

Hybrid Professional Master's Degree

Medical Research



Hybrid Professional Master's Degree Medical Research

Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Global University

Accreditation: 60 + 4 ECTS

Website: www.techtute.com/us/medicine/hybrid-professional-master-degree/hybrid-professional-master-degree-medical-research

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01

Introduction

Health research has become a fundamental area in recent years, given the difficulty of finding pharmacological solutions to antibiotic resistance. However, this scenario has opened up possibilities both for the creation of new research projects, as well as for obtaining funding and disseminating them to society. In this reality, TECH offers the medical professionals a degree that will take them through 12 months of information and current information on the techniques and methods used to provide solutions from the field of medical research. All this through advanced multimedia content and quality, complemented by a practical internship in a prestigious research center. In this way, graduates will be able to successfully obtain the knowledge update they desire.



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This Hybrid Professional Master's Degree in Medical Research offers you the opportunity to update your knowledge through a qualification that is at the forefront of the academic world”

Today, society is more aware of the relevance of medical research. For example, the pandemic caused by COVID-19 marked a turning point in this field. As a result, public administrations and private entities are now advocating the promotion of projects that provide solutions to the main healthcare challenges.

In this scenario, medical professionals have seen how their work is highly valued, while collaboration between teams from different projects around the world and the techniques and methods used have improved. A reality that leads the specialist to demand an update of their knowledge. This is the reason why this academic institution has created this Hybrid Professional Master's Degree in Medical Research.

This is a program, in which TECH has brought together a management and an expert teaching staff, which will take you to know the latest advances in the use of the R program, for statistical and graphical analysis of data or the essential information to launch a new research project. To do so, you will be provided with innovative teaching tools, which will lead you to be aware of new technologies conducive to scientific dissemination or protection of results.

In addition, thanks to the Relearning system, based on the reiteration of content, the professional will be able to reduce the long hours of study and memorization. In this way, they will advance in a much more natural and progressive way through the syllabus of this program.

An academic option that also offers a more practical vision of the reality of medical research. Therefore, once the 100% online theoretical phase is completed, the graduate will have access to a practical internship in a leading clinical center. A space where they will be tutored by research professionals with extensive experience in this field. An excellent opportunity to keep abreast of Medical Research through a high-level qualification.

This **Hybrid Professional Master's Degree in Medical Research** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ Development of more than 100 clinical cases 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
- ♦ Appraisal of the feasibility of potential research projects
- ♦ Practical vision of the techniques and new technologies applied to obtain and disseminate results
- ♦ 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
- ♦ Furthermore, you will be able to carry out a clinical internship in one of the best centers on the international scene



You are before a qualification that provides you with the latest information on the new biomedical research areas"

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In only 7 months, TECH offers you an advanced update on health research, financing and dissemination of research projects”

The program's teaching staff includes professionals from the industry who contribute their work experience to this program, as well as renowned specialists from leading societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide professionals with situated and contextual learning, i.e., a simulated environment that will provide immersive specialization, designed for specializing oneself 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 course. For this purpose, students will be assisted by an innovative interactive video system created by renowned and experienced experts.

This Hybrid Professional Master's Degree will introduce you to the latest statistical data mining techniques through a specialized teaching team.

Get the most relevant information about R programming and apply its methodology in your next research.



02

Why Study this Hybrid Professional Master's Degree?

The course of this Hybrid Professional Master's Degree has become a significant asset that the medical professional can use if they are looking to update their practice in a comprehensive manner in relation to the area of Medical Research. It is a complete, up-to-date, exhaustive and dynamic program that combines the most specialized theory with the highest level of practice in a clinical center with international renown. As a result, in just 12 months of educational experience they will have managed to implement in their strategies the mastery of the most sophisticated equipment of the current medical environment and the research techniques that are marking the forefront of scientific progress in different areas.



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A complete and dynamic program focused on updating your practice in Medical Research in a comprehensive manner”

1. Updating from the latest technology available

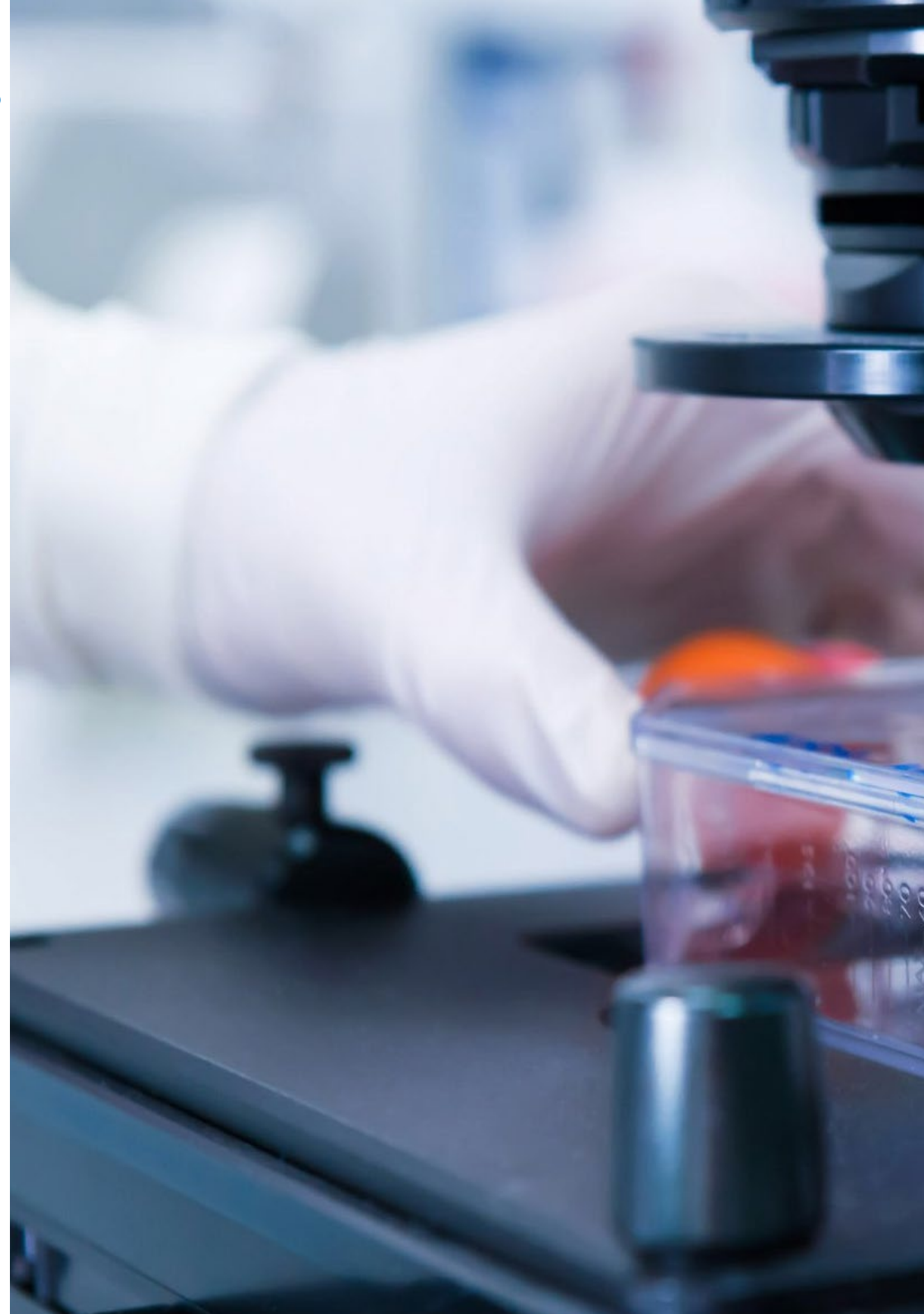
The course of this Hybrid Professional Master's Degree will provide the graduate with the latest information related to the use of current equipment in relation to Medical Research, concepts that can then be applied in the practical internship. The experience in the clinical center will allow them to access the management of the same, getting up to date with the most innovative strategies to get the most out of the resources offered by science today.

2. Gaining in-depth knowledge from the experience of top specialists

TECH guarantees that the student who accesses this program will have the support of an internship tutor specialized in the area of Medical Research. This is to ensure that they can get the most out of the program through the support of a figure chosen to ensure that this is the case, providing all the resources they need to do so and serving as a guide during the 12 months.

3. Entering first-class clinical environments

The internship period of this program will give the graduate access to hundreds of real cases, not only to update their knowledge in relation to the latest developments in Clinical Research, but also to improve their skills in areas such as data collection, patient care, handling of tools, etc.





4. Combining the best theory with state-of-the-art practice

The success of this type of program lies mainly in the perfect combination of theory and practice. It is a unique opportunity to first update your knowledge based on the latest information, with the guarantee of being able to apply it later in the clinical internship to which you will have access once the first period has been completed.

5. Expanding the boundaries of knowledge

TECH has an international agreement with various centers around the world. Therefore, when a graduate decides to enroll in programs such as this one, they have the opportunity to access a practical internship in different places. As a result, they can take on other types of challenges, among which is getting to know the work culture applied in different territories, following, of course, clinical guidelines of standardized recognition.

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You will have full practical immersion at the center of your choice”

02 Objectives

The syllabus of this program has been designed to offer the professional, in only 7 months, the most relevant information on Medical Research. In this way, the graduate will delve into collaborative research, advances in the statistical methods used, as well as the dissemination of the results. These goals will be easily achievable, thanks to the dynamism of the teaching materials and the Relearning system used by TECH.



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This program will bring you up to date with new digital technologies, which favor scientific dissemination”



General Objective

- This Hybrid Professional Master's Degree in Medical Research allows the professional to approach the current state of the scientific field, to master the analysis tools used at present, as well as to broaden their knowledge of data protection. To do so, they will have the most innovative teaching tools in the academic field. In addition, you will have at your disposal a specialized teaching team that will guide you at all times to successfully achieve these goals



This program will bring you up to date with new digital technologies, which favor scientific dissemination"



Specific Objectives

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

- Become familiar with the scientific method to be followed to carry out a 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. The Clinical Trial in Health Research

- ♦ Recognize the main figures involved in clinical trials
- ♦ Learn how to generate protocols
- ♦ Documentation management

Module 5. Project Financing

- ♦ Have an in-depth knowledge of the sources of funding
- ♦ In-depth knowledge of the different calls for proposals

Module 6. Statistics and R in Health Research

- ♦ Describe the main concepts of biostatistics
- ♦ Learn how to use the R program
- ♦ Define and understand the regression method and multivariate analysis with R
- ♦ Recognize the concepts of statistics applied to research
- ♦ Describe the statistical techniques of data mining
- ♦ Provide knowledge of the most commonly used statistical techniques in biomedical research

Module 7. Graphical Representations of Data in Health Research and Other Advanced Analysis

- ♦ Obtain in-depth knowledge of dimensionality reduction methods
- ♦ Delve into the comparison of methods

Module 8. Dissemination of Results I: Reports, memoirs and scientific articles

- ♦ Learn the various ways of disseminating results
- ♦ Internalize how to write reports
- ♦ Learn how to write for a specialized journal

Module 9. Dissemination of Results II: Symposia, Congresses, Dissemination to Society

- ♦ Learn how to generate a poster at a congress
- ♦ Learn how to prepare different communications of different times
- ♦ Turn a scientific paper into outreach material

Module 10. Protection and Transfer of Results

- ♦ Introduction to the world of results protection
- ♦ Know in depth about patents and similar
- ♦ Delve into the possibilities for the creation of spin-off companies

03 Skills

This university program will lead medical professionals to broaden their skills and enhance their abilities in the field of medical research. To do so, they will have clinical case studies, developed by the teaching team of this program. In this way, they will acquire a closer vision of the research reality, being able to integrate the methodologies shown in their daily professional performance. Therefore, this is a unique opportunity to work, in a comprehensive manner, in the improvement of their competencies through an unparalleled experience.



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This Hybrid Professional Master's Degree will help you to improve your skills in the design and writing of research projects in health sciences”



General Skills

- ♦ Design and write research projects in health sciences
- ♦ Use the information in documentary databases in the field of health sciences for the bibliographic support of a research project
- ♦ Generate specific project formats for funding in different calls for proposals
- ♦ Perform the processing of the results obtained with statistical tools, massive data analysis and computational statistics
- ♦ Manage at an advanced user level statistical packages for the treatment of the information collected in research in the field of health sciences
- ♦ Generate graphs from the data obtained in a project
- ♦ Disseminate the results
- ♦ Perform the appropriate protection/transfer of the data generated
- ♦ Make critical and reasoned judgments on the validity and reliability of scientific information in the health field





Specific Skills

- ♦ Master the new spaces for health research
- ♦ Manage the different phases of clinical trials
- ♦ Recognize the main figures involved in clinical trials
- ♦ Manage the strategy for participation in international projects
- ♦ Generate specific project formats for funding in different calls for proposals
- ♦ Explore regression methods applied to research
- ♦ Master the tools of computational statistics
- ♦ Generate graphs for the visual interpretation of data obtained in research project
- ♦ Manage scientific reports and articles
- ♦ Disseminate data obtained to non-specialized audiences
- ♦ Learn how to turn a scientific paper into outreach material
- ♦ Value the results of a research project

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You are looking at a program that gives you the most direct and practical view of the Medical Research scene”

04

Course Management

With the utmost goal of providing a quality program, TECH has brought together a management and teaching staff with extensive professional experience in health research centers and institutes. Thanks to their extensive knowledge, the professional will obtain rigorous and up-to-date scientific information on Medical Research. In addition, given its proximity, you will be able to resolve any doubts that may arise about the syllabus of this program by making use of the innovative direct communication tool that you will find in the Virtual Campus.



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TECH has gathered an excellent team of medical research professionals who will answer any questions you may have about the program's syllabus”

Management



Dr. López-Collazo, Eduardo

- ♦ Scientific Director, Health Research Institute, La Paz University Hospital
- ♦ Scientific Director, Institute of Health Research, University Hospital La PAZ
- ♦ President of the IdiPAZ Research Commission
- ♦ Member 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 (2010-2013)
- ♦ Coordinator of Health Research Funds in the areas of Cancer, Infectious Diseases and HIV

Professors

Mr. Arnedo Abade, Luis

- ♦ Data & Analyst Manager Noustique Perfumes
- ♦ Data Scientist Manager Darecode
- ♦ Data Scientist Marketing Inycom
- ♦ Data Scientist Marketing Imaginarium
- ♦ Data Scientist Marketing DKV Seguros
- ♦ Data Scientist University of Zaragoza
- ♦ Diploma in Statistics. University of Zaragoza

Dr. del Fresno, Carlos

- ♦ "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 Borrel 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

Dr. Martín Quirós, Alejandro

- ♦ Head of the Urgent and Emergent Pathology Research Group of the Research Institute of La Paz University Hospital
- ♦ Secretary of the Teaching Commission of the Research Institute of La Paz University Hospital
- ♦ Associate of the Emergency Department of the La Paz University Hospital
- ♦ Assistant of Internal Medicine/Infectious Diseases of the High-Level Isolation Unit of the University Hospital La Paz - At Hospital Carlos III
- ♦ Internist at Olympia Quirón Hospital

Dr. Avendaño, Jose

- ♦ Sara Borrel Researcher Scientific Committee 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

Ms. Gómez Campelo, Paloma

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

Dr. Pascual, Alejandro

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

05 Educational Plan

The syllabus of this university program has been prepared by an excellent team of professionals, who seek to offer the most relevant and up-to-date information on Medical Research. In this way, the specialist will be able to delve into an advanced syllabus, which will lead them to be aware of the current scientific methods applied to health research, the generation of projects or the dissemination of the results in new informative spaces. All this, with multimedia teaching material that can be accessed at any time of the day, from an electronic device with an Internet connection. The program is completed by a practical internship in a leading research center.



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A syllabus designed to provide you with the latest scientific knowledge applied to health research”

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
 - 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. The Clinical Trial in Health Research

- 4.1. Types of Clinical Trials (CT)
 - 4.1.1. Clinical Trials Promoted by the Pharmaceutical Industry
 - 4.1.2. Independent Clinical Trials
 - 4.1.3. Drug Replacement
- 4.2. Phases of CE
- 4.3. Main Figures Involved in CE5
- 4.4. Generation of Protocols
 - 4.4.1. Randomization and Masking
 - 4.4.2. Non-Inferiority Studies
- 4.5. Ethical Aspects
- 4.6. Patient Information Sheet
- 4.7. Informed Consent
- 4.8. Good Clinical Practice Criteria
- 4.9. Drug Research Ethics Committee
- 4.10. Search for Funding for Clinical Trials
 - 4.10.1. Public. Main Spanish, European, Latin American and U.S. Agencies.
 - 4.10.2. Private. Main Pharmaceutical Companies

Module 5. Project Financing

- 5.1. Search for Financing Opportunities
- 5.2. How to Adjust a Project to the Format of a Call for Proposals?
 - 5.2.1. Keys to Success
 - 5.2.2. Positioning, Preparation and Writing
- 5.3. Public Calls for Proposals. Main European and American Agencies
- 5.4. Specific European Calls for Proposals
 - 5.4.1. Horizon 2020 Projects
 - 5.4.2. Human Resources Mobility
 - 5.4.3. Madame Curie Program
- 5.5. Intercontinental collaboration Calls: Opportunities for International Interaction
- 5.6. Calls for Collaboration with the United States
- 5.7. Strategy for Participation in International Projects
 - 5.7.1. How to Define a Strategy for Participation in International Consortia
 - 5.7.2. Support and Assistance Structures
- 5.8. International Scientific Lobbying
 - 5.8.1. Access and Networking
- 5.9. Private Calls for Proposals
 - 5.9.1. Foundations and Funding Organizations for Health Research in Europe and the Americas
 - 5.9.2. Private Funding Calls for Proposals from U.S. Organizations
- 5.10. Securing the Loyalty of a Funding Source: Keys to Lasting Financial Support

Module 6. Statistics and R in Health Research

- 6.1. Biostatistics
 - 6.1.1. Introduction to The Scientific Method
 - 6.1.2. Population and Sample. Sampling Measures of Centralization
 - 6.1.3. Discrete Distributions and Continuous Distributions
 - 6.1.4. General Outline of Statistical Inference. Inference about a Normal Population Mean. Inference about a General Population Mean
 - 6.1.5. Introduction to Nonparametric Inference

- 6.2. Introduction to R
 - 6.2.1. Basic Features of the Program
 - 6.2.2. Main Object Types
 - 6.2.3. Simple Examples of Simulation and Statistical Inference
 - 6.2.4. Graphs
 - 6.2.5. Introduction to R Programming
- 6.3. Regression Methods with R
 - 6.3.1. Regression Models
 - 6.3.2. Variable Selection
 - 6.3.3. Model Diagnosis
 - 6.3.4. Treatment of Outliers
 - 6.3.5. Regression Analysis
- 6.4. Multivariate Analysis with R
 - 6.4.1. Description of Multivariate Data
 - 6.4.2. Multivariate Distributions
 - 6.4.3. Dimension Reduction
 - 6.4.4. Unsupervised Classification: Cluster Analysis
 - 6.4.5. Supervised Classification: Discriminant Analysis
- 6.5. Regression Methods for Research with R
 - 6.5.1. Generalized Linear Models (GLM): Poisson Regression and Negative Binomial Regression
 - 6.5.2. Generalized Linear Models (GLM): Logistic and Binomial Regressions
 - 6.5.3. Poisson and Negative Binomial Regression Inflated by Zeros
 - 6.5.4. Local Fits and Generalized Additive Models (GAMs)
 - 6.5.5. Generalized Mixed Models (GLMM) and Generalized Additive Mixed Models (GAMM)
- 6.6. Statistics Applied to Biomedical Research with R I
 - 6.6.1. Basic Notions of R. Variables and Objects in R. Data handling. Files. Graphs
 - 6.6.2. Descriptive Statistics and Probability Functions
 - 6.6.3. Programming and Functions in R
 - 6.6.4. Contingency Table Analysis
 - 6.6.5. Basic Inference with Continuous Variables

- 6.7. Statistics Applied to Biomedical Research with R II
 - 6.7.1. Analysis of Variance
 - 6.7.2. Correlation Analysis
 - 6.7.3. Simple Linear Regression
 - 6.7.4. Multiple Linear Regression
 - 6.7.5. Logistic Regression
- 6.8. Statistics Applied to Biomedical Research with R III
 - 6.8.1. Confounding Variables and Interactions
 - 6.8.2. Construction of a Logistic Regression Model
 - 6.8.3. Survival Analysis
 - 6.8.4. Cox Regression
 - 6.8.5. Predictive Models. ROC Curve Analysis
- 6.9. Statistical Data Mining Techniques with R I
 - 6.9.1. Introduction. Data Mining. Supervised and Unsupervised Learning. Predictive Models. Classification and Regression
 - 6.9.2. Descriptive Analysis. Data Pre-Processing
 - 6.9.3. Principal Component Analysis (PCA)
 - 6.9.4. Principal Component Analysis (PCA)
 - 6.9.5. Cluster Analysis. Hierarchical Methods. K-Means
- 6.10. Statistical Data Mining Techniques with R II
 - 6.10.1. Model Evaluation Measures. Predictive Ability Measures. ROC Curves
 - 6.10.2. Models Assessment Techniques. Cross-Validation. Bootstrap Samples
 - 6.10.3. Tree-Based Methods (CART)
 - 6.10.4. Support Vector Machines (SVM)
 - 6.10.5. Random Forest (RF) and Neural Networks (NN)

Module 7. Graphical Representations of Data in Health Research and Other Advanced Analysis

- 7.1. Types of Graphs
- 7.2. Survival Analysis
- 7.3. ROC Curves
- 7.4. Multivariate Analysis (Types of Multiple Regression)
- 7.5. Binary Regression Models
- 7.6. Massive Data Analysis
- 7.7. Dimensionality Reduction Methods
- 7.8. Comparison of Methods: PCA, PPCA and KPCA
- 7.9. T-SNE (t-Distributed Stochastic Neighbor Embedding)
- 7.10. UMAP (Uniform Manifold Approximation and Projection)

Module 8. Dissemination of Results I: Reports, Memoirs and Scientific Articles

- 8.1. Generating a Scientific Report or Memory of a Project
 - 8.1.1. Optimal Approach to the Discussion
 - 8.1.2. Presentation of the Limitations
- 8.2. Generation of a Scientific Article: How to Write a Paper on Based on the Data Obtained?
 - 8.2.1. General Structure
 - 8.2.2. Where Does the Paper Go?
- 8.3. Where to Start?
 - 8.3.1. Adequate Representation of the Results
- 8.4. The Introduction: The Mistake of Starting with this Section
- 8.5. The Discussion: The Cusp Moment
- 8.6. The Description of Materials and Methods: The Guaranteed Reproducibility
- 8.7. Selection of the Journal where the Paper will be Submitted
 - 8.7.1. Choice Strategy
 - 8.7.2. Priority List
- 8.8. Adaptation of the Manuscript to the Different Formats
- 8.9. The Cover Letter: Concise Presentation of the Study to the Editor
- 8.10. How to Respond to Reviewers' Doubts? The Rebuttal Letter

Module 9. Dissemination of Results II: Symposia, Congresses, Dissemination to Society

- 9.1. Presentation of Results at Congresses and Symposia
 - 9.1.1. How is a Poster Generated?
 - 9.1.2. Data Representation
 - 9.1.3. Focusing the Message
- 9.2. Short Communications
 - 9.2.1. Data Representation for Short Communications
 - 9.2.2. Focusing the Message
- 9.3. The Plenary Lecture: Notes on How to Keep the Attention of the Specialized Audience for More than 20 Minutes
- 9.4. Dissemination to the General Public
 - 9.4.1. Need Vs. Opportunity
 - 9.4.2. Use of References
- 9.5. Use of Social Networks for the Dissemination of Results
- 9.6. How to Adapt Scientific Data to the Popular Language?
- 9.7. Hints for Summarizing a Scientific Paper in a Few Characters
 - 9.7.1. Instant Dissemination via Twitter
- 9.8. How to turn a Scientific Paper into a Popularization Material
 - 9.8.1. Podcast
 - 9.8.2. YouTube Videos
 - 9.8.3. Tik Tok
 - 9.8.4. Comic Book
- 9.9. Popular Literature
 - 9.9.1. Columns
 - 9.9.2. Books

Module 10. Protection and Transfer of Results

- 10.1. Protection of Results: Overview
- 10.2. Valorization of the Results of a Research Project
- 10.3. Patents: Pros and Cons
- 10.4. Other Forms of Protection of Results
- 10.5. Transfer of Results to Clinical Practice
- 10.6. Transfer of Results to Industry
- 10.7. The Technology Transfer Contract
- 10.8. Trade Secrets
- 10.9. Generation of Spin-Off Companies from a Research Project
- 10.10. Search for Investment Opportunities in Spin-Off Companies



With this qualification you will be up to date on the latest procedural advances for the conduct of clinical trials in health research”

06

Clinical Internship

Once the professional concludes the online theoretical period, they will access a practical phase consisting of a 3-week internship in a prestigious research center. A scenario that will allow them to obtain the latest scientific information from specialized professionals with experience in clinical trials.



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Perform your internship in a center rigorously selected by TECH, to offer you a unique professional experience”

The professional who enters this qualification will complete an Internship Program consisting of a 3-week stay in a renowned research center. During this period, the specialist will stay from Monday to Friday, in 8-hour shifts, with professionals with extensive experience in the field of Medical Research. This internship will allow them to contribute to the processing of the results obtained, to learn the latest techniques and tools used in research, as well as to participate in the strategy of the projects that the center has in place.

In this way, this practical program will be very useful for the professional, who will not only be able to update their theoretical knowledge visualized in the syllabus of this Hybrid Professional Master's Degree, but also to be up to date, from a direct and practical view of the procedures, protocols and innovations in medical research.

This process is undoubtedly an excellent opportunity for professionals who wish to be continuously up to date through a quality program, which offers a theoretical and practical perspective, through a unique experience in a leading research center. In this way, TECH offers a new way of understanding and integrating health processes, turning a practical internship into an ideal scenario to broaden the skills and capabilities of professionals.

The practical teaching will be carried out with the accompaniment and guidance of the professors and other fellow students who will facilitate teamwork and multidisciplinary integration as transversal competencies for medical practice (learning to be and learning to relate).

The procedures described below will be the basis of the specialization, and their realization will be subject to the center's own availability, its usual activity and workload, the proposed activities being the following:



Module	Practical Activity
Research Project	Collaborate in the design and drafting of research projects in Health Sciences
	Help generate specific project formats for funding in different calls for proposals
	Contribute to generate graphs from the data obtained in a project
	Help to perform the appropriate protection/transfer of the generated data
	Manage the different phases of clinical trials
	Manage scientific reports and articles
	Collaborate in the generation of graphs for the visual interpretation of data obtained in a research project
Field Work	Collect biological samples to identify possible abnormalities or characteristics relevant to medical research
	Perform laboratory tests to aid in the diagnosis and treatment of disease
	Analyze epidemiological data, crucial to understanding public health and disease prevention
	Interview patients to gather relevant information about their medical history, current symptoms, lifestyle, and other pertinent variables

Module	Practical Activity
Use of tools and software	Use information in documentary databases in the field of Health Sciences for the bibliographic support of a research project
	Contribute to the processing of the results obtained with statistical tools, massive data analysis and computational statistics
	Handle statistical packages at an advanced user level for the treatment of information obtained in Health Sciences research
	Manage computational statistics tools
	Handle the tools for dissemination to non-specialized audiences
	Participate in the dissemination of results
Dissemination of Results	Make critical and reasoned judgments on the validity and reliability of scientific information in the health field
	Value the results of a research project
	Approach the polytraumatized patient in a specific way
	Provide support to convert a scientific paper into popularization material



Get qualified in a research center with experienced professionals who will guide you in updating the knowledge you are looking for

Civil Liability Insurance

This institution's main concern is to guarantee the safety of the trainees and other collaborating agents involved in the internship process at the company. Among the measures dedicated to achieve this is the response to any incident that may occur during the entire teaching-learning process.

To this end, this entity commits to purchasing a civil liability insurance policy to cover any eventuality that may arise during the course of the internship at the center.

This liability policy for interns will have broad coverage and will be taken out prior to the start of the Internship Program period. That way professionals will not have to worry in case of having to face an unexpected situation and will be covered until the end of the internship program at the center.





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The University will take out civil liability insurance to cover any eventuality that may arise during the development of the stay at the internship center"

General Conditions of the Internship Program

The general terms and conditions of the internship agreement for the program are as follows:

1. TUTOR: During the Hybrid Professional Master's Degree, students will be assigned with two tutors who will accompany them throughout the process, answering any doubts and questions that may arise. On the one hand, there will be a professional tutor belonging to the internship center who will have the purpose of guiding and supporting the student at all times. On the other hand, they will also be assigned with an academic tutor whose mission will be to coordinate and help the students during the whole process, solving doubts and facilitating everything they may need. In this way, the student will be accompanied and will be able to discuss any doubts that may arise, both clinical and academic.

2. DURATION: The internship program will have a duration of three continuous weeks, in 8-hour days, 5 days a week. The days of attendance and the schedule will be the responsibility of the center and the professional will be informed well in advance so that they can make the appropriate arrangements.

3. ABSENCE: If the students does not show up on the start date of the Hybrid Professional Master's Degree, they will lose the right to it, without the possibility of reimbursement or change of dates. Absence for more than two days from the internship, without justification or a medical reason, will result in the professional's withdrawal from the internship, therefore, automatic termination of the internship. Any problems that may arise during the course of the internship must be urgently reported to the academic tutor.





4. CERTIFICATION: Professionals who pass the Hybrid Professional Master's Degree will receive a certificate accrediting their stay at the center.

5. EMPLOYMENT RELATIONSHIP: the Hybrid Professional Master's Degree shall not constitute an employment relationship of any kind.

6. PRIOR EDUCATION: Some centers may require a certificate of prior education for the Hybrid Professional Master's Degree. In these cases, it will be necessary to submit it to the TECH internship department so that the assignment of the chosen center can be confirmed.

7. DOES NOT INCLUDE: The Hybrid Professional Master's Degree will not include any element not described in the present conditions. Therefore, it does not include accommodation, transportation to the city where the internship takes place, visas or any other items not listed.

However, students may consult with their academic tutor for any questions or recommendations in this regard. The academic tutor will provide the student with all the necessary information to facilitate the procedures in any case.

07

Where Can I Do the Internship?

The professional who enrolls in this Hybrid Professional Master's Degree will carry out a practical internship in a prestigious research center, where they will be able to update their knowledge on Medical Research together with professionals in this field. This will be possible thanks to the rigorous selection made by TECH of the research centers and the human and specialized team that comprises it. In this way, this academic institution seeks to offer a program of quality and according to the latest developments.





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Conclude this academic journey with a practical internship in one leading research center”

tech 40 | Where Can I Do the Internship?

The student will be able to do this program at the following centers:



Medicine

IdiPAZ

Country: Spain
City: Madrid

Address: Paseo de la Castellana 261, Edificio Norte, 28046 Madrid

La Paz University Hospital Research Institute

Related internship programs:

- Medical Research
- MBA in Clinical Trials Management and Monitoring



Medicine

CSIC

Country: Spain
City: Madrid

Address: Calle Serrano, 117, Chamartín, 28006 Madrid

Spanish State Agency for Scientific Research and Technological Development

Related internship programs:

- Allergology



Medicine

Rehamex

Country: Mexico
City: Mexico

Address: J.J. Fernández de Lizardi No. 5, Cto. Novelistas, Ciudad Satélite, Naucalpan

Center specialized in rehabilitation and physical health promotion.

Related internship programs:

- Diagnosis in Physiotherapy
- Sports Physiotherapy





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Leading professionals with extensive experience in Health Research will guide you to successfully achieve your goals”

08

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"

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.

“

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.



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

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 we face 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.



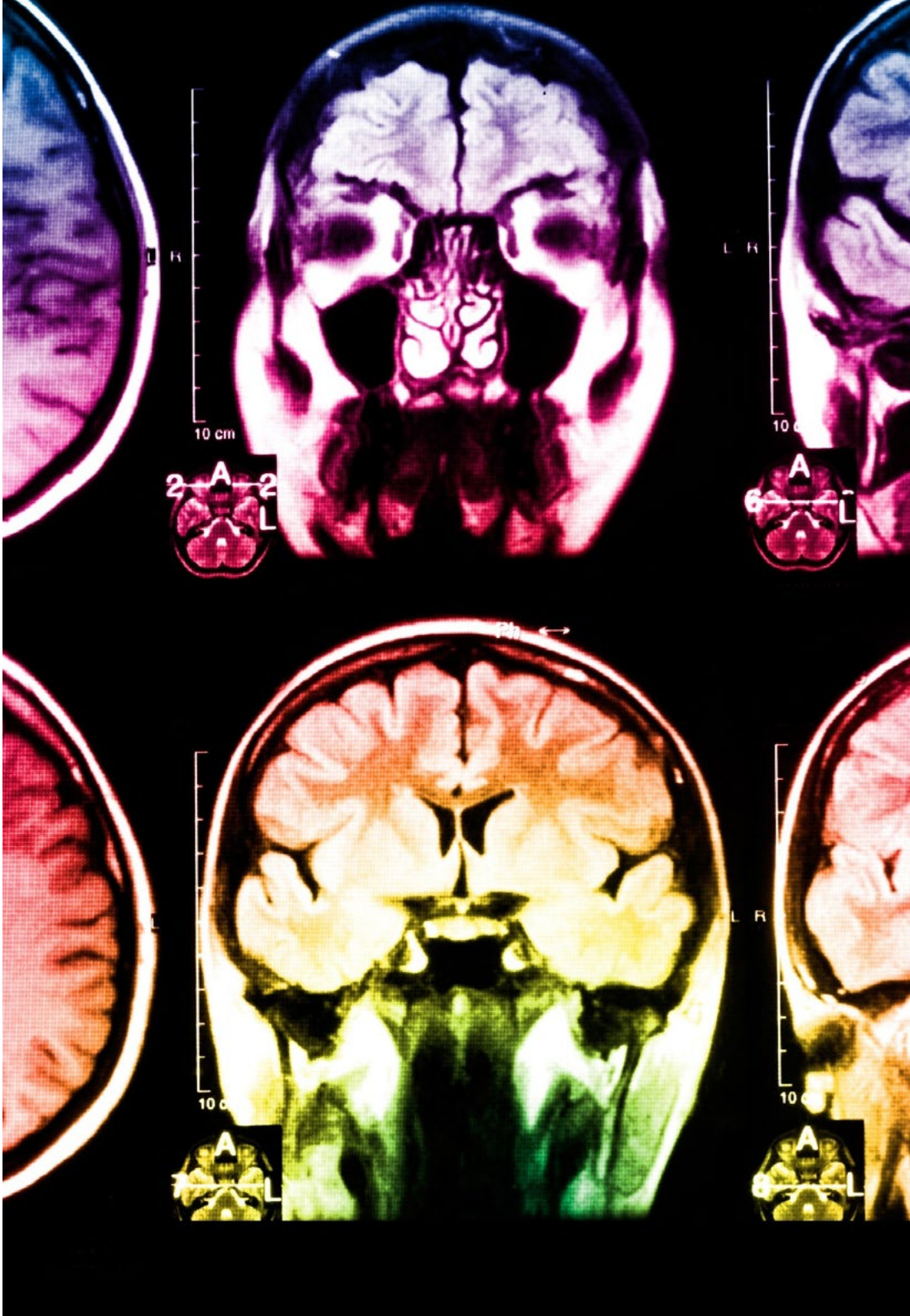
In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

With this methodology, we have 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, markets, and financial 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.

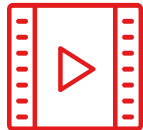
Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.

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.



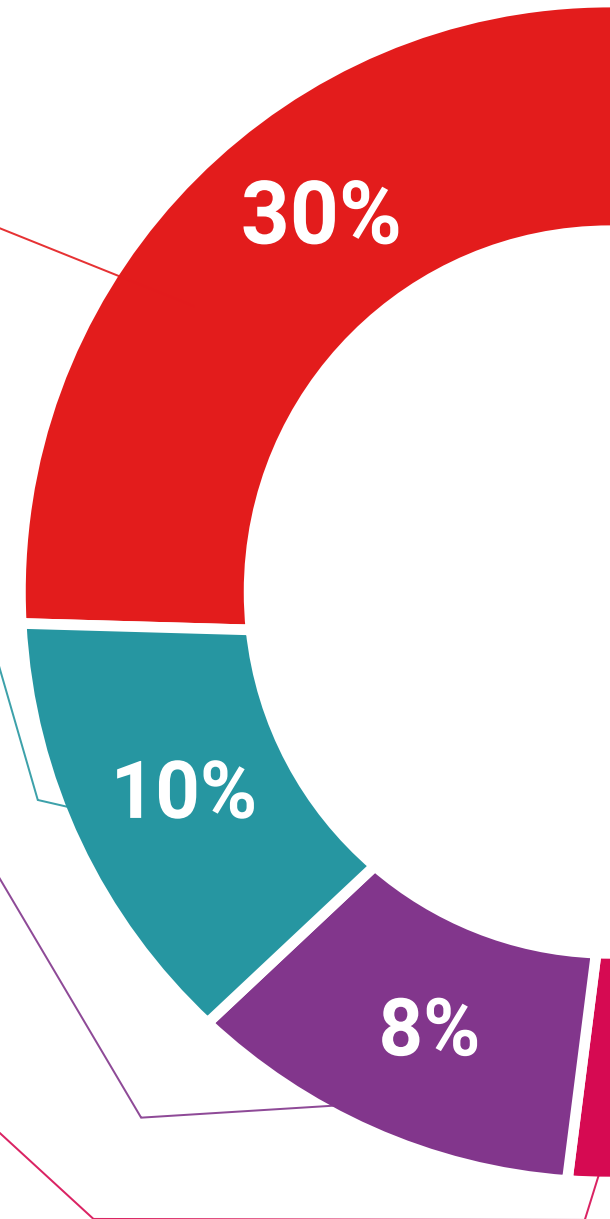
Practising Skills and Abilities

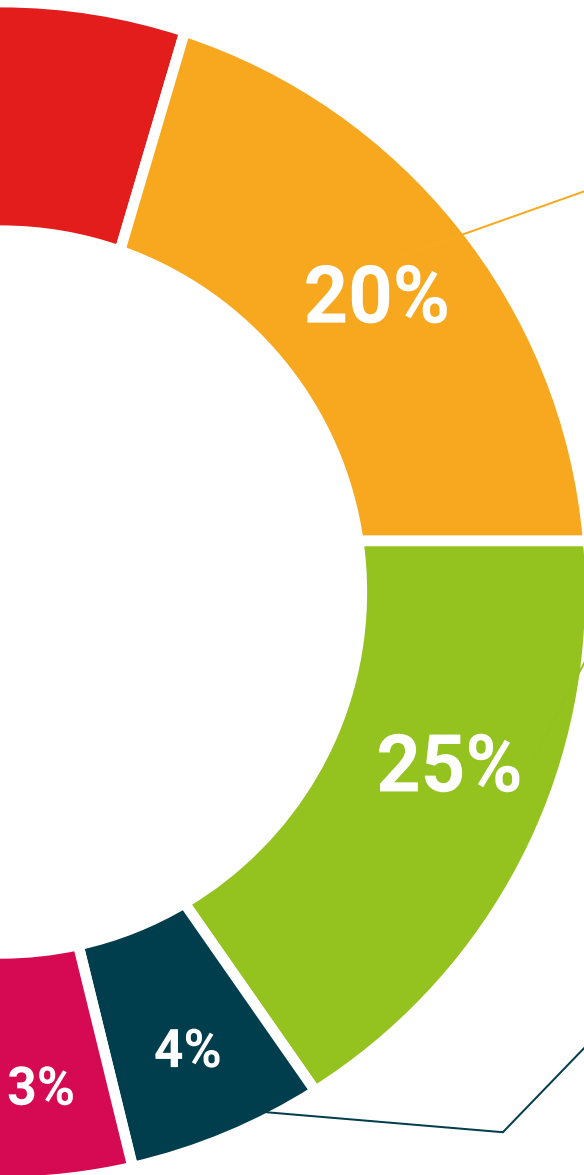
They will carry out activities to develop specific competencies and skills in each thematic area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



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 situation. 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.



09

Certificate

The Hybrid Professional Master's Degree in Medical Research guarantees students, in addition to the most rigorous and up-to-date education, access to a Hybrid Professional Master's Degree diploma 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 private qualification will allow you to obtain a **Hybrid Professional Master's Degree in Medical 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** private qualification 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: **Hybrid Professional Master's Degree in Medical Research**

Modality: **Hybrid (Online + Clinical Internship)**

Duration: **12 months**

Accreditation: **60 + 4 ECTS**



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



Hybrid Professional Master's Degree

Medical Research

Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Global University

Accreditation: 60 + 4 ECTS

Hybrid Professional Master's Degree

Medical Research

