

Postgraduate Diploma Biomedical Information Management, Diagnosis and Application of Personalized Pharmacological Treatments with Artificial Intelligence



Postgraduate Diploma Biomedical Information Management, Diagnosis and Application of Personalized Pharmacological Treatments with Artificial Intelligence

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Accreditation: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techtitude.com/us/artificial-intelligence/postgraduate-diploma/postgraduate-diploma-biomedical-information-management-diagnosis-application-personalized-pharmacological-treatments-artificial-intelligence

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01

Introduction to the Program

The integration of Artificial Intelligence in the management of biomedical information has revolutionized the diagnosis and application of personalized pharmacological treatments. In this sense, international institutions have developed advanced systems that analyze large volumes of clinical and genomic data, allowing the identification of complex patterns and the optimization of medical decisions. For example, the *iASiS* project seeks to transform the abundance of biomedical data into useful knowledge for decision making, integrating information from various sources such as genomics, electronic health records and scientific literature. Taking this revolution in the healthcare sector into account, TECH has developed this postgraduate program that will provide a unique opportunity to specialize in a field with growing demand and international projection. All of this, through a 100% online methodology.



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With a practical and up-to-date approach, this Postgraduate Diploma will allow you to position yourself at the forefront of healthcare innovation, boosting your career in a sector in full transformation. Join the most complete program now!”

Artificial Intelligence has transformed the healthcare sector, enabling the optimization of diagnosis and the application of personalized pharmacological treatments. In fact, the efficient management of biomedical information is key to analyzing large volumes of clinical and genomic data, facilitating more accurate and effective decisions. In this context, the development of specialized skills in the use of AI algorithms, data mining and machine learning is essential for healthcare professionals seeking to innovate in medical care and improve therapeutic outcomes.

With the objective of responding to these needs, TECH has designed this Postgraduate Diploma in Biomedical Information Management, Diagnosis and Application of Personalized Pharmacological Treatments with Artificial Intelligence as the best option for acquiring specialized skills in this field. Throughout the academic itinerary, designed with a comprehensive approach, key areas such as natural language processing in clinical analysis, predictive disease modeling and optimal selection of pharmacological treatments will be addressed. Likewise, emphasis will be placed on advanced methodologies for the structuring of medical data and the development of systems to support clinical decision making.

Having acquired this knowledge, graduates will be ready to access job opportunities in highly specialized environments. They will be able to work in healthcare institutions, pharmaceutical laboratories and research centers, leading innovation projects in diagnosis and treatment personalization. They will also expand their possibilities for professional growth in the technology sector applied to biomedicine.

Likewise, this program will be taught 100% online, which provides flexibility to balance learning with other responsibilities. Through the Relearning methodology, based on the progressive reiteration of key concepts, the assimilation of the contents will be optimized, guaranteeing a dynamic and effective educational experience. Finally, all the material will be available in digital format 24 hours a day, facilitating immediate access from any device with an Internet connection.

This **Postgraduate Diploma in Biomedical Information Management, Diagnosis and Application of Personalized Pharmacological Treatments with Artificial Intelligence** contains the most complete and up-to-date program on the market. The most important features include:

- ♦ Development of practical cases presented by experts in Artificial Intelligence
- ♦ 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
- ♦ Special emphasis on innovative methodologies in Biomedical Information Management, Diagnosis and Application of Personalized Pharmacological Treatments with AI
- ♦ 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



The advancement of pharmacology offers exciting opportunities in a constantly evolving industry. With this postgraduate program you will prepare to start a prestigious career in the field of AI"

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If you want to transform the pharmacological field with Artificial Intelligence tools and lead the design of innovative solutions in personalized health, TECH has this comprehensive program made for you”

Its teaching staff includes professionals from the field of Artificial Intelligence, who bring their work experience to this program, as well as renowned specialists from leading companies 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 an immersive learning experience designed to prepare for real-life situations.

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

With the backing of specialized knowledge, you will acquire a profile that is highly valued by organizations committed to the advancement of personalized pharmacy and global well-being related to AI.

This fully qualifying program will give you the best benefits of online education: innovative, cutting-edge teaching models and a fully up-to-date syllabus. Enroll now!



02

Why Study at TECH?

TECH is the world's largest online university. With an impressive catalog of more than 14,000 university programs available in 11 languages, it is positioned as a leader in employability, with a 99% job placement rate. In addition, it relies on an enormous faculty of more than 6,000 professors of the highest international renown.



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*Study at the world's largest online university
and guarantee your professional success.
The future starts at TECH”*

The world's best online university, according to FORBES

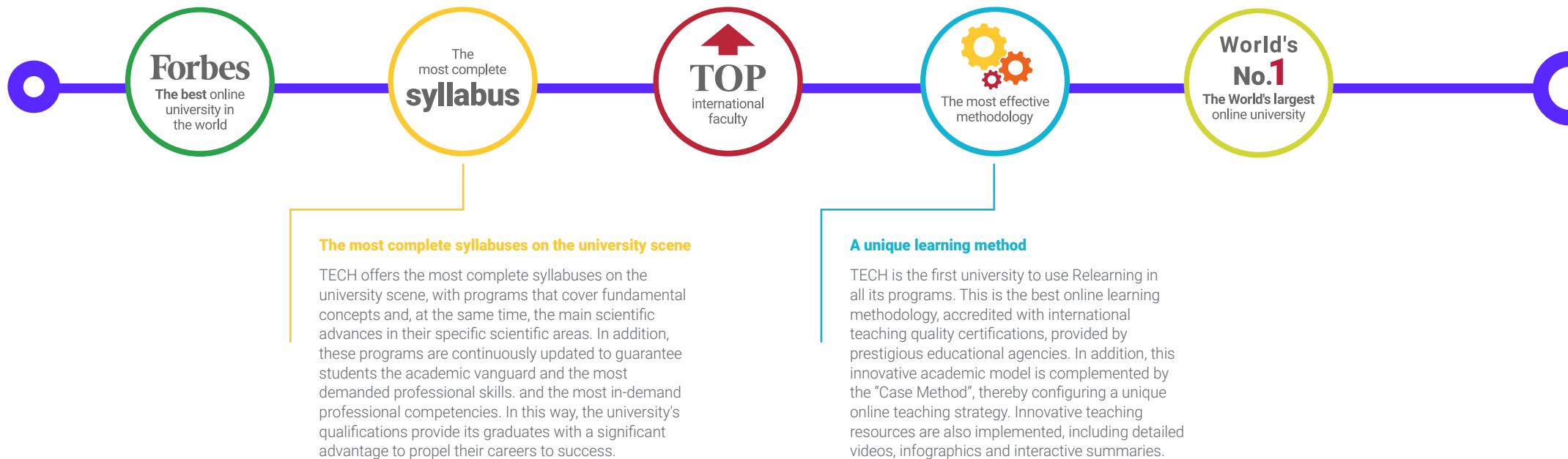
The prestigious Forbes magazine, specialized in business and finance, has highlighted TECH as "the best online university in the world" This is what they have recently stated in an article in their digital edition in which they echo the success story of this institution, "thanks to the academic offer it provides, the selection of its teaching staff, and an innovative learning method oriented to form the professionals of the future".

The best top international faculty

TECH's faculty is made up of more than 6,000 professors of the highest international prestige. Professors, researchers and top executives of multinational companies, including Isaiah Covington, performance coach of the Boston Celtics; Magda Romanska, principal investigator at Harvard MetaLAB; Ignacio Wistumba, chairman of the department of translational molecular pathology at MD Anderson Cancer Center; and D.W. Pine, creative director of TIME magazine, among others.

The world's largest online university

TECH is the world's largest online university. We are the largest educational institution, with the best and widest digital educational catalog, one hundred percent online and covering most areas of knowledge. We offer the largest selection of our own degrees and accredited online undergraduate and postgraduate degrees. In total, more than 14,000 university programs, in ten different languages, making us the largest educational institution in the world.



The most complete syllabuses on the university scene

TECH offers the most complete syllabuses on the university scene, with programs that cover fundamental concepts and, at the same time, the main scientific advances in their specific scientific areas. In addition, these programs are continuously updated to guarantee students the academic vanguard and the most demanded professional skills. and the most in-demand professional competencies. In this way, the university's qualifications provide its graduates with a significant advantage to propel their careers to success.

A unique learning method

TECH is the first university to use Relearning in all its programs. This is the best online learning methodology, accredited with international teaching quality certifications, provided by prestigious educational agencies. In addition, this innovative academic model is complemented by the "Case Method", thereby configuring a unique online teaching strategy. Innovative teaching resources are also implemented, including detailed videos, infographics and interactive summaries.

The official online university of the NBA

TECH is the official online university of the NBA. Thanks to our agreement with the biggest league in basketball, we offer our students exclusive university programs, as well as a wide variety of educational resources focused on the business of the league and other areas of the sports industry. Each program is made up of a uniquely designed syllabus and features exceptional guest hosts: professionals with a distinguished sports background who will offer their expertise on the most relevant topics.

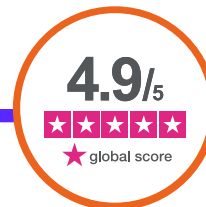
Leaders in employability

TECH has become the leading university in employability. Ninety-nine percent of its students obtain jobs in the academic field they have studied within one year of completing any of the university's programs. A similar number achieve immediate career enhancement. All this thanks to a study methodology that bases its effectiveness on the acquisition of practical skills, which are absolutely necessary for professional development.



Google Premier Partner

The American technology giant has awarded TECH the Google Premier Partner badge. This award, which is only available to 3% of the world's companies, highlights the efficient, flexible and tailored experience that this university provides to students. The recognition not only accredits the maximum rigor, performance and investment in TECH's digital infrastructures, but also places this university as one of the world's leading technology companies.



The top-rated university by its students

Students have positioned TECH as the world's top-rated university on the main review websites, with a highest rating of 4.9 out of 5, obtained from more than 1,000 reviews. These results consolidate TECH as the benchmark university institution at an international level, reflecting the excellence and positive impact of its educational model.



03 Syllabus

TECH has designed an innovative syllabus that will address in depth the integration of AI in the biomedical sector. Through an interdisciplinary approach, this program will enable specialists to understand how health data management systems work, master the latest trends in predictive modeling and acquire advanced skills in the analysis of clinical information. In this way, they will not only delve into the use of emerging technologies, but also offer a strategic vision of their impact on precision medicine.



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If you are ready to make a difference in the healthcare of tomorrow, this expertly designed online postgraduate program is the next step in your career. Join TECH and lead the transformation of personalized Pharmacy with AI!”

Module 1. Management and Analysis of Biomedical Information and Scientific Literature with Artificial Intelligence

- 1.1. Introduction to the Use of AI for Biomedical Information
 - 1.1.1. Importance of Biomedical Information in Pharmacy
 - 1.1.2. Challenges in the Management and Analysis of the Scientific Literature
 - 1.1.3. Role of AI in the Management of Large Volumes of Scientific Data
 - 1.1.4. Examples of AI Tools such as Semantic Scholar in Biomedical Research
- 1.2. Biomedical Information Retrieval with AI
 - 1.2.1. Advanced Searching Techniques in Scientific Databases
 - 1.2.2. AI Algorithms to Improve Search Accuracy and Relevance
 - 1.2.3. Personalization of Results through Machine Learning
 - 1.2.4. Applications such as PubMed AI for Efficient Information Retrieval
- 1.3. Natural Language Processing (NLP) in Scientific Texts
 - 1.3.1. NLP Applications in the Analysis of Biomedical Literature
 - 1.3.2. Automatic Extraction of Key Information from Scientific Articles
 - 1.3.3. Automatic Summarization and Generation of Structured Abstracts
 - 1.3.4. Tools such as SciBERT for Scientific Text Processing
- 1.4. Biomedical Text Mining
 - 1.4.1. Basic Concepts and Techniques in Text Mining
 - 1.4.2. Identification of Trends and Patterns in Scientific Publications
 - 1.4.3. Extraction of Relationships between Biomedical Entities
 - 1.4.4. Examples such as MEDLINE and Text Mining Library for Text Mining
- 1.5. Ontologies and Semantic Annotations in Biomedicine
 - 1.5.1. The Use and Creation of Ontologies in the Health Sciences
 - 1.5.2. Semantic Annotation of Scientific Documents
 - 1.5.3. AI for Semantic Enrichment and Contextual Searching
 - 1.5.4. Tools such as BioPortal and UMLS for Ontological Management
- 1.6. Scientific Literature Recommender Systems
 - 1.6.1. Recommendation Algorithms in Scientific Platforms
 - 1.6.2. Personalization of Content for Researchers and Practitioners
 - 1.6.3. AI in Predicting Future Relevance and Citations
 - 1.6.4. Applications such as Mendeley Suggest and ResearchGate

- 1.7. Visualization of Biomedical Data and Knowledge
 - 1.7.1. Visualization Techniques for Complex Biomedical Data
 - 1.7.2. Knowledge Maps and Research Networks
 - 1.7.3. AI Tools to Visualize Relationships and Trends
 - 1.7.4. Examples such as VOSviewer and Cytoscape in Scientific Visualization
- 1.8. AI-Assisted Knowledge Discovery
 - 1.8.1. Identification of New Hypotheses from Existing Data
 - 1.8.2. Integration of Multidisciplinary Data with AI
 - 1.8.3. Prediction of Unknown Drug Interactions and Pharmacological Effects
 - 1.8.4. Cases such as IBM Watson Discovery and Elsevier's Entellect
- 1.9. Big Data Management in Biomedical Research
 - 1.9.1. Challenges of Big Data in Biomedical Research
 - 1.9.2. Efficient Storage and Processing of Massive Data
 - 1.9.3. AI for Genomic and Proteomic Data Analysis
 - 1.9.4. Tools such as Apache Hadoop and Spark in Biomedicine
- 1.10. Challenges and Future Perspectives in NLP for Scientific Literature
 - 1.10.1. Specific NLP Challenges in Scientific and Biomedical Data
 - 1.10.2. Limitations in Search and Analysis Automation
 - 1.10.3. Recent Advances in NLP for Biomedical Sciences (BioGPT, BioBERT)
 - 1.10.4. Future Applications of AI in Scientific Research and Publication

Module 2. Artificial Intelligence in Diagnostics and Personalized Therapies

- 2.1. Early Diagnosis of Diseases
 - 2.1.1. Importance of Early Diagnosis in the Treatment of Diseases
 - 2.1.2. AI Algorithms for Early Detection of Pathology
 - 2.1.3. AI for Predictive Analysis of Risk Factors
 - 2.1.4. Examples such as PathAI for Automated Diagnosis
- 2.2. AI-Based Personalized Therapies
 - 2.2.1. Introduction to Personalized Medicine and Its Relevance
 - 2.2.2. AI for Personalization of Treatments according to Patient Profile
 - 2.2.3. Predictive Models for Personalized Dose Adjustment
 - 2.2.4. Applications such as Tempus in Personalized Oncology

- 2.3. Biomarker Detection Using AI
 - 2.3.1. Concept and Types of Biomarkers in Medicine
 - 2.3.2. AI Algorithms for the Identification of Key Biomarkers
 - 2.3.3. Importance of Biomarkers in Diagnosis and Treatment
 - 2.3.4. Tools such as Freenome for Biomarker Detection
- 2.4. Genomic Medicine and Pharmacogenomics
 - 2.4.1. Genomics and Pharmacogenomics for Personalization of Therapies
 - 2.4.2. AI Applications in the Analysis of Genetic Profiling
 - 2.4.3. AI in the Study of Genetic Variations for Personalized Medicine
 - 2.4.4. Cases such as 23andMe in Personalized Genetic Analysis
- 2.5. AI in Immunotherapy and Oncology
 - 2.5.1. Introduction to Immunotherapy and Its Impact on Cancer Treatment
 - 2.5.2. Application of AI to Personalize Immune Therapies
 - 2.5.3. AI Models for Optimizing Efficacy of Immunotherapies
 - 2.5.4. Examples such as GNS Healthcare for Immunotherapy in Oncology
- 2.6. Personalized Pharmacological Counseling
 - 2.6.1. Importance of Personalized Pharmacological Counseling
 - 2.6.2. AI for Treatment Recommendations according to Specific Conditions
 - 2.6.3. AI Models to Optimize Drug Selection
 - 2.6.4. Example of IBM Watson for Oncology in Treatment Recommendations
- 2.7. Treatment Response Prediction
 - 2.7.1. AI Techniques for Predicting Responses to Different Treatments
 - 2.7.2. Predictive Models of Efficacy and Safety of Treatments
 - 2.7.3. AI Algorithms for Treatment Personalization
 - 2.7.4. Tools such as Foundation Medicine for Analysis of Treatment Response
- 2.8. Development of Algorithms for Specific Therapies
 - 2.8.1. Principles of Algorithm Development for Targeted Therapies
 - 2.8.2. AI for Identifying and Developing Targeted Therapies
 - 2.8.3. Algorithms Personalized according to Disease Type
 - 2.8.4. Applications such as Owkin in Federated Learning for Oncology

- 2.9. Remote Patient Monitoring
 - 2.9.1. Importance of Remote Monitoring in Chronic Patients
 - 2.9.2. AI for Monitoring Parameters and Vital Signs Remotely
 - 2.9.3. Predictive Models to Anticipate Patient Complications
 - 2.9.4. Tools such as Biofourmis for Remote Monitoring
- 2.10. AI in Portable Diagnostic Devices
 - 2.10.1. Impact of Portable Devices on Health Diagnosis
 - 2.10.2. AI Algorithms in Portable Devices Data Analysis
 - 2.10.3. AI for Real-Time Detection of Health Conditions
 - 2.10.4. Examples such as Butterfly iQ, AI-Assisted Portable Ultrasound

Module 3. Regulation, Safety and Ethics of Artificial Intelligence in Pharmaceuticals

- 3.1. AI Regulations for Pharmaceutical Products
 - 3.1.1. Introduction to Regulatory Standards in AI Applied to Health Care
 - 3.1.2. Main Regulatory Agencies (FDA, EMA) and Their Role in AI
 - 3.1.3. Standards for the Approval of AI Technologies in Pharmaceuticals
 - 3.1.4. Examples of AI Software Certification for Healthcare Products
- 3.2. Healthcare AI Regulatory Compliance
 - 3.2.1. Key Concepts in AI Regulatory Compliance
 - 3.2.2. Legal Requirements for the Development of AI in Pharmacy
 - 3.2.3. AI Audits to Ensure Regulatory Compliance
 - 3.2.4. Examples of AI Compliance under the European MDR
- 3.3. Data Security in AI Applications
 - 3.3.1. Introduction to Data Security in the Healthcare Environment
 - 3.3.2. Security Protocols for the Storage of Medical Data
 - 3.3.3. AI for Threat Detection and Data Protection
 - 3.3.4. Microsoft Azure Tools for Secure Data Management
- 3.4. Privacy and Ethics in AI Applications
 - 3.4.1. Ethical Concepts in Patient Data Management
 - 3.4.2. Responsible AI and Privacy Principles in Pharmacy
 - 3.4.3. Tools for Anonymization of Sensitive Data
 - 3.4.4. Examples of Privacy in Google Health

- 3.5. Transparency of Algorithms in AI for Health
 - 3.5.1. Importance of Transparency in AI Applied to Health
 - 3.5.2. Explainability of Algorithms and Their Interpretation in Healthcare
 - 3.5.3. Methods to Ensure Transparency in AI Models
 - 3.5.4. Application of IBM Explainable AI for Healthcare
- 3.6. Avoiding Biases in AI Systems
 - 3.6.1. Identification of Biases in Medical and Pharmaceutical Data
 - 3.6.2. Techniques for Minimizing Bias in AI Algorithms
 - 3.6.3. Examples of Common Biases in AI for Pharmaceuticals
 - 3.6.4. Use of Google's Fairness Toolkit to Reduce Biases
- 3.7. Auditing AI Systems in Pharmacy
 - 3.7.1. Concept and Objectives of AI Auditing in Health Care
 - 3.7.2. Audit Methods to Validate AI Systems
 - 3.7.3. Audit Criteria to Ensure Quality and Ethics
 - 3.7.4. Example of an AI Audit with TÜV SÜD
- 3.8. Informed Consent in AI Health Data
 - 3.8.1. Importance of Consent in the Use of Personal Data
 - 3.8.2. AI Tools for Informed Consent Management
 - 3.8.3. AI in Obtaining and Secure Storage of Consents
 - 3.8.4. Example of Consent Management in Epic Systems
- 3.9. AI for Pharmacy Fraud Detection
 - 3.9.1. Impact of Fraud in the Pharmaceutical Industry
 - 3.9.2. AI Algorithms for Identification of Fraudulent Activities
 - 3.9.3. AI in the Prevention of Counterfeiting and Illegal Sale of Pharmaceuticals
 - 3.9.4. Example of SAS Fraud Framework for Healthcare
- 3.10. Responsibility and Accountability in AI
 - 3.10.1. Concept of Accountability in AI Applications
 - 3.10.2. Definition of Roles and Responsibilities in AI for Health Care
 - 3.10.3. AI for Tracking Decisions and Actions in Healthcare Processes
 - 3.10.4. Initiatives such as Partnership on AI for Accountability Guidelines



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Without a doubt, this Postgraduate Diploma represents a strategic advantage for you if you are looking for a promising future in AI-related Pharmacy. Here you will enjoy an educational experience of the highest level”

04

Teaching Objectives

The main objective of this Postgraduate Diploma is to provide the necessary tools to integrate Artificial Intelligence into clinical decision-making. In order to achieve this, the program will focus on learning innovative methodologies that enable the collection, structuring and analysis of large volumes of clinical data using AI algorithms. Graduates will be able to identify patterns in the evolution of diseases, design strategies for the early detection of diseases and optimize the selection of drugs according to the individual characteristics of each patient. They will also be able to lead innovation projects in medical centers, laboratories and pharmaceutical companies.



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No fixed schedules and 24/7 access: that's what this comprehensive Postgraduate Diploma is all about. In this way, you will catch up at your own pace with the latest advances in Pharmacy related to AI”



General Objectives

- ♦ Master artificial intelligence tools applied to biomedical information management
- ♦ Analyze biomedical data for informed clinical decision-making
- ♦ Interpret relevant scientific literature for the personalization of pharmacological treatments
- ♦ Design innovative strategies for artificial intelligence-assisted diagnostics
- ♦ Apply innovative technologies in the creation of more effective personalized treatments
- ♦ Ensure safety and ethics in the handling of biomedical data with AI
- ♦ Integrate scientific and technological knowledge to solve complex biomedical problems
- ♦ Contribute to the development of advanced solutions in biomedicine and pharmacology



Join TECH and transform your career in Pharmacy with Artificial Intelligence. Be part of the future of pharmacological care with the most complete and specialized Postgraduate Diploma on the educational market"





Specific Objectives

Module 1. Management and Analysis of Biomedical Information and Scientific Literature with Artificial Intelligence

- ♦ Use AI tools for the analysis of large volumes of biomedical data
- ♦ Develop skills to interpret and synthesize relevant biomedical scientific literature
- ♦ Design biomedical information management systems that optimize clinical research
- ♦ Evaluate the quality and relevance of biomedical data using AI-based techniques

Module 2. Artificial Intelligence in Diagnostics and Personalized Therapies

- ♦ Apply artificial intelligence techniques in the development of accurate medical diagnostics
- ♦ Implement advanced algorithms for the creation of more effective personalized therapies
- ♦ Analyze clinical data to optimize individualized therapeutic decisions
- ♦ Design strategies for continuous improvement in the integration of AI in personalized medicine

Module 3. Regulation, Safety and Ethics of Artificial Intelligence in Pharmaceuticals

- ♦ Analyze the international regulations applicable to the use of artificial intelligence in pharmacy
- ♦ Identify risks associated with the handling of pharmaceutical data and establish security strategies
- ♦ Evaluate ethical aspects in the development and application of AI in pharmaceutical processes
- ♦ Design protocols to ensure accountability and regulatory compliance in pharmaceutical AI

05

Career Opportunities

This qualification will open up a wide range of job opportunities in medical institutions, pharmaceutical laboratories and research centers. Thanks to the knowledge acquired in this program, graduates will be able to work in key areas such as healthcare Big Data management, the development of AI-assisted diagnostic tools and the optimization of personalized therapies. In addition, they will be able to collaborate on innovative projects within the pharmaceutical industry, contributing to the design of new drugs and the implementation of therapeutic strategies based on pharmacogenomics.



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Do you want to integrate Artificial Intelligence to revolutionize pharmacological treatments? With this innovative 100% online Postgraduate Diploma you will meet your objectives and stand out in the healthcare field with the latest technology”

Graduate Profile

Graduates will develop a unique combination of knowledge in biomedicine, data analysis and predictive modeling, which will enable them to work in clinical, pharmaceutical and research environments with an innovative approach. In fact, their ability to interpret large volumes of health information using AI will enable them to optimize the diagnosis of diseases and design therapeutic strategies adapted to each patient. In addition, it will provide a solid understanding of the regulation and ethics of the use of biomedical data, ensuring a responsible application of these technologies in professional practice.

If you are ready to make a difference in the healthcare sector, this online Postgraduate Diploma designed by experts is the next step in your career. Join TECH and lead the transformation of personalized pharmacy with AI!

- ♦ **Interdisciplinary Work in Medical and Technological Environments:** Collaborate with multidisciplinary teams combining knowledge in biomedicine, pharmacology and Artificial Intelligence to address complex challenges
- ♦ **Critical Thinking Applied to Health Innovation:** Develop an analytical vision to evaluate, integrate, and optimize biomedical data and technological tools in innovative therapeutic projects
- ♦ **Efficient Information Management in Digital Environments:** Organize and analyze large volumes of biomedical data, guaranteeing precision and relevance in the development of personalized solutions
- ♦ **Adaptation to New Technologies and Trends in AI:** Master advanced tools, quickly adapting to technological changes and applying them strategically in the health sector



After completing the program, you will be able to use your knowledge and skills in the following positions:

- 1. Bioinformatics Specialist:** Professional responsible for analyzing and processing large amounts of biological data using advanced AI techniques to discover relevant patterns in biomedical research.
- 2. Digital Health Consultant:** Advisor in the implementation of technological solutions for the improvement of diagnosis and treatment processes in healthcare institutions.
- 3. Data Scientist in Pharmacology:** Responsible for the collection, analysis and interpretation of clinical and pharmacological data to improve the creation of personalized treatments using AI.
- 4. Project Manager in Pharmaceutical Innovation:** Coordinating research and development projects in the pharmaceutical industry, focused on the integration of AI in the development of new drugs.
- 5. Specialist in Personalized Therapy:** Professional in charge of developing and adapting AI-based drug therapies for the individualized treatment of complex diseases
- 6. Health Innovation Director:** Leader in charge of directing cutting-edge projects in the use of emerging technologies, such as AI, in the health sector, particularly in the diagnosis and treatment of diseases.
- 7. Clinical Data Analyst:** Responsible for processing and analyzing clinical data with AI tools to identify patterns and improve decision making in medical treatments.
- 8. Researcher in Artificial Intelligence for Medicine:** Professional dedicated to conduct scientific research that integrates Artificial Intelligence in the development of innovative drugs and medical treatments.



Not only will you have an innovative online methodology that facilitates flexibility and combines access to interactive multimedia resources, but you will also receive guidance from internationally renowned experts”

06

Study Methodology

TECH is the world's first university to combine the **case study** methodology with **Relearning**, a 100% online learning system based on guided repetition.

This disruptive pedagogical strategy has been conceived to offer professionals the opportunity to update their knowledge and develop their skills in an intensive and rigorous way. A learning model that places students at the center of the educational process giving them the leading role, adapting to their needs and leaving aside more conventional methodologies.



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TECH will prepare you to face new challenges in uncertain environments and achieve success in your career”

The student: the priority of all TECH programs

In TECH's study methodology, the student is the main protagonist.

The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

With TECH's asynchronous educational model, it is students who choose the time they dedicate to study, how they decide to establish their routines, and all this from the comfort of the electronic device of their choice. The student will not have to participate in live classes, which in many cases they will not be able to attend. The learning activities will be done when it is convenient for them. They can always decide when and from where they want to study.

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*At TECH you will NOT have live classes
(which you might not be able to attend)”*



The most comprehensive study plans at the international level

TECH is distinguished by offering the most complete academic itineraries on the university scene. This comprehensiveness is achieved through the creation of syllabi that not only cover the essential knowledge, but also the most recent innovations in each area.

By being constantly up to date, these programs allow students to keep up with market changes and acquire the skills most valued by employers. In this way, those who complete their studies at TECH receive a comprehensive education that provides them with a notable competitive advantage to further their careers.

And what's more, they will be able to do so from any device, pc, tablet or smartphone.

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TECH's model is asynchronous, so it allows you to study with your pc, tablet or your smartphone wherever you want, whenever you want and for as long as you want”

Case Studies and Case Method

The case method has been the learning system most used by the world's best business schools. Developed in 1912 so that law students would not only learn the law based on theoretical content, its function was also to present them with real complex situations. In this way, they could make informed decisions and value judgments about how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

With this teaching model, it is students themselves who build their professional competence through strategies such as Learning by Doing or Design Thinking, used by other renowned institutions such as Yale or Stanford.

This action-oriented method will be applied throughout the entire academic itinerary that the student undertakes with TECH. Students will be confronted with multiple real-life situations and will have to integrate knowledge, research, discuss and defend their ideas and decisions. All this with the premise of answering the question of how they would act when facing specific events of complexity in their daily work.



Relearning Methodology

At TECH, case studies are enhanced with the best 100% online teaching method: Relearning.

This method breaks with traditional teaching techniques to put the student at the center of the equation, providing the best content in different formats. In this way, it manages to review and reiterate the key concepts of each subject and learn to apply them in a real context.

In the same line, and according to multiple scientific researches, reiteration is the best way to learn. For this reason, TECH offers between 8 and 16 repetitions of each key concept within the same lesson, presented in a different way, with the objective of ensuring that the knowledge is completely consolidated during the study process.

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



A 100% online Virtual Campus with the best teaching resources

In order to apply its methodology effectively, TECH focuses on providing graduates with teaching materials in different formats: texts, interactive videos, illustrations and knowledge maps, among others. All of them are designed by qualified teachers who focus their work on combining real cases with the resolution of complex situations through simulation, the study of contexts applied to each professional career and learning based on repetition, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neuroscience points to the importance of taking into account the place and context where the content is accessed before starting a new learning process. Being able to adjust these variables in a personalized way helps people to remember and store knowledge in the hippocampus to retain it in the long term. This is a model called Neurocognitive context-dependent e-learning that is consciously applied in this university qualification.

In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

Likewise, this very complete Virtual Campus will allow TECH students to organize their study schedules according to their personal availability or work obligations. In this way, they will have global control of the academic content and teaching tools, based on their fast-paced professional update.



The online study mode of this program will allow you to organize your time and learning pace, adapting it to your schedule”

The effectiveness of the method is justified by four fundamental achievements:

1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that assess real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.

The university methodology top-rated by its students

The results of this innovative teaching model can be seen in the overall satisfaction levels of TECH graduates.

The students' assessment of the teaching quality, the quality of the materials, the structure of the program and its objectives is excellent. Not surprisingly, the institution became the top-rated university by its students according to the global score index, obtaining a 4.9 out of 5.

Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is at the forefront of technology and teaching.

You will be able to learn with the advantages that come with having access to simulated learning environments and the learning by observation approach, that is, Learning from an expert.



As such, the best educational materials, thoroughly prepared, will be available in this program:



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.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



Practicing Skills and Abilities

You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.



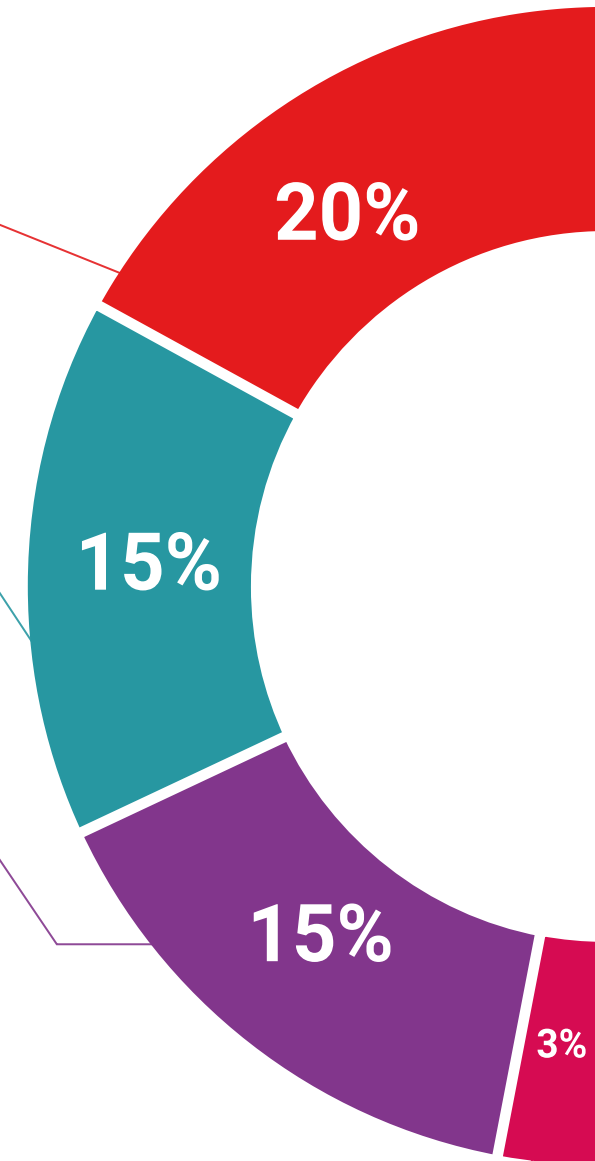
Interactive Summaries

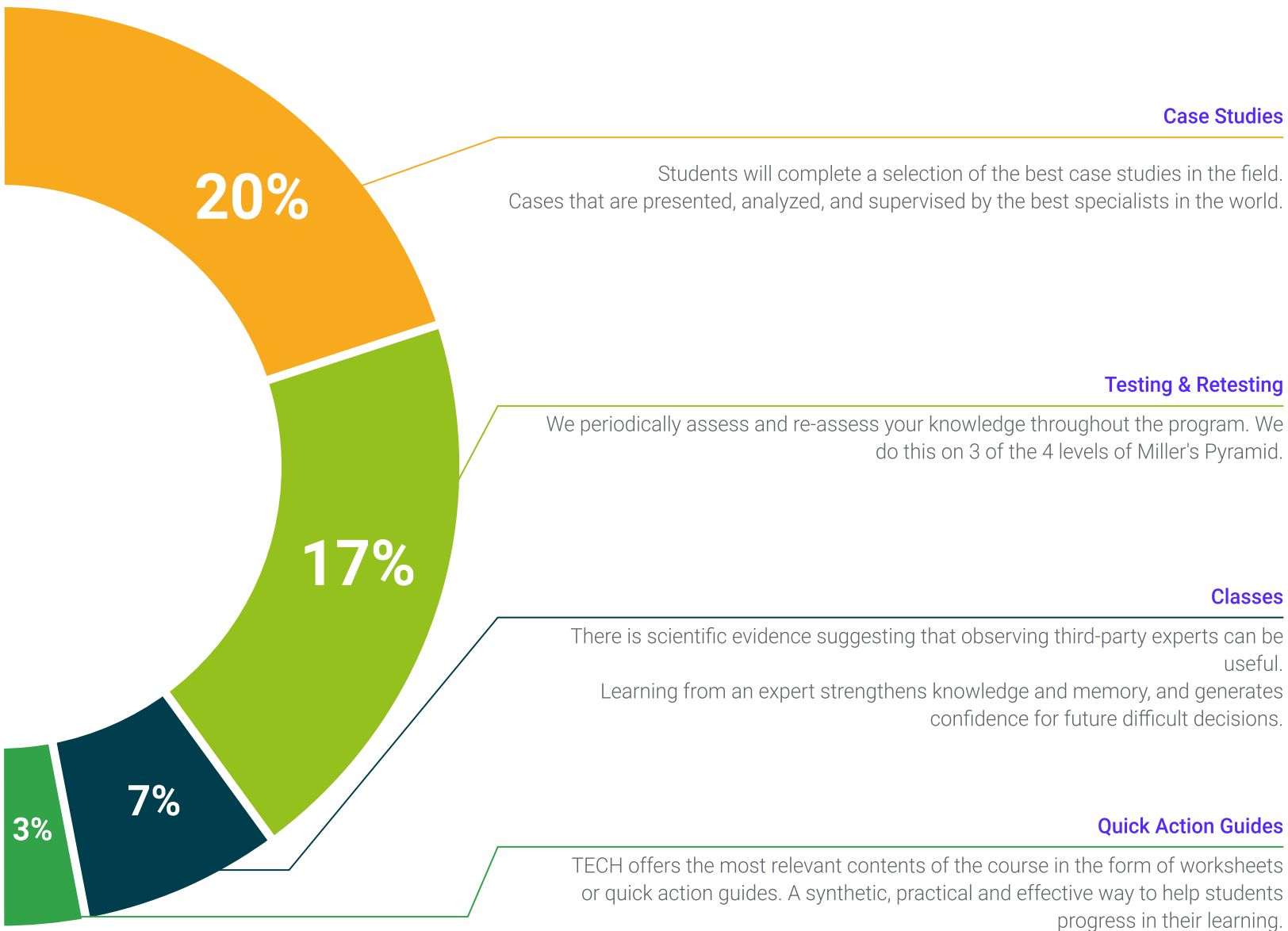
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge. This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



Additional Reading

Recent articles, consensus documents, international guides... In our virtual library you will have access to everything you need to complete your education.





07

Teaching Staff

On this academic journey, students will have the opportunity to study with a team of specialists made up of researchers, doctors, bioinformaticians and experts in Artificial Intelligence, all of them with outstanding careers in the fields of healthcare and technology. In fact, each of the mentors has been selected for their in-depth knowledge in key areas such as biomedical Big Data management, predictive disease modelling and the development of personalized drug therapies. Furthermore, their experience will allow them to offer a practical and up-to-date vision on the implementation of AI in clinical diagnosis and the optimization of treatments.



“

The teachers, experts with extensive experience in the area, will offer high-quality education based on real cases and innovative solutions. This will prepare you to face the current challenges of the technology sector”

Management



Dr. Peralta Martín-Palomino, Arturo

- CEO and CTO at Prometheus Global Solutions
- CTO at Korporate Technologies
- CTO at AI Shephers GmbH
- Consultant and Strategic Business Advisor at Alliance Medical
- Director of Design and Development at DocPath
- PhD in Computer Engineering from the University of Castilla-La Mancha
- PhD in Economics, Business and Finance from the Camilo José Cela University
- PhD in Psychology from University of Castilla La Mancha
- Master's Degree in Executive MBA from the Isabel I University
- Master's Degree in Sales and Marketing Management, Isabel I University
- Master's Degree in Expert in Big Data by Hadoop Training
- Master's Degree in Advanced Information Technologies from the University of Castilla La Mancha
- Member of: SMILE Research Group

Professors

Ms. Del Rey Sánchez, Cristina

- ♦ Talent Management Administrator at Securitas Seguridad España, S.L.
- ♦ Extracurricular Activities Center Coordinator
- ♦ Tutor and pedagogical interventions with Primary and Secondary Education students
- ♦ Postgraduate Degree in Development, Delivery and Tutoring of e-Learning Training Actions
- ♦ Postgraduate Degree in Early Childhood Care
- ♦ Degree in Pedagogy from the Complutense University of Madrid

Mr. Del Rey Sánchez, Alejandro

- ♦ Responsible for implementing programs to improve tactical care in emergencies
- ♦ Degree in Industrial Organization Engineering
- ♦ Certification in Big Data and Business Analytics
- ♦ Certification in Microsoft Excel Advanced, VBA, KPI and DAX
- ♦ Certification in CIS Telecommunication and Information Systems

Dr. Carrasco González, Ramón Alberto

- ♦ Business Intelligence Manager (Marketing) at Granada Savings Bank and Mare Nostrum Bank
- ♦ Information Systems Manager (Data Warehousing and Business Intelligence) at Granada Savings Bank and Mare Nostrum Bank
- ♦ Computer Science and Artificial Intelligence Specialist and Researcher
- ♦ PhD in Artificial Intelligence from the University of Granada
- ♦ Higher Engineering Degree in Computer Science from the University of Granada

Mr. Martín-Palomino Sahagún, Fernando

- ♦ *Chief Technology Officer* and *R+D+i Director* at AURA Diagnostics (medTech)
- ♦ Business Development at SARLIN
- ♦ Chief Operating Officer at Alliance Diagnostics
- ♦ Chief Innovation Officer at Alliance Medical
- ♦ *Chief Information Officer* at Alliance Medical
- ♦ Field Engineer & Project Management in Digital Radiology at Kodak
- ♦ MBA from Polytechnic University of Madrid
- ♦ *Executive Master* in Marketing and Sales at ESADE
- ♦ Telecommunications Engineer from the University Alfonso X El Sabio

Mr. Popescu Radu, Daniel Vasile

- ♦ Independent Specialist in Pharmacology, Nutrition and Dietetics
- ♦ Freelance Producer of Teaching and Scientific Contents
- ♦ Nutritionist and Community Dietitian
- ♦ Community Pharmacist
- ♦ Researcher
- ♦ Master's Degree in Nutrition and Health at the Open University of Cataluña
- ♦ Master's Degree in Psychopharmacology from the University of Valencia
- ♦ Pharmacist from the Complutense University of Madrid
- ♦ Nutritionist-Dietician from the European University Miguel de Cervantes

08

Certificate

The Postgraduate Diploma in Biomedical Information Management, Diagnosis and Application of Personalized Pharmacological Treatments with Artificial Intelligence guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.



“

*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 **Postgraduate Diploma in Biomedical Information Management, Diagnosis and Application of Personalized Pharmacological Treatments with Artificial Intelligence** 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: **Postgraduate Diploma in Biomedical Information Management, Diagnosis and Application of Personalized Pharmacological Treatments with Artificial Intelligence**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**





Postgraduate Diploma
Biomedical Information
Management, Diagnosis and
Application of Personalized
Pharmacological Treatments
with Artificial Intelligence

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Accreditation: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

Postgraduate Diploma

Biomedical Information Management, Diagnosis and Application of Personalized Pharmacological Treatments with Artificial Intelligence