Postgraduate Diploma

Development, Manufacturing and Distribution of New Drugs with Artificial Intelligence

tech global university

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Postgraduate Diploma

Development, Manufacturing and Distribution of New Drugs with Artificial Intelligence

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

Website: **www.techtitute.com/us/artificial-intelligence/postgraduate-diploma/postgraduate-diploma-development-manufacturing-distribution-new-drugs-artificial-intelligence**

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01

Introduction to the Program

The Development, Manufacturing and Distribution of New Drugs has undergone significant transformations in recent decades, driven by advances in technology, especially in the field of Artificial Intelligence. International institutions such as the WHO and the FDA have recognized the impact of technology on the pharmaceutical industry, promoting its integration into drug development processes. Taking these innovations into account, TECH has designed a very comprehensive Postgraduate Diploma that will address each stage of a drug's life cycle, from conception to delivery to the patient, thereby contributing to greater accessibility and effectiveness of treatments. All of this will be detailed using a 100% online and innovative methodology.

With this 100% online Postgraduate Diploma, you will master the use of Artificial Intelligence to accelerate the pharmaceutical process. This will prepare you to face the challenges of the future. Enroll and revolutionize the pharmaceutical industry!"

The development, manufacture and distribution of new drugs is one of the most challenging and advanced fields within the pharmaceutical industry. In this context, the incorporation of Artificial Intelligence into these processes has revolutionized the way drugs are researched and produced. Thanks to AI, researchers can accelerate the development of new drugs, optimize manufacturing techniques and improve distribution efficiency, contributing to a more accessible and effective healthcare system.

With this in mind, TECH has developed this Postgraduate Diploma in the Development, Manufacturing and Distribution of New Drugs with Artificial Intelligence, which will provide the most outstanding knowledge in this field. Through this comprehensive and specialized program, a unique education will be provided that combines theory and practice to offer a solid experience, focused on innovation and continuous improvement. In this way, specialists will master the use of AI algorithms in drug design, the automation of manufacturing processes and the optimization of distribution chains through predictive analysis.

Upon completion of this program, graduates will be equipped with the skills necessary to lead in a rapidly expanding sector. Thanks to the knowledge they acquire, they will be able to access positions of responsibility in pharmaceutical companies, research centers and regulatory bodies, where they will be able to apply innovative solutions to accelerate the development of new treatments. They will also open the door to new opportunities in the field of digital health and the optimization of industrial processes, areas with a high demand for specialists.

In addition, the program will be delivered 100% online, allowing students to balance their education with other professional or personal responsibilities. In turn, the Relearning methodology will optimize the learning process through the repetition and consolidation of key concepts. Finally, the materials will be accessible 24/7, allowing experts to organize their time flexibly.

This **Postgraduate Diploma in Development, Manufacturing and Distribution of New Drugs 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 the self-assessment process can be carried out to improve learning
- Special emphasis on innovative methodologies in the Development, Manufacturing and Distribution of New Drugs with Artificial Intelligence
- 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

Enroll in this program and benefit from the best multimedia materials and teaching resources that TECH has to offer you. You will boost the growth of your professional career with the best!"

Are you passionate about pharmaceuticals and innovation? With this qualification you will be part of the future of the industry. You will study in a 100% online and flexible environment. Grow your career with the power of technology!"

Benefit from practical training and Relearning to improve your skills and stand out in the technology and pharmacological market. You will contribute to the development of the medicines of the future!

This innovative program will allow you to acquire, at an early stage, key knowledge in Artificial Intelligence and pharmacology, as well as specialized skills for your professional development. Enroll now!

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.

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.

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.

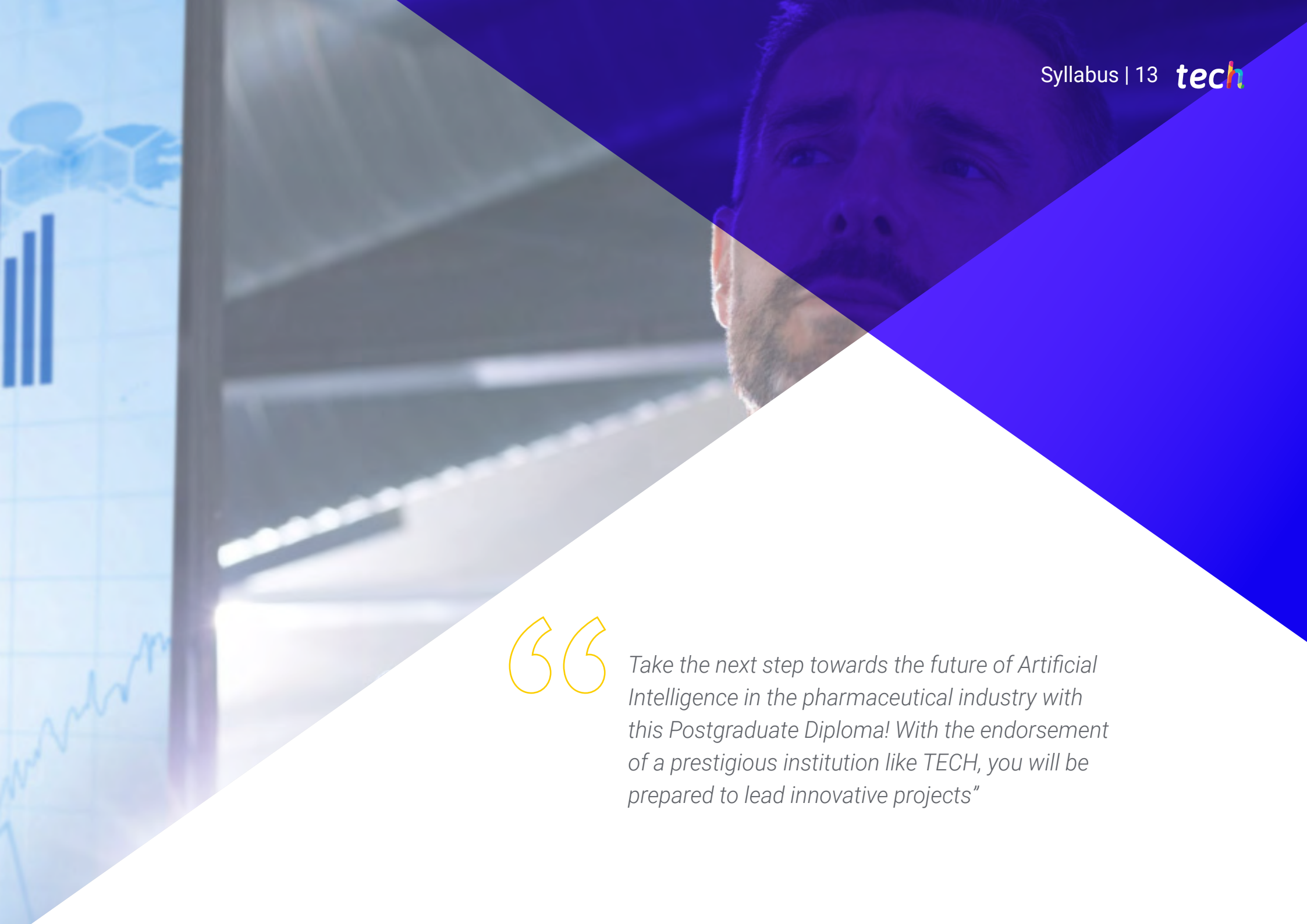
The top-rated university by its students

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.

02

Syllabus

Throughout a multidisciplinary syllabus, specialists will learn to integrate advanced Artificial Intelligence tools at each stage of the drug life cycle, addressing areas such as production automation, improving the efficiency of clinical trials and intelligent distribution. In turn, they will delve into the regulatory and safety aspects that ensure innovation is applied within legal and ethical frameworks. In this way, graduates will become highly skilled experts, prepared to lead innovative projects.



Take the next step towards the future of Artificial Intelligence in the pharmaceutical industry with this Postgraduate Diploma! With the endorsement of a prestigious institution like TECH, you will be prepared to lead innovative projects"

Module 1. Development of New Drugs with Artificial Intelligence

1.1. Identification of Therapeutic Targets with AI
- 1.1.1. Concept of Therapeutic Targets and Their Importance in Pharmacology
- 1.1.2. AI Algorithms for the Identification of Potential Targets
- 1.1.3. Neural Network Models in Therapeutic Target Prediction
- 1.1.4. Examples such as Insilico Medicine for Target Discovery

1.2. AI-Assisted Drug Design
- 1.2.1. AI-Assisted Molecular Design Techniques
- 1.2.2. Computational Modeling in Drug Design
- 1.2.3. Molecule Generation with Deep Learning
- 1.2.4. Applications such as Atomwise in Drug Discovery

1.3. Pharmaceutical Compound Optimization
- 1.3.1. Optimization Processes in Drug Development
- 1.3.2. AI Techniques for Improving Composite Properties
- 1.3.3. Molecular Simulation Tools in Drug Optimization
- 1.3.4. Examples of Platforms such as Schrodinger for Optimization

1.4. Simulation of Drug-Receptor Interactions
- 1.4.1. Importance of Drug-Receptor Interactions
- 1.4.2. Molecular Simulation Techniques in Pharmacology
- 1.4.3. AI Algorithms for Predicting Molecular Interactions
- 1.4.4. Tools such as Cresset for Interaction Simulation

1.5. Generation of Bioactive Compound Libraries
- 1.5.1. Creation of Compound Libraries in Drug Development
- 1.5.2. AI in the Generation and Classification of Compounds
- 1.5.3. Virtual Screening of Bioactive Compounds
- 1.5.4. Example of Tools such as Chemoinformatics from ChemAxon

1.6. Preclinical Hypothesis Validation with AI
- 1.6.1. Preclinical Stage Hypothesis Validation
- 1.6.2. AI Models for Testing in Preclinical Experimentation
- 1.6.3. Predictive Analytical Tools for Preclinical Analysis
- 1.6.4. Case of BenevolentAI in Preclinical Research

1.7. Prediction of Side Effects and Toxicity
- 1.7.1. Assessment of Side Effects by AI
- 1.7.2. Toxicity Models in Early Stages of Development
- 1.7.3. AI for Drug Safety and Toxicity Analysis
- 1.7.4. DeepChem Applications for Composite Toxicity

1.8. Dose and Formulation Optimization
- 1.8.1. Principles of Formulation and Dose Optimization
- 1.8.2. AI in the Determination of Effective and Safe Dose
- 1.8.3. Predictive Models for Formulation Optimization
- 1.8.4. Genentech Example for Dose and Formulation Studies

1.9. In Silico Tests in Early Development Phases
- 1.9.1. Concept of in Silico Testing in Pharmaceutical Development
- 1.9.2. Algorithms for Simulation and Virtual Testing
- 1.9.3. AI in In Vitro and In Vivo Test Reduction
- 1.9.4. Example of Simulations Plus in In Silico Prediction

1.10. AI-Assisted Clinical Studies
- 1.10.1. AI-Assisted Clinical Study Design
- 1.10.2. Optimization of the Recruitment Phase in Clinical Trials
- 1.10.3. Response Modeling and Follow-Up in Clinical Trials
- 1.10.4. Cases such as Medidata Solutions in Clinical Trial Optimization

Module 2. Artificial Intelligence in Pharmaceutical Production and Distribution

2.1. Optimization of Manufacturing Processes with AI
- 2.1.1. Introduction to Pharmaceutical Manufacturing and Current Challenges
- 2.1.2. AI Algorithms to Improve Production Efficiency
- 2.1.3. Predictive Models to Reduce Manufacturing Times
- 2.1.4. Siemens Pharma Example for Process Automation

2.2. Quality Control in Drug Manufacturing
- 2.2.1. Importance of Quality Control in the Pharmaceutical Industry
- 2.2.2. AI Algorithms for Inspection and Defect Detection
- 2.2.3. AI to Ensure Consistency in Product Quality
- 2.2.4. Applications such as Aizon for Quality Analysis in Production

2.3. AI for Inventory and Distribution Management
- 2.3.1. Introduction to Inventory Management in Pharmaceuticals
- 2.3.2. AI Models for Inventory and Demand Optimization
- 2.3.3. Demand Forecasting Using Data Analytics
- 2.3.4. Tools such as SAP Integrated Business Planning

2.4. Predictive Maintenance in Production Plants
- 2.4.1. Concept of Predictive Maintenance and Its Benefits
- 2.4.2. AI Algorithms to Anticipate Machinery Failures
- 2.4.3. AI to Optimize Maintenance Cycles
- 2.4.4. Examples of Digital GE in Predictive Maintenance

2.5. Drug Counterfeit Detection
- 2.5.1. Impact of Drug Counterfeiting on Public Health
- 2.5.2. AI for Authentication of Pharmaceutical Products
- 2.5.3. Computer Vision Algorithms for Counterfeit Detection
- 2.5.4. Tools such as TruTag for Authenticity Verification

2.6. Automation in Packaging and Labeling
- 2.6.1. Packaging Processes in the Pharmaceutical Industry
- 2.6.2. AI for Optimization of Automated Labeling and Packaging
- 2.6.3. Computer Vision Techniques in Label Control
- 2.6.4. Rockwell Automation Applications in Packaging

2.7. Logistics Optimization and Safe Distribution of Pharmaceuticals
- 2.7.1. Drug Logistics and Its Impact on Availability
- 2.7.2. AI Algorithms for Optimization of Distribution Routes
- 2.7.3. AI for Tracking Deliveries and Transport Conditions
- 2.7.4. Examples such as UPS Healthcare for Secure Distribution

2.8. AI for Cold Chain Improvement in Distribution
- 2.8.1. Importance of the Cold Chain for Sensitive Medicines
- 2.8.2. Predictive Models for Maintaining Optimal Temperatures
- 2.8.3. Real-Time Monitoring Algorithms
- 2.8.4. Tools such as Carrier Sensitech for Cold Chain Control

2.9. Automation of Stock Management in Pharmacies
- 2.9.1. Introduction to Stock Management in Pharmacies
- 2.9.2. AI Algorithms for Optimizing Product Replenishment
- 2.9.3. AI Systems for Demand and Consumption Forecasting
- 2.9.4. Applications such as Omnicell for Automated Inventory Management

2.10. Delivery Route Optimization with AI
- 2.10.1. Delivery Challenges in the Pharmaceutical Industry
- 2.10.2. Route Optimization Algorithms for Efficient Delivery
- 2.10.3. AI for Real-Time Dynamic Route Planning
- 2.10.4. Example of DHL SmartSensor for Drug Logistics

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

Do you want to boost your professional growth and find better opportunities? This program will allow you to acquire the necessary knowledge to stand out in the technology and pharmaceutical sector"

04

Teaching Objectives

The main goal of this Postgraduate Diploma is to provide specialists with the knowledge and skills necessary to integrate Artificial Intelligence into all stages of the pharmaceutical process. In this way, the program is designed to give them a deep understanding of how AI can transform the research, design, manufacturing and distribution of drugs, optimizing each phase of the drug life cycle. Through a multidisciplinary approach, graduates will gain a solid understanding of emerging technologies and their practical application in the pharmaceutical industry.

Transform Pharmacy with Artificial Intelligence: Thanks to this program, you will learn how to develop and distribute innovative drugs. Join TECH and make a difference in the pharmaceutical industry!"

General Objectives

- Apply artificial intelligence tools in the design and development of new drugs
- Optimize pharmaceutical manufacturing processes through advanced technologies
- Integrate international regulations in the development and distribution of drugs
- Develop logistics strategies for global drug distribution
- Analyze clinical data to improve efficacy and safety of treatments
- Implement predictive techniques in pharmaceutical research and development
- Design innovative solutions for the personalization of medical therapies
- Lead multidisciplinary pharmaceutical projects with a technological and strategic focus

Would you like to revolutionize pharmacology through the use of Artificial Intelligence? This Postgraduate Diploma will help you achieve your goals. Here you will have multimedia materials and an innovative syllabus"

Specific Objectives

Module 1. Development of New Drugs with Artificial Intelligence

- Apply artificial intelligence techniques to identify innovative molecules
- Design predictive algorithms to assess the efficacy of pharmacological compounds
- Implement computational models to optimize drug development
- Analyze genomic data to personalize pharmacological treatments

Module 2. Artificial Intelligence in Pharmaceutical Production and Distribution

- Automate manufacturing processes through artificial intelligence systems
- Optimize logistics management and drug distribution with advanced technologies
- Integrate digital platforms for real-time monitoring of the supply chain
- Design pharmaceutical production strategies based on predictive data analysis

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

- Identify international regulations for the use of AI in the pharmaceutical field
- Evaluate ethical risks associated with the implementation of artificial intelligence in pharmacy
- Design safety protocols to ensure the integrity of AI processes
- Promote the responsible and ethical use of Artificial Intelligence in the pharmaceutical industry

05

Career Opportunities

This qualification will open up a range of career opportunities in one of the most dynamic and technologically advanced industries in the world. Graduates will be fully prepared to take on high-level roles in pharmaceutical companies, research centres, regulatory institutions and technology companies specialized in healthcare. In addition, they will be able to access a wide range of positions such as research and development (R&D) managers, pharmaceutical automation specialists, health data analysts, quality or regulatory compliance managers and consultants in emerging technologies for the pharmaceutical industry.

Enroll in a practical and specialized program to boost your career in the pharmaceutical and technology industry. Using a 100% online methodology, you will lead the future of these areas!"

Graduate Profile

The profile of the graduate of this program will be focused on the ability to integrate the advances of Artificial Intelligence in each stage of the life cycle of medicines, from their initial research to their distribution and commercialization. Upon completion of the program, this expert will be prepared to make key decisions and lead innovative projects within pharmaceutical companies, regulatory bodies, and cutting-edge research centers. In addition, they will be characterized by a solid technical preparation, combined with a deep understanding of the regulatory, ethical and productive aspects that set the course for pharmaceutical innovation.

Designed to prepare leaders in technological and pharmaceutical innovation, this program will enable you to face the challenges of a constantly evolving industry, using the best teaching tools.

- **Leadership Skills in Multidisciplinary Environments:** Coordinate and manage work teams in pharmaceutical innovation projects, promoting collaboration between different areas
- **Critical and Analytical Thinking:** Assess, interpret and utilize large volumes of biomedical and pharmacological data, applying Artificial Intelligence to make informed decisions
- **Management of Technological Projects:** Plan, implement and supervise projects related to the development, manufacturing and distribution of medicines, using advanced technological tools
- **Adaptation to Regulatory and Ethical Changes:** Incorporate the evolution of international and ethical regulations in the pharmaceutical industry, adapting drug development strategies to these changes

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

1. **Director of Pharmaceutical Research and Development:** Leads teams responsible for new drug research, implementing innovative technologies and efficient development strategies
2. **Pharmaceutical Production Manager:** Oversees drug production operations, ensuring quality and efficiency in the use of advanced technologies, such as Artificial Intelligence
3. **Pharmaceutical Logistics Specialist:** Manage the drug supply chain, implementing intelligent systems for global distribution and product traceability
4. **Head of Pharmaceutical Regulation and Compliance:** In charge of ensuring that pharmaceutical products comply with local and international regulations, applying ethical and legal standards in their development
5. ***Data Scientist* in Pharmaceuticals:** Uses Artificial Intelligence and data analytics tools to process large volumes of biomedical and pharmacological information, optimizing drug development
6. **Director of Pharmaceutical Technology Innovation:** Leads the implementation of new technologies, especially Artificial Intelligence, to transform drug development and production processes
7. **Pharmaceutical Marketing and Commercialization Manager:** Develops marketing strategies for the introduction of new drugs to the market, using data analytics to identify trends and opportunities
8. **Digital Pharma Consultant:** Provides advice to pharmaceutical companies on the implementation of digital solutions, such as AI and Big Data, to improve drug research and manufacturing

Thanks to TECH's online modality, you will advance in your professional career without interruptions, preparing you for a future where technology will play a leading role in the pharmaceutical industry"

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.

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.

"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.

> *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.

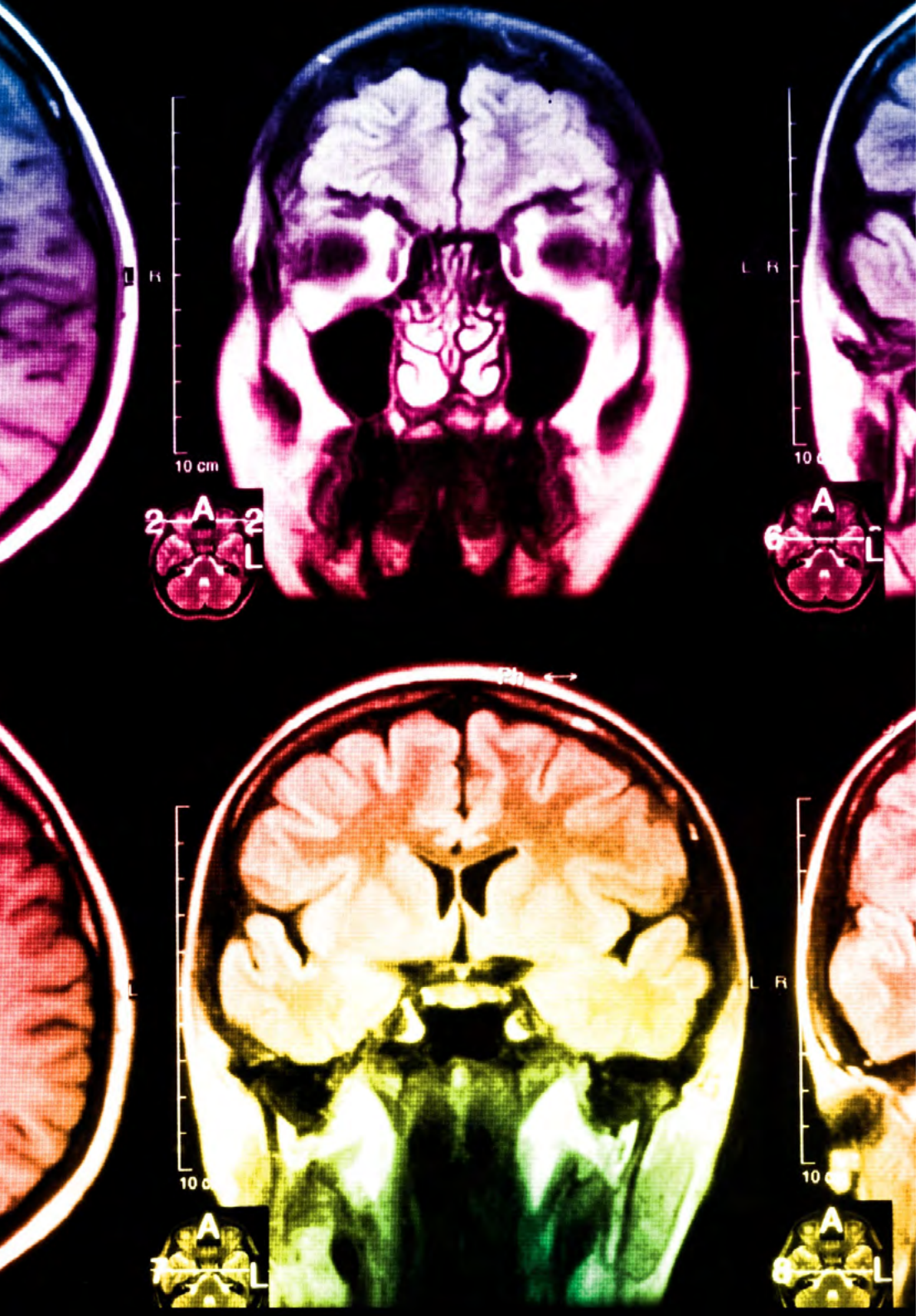
In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

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

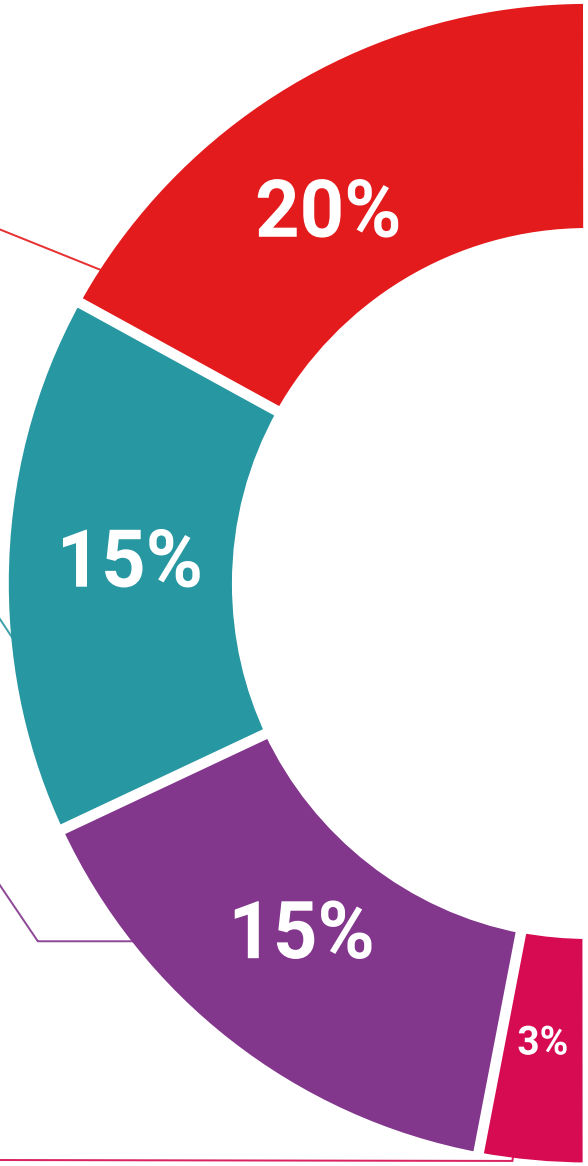
You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.

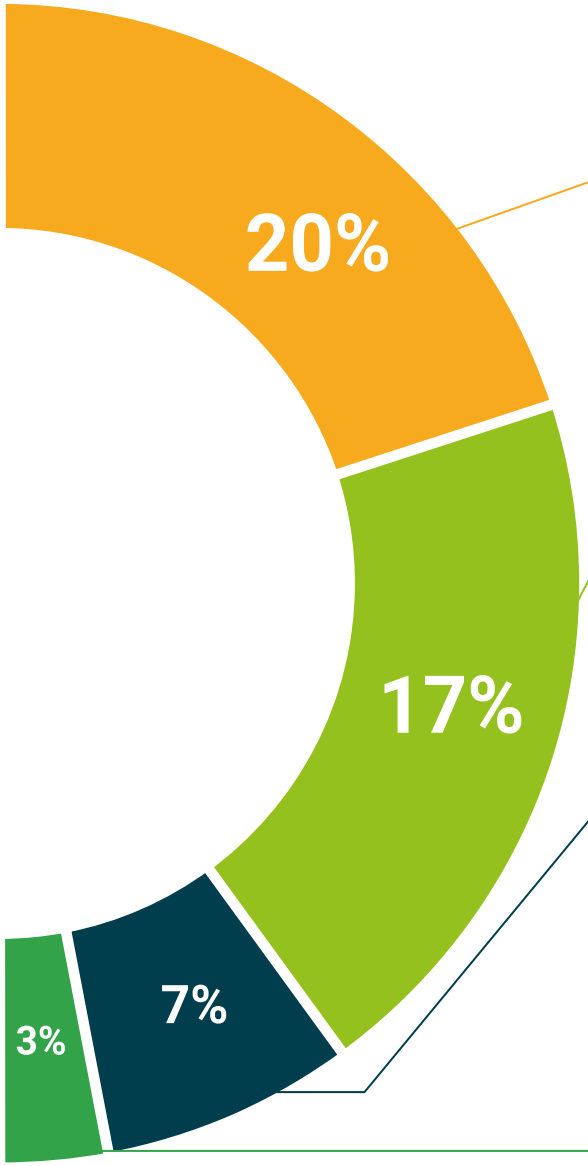
Interactive Summaries

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.





Case Studies

Students will complete a selection of the best case studies in the field.
Cases that are presented, analyzed, and supervised by the best specialists in the world.

Testing & Retesting

We periodically assess and re-assess your knowledge throughout the program. We do this on 3 of the 4 levels of Miller's Pyramid.

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 for future difficult decisions.

Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical and effective way to help students progress in their learning.

07

Teaching Staff

The teaching staff is made up of a group of top-level professionals, who bring their vast experience from both the academic and pharmaceutical sectors. In fact, each member of the team is an internationally renowned expert with a solid background in drug research and development, as well as in the application of Artificial Intelligence in industrial and pharmaceutical production processes. Thanks to the combination of academics, researchers and working professionals, students will benefit from a comprehensive and up-to-date perspective on the latest innovations in the sector.

The approach of TECH's teachers, specialists with extensive experience, ensures that you not only acquire key knowledge, but are also prepared to lead AI and Pharmacy projects with expertise"

Management

Dr. Peralta Martín-Palomino, Arturo

- CEO and CTO at Prometeus 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

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

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 the Polytechnic University of Madrid
- Executive Master's Degree in Marketing and Sales at ESADE
- Telecommunications Engineer from the University Alfonso X El Sabio

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

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

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

08

Certificate

The Professional Master's Degree in Development, Manufacturing and Distribution of New Drugs 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 Development, Manufacturing and Distribution of New Drugs 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.

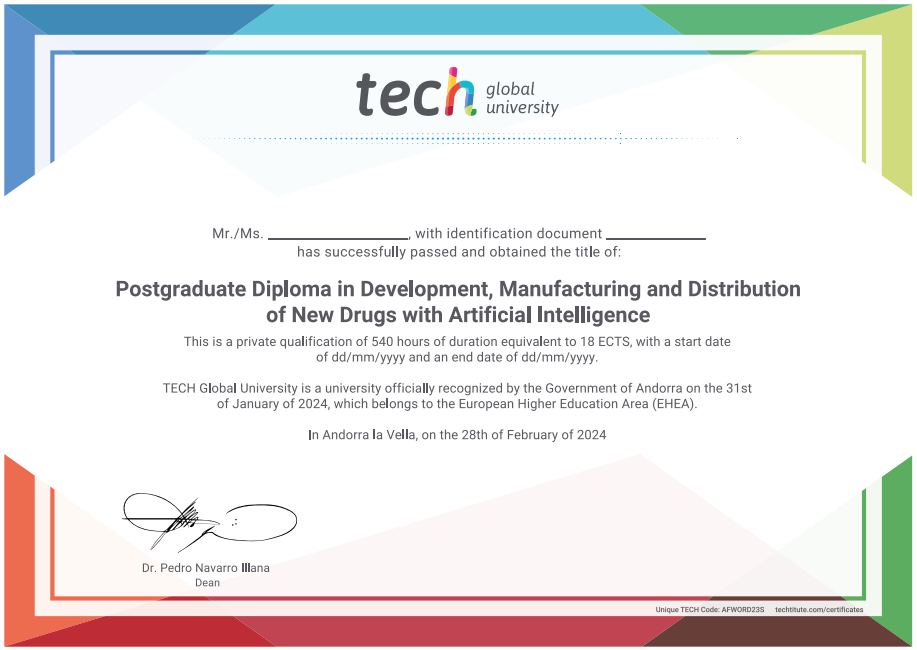
This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Development, Manufacturing and Distribution of New Drugs with Artificial Intelligence**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**


tech global university

Mr./Ms. _____, with identification document _____
has successfully passed and obtained the title of:

Postgraduate Diploma in Development, Manufacturing and Distribution of New Drugs with Artificial Intelligence

This is a private qualification of 540 hours of duration equivalent to 18 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
Dean

Unique TECH Code: AFWORD23S techtitute.com/certificates

*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.

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Postgraduate Diploma

Development, Manufacturing and Distribution of New Drugs with Artificial Intelligence

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

Postgraduate Diploma

Development, Manufacturing and Distribution of New Drugs with Artificial Intelligence

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