissions work and how to decrypt the most cryptic Linux permissions easily

03

Course Management

The program includes in its teaching staff reference specialists in Linux Operating System for Medicine, who pour into this program the experience of their work. In addition, other specialists of recognized prestige participate in its design and elaboration, completing the program in an interdisciplinary manner.

"

Learn from leading professionals the latest advances in procedures in the field of Linux Operating System for Medicine"

Management

Dr. Oruezábal Moreno, Mauro Javier

- Head of the medical Oncology Service at La Paz University Hospital since 2017
- Research Visitors at University of Southampton
- Master's Degree in Bioinformatics and Biostatistics UOC-UB
- Master's Degree in Bioinformatics Analysis, Pablo de Olavide University
- Doctor of Medicine from the Complutense University of Madrid. Outstanding Cum Laude Qualification
- Member of the Spanish Society of Medical Oncology and GECP Group (Spanish Group of Lung Cancer)
- Specialist in Medical Oncology, University Hospital San Carlos of Madrid
- Degree in Medicine and Surgery, Navarra University

Dr. Krallinger, Martin

- Head of the text mining unit at the Spanish National Cancer Research Center (CNIO)
- He has completed the selection process for the position of head of the text mining unit at the Barcelona Supercomputing Center (BSC)
- Expert in the field of biomedical and clinical text mining and linguistic technologies
- Expert in specific text mining applications for drug safety, molecular systems biology and oncology
- Participated in the implementation and evaluation of biomedical named entity recognition components, information extraction systems, semantic indexing of large datasets of heterogeneous document types
- Participated in the development of the first biomedical text annotation meta-server (biocreative metaserver - BCMS) and the BeCalm metaserver
- Organizer of BioCreative community evaluation challenges for the evaluation of natural language processing tools and has participated in the organization of biomedical text mining tasks in various international community challenges, including IberEval and CLEF

Professors

Mr. Alberich Martí, Ricardo
- Full university professor of Mathematics, Sciences and Computing (Director)
- Computer Science and Artificial Intelligence University of the Balearic Islands

Ms. Álvarez Cubero, María Jesús
- Professor of the Department of Biochemistry III and Immunology, University of Granada

Mr. Andrés León, Eduardo
- Head of the Bioinformatics Unit at the Institute of Parasitology and Biomedicine "Lopez-Neyra" - CSIC
- Degree in Biology and Molecular Biology, Universidad Autónoma de Madrid

Ms. Astudillo González, Aurora
- Anatomic Pathology Service
- Associate Professor at the University of Oviedo linked to the Central University Hospital of Asturias. Scientific Director of the Principality of Asturias Biobank

Ms. Burón Fernández, María del Rosario
- Internal Medicine Department, Infanta Cristina University Hospital

Mr. Carmona Bayonas, Alberto
- Medical Oncology Service, Morales Meseguer General University Hospital

Ms. Ciruelos, Eva Maria
- MD, PhD. D. Medical Oncology Service, 12 de Octubre University Hospital, Madrid
- HM CIOCC, Madrid

Mr. Galiana, Enrique de Andrés
- Mathematics Department, University of Oviedo

Mr. De la Haba Rodríguez, Juan
- Medical Oncology Department, University of Cordoba, Reina Sofia University Hospital, University of Cordoba

Mr. Fernández Martínez, Juan Luis
- Director of the Inverse Problems, Optimization and Machine Learning Group, Department of Mathematics. University of Oviedo

Ms. Figueroa, Angelica
- Institute of Biomedical Research A Coruña (INIBIC)
- Research Group Leader, Epithelial Plasticity and Metastasis

Ms. García Casado, Zaida
- Laboratory of Molecular Biology Valencian Institute of Oncology Foundation
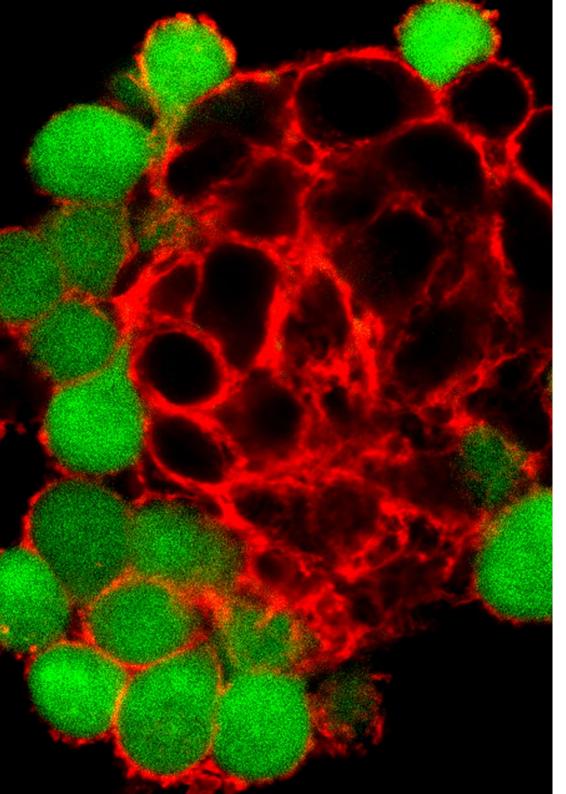
Mr. GarcíaFoncillas, Jesús
- Jiménez Diaz, Foundation Medical Oncology Service

Mr. Gomila Salas, Juan Gabriel
- University Professor Mathematical Sciences and Computer Science and Artificial Intelligence, University of the Balearic Islands

Mr. González Gomáriz, José
- IdiSNA (Institute for Health Research of Navarra) Researcher in Training

Mr. Hoyos Simón, Sergio
- Medical Oncology Service at Rey Juan Carlos University Hospital

Mr. Intxaurrondo, Ander
- Life Sciences-Text Mining
- Barcelona Supercomputing Center

Ms. Jiménez-Fonseca, Paula
- Coordinator of the Digestive and Endocrine Tumors Section Medical Oncology. Asturias Central University Hospital

Ms. Lage Alfranca, Yolanda
- Jiménez Diaz, Foundation Medical Oncology Service

Mr. López Guerrero, José Antonio
- Medical Oncology Service, Valencian Institute of Oncology

Mr. López López, Rafael
- Head of the Medical Oncology Department
- Santiago de Compostela University Hospital Complex
- Translational Medical Oncology Group Health Research Institute

Mr. Martínez González, Luis Javier
- According to the precepts laid down by Camper Genomics Unit
- Pfizer center - University of Granada - Andalucía Government Center for Genomics and Oncology Research
- Pfizer - University of Granada - Andalucía Government Centre for Genomics and Oncological Research (GENYO)

Ms. Martínez Iglesias, Olaia
- Institute of Biomedical Research A Coruña (INIBIC)
- Research Group Leader, Epithelial Plasticity and Metastasis

Mr. Paramio Gonzalez, Jesús María
- CIEMAT Molecular Oncology Unit
- 12 de Octubre Research Institute of Madrid

Mr. Pascual Martínez, Tomás
- Barcelona Clinical Hospital
- Translational Genomics and Targeted Therapeutics in Solid Tumours Lab (IDIBAPS)

Ms. Pérez Gutiérrez, Ana María
- Student on the Master's Degree in the Clinical Bioinformatics Department of the Progress and Health Foundation, FPS, Virgen del Rocío Hospital, Seville
- PhD student in Biomedicine, UGR

Ms. Ribalta, Teresa
- MD, PhD. Chief, Anatomic Pathology Service, Hospital Sant Joan de Déu, Biobank
- Consultor, Anatomic Pathology Service, Hospital Clínic
- Professor of Pathology, Universitat de Barcelona

Mr. Sánchez Rubio, Javier
- Pharmacy Department, Getafe University Hospital

Mr. Olivas Varela, José Ángel
- Deputy Director, Department of Information Technologies and Systems, Higher School of Computer Science

Mr. Torres, Arnau Mir
- Full university Professor of Mathematical Sciences and Computer Science and Artificial Intelligence , University of the Balearic Islands

Soares, Felipe
- Artificial Intelligence and Machine Learning Engineer at Apple
- Text Mining Research Engineer at the National Supercomputing Center in Barcelona

Mr. Rueda Fernández, Daniel
- Research Unit of the 12 de Octubre University Hospital, Madrid

Mr. Segura Ruiz, Víctor
- CIMA University of Navarra (Bioinformatics Platform) Unit Director

Mr. Vázquez García, Miguel
- Genome Informatics Group Leader
- Barcelona Supercomputing Center

Mr. Velastegui Ordoñez, Alejandro
- Medical Oncology Department,

04
Structure and Content

The structure of the contents has been designed by a team of professionals from the best educational centers, universities, and companies in the national territory, aware of the relevance of current specialization in order to intervene in the training and support of students, and committed to quality teaching through New Educational Technologies.

This Postgraduate Certificate in Linux Operating System for Medicine contains the most complete and up-to-date scientific program on the market"

Module 1. Use of Unix and Linux in Bioinformatics

1.1.   Introduction to the Linux Operating System
    1.1.1.   What is an Operating System?
    1.1.2.   The Benefits of Using Linux
1.2.   Linux Environment and Installation
    1.2.1.   Linux Distributions?
    1.2.2.   Linux Installation Using a USB Memory
    1.2.3.   Linux Installation Using a CD-ROM
    1.2.4.   Linux Installation Using a Virtual Machine
1.3.   The Command Line
    1.3.1.   Introduction
    1.3.2.   What is a Command Line?
    1.3.3.   Working on the Terminal
    1.3.4.   Shell and Bash
1.4.   Basic Browsing
    1.4.1.   Introduction
    1.4.2.   How to Learn the Current Location?
    1.4.3.   Absolute and Relative Routes
    1.4.4.   How to Navigate in the System?
1.5.   File Manipulation
    1.5.1.   Introduction
    1.5.2.   How to Build a Directory?
    1.5.3.   How to Move to a Directory?
    1.5.4.   How to Create an Empty File?
    1.5.5.   Copying a File and Directory
    1.5.6.   Deleting a File and Directory

1.6.   VI Text Editor
    1.6.1.   Introduction
    1.6.2.   How to Save and Exit?
    1.6.3.   How to Browse a File in the VI Text Editor?
    1.6.4.   Deleting Contents
    1.6.5.   The Undo Command
1.7.   Wildcards
    1.7.1.   Introduction
    1.7.2.   What are Wildcards?
    1.7.3.   Examples of Wildcards
1.8.   Licences
    1.8.1.   Introduction
    1.8.2.   How to See the Licences of a File?
    1.8.3.   How to Change the Licences?
    1.8.4.   Licence Configuration
    1.8.5.   Licences for Directories
    1.8.6.   The "Root" User
1.9.   Filters
    1.9.1.   Introduction
    1.9.2.   Head
    1.9.3.   Tail
    1.9.4.   Sort
    1.9.5.   nl
    1.9.6.   wc
    1.9.7.   Cut
    1.9.8.   Sed
    1.9.9.   Uniq
    1.9.10.   Tac
    1.9.11.   Other Filters

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

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.

06
Certificate

This Postgraduate Certificate in Linux Operating System for Medicine guarantees you, in addition to the most rigorous and up-to-date training, access to a Postgraduate Certificate issued by TECH Technological University.

Successfully complete this program and receive your university degree without travel or laborious paperwork"

This **Postgraduate Certificate in Linux Operating System for Medicine** contains the most complete and up-to-date scientific program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Certificate** 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 Linux Operating System for Medicine**

Official Nº of hours: **175 h.**

tech technological university

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

POSTGRADUATE CERTIFICATE
in

Linux Operating System for Medicine

This is a qualification awarded by this University, equivalent to 175 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 issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

Postgraduate Certificate
Linux Operating System for Medicine

Course Modality: **Online**

Duration: **2 months**

Certificate: **TECH Technological University**

Official Nº of hours: **175 h.**

Postgraduate Certificate

Linux Operating System
for Medicine

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