

# Postgraduate Diploma Health Research



## Postgraduate Diploma Health Research

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

Website: [www.techtute.com/us/dentistry/postgraduate-diploma/postgraduate-diploma-health-research](http://www.techtute.com/us/dentistry/postgraduate-diploma/postgraduate-diploma-health-research)

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# 01

# Introduction

Innovations in the use of materials applied to dentistry, new types of treatments and, in general, each and every one of the advances oblige their professionals to acquire this knowledge and apply the most innovative techniques for the most perfect praxis possible. All this motivates dentists to continue expanding their skills, aiming to be a reference in the sector, and for this reason, it is essential to delve into the field of Applied Medical Research. Specifically, this program includes various contents and modules to achieve a complete update in this field. The students will have an easy access to it, with a completely online content structure with which they can access from any device with Internet access whenever they wish, given the versatility that TECH Technological University offers.



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*With the contents learned in this program you will be able to control the keys to create, manage and use patents”*

Nowadays, the immediacy and fast-paced life often leads us to opt for quick solutions. Among these, of course, is food, in many cases based on high amounts of sugars, processed and ultra-processed foods and, in general, products that directly affect both the teeth and the different parts of the mouth. For this reason, practices within the dental sector have to be state-of-the-art in order to be able to perform efficient treatments and actions for certain problems.

In order to meet this level of demand, the use of new technologies in research is essential in this field. Therefore, specialists who want to be at the forefront of this field must seek the means to acquire the necessary knowledge.

Given these needs of the professionals in the world of dentistry, TECH Technological University has created an academic program together with experts in the field, with which it has achieved a methodical, accessible and intuitive structure so that the acquisition of this information is comfortable and accessible to students.

In this way, dentists will be able to delve into aspects such as the transcription of data collected from research and the best way to keep it safe, examine the use of the necessary tools to generate efficient and applicable projects, as well as understand the pros and cons of patents, which is of utmost importance in any research.

Regarding the format of this Postgraduate Diploma, it has an innovative profile, with a structure and a demand for flexible attention adapted to this professional field, so it will not be difficult to combine the program with the daily life of dentists, achieving a perfect symbiosis between learning new contents and applying them in the professional practice.

This **Postgraduate Diploma in Health Research** contains the most complete and up-to-date scientific 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 the self-assessment process can be carried out to improve learning
- ◆ Its special emphasis on innovative methodologies
- ◆ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ◆ Content that is accessible from any fixed or portable device with an Internet connection



*Continuing professional development keeps efficiency at work. Get up to date with the most innovative contents in Project Finance and Project Funding"*

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*Protecting research results is almost as important as the research itself. Learn what it takes to safeguard all this data"*

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 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.

*Expand your limits and be at the forefront of a growing professional sector.*

*Learn the most effective methods in Medical Research and apply them in your daily professional life.*



# 02

# Objectives

TECH Technological University and its team of professionals in the medical area have developed this program with the objective that the students get up to date in their practice through an academic experience that adapts not only to their availability, but also to the most exhaustive demands of the research field. In this way, you will be able to delve into the latest developments related to project management and the preparation of statistics in the health care activity through an innovative and complete Postgraduate Diploma, which will also allow you to master your skills in a comprehensive manner.







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*Whatever your goals are, TECH will put at your disposal all the academic resources, not only to achieve them, but to surpass them in less than 6 months and in a guaranteed way"*



## General Objectives

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- ♦ Understand the appropriate approach to a question or problem to be solved
- ♦ Asses the state of the art of the problem through literature search
- ♦ Assess the feasibility of the potential project
- ♦ Study the drafting of a project in accordance with the different calls for proposals
- ♦ Examine the search for funding
- ♦ Master the necessary data analysis tools
- ♦ Write scientific articles (papers) for the daily magazines
- ♦ Generate posters relevant to the units covered
- ♦ Know the tools for dissemination to the non-specialized public
- ♦ Delve into data protection
- ♦ Understand the transfer of knowledge generated to industry or the clinic
- ♦ Examine the current use of artificial intelligence and massive data analysis
- ♦ Study examples of successful projects



*Improve your skills with this program and expand your professional comfort zone"*





## Specific Objectives

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### **Module 1. The Scientific Method Applied to Health Research. Bibliographic positioning of the research**

- ◆ Become familiar with the scientific method used to conduct health research
- ◆ Learn the correct way to ask a question and the methodology to follow to achieve the best possible answer
- ◆ Delve into learning how to search for bibliographic methods
- ◆ Master all the concepts of scientific activity

### **Module 2. Generation of Working Groups: Collaborative Research**

- ◆ Learn how to create working groups
- ◆ Create new biomedical research spaces

### **Module 3. Generation of Research Projects**

- ◆ Learn how to assess the feasibility of the potential project
- ◆ Know in depth the essential milestones for writing a research project
- ◆ Delve into the criteria for exclusion/inclusion in projects
- ◆ Learn how to set up the specific team for each project

### **Module 4. Protection and Transfer of Results**

- ◆ Introduction to the world of results protection
- ◆ Know in depth about patents and similar
- ◆ You will learn in depth about the possibilities of creating companies

03

# Course Management

In order to offer a comprehensive and quality education, TECH Technological University has chosen to form a teaching team of the best level within this field. For this purpose, an exhaustive selection has been made for the Postgraduate Diploma, where both their professional knowledge and the specialization skills that they are able to apply have been combined. This guarantees improvement and updating of all the knowledge that the students have, applying and using both the tools and the concepts that will be explained in it.



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*Expand your skills as a professional by acquiring keys and tools from a team of teachers who are experts in the field"*

## Management



### Dr. López-Collazo, Eduardo

- ♦ Scientific Deputy Director in the Institute for Health Research the Health Research Institute of La Paz University Hospital
- ♦ Head of the Department of Immune Response and Infectious Diseases at IdiPAZ
- ♦ Head of the Department of Immune Response, Tumors and Immunology at IdiPAZ
- ♦ President of the IdiPAZ Research Commission
- ♦ Sponsor of the External Scientific Committee of the Murcian Institute of Health Research
- ♦ Member of the Scientific Commission of FIDE
- ♦ Editor of the international scientific journal "Mediators of Inflammation"
- ♦ Editor of the international scientific journal "Frontiers of Immunology"
- ♦ Coordinator of IdiPAZ Platforms
- ♦ Coordinator of Health Research Funds in the areas of Cancer, Infectious Diseases and HIV
- ♦ PhD in Nuclear Physics, University of La Habana
- ♦ Doctorate in Pharmacy from the Complutense University of Madrid

## Professors

### Dr. Gómez Campelo, Paloma

- ♦ Researcher at the Health Research Institute, University Hospital La Paz
- ♦ Deputy Technical Director of the Health Research Institute of La Paz University Hospital
- ♦ Director of the Biobank of the Health Research Institute of the University Hospital La Paz
- ♦ Collaborating Teacher of the Polytechnic University of Catalonia
- ♦ Doctorate in Psychology the Complutense University of Madrid
- ♦ Degree in Psychology from the Complutense University of Madrid

### Dr. Pascual Iglesias, Alejandro

- ♦ Bioinformatics Platform Coordinator, La Paz Hospital
- ♦ Advisor to the COVID-19 Expert Committee of Extremadura
- ♦ Researcher in Eduardo López-Collazo's innate immune response research group, Health Research Institute, University Hospital La Paz
- ♦ Researcher in the coronavirus research group of Luis Enjuanes, National Center of Biotechnology CNB-CSIC
- ♦ Coordinator of Continuing Education in Bioinformatics, Health Research Institute of the University Hospital La Paz
- ♦ Cum Laude Doctor in Molecular Biosciences from the Autonomous University of Madrid
- ♦ Degree in Biology Molecular from the University of Salamanca
- ♦ Professional Master's Degree in Cellular and Molecular Physiopathology and Pharmacology from the Universidad of Salamanca

### Dr. Avendaño Ortiz, José

- ♦ "Sara Borrell" Researcher Foundation for Biomedical Research of the Ramón y Cajal University Hospital (FIBioHRC/IRyCIS)
- ♦ Researcher Foundation for Biomedical Research of La Paz University Hospital (FIBHULP/ IdiPAZ)
- ♦ Researcher HM Hospitals Foundation (FiHM)
- ♦ Graduate in Biomedical Sciences from the University of Lleida
- ♦ Master's Degree in pharmacological research from the Autonomous University of Madrid
- ♦ PhD in Pharmacology and Physiology from the Autonomous University of Madrid

### Dr. del Fresno, Carlos

- ♦ Researcher Specialist in Biochemistry, Molecular Biology and Biomedicine
- ♦ "Michael Servetus" Researcher. Group Leader, Research Institute of the Hospital la Paz (IdiPAZ)
- ♦ Researcher Spanish Association Against Cancer (AECC), National Center for Cardiovascular Research (CNIC- ISCIII)
- ♦ Researcher, National Center for Cardiovascular Research (CNIC- ISCIII)
- ♦ "Sara Borrell" Researcher, National Biotechnology Center (CNIC - ISCIII)
- ♦ PhD in Biochemistry, Molecular Biology and Biomedicine, Autonomous University of Madrid
- ♦ Degree in Biology from the Complutense University of Madrid

# 04

## Structure and Content

The syllabus has been designed based on the requirements of Medical Research and the needs of Dental professionals to be up to date in their careers. For this reason, a study plan has been created whose modules offer an expansion of knowledge in Health Research. Students will be able to learn contents related to scientific methods applied to research, how to generate projects and structures, what they should have, as well as to protect and disseminate the results obtained, and thus, obtaining a comprehensive learning in this topic.





A close-up photograph of a person's hand holding a medical device. The device has a circular opening and a corrugated grey tube. A yellowish, gel-like substance is applied to the skin on the back of the hand. The background is a solid purple color.

“

*An improved learning structure oriented towards absolute efficiency to make your study a complete and enjoyable task"*

## Module 1. The Scientific Method Applied to Health Research. Bibliographic Positioning of the Research

- 1.1. Definition of the Question or Problem to be Solved
- 1.2. Bibliographic Positioning of the Question or Problem to be Solved
  - 1.2.1. Information Search
    - 1.2.1.1. Strategies and Keywords Pubmed and Other Repositories of Scientific Articles
  - 1.2.2. Pubmed and Other Repositories of Scientific Articles
- 1.3. Treatment of Bibliographic Sources
- 1.4. Treatment of Documentary Sources
- 1.5. Advanced Bibliography Search
- 1.6. Generation of Reference Bases for Multiple Use
- 1.7. Bibliography Managers
- 1.8. Extraction of Metadata in Bibliographic Searches
- 1.9. Definition of the Scientific Methodology to be Followed
  - 1.9.1. Selection of the Necessary Tools
  - 1.9.2. Design of Positive and Negative Controls in an Investigation
- 1.10. Translational Projects and Clinical Trials: Similarities and Differences

## Module 2. Generation of Working Groups: Collaborative Research

- 2.1. Definition of Working Groups
- 2.2. Formation of Multidisciplinary Teams
- 2.3. Optimal Distribution of Responsibilities
- 2.4. Leadership
- 2.5. Control of Activities Achievement
- 2.6. Hospital Research Teams
  - 2.6.1. Clinical Research
  - 2.6.2. Basic Research
  - 2.6.3. Translational Research
- 2.7. Creation of Collaborative Networks for Health Research
- 2.8. New Spaces for Health Research
  - 2.8.1. Thematic Networks
- 2.9. Networked Biomedical Research Centers
- 2.10. Biobanks of Samples International Collaborative Research



### Module 3. Generation of Research Projects

- 3.1. General Structure of a Project
- 3.2. Presentation of Background and Preliminary Data
- 3.3. Definition of the Hypothesis
- 3.4. Definition of General and Specific Objectives
- 3.5. Definition of the Type of Sample, Number and Variables to be Measured
- 3.6. Establishment of the Scientific Methodology
- 3.7. Exclusion/Inclusion Criteria in Projects with Human Samples
- 3.8. Establishment of the Specific Team: Balance and Expertise
- 3.9. Expectations: An Important Element that we Forget
- 3.10. Budget Generation: a fine Tuning Between the Needs and the Reality of the Call
- 3.11. Ethical Aspects

### Module 4. Protection and Transfer of Results

- 4.1. Protection of Results: General Aspects
- 4.2. Valorization of the Results of a Research Project
- 4.3. Patents: Pros and Cons
- 4.4. Other Forms of Protection of Results
- 4.5. Transfer of Results to Clinical Practice
- 4.6. Transfer of Results to Industry
- 4.7. The Technology Transfer Contract
- 4.8. Trade Secrets
- 4.9. Generation of Companies Spin-Off from a Research Project
- 4.10. Search for Investment Opportunities in companies Spin-Off



*A program of study created by referents to bring you closer to professional perfection in the field of Dentistry"*

# 05

# 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"*

## At TECH we use the Case Method

In a given situation, what should a professional do? 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 dentist's professional practice.

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*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. Dentists who follow this method not only grasp concepts, but also develop their mental capacity by means of exercises to evaluate real situations and apply their 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.

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





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 we have trained more than 115,000 dentists with unprecedented success, in all specialties regardless of the workload. 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 training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for 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.



### Educational Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances, and to the forefront of 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 suggesting that observing third-party experts can be useful.  
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

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



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*Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork”*

This **Postgraduate Diploma in Health 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 Research**

Official N° of hours: **600 h.**



\*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.

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



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