



Postgraduate Diploma Health System. Clinical Medicine and Research

» Modality: online

» Duration: 6 months

» Certificate: TECH Technological University

» Dedication: 16h/week

» Schedule: at your own pace

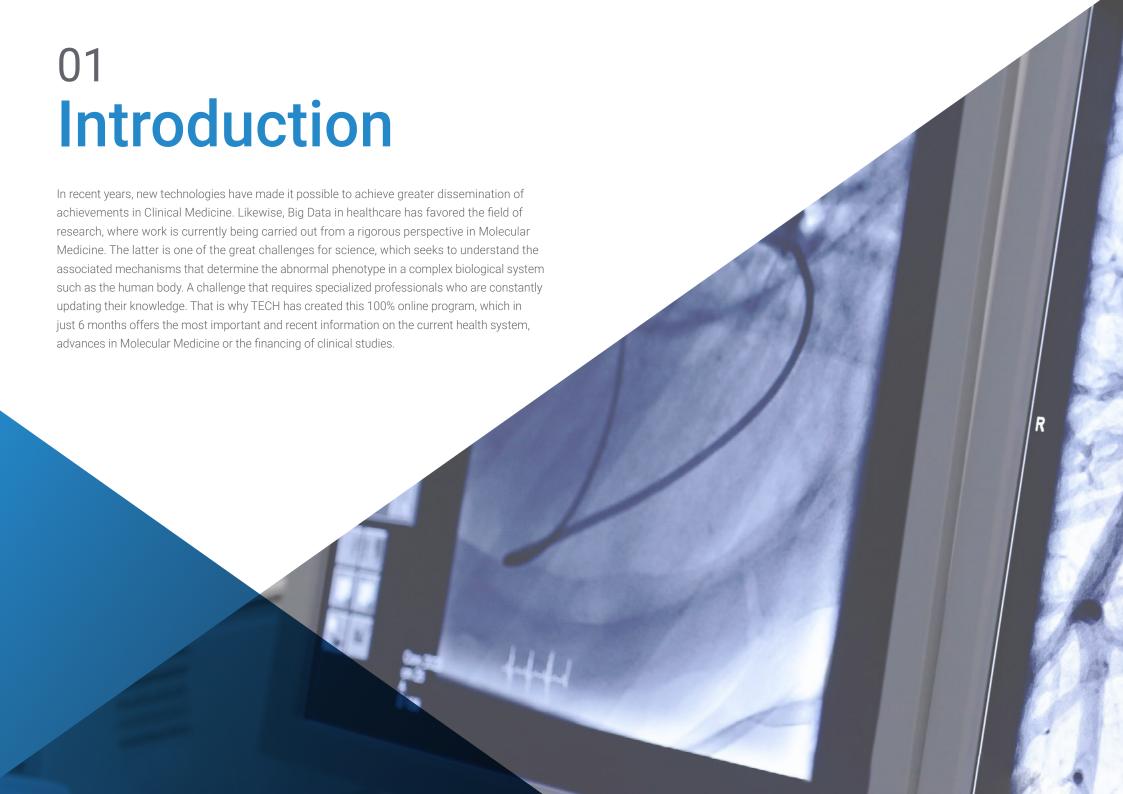
» Exams: online

Website: www.techtitute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-health-system-clinical-medicine-research

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tech 06 | Introduction

Thanks to Information and Communication Technologies (ICT), scientific dissemination has taken a step closer to the general public and other researchers around the world. Therefore, there are currently numerous digital social networks aimed at scientists, where information and the advances achieved can flow more directly.

A favorable scenario for Clinical Medicine that has also seen how in recent years, society has shown greater interest in the proper functioning of the health system, especially after the pandemic caused by COVID-19. Faced with this reality, TECH has designed this Postgraduate Diploma in Health System. Clinical Medicine and Research. A program that provides the specialist with the most rigorous and current information in this field, from the hand of professional experts with experience in the field of Biomedicine and health research.

A 100% online program, which will lead the professional to delve into the progress of Molecular Medicine and the diagnosis of pathologies, the management of health centers, as well as the most recent methods and resources in the field of research. To this end, the graduate will be provided with innovative pedagogical tools (video summary of each topic, videos in focus), essential readings and clinical case studies.

In addition, thanks to the *Relearning* method, based on the reiteration of key concepts, the professional will be able to advance through the syllabus in a natural way, and even reduce the long hours of study and memorization. This educational institution thereby offers a magnificent opportunity for professionals who wish to update their knowledge by means of a flexible Postgraduate Diploma, which they can access whenever and wherever they want. All you need is an electronic device with an Internet connection to be able to view, at any time, the syllabus hosted on the virtual platform. An ideal option for those who seek to balance the most demanding responsibilities with a high-level education.

This **Postgraduate Diploma in Health System. Clinical Medicine and Research** contains the most complete and up-to-date scientific program on the market. Its most notable features are:

- The development of practical cases presented by experts in clinical research
- The graphic, schematic and eminently practical contents with which it is designed provide clinical and practical information on those 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



This is an educational option that will allow you to delve into the most recent methods of resource allocation in health"



This Postgraduate Diploma will take you to delve, from a theoretical-practical point of view, into the management and direction of health centers"

The program's teaching staff includes professionals from the sector 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.

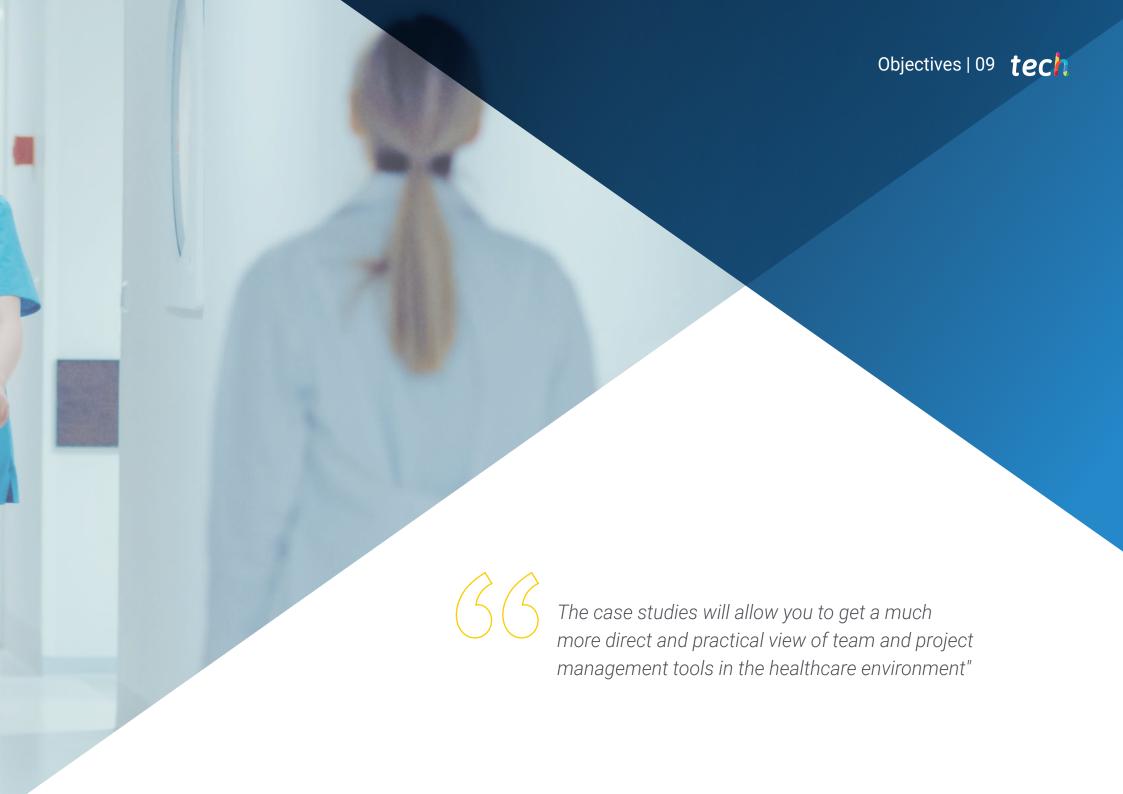
This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise throughout the program. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

With this program, you will get up to date on the new methodologies for disseminating the results of scientific research.

Reduce the long hours of study thanks to the Relearning method, used by TECH Technological University in all its programs.







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General Objectives

- Develop key concepts of medicine that serve as a vehicle to understand clinical medicine
- Determine the major diseases affecting the human body classified by apparatus or systems, structuring each module into a clear outline of pathophysiology, diagnosis, and treatment
- Determine how to obtain metrics and tools for healthcare management
- Understand the basics of basic and translational scientific methodology
- Examine the ethical and best practice principles governing the different types of research in health sciences
- Identify and generate the means of funding, assessing and disseminating scientific research
- Identify the real clinical applications of the various techniques
- Develop the key concepts of computational science and theory
- Determine the applications of computation and its implication in bioinformatics
- Provide the necessary resources to practically apply all the concepts in the modules
- Develop the fundamental concepts of databases
- Determine the importance of medical databases
- Delve into the most important techniques in research
- Provide specialized knowledge of the technologies and methodologies used in the design, development and assessment of telemedicine systems
- Determine the different types and applications of telemedicine
- Delve into the most common ethical aspects and regulatory frameworks of telemedicine
- Analyze the use of medical devices







Specific Objectives

Module 1. Molecular Medicine and Pathology Diagnosis

- Understand the diseases of the circulatory and respiratory systems
- Determine the general pathology of the digestive and urinary apparatus, of the endocrine and metabolic systems and of the nervous system
- Generate expertise in diseases affecting the blood and the locomotor system

Module 2. Health System Management and Administration in Health Centers

- Determine what a health system is
- Analyze the different healthcare models in Europe
- Examine how the healthcare market functions
- Develop key knowledge of hospital design and architecture
- Generate specialized knowledge of health measures
- Delve into resource allocation methods
- Compile productivity management methods
- Establish the role played by *Project Managers*

Module 3. Research in Health Sciences

- Determine the need for scientific research
- Interpret scientific methodology
- Specify the need for types of research in health sciences, each in their context
- Establish the principles of evidence-based medicine
- Examine the needs to interpret scientific results
- Develop and interpret the basics of clinical trials
- Examine the methodology used to disseminate scientific research results and the ethical and legislative principles that govern it





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Management



Ms. Sirera Pérez, Ángela

- Biomedical Engineer expert in Nuclear Medicine and exoskeleton design
- Designer of specific parts for 3D printing at Technadi
- Technician in the Nuclear Medicine area of the University Clinic of Navarra
- Degree in Biomedical Engineering from the University of Navarra
- MBA and Leadership in Healthcare and Medical Technology Companies





Mr. Varas Pardo, Pablo

- Biomedical Engineer Expert Data Scientist
- Data Scientist. Institute of Mathematical Sciences (ICMAT)
- Biomedical Engineer, La Paz Hospital
- Graduate in Biomedical Engineering from the Polytechnic University of Madrid
- Internship at 12 de Octubre Hospital
- Master's Degree in Technological Innovation in Health, UPM and Higher Technical Institute of Lisbon
- Master's Degree in Biomedical Engineering Polytechnic University of Madrid

Dr. Ortega Núñez, Miguel Ángel

- Researcher in the area of Biomedicine
- Assistant Professor, Department of Medicine and Medical Specialties, University of Alcalá, Spain
- Doctorate in Health Sciences, University of Alcala
- Graduate in Health Biology from the University of Alcalá
- Master's Degree in Genetics and Cell Biology from the University of Alcalá
- Master's Degree in University Teaching

Dr. Pacheco Gutiérrez, Victor Alexander

- Specialist in Orthopedics and Sports Medicine, Dr. Sulaiman Al Habib Hospital
- Medical Advisor, Venezuelan Cycling Federatio
- Specialist, Department of Shoulder and Elbow Orthopedics and Sports Medicine, La Isabelica Clinical Center
- Medical advisor to several baseball clubs and to the Carabobo Boxing Association
- Degree in Medicine, University of Carabobo
- Specialty in Orthopedics and Traumatology, Dr. Enrique Tejera Hospital City







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Module 1. Molecular Medicine and Pathology Diagnosis

1.1. Molecular Medicine

- 1.1.1. Cellular and Molecular Biology. Cell Injury and Cell Death. Aging
- 1.1.2. Diseases Caused by Microorganisms and Host Defence
- 1.1.3. Autoimmune Diseases
- 1.1.4. Toxicological Diseases
- 1.1.5. Hypoxia Diseases
- 1.1.6. Diseases related to the Environment
- 1.1.7. Genetic Diseases and Epigenetics
- 1.1.8. Oncological Diseases

1.2. Circulatory System

- 1.2.1. Anatomy and Function
- 1.2.2. Myocardial Diseases and Heart Failure
- 1.2.3. Cardiac Rhythm Diseases
- 1.2.4. Valvular and Pericardial Diseases
- 1.2.5. Atherosclerosis, Arteriosclerosis and Arterial Hypertension
- 1.2.6. Peripheral Arterial and Venous Disease
- 1.2.7. Lymphatic Disease (Greatly Overlooked)

1.3. Respiratory Diseases

- 1.3.1. Anatomy and Function
- 1.3.2. Acute and Chronic Obstructive Pulmonary Diseases
- 1.3.3. Pleural and Mediastinal Diseases
- 1.3.4. Infectious Diseases of the Pulmonary Parenchyma and Bronchi
- 1.3.5. Pulmonary Circulation Diseases

1.4. Digestive System Diseases

- 1.4.1. Anatomy and Function
- 1.4.2. Digestive System, Nutrition, and Hydroelectrolyte Exchange
- 1.4.3. Gastroesophageal Diseases
- 1.4.4. Gastrointestinal Infectious Diseases
- 1.4.5. Liver and Biliary Tract Diseases
- 1.4.6. Pancreatic Diseases
- 1.4.7. Colon Diseases

1.5. Renal and Urinary Tract Diseases

- 1.5.1. Anatomy and Function
- 1.5.2. Renal Insufficiency (Prerenal, Renal, and Postrenal): How They Are Triggered
- 1.5.3. Obstructive Urinary Tract Diseases
- 1.5.4. Sphincteric Insufficiency in the Urinary Tract
- 1.5.5. Nephrotic Syndrome and Nephritic Syndrome

1.6. Endocrine System Diseases

- 1.6.1. Anatomy and Function
- 1.6.2. The Menstrual Cycle and Associated Conditions
- 1.6.3. Thyroid Disease
- 1.6.4. Adrenal Insufficiency
- 1.6.5. Disorders of Sexual Differentiation
- 1.6.6. Hypothalamic-Pituitary Axis, Calcium Metabolism, Vitamin D and Effects on Growth and Skeleton

1.7. Metabolism and Nutrition

- 1.7.1. Essential and Non-Essential Nutrients: Clarifying Definitions
- 1.7.2. Carbohydrate Metabolism and Alterations
- 1.7.3. Protein Metabolism and Alterations
- 1.7.4. Lipids Metabolism and Alterations
- 1.7.5. Iron Metabolism and Alterations
- 1.7.6. Disorders of Acid-Base Balance
- 1.7.7. Sodium and Potassium Metabolism and Alterations
- .7.8. Nutritional Diseases (Hypercaloric and Hypocaloric)

1.8. Hematologic Diseases

- 1.8.1. Anatomy and Function
- 1.8.2. Red Blood Cell Disorders
- 1.8.3. Diseases of White Blood Cells, Lymph Nodes and Spleen
- 1.8.4. Hemostasis and Bleeding Diseases

- 1.9. Musculoskeletal System Diseases
 - 1.9.1. Anatomy and Function
 - 1.9.2. Joints: Types and Function
 - 1.9.3. Bone Regeneration
 - 1.9.4. Normal and Pathological Skeletal System Development
 - 1.9.5. Deformities of the Upper and Lower Limbs
 - 1.9.6. Joint Pathology, Cartilage, and Synovial Fluid Analysis
 - 1.9.7. Joint Diseases with Immunologic Origin
- 1.10. Nervous System Diseases
 - 1.10.1. Anatomy and Function
 - 1.10.2. Central and Peripheral Nervous System Development
 - 1.10.3. Development of the Spine and Components
 - 1.10.4. Cerebellum and Proprioceptive Diseases
 - 1.10.5. Brain Disorders (Central Nervous System)
 - 1.10.6. Spinal Cord and Cerebrospinal Fluid Diseases
 - 1.10.7. Stenotic Diseases of the Peripheral Nervous System
 - 1.10.8. Infectious Diseases of the Central Nervous System
 - 1.10.9. Cerebrovascular Disease (Stenotic and Hemorrhagic)

Module 2. Health system Management and Administration in Health Centers

- 2.1. Healthcare Systems
 - 2.1.1. Healthcare Systems
 - 2.1.2. Healthcare Systems according to the WHO
 - 2.1.3. Healthcare Context
- 2.2. Healthcare Models I. Bismark Model vs. Beveridge Model
 - 2.2.1. Bismark Model
 - 2.2.2. Beveridge Model
 - 2.2.3. Bismark Model Beveridge Model
- 2.3. Healthcare Models II. Semashko, Private and Mixed Models
 - 2.3.1. Semashko Model
 - 2.3.2. Private Model
 - 2.3.3. Mixed Models
- 2.4. The Health Market

- 2.4.1. The Health Market
- 2.4.2. Health Market Regulation and Limitations
- 2.4.3. Payment Methods for Doctors and Hospitals
- 2.4.4. Clinical Engineers
- 2.5. Hospitals. Typology
 - 2.5.1. Hospital Architecture
 - 2.5.2. Types of Hospitals
 - 2.5.3. Hospital Organization
- 2.6. Health Metrics
 - 2.6.1. Mortality
 - 2.6.2. Morbidity
 - 2.6.3. Healthy Life Years
- 2.7. Health Resource Allocation Methods
 - 2.7.1. Lineal Programming
 - 2.7.2. Maximization Models
 - 2.7.3. Minimization Models
- 2.8. Measuring Healthcare Productivity
 - 2.8.1. Measuring Health Productivity
 - 2.8.2. Productivity Ratios
 - 2.8.3. Input Adjustment
 - 2.8.4. Output Adjustment
- 2.9. Health Process Improvement
 - 2.9.1. Lean Management Process
 - 2.9.2. Work Simplification Tools
 - 2.9.3. Troubleshooting Tools
- 2.10. Healthcare Project Management
 - 2.10.1. The Role Played by Project Managers
 - 2.10.2. Team and Project Management Tools
 - 2.10.3. Schedule and Time Management

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Module 3. Research in Health Sciences

- 3.1. Scientific Research I. The Scientific Method
 - 3.1.1. Scientific Research
 - 3.1.2. Research in Health Sciences
 - 3.1.3. The Scientific Method
- 3.2. Scientific Research II. Typology
 - 3.2.1. Basic Research
 - 3.2.2. Clinical Research
 - 3.2.3. Translational Research
- 3.3. Evidence-Based Medicine
 - 3.3.1. Evidence-Based Medicine
 - 3.3.2. Principles of Evidence-Based Medicine
 - 3.3.3. Methodology of Evidence-Based Medicine
- 3.4. Ethics and Legislation in Scientific Research. Declaration of Helsinki
 - 3.4.1. The Ethics Committee
 - 3.4.2 Declaration of Helsinki
 - 3.4.3. Ethics in Health Sciences
- 3.5 Scientific Research Results
 - 3.5.1 Methods
 - 3.5.2. Rigor and Statistical Power
 - 3.5.3. Scientific Results Validity
- 3.6. Public Communication
 - 3.6.1 Scientific Societies
 - 3.6.2. Scientific Conferences
 - 3.6.3. Communication Structures
- 3.7. Funding in Scientific Research
 - 3.7.1. Structure in Scientific Projects
 - 3.7.2. Public Financing
 - 3.7.3. Private and Industrial Funding

- 3.8. Scientific Resources in Literature Searching. Health Sciences Databases I
 - 3.8.1. PubMed-Medline
 - 3.8.2. Embase
 - 3.8.3. WOS and JCR
 - 3.8.4. Scopus and Scimago
 - 3.8.5. Micromedex
 - 3.8.6. MEDES
 - 3.8.7. IBECS
 - 3.8.8. LILACS
 - 3.8.9 BDENF
 - 3.8.10 Cuidatge
 - 3.8.11 CINAHL
 - 3.8.12 Cuiden Plus
 - 3.8.13 Enfispo
- 3.8.14 NCBI (OMIM, TOXNET) and NIH (National Cancer Institute) Databases
- 3.9. Scientific Resources in Literature Searching. Health Sciences Databases II
 - 3.9.1. NARIC Rehabdata
 - 3.9.2. PEDro
 - 3.9.3. ASABE: Technical Library
 - 3.9.4. CAB Abstracts
 - 3.9.5. Centre for Reviews and Dissemination (CRD) Databases:
 - 3.9.6. Biomed Central BMC
 - 3.9.7. ClinicalTrials.gov
 - 3.9.8. Clinical Trials Register
 - 3.9.9 DOAJ- Directory of Open Access Journals
 - 3.9.10 PROSPERO (International Prospective Register of Systematic Reviews)
 - 3.9.11 TRIP
 - 3.9.12 LILACS
 - 3.9.13 NIH. Medical Library
 - 3.9.14 Medline Plus
 - 3.9.15 OPS

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3.10. Scientific Resources in Literature Searching III. Search Engines and Platforms

3.10.1. Search Engines and Multisearch Engines

3.10.1.1. Findr

3 10 1 2 Dimensions

3.10.1.3. Google Scholar

3.10.1.4. Microsoft Academic

3.10.2. WHO International Clinical Trials Registration Platform (ICTRP)

3.10.2.1. PubMed Central PMC

3.10.2.2. Open Science Collector (RECOLECTA)

3.10.2.3. Zenodo

3.10.3. Doctoral Thesis Search Engines

3.10.3.1. DART-Europe

3.10.3.2. Dialnet-Doctoral Theses

3.10.3.3. OATD (Open Access Theses and Dissertations)

3.10.3.4. TDR (Doctoral Theses Online)

3.10.3.5. TESEO

3.10.4. Bibliography Managers

3.10.4.1. Endnote Online

3.10.4.2. Mendeley

3.10.4.3. Zotero

3.10.4.4. Citeulike

3 10 4 5 RefWorks

3.10.5. Digital Social Networks for Researchers

3.10.5.1. Scielo

3.10.5.2. Dialnet

3.10.5.3. Free Medical Journals

3.10.5.4. DOAJ

3.10.5.5. Open Science Directory

3.10.5.6. Redalyc

3.10.5.7. Academia.edu

3.10.5.8. Mendeley

3.10.5.9. ResearchGate

3.10.6. Social Web 2.0 Resources

3.10.6.1. Delicious

3.10.6.2. SlideShare

3.10.6.3. YouTube

3.10.6.4. Twitter

3.10.6.5. Health Science Blogs

3.10.6.6. Facebook

3.10.6.7. Evernote

3.10.6.8. Dropbox

3.10.6.9. Google Drive

3.10.7. Scientific Journal Publishers and Aggregators Portals

3.10.7.1. Science Direct

3.10.7.2. Ovid

3.10.7.3. Springer

3.10.7.4. Wiley

3.10.7.5. Proquest

3.10.7.6. Ebsco

3.10.7.7. BioMed Central



A 100% online program will provide you with the latest information on research in the healthcare field"





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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:

- 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.



Methodology | 27 tech

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.

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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

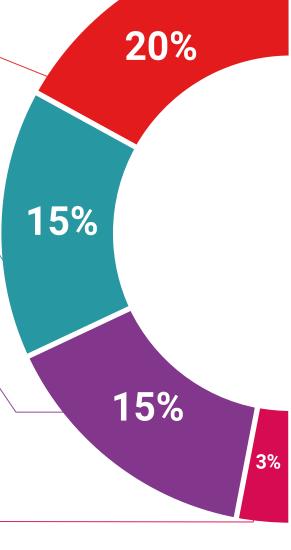
TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many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

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.









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This Postgraduate Diploma in Health System. Clinical Medicine and Research 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 Diploma, issued by TECH Technological University via tracked delivery*.

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

Title: Postgraduate Diploma in Health System. Clinical Medicine and Research Official No of Hours: 450 h.



Health System. Clinical Medicine and Research

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.

^{*}Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.



Postgraduate Diploma Health System. Clinical Medicine and Research

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

