

# Postgraduate Certificate Health Sciences Research



## Postgraduate Certificate Health Science Research

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Credits: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtitute.com/us/engineering/postgraduate-certificate/health-science-research](http://www.techtitute.com/us/engineering/postgraduate-certificate/health-science-research)

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# 01

# Introduction

Health sciences have an increasingly strong relationship with information technology, from the storage of case reports to the management of genetic data. In this way, the different research models and the correct use of information technologies for the storage, consultation and dissemination of this type of content become relevant. This academic program develops in detail this knowledge, which is essential for the new developments of big-data, a tool that plays a very relevant role in disciplines such as bioengineering or artificial intelligence. All this, condensed in 6 weeks of intensive and 100% online study.



A close-up photograph of a microscope's objective lens and eyepiece, showing the intricate metal components and the lens. The background is blurred, suggesting a laboratory setting. The image is partially obscured by a diagonal white and red graphic overlay.

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*With this Postgraduate Certificate you will be able to stand out in your research practices in the area of Health Sciences in a specialized, rigorous and highly effective way"*



It is increasingly necessary to have highly qualified professionals for research and dissemination in all areas of knowledge. This program is intended for professional engineers or students of related areas who are interested in the research apparatus of biomedical engineering, pharmacology, genetics and other areas of the health sector, which, moreover, have research and dissemination formats with very specific guidelines and requirements.

Universities, private and public research centers, commercial laboratories and hospitals are some of the institutions that make use of data storage systems for technical purposes, either to obtain information or to disseminate it. What TECH offers with this program is a course that clearly shows the relationship between the scientific method, the clinical trial and the methods of virtual disclosure and storage in the Health Sciences.

This is a 100% online program that offers professionals interested in Health Sciences research a wealth of virtual material that will boost your study by giving you access to scientific essays, dynamic material, practical examples and a wide range of resources. It should also be noted that you will be in contact with renowned specialists with significant experience in the field.

This **Postgraduate Certificate in Health Sciences Research** contains the most complete and up-to-date program on the market. The most important features include:

- ◆ Case studies presented by experts in Health Sciences Research
- ◆ The graphic, schematic, and 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
- ◆ The availability of access to content from any fixed or portable device with an Internet connection



*Learn how to take advantage of all the possibilities offered by information technologies for research and explore them in the field of Health Sciences"*

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*The scientific method and research methods are becoming increasingly sophisticated. Stay on the cutting edge with this Postgraduate Certificate"*

*Medline is one of the most comprehensive databases of medical literature. Learn all about their search engines and take advantage of their content and that of countless other sources.*

*Learn all about public and private funding of scientific research and be a fully updated professional.*

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.

Its 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 an immersive education programmed to learn in real situations.

The design of this program focuses on Problem-Based Learning, by means of which the professional must try to solve the different professional practice situations that are presented throughout the academic course. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.



02

# Objectives

The design of this program is intended for the student to deepen and update in the use of research techniques and tools for scientific research, mainly in the area of health. At the end of this 6-week Postgraduate Certificate, the student will know and efficiently manage the different health sector databases and will be able to carry out research with statistical, analytical and ethical rigor on any topic in these areas.







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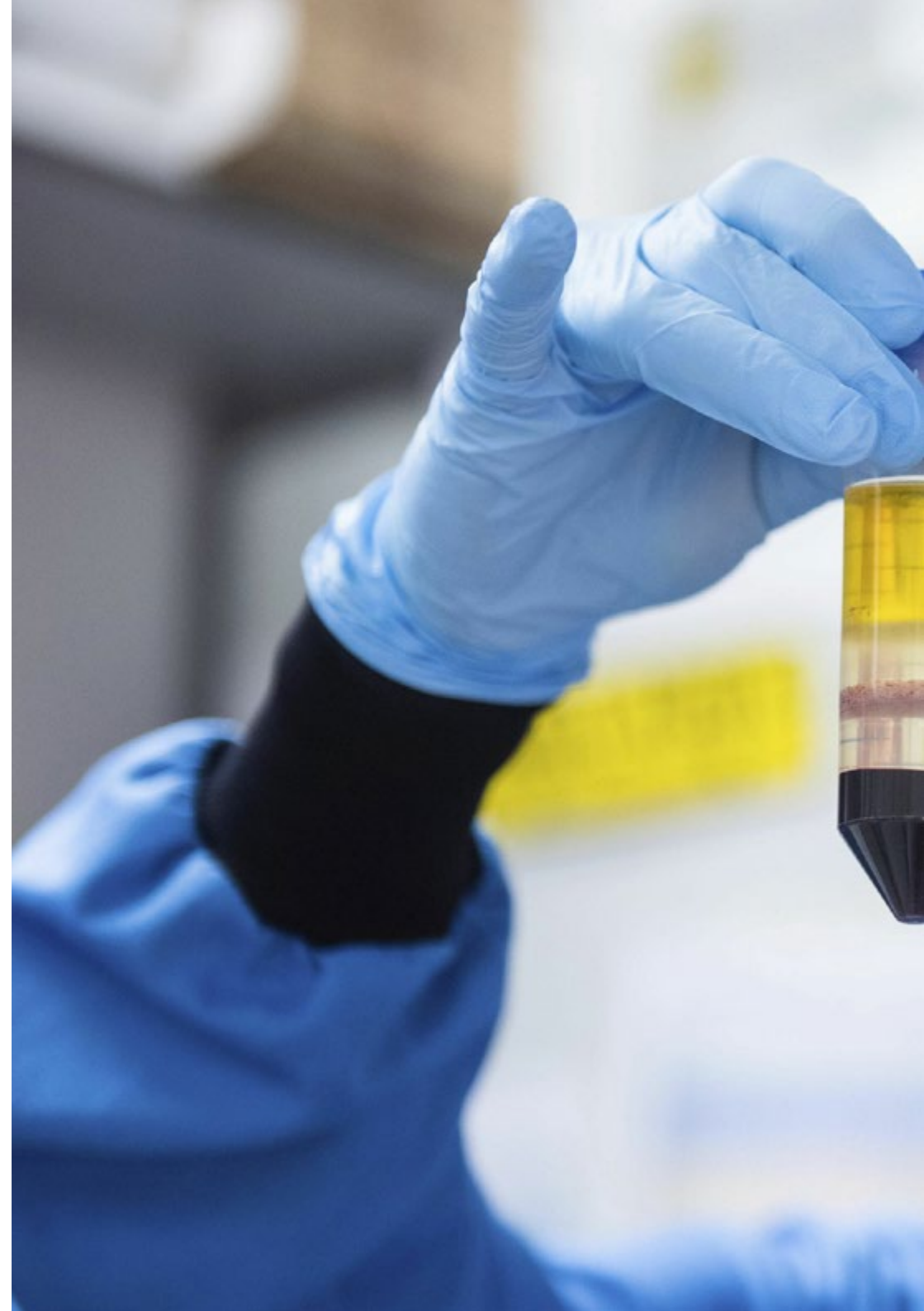
*Give your career a plus by deepening  
your knowledge of research methods  
in the health sector”*



## General Objectives

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- ◆ Build key concepts of medicine that act as a vehicle for understanding clinical medicine
- ◆ Determine how to obtain metrics and tools for healthcare management
- ◆ Understand the basics of basic and translational scientific methodology
- ◆ Examine the ethical principles and best practices that govern the different types of health sciences research
- ◆ Identify and generate the means for financing, evaluation and dissemination of scientific research
- ◆ Identify the real clinical applications of the various techniques
- ◆ Develop the key concepts of computational science and theory
- ◆ Provide the necessary resources for the initiation of the student in the practical application of the concepts of the module
- ◆ Develop the fundamental concepts of databases
- ◆ Determine the importance of medical databases
- ◆ Delve into the most important techniques in research
- ◆ Establish the different types and applications of telemedicine
- ◆ Collect eHealth success stories and mistakes to avoid





## Specific objectives

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- ◆ Determine the need for scientific research
- ◆ Interpret scientific methodology
- ◆ Specify the needs of the types of research in health sciences, 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 for disseminating the results of scientific research and the ethical and legislative principles that govern it

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*TECH helps you to train and meet your professional goals with innovative educational techniques and the best academic program”*

03

# Course Management

In order to support as much as possible to excellent researchers in the health area, TECH Global University has a team of recognized specialists who will help those interested in this area to know in detail the dissemination of scientific-medical information at international level. With the help of the virtual tools that TECH offers, those interested in this area will learn with the support of the best specialists in the subject all the details, bibliographic, informative, and legal details of research in Health Sciences.







“

*Acquire new and updated research tools from the best specialists”*



## 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

## Professors

### Dr. Ortega Núñez, Miguel Ángel

- ◆ Researcher in the area of Biomedicine
- ◆ Assistant Professor, Department of Medicine and Medical Specialties of Alcala University
- ◆ 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



# 04

# Structure and Content

The syllabus of this program is designed to give the student a strong foundation in scientific research, particularly in the health sciences. This Postgraduate Certificate exposes all the theoretical issues that underlie medical and related research, but with special emphasis on all the current research tools that are available and indispensable to take advantage of developments in the field around the world. Data storage and search resources, virtual networks for scientific dissemination, public and private registry systems for different health sciences, etcetera. This and much more will be taught in a rigorous and organized manner in this 100% online course.







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*A rigorously designed curriculum for you to learn everything you need to know about Health Sciences research”*

## Module 1. Research in Health Sciences

- 1.1. Scientific Research I. The Scientific Method
  - 1.1.1. Scientific Research
  - 1.1.2. Research in Health Sciences
  - 1.1.3. The Scientific Method
- 1.2. Scientific Research II. Typology
  - 1.2.1. Basic Research
  - 1.2.2. Clinical Research
  - 1.2.3. Translational Research
- 1.3. Evidence-Based Medicine
  - 1.3.1. Evidence-Based Medicine
  - 1.3.2. Principles of Evidence-Based Medicine
  - 1.3.3. Methodology of Evidence-Based Medicine
- 1.4. Ethics and Legislation in Scientific Research. Declaration of Helsinki
  - 1.4.1. The Ethics Committee
  - 1.4.2. Declaration of Helsinki
  - 1.4.3. Ethics in Health Sciences
- 1.5. Scientific Research Results
  - 1.5.1. Methods
  - 1.5.2. Rigor and Statistical Power
  - 1.5.3. Scientific Results Validity
- 1.6. Public Communication
  - 1.6.1. Scientific Societies
  - 1.6.2. Scientific Conferences
  - 1.6.3. Communication Structures
- 1.7. Funding in Scientific Research
  - 1.7.1. Structure in Scientific Projects
  - 1.7.2. Public Financing
  - 1.7.3. Private and Industrial Funding
- 1.8. Scientific Resources in Literature Searching. Health Sciences Databases I
  - 1.8.1. PubMed-Medline
  - 1.8.2. Embase
  - 1.8.3. WOS and JCR
  - 1.8.4. Scopus and Scimago
  - 1.8.5. Micromedex
  - 1.8.6. MEDES
  - 1.8.7. IBECs
  - 1.8.8. LILACS
  - 1.8.9. CSIC Databases: ISOC and ICYT
  - 1.8.10. BDEF
  - 1.8.11. Cuidatge
  - 1.8.12. CINAHL
  - 1.8.13. Cuiden Plus
  - 1.8.14. Enfispo
  - 1.8.15. NCBI (OMIM, TOXNET) and NIH (National Cancer Institute) Databases
- 1.9. Scientific Resources in Literature Searching. Health Sciences Databases II
  - 1.9.1. NARIC - Rehabdata
  - 1.9.2. PEDro
  - 1.9.3. ASABE: Technical Library
  - 1.9.4. CAB Abstracts
  - 1.9.5. CSIC-Indexes
  - 1.9.6. Centre for Reviews and Dissemination (CRD) Databases:
  - 1.9.7. Biomed Central BMC
  - 1.9.8. ClinicalTrials.gov
  - 1.9.9. Clinical Trials Register
  - 1.9.10. DOAJ- Directory of Open Access Journals
  - 1.9.11. PROSPERO (Registro Internacional Prospectivo de Revisiones Sistemáticas)
  - 1.9.12. TRIP
  - 1.9.13. LILACS
  - 1.9.14. NIH. Medical Library
  - 1.9.15. Medline Plus
  - 1.9.16. OPS



- 1.10. Scientific Resources in Literature Searching III. Search Engines and Platforms
  - 1.10.1. Search Engines and Multisearch Engines
    - 1.10.1.1. Findr
    - 1.10.1.2. Dimensions
    - 1.10.1.3. Google Scholar
    - 1.10.1.4. Microsoft Academic
  - 1.10.2. WHO International Clinical Trials Registration Platform (ICTRP)
    - 1.10.2.1. PubMed Central PMC
    - 1.10.2.2. Open Science Collector (RECOLECTA)
    - 1.10.2.3. Zenodo
  - 1.10.3. Doctoral Thesis Search Engines
    - 1.10.3.1. DART-Europe
    - 1.10.3.2. Dialnet
    - 1.10.3.3. OATD (Open Access Theses and Dissertations)
    - 1.10.3.4. TDR (Doctoral Theses Online)
    - 1.10.3.5. TESEO
  - 1.10.4. Bibliography Managers
    - 1.10.4.1. Endnote Online
    - 1.10.4.2. Mendeley
    - 1.10.4.3. Zotero
    - 1.10.4.4. Citeulike
    - 1.10.4.5. Refworks
  - 1.10.5. Digital Social Networks for Researchers
    - 1.10.5.1. Scielo
    - 1.10.5.2. Dialnet
    - 1.10.5.3. Free Medical Journals
    - 1.10.5.4. DOAJ
    - 1.10.5.5. Open Science Directory
    - 1.10.5.6. Redalyc
    - 1.10.5.7. Academia.edu
    - 1.10.5.8. Mendeley
    - 1.10.5.9. ResearchGate
  - 1.10.6. Social Web 2.0 Resources
    - 1.10.6.1. Delicious
    - 1.10.6.2. SlideShare
    - 1.10.6.3. YouTube.
    - 1.10.6.4. Twitter
    - 1.10.6.5. Health Science Blogs
    - 1.10.6.6. Facebook.
    - 1.10.6.7. Evernote
    - 1.10.6.8. Dropbox
    - 1.10.6.9. Google Drive
  - 1.10.7. Scientific Journal Publishers and Aggregators Portals
    - 1.10.7.1. Science Direct
    - 1.10.7.2. Ovid
    - 1.10.7.3. Springer
    - 1.10.7.4. Wiley
    - 1.10.7.5. Proquest
    - 1.10.7.6. Ebsco
    - 1.10.7.7. BioMed Central



*A Postgraduate Certificate  
with everything you need  
to be a great researcher"*

04

# 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.





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*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"*

## Case Study to contextualize all content

Our program offers a revolutionary approach to developing skills and knowledge. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

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*At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world”*



*You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.*



*The student will learn to solve complex situations in real business environments through collaborative activities and real cases.*

### A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and professional reality is taken into account.

“*Our program prepares you to face new challenges in uncertain environments and achieve success in your career”*

The case method is the most widely used learning system in the best faculties in the world. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question that you are presented with in the case method, an action-oriented learning method. Throughout the program, the studies will be presented with multiple real cases. They will have to combine all their knowledge and research, and argue and defend their ideas and decisions.



## Relearning Methodology

TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

*In 2019, we obtained the best learning results of all online universities in the world.*

At TECH, you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Relearning.

Our university is the only one in the world authorized to employ this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best online university indicators.



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.

This methodology has trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, and financial markets and instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

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

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.



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.



### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



### Practising Skills and Abilities

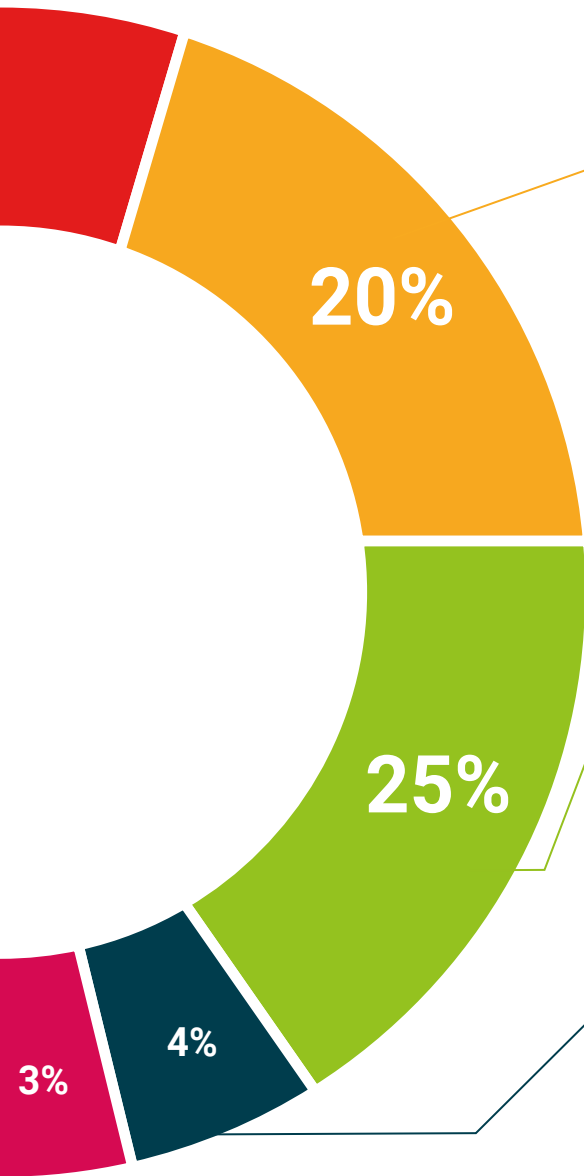
They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



### 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.





**Case Studies**

Students will complete a selection of the best case studies chosen specifically for this program. Cases that are presented, analyzed, and supervised by the best specialists in the world.



**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".



**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.





05

# Certificate

The Postgraduate Certificate in Health Sciences Research guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.



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*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 your **Postgraduate Certificate in Health Sciences Research** 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 Certificate in Health Sciences Research**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



future  
health confidence people  
education information tutors  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service innovation  
knowledge present quality  
development languages  
virtual classroom



## Postgraduate Certificate Health Science Research

- › Modality: online
- › Duration: 6 weeks
- › Certificate: TECH Global University
- › Credits: 6 ECTS
- › Schedule: at your own pace
- › Exams: online



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