

Postgraduate Diploma

Elaboration of Individualized Oral Medicines



Postgraduate Diploma Elaboration of Individualized Oral Medicines

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Accreditation: 23 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techtute.com/us/pharmacy/postgraduate-diploma/postgraduate-diploma-elaboration-individualized-oral-medicines

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01

Introduction

The development of industry and the discovery of new synthetic medicines has transformed the concept of medicine. We have gone from an individualized medicine for a specific patient and specific needs, to a global medicine. That is, for a specific disease, but intended for a large number of patients.





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The Postgraduate Diploma in Elaboration of Individualized Oral Medicines contains the most complete and up to date scientific program on the market"

Industrialized medicine has been a breakthrough in current therapeutics, since many patients have found a remedy for their illnesses.

However, this industrialized drug does not cover all therapeutic needs. For various reasons, there are therapeutic gaps that only the Individualized Medicine can fill.

The Master Formulation or, nowadays, "individualized medicine" is the essence of the pharmaceutical profession. It has been the starting point of human medicine therapeutics, when patient care was individualized.

The master formula, understood as the medicine intended for an individualized patient, prepared by or under the direction of a pharmacist, to expressly comply with a detailed medical prescription of the medicinal substances it includes, requires that the professional activity be adjusted to strict and faithfully reproducible procedural guidelines. In this sense, pharmacists need to be updated and promote continuous training in the knowledge and compliance with the standards for the correct preparation and quality control of master formulas in order to achieve the required level of quality.

The objective of this program is to train pharmacists in a discipline unique and exclusive to their profession, training professionals who can respond to therapeutic gaps with the formulation of an individualized drug with the quality and efficacy of an industrialized drug.

This **Postgraduate Diploma in Elaboration of Individualized Oral Medicines** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ Clinical cases presented by experts in the different specialties. The graphic, schematic, and eminently practical contents of which they are composed provide scientific and practical information on the disciplines that are essential for professional practice
- ♦ What's new in the development of individualized oral medications?
- ♦ Algorithm-based interactive learning system for decision-making in the presented clinical situations
- ♦ With a special emphasis on evidence-based medicine and research methodologies in Elaboration of Individualized Oral Medicines
- ♦ All this will be complemented by theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ♦ Content that is accessible from any fixed or portable device with an Internet connection

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This Postgraduate Diploma may be the best investment you can make in the selection of a refresher program for two reasons: in addition to updating your knowledge in the elaboration and development of individualized drugs of oral administration, you will obtain a Postgraduate Diploma from TECH Global University"

Increase your confidence in decision making by updating your knowledge through this Postgraduate Diploma in Elaboration of Individualized Oral Medicines.

Don't miss the opportunity to update your knowledge in Elaboration of Individualized Oral Medicines to improve patient care.

Its teaching staff includes health professionals belonging to the field of pharmacology, who bring to this training the experience of their work, in addition to recognized specialists belonging to leading scientific societies.

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 training program to train in real situations.

This program is designed around Problem Based Learning, whereby the physician must try to solve the different professional practice situations that arise during the course. This will be done with the help of an innovative interactive video system developed by renowned experts in the field of pharmacology with extensive teaching experience.



02

Objectives

The main objective of the program is the development of theoretical and practical learning, so that the health professional can master in a practical and rigorous way the study of the Elaboration of Individualized Oral Medicines.



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This refresher program will generate a sense of security in the elaboration of dosage forms, which will help you grow personally and professionally"



General Objectives

- ♦ Guarantee the correct preparation, by the pharmacist, of magistral formulas and official preparations according to current regulations by means of complementary theoretical/practical training to that acquired in the degree/licensure, updating knowledge, training skills and developing attitudes.



Specific Module Objectives

- ♦ Establish suitable laboratory conditions for product preparation
- ♦ Explain the registry of raw materials as well as production reports
- ♦ Explain the proper completion of the patient information leaflet
- ♦ Define the basic principles of packaging in master formulation
- ♦ Explain the quality control to be carried out in the preparation of dosage forms
- ♦ Explain the use of active ingredients for each of the pharmaceutical forms
- ♦ Explain the current legislation on the elaboration and quality control of master formulas and official preparations
- ♦ Explain resources and sources of consultation in the Master Formulation laboratory
- ♦ Describe proper tool handling
- ♦ Proper use of measurement systems



- ♦ Explain the significant differences and peculiarities in the preparation of different oral dosage forms: solutions, suspensions, colloidal dispersions (gels), capsules and powders.
- ♦ Carry out the operations of elaboration and/or control according to the established norms of correct elaboration and quality control of magistral formulas and office preparations.
- ♦ To make the corresponding records.
- ♦ Explain what is the emulsion sign?
- ♦ Explain what is involved in the testing of organoleptic characteristics, final weight/volume.

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Take the opportunity and take the step to get up to date on the latest developments in Elaboration of Individualized Oral Medicines”



03

Course Management

This program includes in its teaching staff health professionals of recognized prestige, who belong to the field of pharmacology and who bring to this training the experience of their work.

In addition, renowned specialists, members of prestigious national and international scientific communities, are involved in designing and preparing the program.





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Learn from leading professionals the latest advances in Elaboration of Individualized Oral Medicines”

Director



Dr. Sánchez Guerrero, Amelia

- ♦ Head of the Hospital Pharmacy Service at the Puerta del Hierro U.H. in Majadahonda since February 2015. }
- ♦ Doctorate. Doctor Complutense University. Madrid
- ♦ Degree in Pharmacy. Complutense University of Madrid. Madrid
- ♦ Member of the Teaching Commission. Puerto de Hierro U.H. Majadahonda
- ♦ Chairman of the Pharmacy and Therapeutics Committee. Puerto de Hierro U.H. Majadahonda
- ♦ Know, understand and value your pharmacist within the hospital. Correo Farmacéutico Award for one of the Best Pharmacy Initiatives of the Year 2017 in the Pharmaceutical Care and Health Education section. Madrid, April 2018
- ♦ Know, understand and value your pharmacist within the hospital. Sanitaria 2000 Award "Visibility of the hospital pharmacist in the hospital setting" organized by the SEFH and Redacción Médica. IV Global Meeting of Hospital Pharmacy. Córdoba, April 2018

Professors

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- ♦ Primary Care Pharmacy. Northwest Assistance Directorate. SERMAS
- ♦ General Subdirectorate of Pharmacy and Health Products. Health Council of SERMAS.
- ♦ Antibiotic optimization program. Getafe University Hospital

04

Structure and Content

The structure of the contents has been designed by a team of professionals knowledgeable about the implications of training in daily pharmaceutical practice, aware of the relevance of current training in order to develop individualized dosage forms in a safe and efficient manner and committed to quality teaching through new educational technologies.





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This Postgraduate Diploma in Elaboration of Individualized Oral Medicines contains the most complete and updated scientific program on the market"

Module 1. Biopharmaceutics and Pharmacokinetics

- 1.1. New Aspects of Galenic Pharmacy
 - 1.1.1. Introduction
 - 1.1.2. Chemical, Therapeutic and Biological Equivalence of Medicines
 - 1.1.3. Biopharmaceutics and Basic Pharmacokinetics
 - 1.1.4. Pharmaceutic Technology
 - 1.1.5. Clinical Pharmacokinetics
- 1.2. Evolution of Medicines in the Body
 - 1.2.1. LADME
 - 1.2.2. Kinetics of LADME Processes
 - 1.2.3. Release as a Limiting Factor for Absorption
- 1.3. Absorption Mechanisms
 - 1.3.1. Passive Diffusion
 - 1.3.2. Convective Diffusion
 - 1.3.3. Active Transport
 - 1.3.4. Facilitated Transport
 - 1.3.5. Ion Pairs
 - 1.3.6. Pinocytosis
- 1.4. Routes of Administration
 - 1.4.1. Oral Route
 - 1.4.1.1. Physiological Factors Affecting Gastrointestinal Absorption
 - 1.4.1.2. Physicochemical Factors that Limit Absorption
 - 1.4.2. Topical Route
 - 1.4.2.1. Structure of the Skin
 - 1.4.2.2. Factors Influencing the Absorption of Substances Through the Skin
 - 1.4.2.3. Parenteral Route
 - 1.4.2.3.1. Parenteral Aqueous Solutions
 - 1.4.2.3.2. Delayed Parenteral Solutions

Module 2. Basic Operations in the Production of Individualized Formulas

- 2.1. Spraying.
 - 2.1.1. Importance in the Formulation and Objectives
 - 2.1.2. Spraying Equipment
 - 2.1.1.1. Manual
 - 2.1.1.2. Industrial
 - 2.1.3. Factors that Affect Spraying
 - 2.1.3.1. Size
 - 2.1.3.2. Texture
 - 2.1.4. Rheological Properties
 - 2.1.4.1. Plastics
 - 2.1.4.2. Exfoliables
 - 2.1.4.3. Elastic
- 2.2. Screening.
 - 2.2.1. Description
 - 2.2.2. Sieves
 - 2.2.3. Sieving Procedures
- 2.3. Mixing and Homogenization
 - 2.3.1. Objectives
 - 2.3.2. Types of Mixtures
 - 2.3.3. Homogenization Process
 - 2.3.4. Mixing Equipment
- 2.4. Filtration
 - 2.4.1. Concept
 - 2.4.2. Filtration Systems
 - 2.4.3. Modes of Filtration



- 2.4.3.1. Conventional Filtration
- 2.4.3.2. Microfiltration
- 2.4.3.3. Ultrafiltration
- 2.4.3.4. Reverse Osmosis
- 2.4.3.5. Sterilizing Filtration
- 2.4.3.6. Tangential Filtration
- 2.5. Drying
 - 2.5.1. Types of Sounds According to their Humidity
 - 2.5.2. Midwives in Drying
 - 2.5.3. The Drying Process
 - 2.5.4. Devices for Drying
 - 2.5.5. Freeze-Drying
 - 2.5.5.1. Stages of the Freeze-drying Process
 - 2.5.5.2. Applications
- 2.6. Sterilization.
 - 2.6.1. Heat Sterilization
 - 2.6.1.1. Humid Heat
 - 2.6.1.2. Dry Heat
 - 2.6.2. Sterilization by Filtration
 - 2.6.3. Other Types of Sterilization

Module 3. Liquid Dosage Forms for Oral Administration

- 3.1. Oral Solutions
 - 3.1.1. Solubility and Factors Involved in this Process
 - 3.1.2. Solvents
 - 3.1.3. Production
 - 3.1.4. Quality Control
 - 3.1.5. Potential Problems in Production
- 3.2. Suspensions and Syrups
 - 3.2.1. Important Aspects
 - 3.2.2. Production
 - 3.2.3. Quality Control
- 3.3. Sachets
 - 3.3.1. Production
- 3.4. Application of Liquid Oral Dosage forms in Pediatrics
 - 3.4.1. Common Pathologies
 - 3.4.2. Common Master Formulas
- 3.5. Application of Liquid Oral Dosage Forms in Geriatrics
 - 3.5.1. Common Pathologies
 - 3.5.2. Common Master Formulas

Module 4. Solid Dosage Forms for Oral Administration

- 4.1. Capsules
 - 4.1.1. Definition and General Aspects
 - 4.1.2. Types
 - 4.1.2.1. Hard Gelatin Capsules
 - 4.1.2.2. Soft Gelatin Capsules
 - 4.1.2.3. Gastroresistant Capsules
 - 4.1.3. Production of Capsules
 - 4.1.4. Excipients Capsules
- 4.2. Tablets I
 - 4.2.1. Definition
 - 4.2.2. Types
 - 4.2.3. Advantages and Disadvantages
 - 4.2.4. Preformulation and Property Analysis
 - 4.2.5. Flow Properties
 - 4.2.6. Formulation
 - 4.2.6.1. Types of Excipients
 - 4.2.6.1.1. Diluents
 - 4.2.6.1.2. Binders
 - 4.2.6.1.3. Disintegrants
 - 4.2.6.1.4. Lubricants
 - 4.2.6.2. Direct Compression Excipients
 - 4.2.6.2.1. Cellulose Derivatives
 - 4.2.6.2.2. Starch Derivatives
 - 4.2.6.2.3. Sugars
 - 4.2.6.2.4. Mineral Products

- 4.2.7. Compression Methods
 - 4.2.7.1. Wet Granulation
 - 4.2.7.1.1. Advantages and Disadvantages
 - 4.2.7.1.2. Granulation and Compression Process
 - 4.2.7.2. Dry Granulation
 - 4.2.7.2.1. Advantages and Disadvantages
 - 4.2.7.2.2. Features
 - 4.2.7.3. Direct Compression
 - 4.2.7.3.1. Advantages and Disadvantages
 - 4.2.7.3.2. Compression Process
- 4.2.8. Quality Control
- 4.2.9. Compression Machines
 - 4.2.9.1 Types
 - 4.2.9.1.1. Eccentric Compression Machines
 - 4.2.9.1.2. Rotary Compression Machines
- 4.3. Tablets II



A unique, key, and decisive training experience to boost your professional development”

05

Methodology

This training provides you with a different way of learning. Our methodology uses a cyclical learning approach: ***Re-learning***.

This teaching system is used in the most prestigious medical schools in the world, and major publications such as the ***New England Journal of Medicine*** have considered it to be one of the most effective.



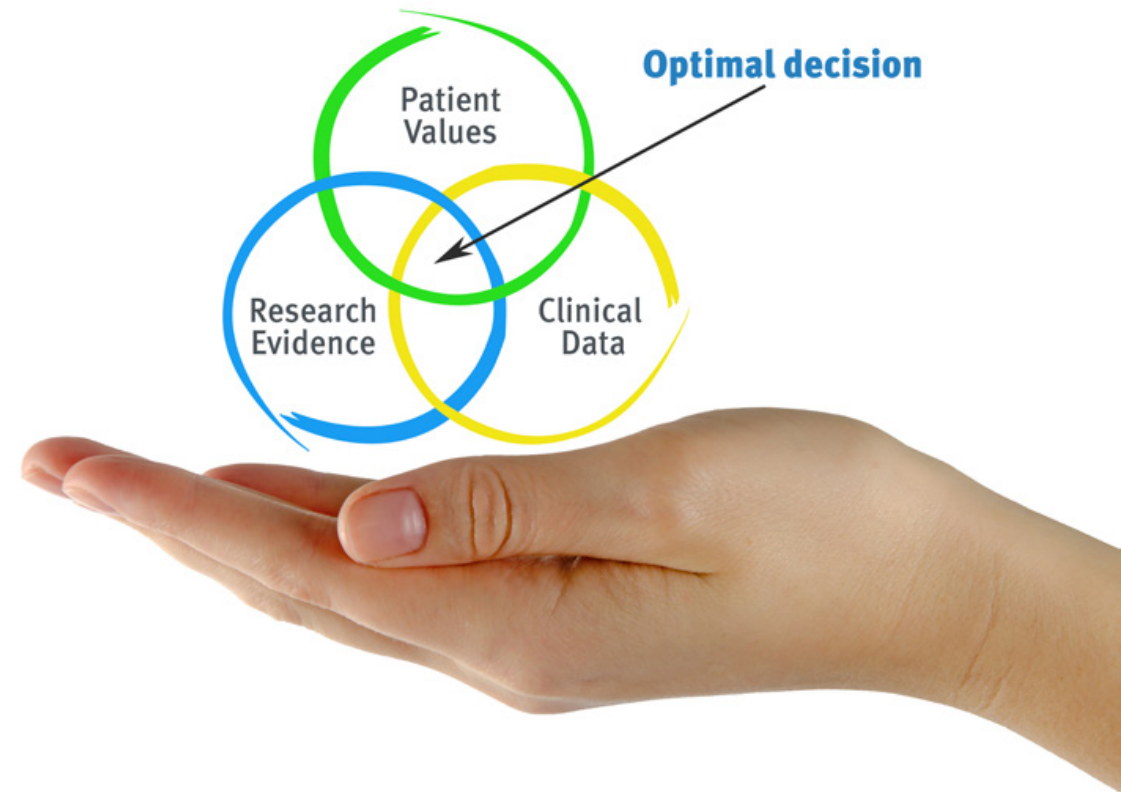


Discover Re-learning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

At TECH we use the Case Method

In a given clinical situation, what would you do? Throughout the program, you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Pharmacists learn better, more quickly and more sustainably over time.

With TECH you can experience a way of learning that is shaking the foundations of traditional universities around the world



According to Dr. Gervas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching potential or because of its uniqueness or rarity. It is essential that the case is based on current professional life, attempting to recreate the actual conditions in a pharmacist's professional practice.

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Did you know that this method was developed in 1912 at Harvard for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method

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

1. Pharmacists who follow this method not only achieve the assimilation of concepts, but also develop their mental capacity through exercises to evaluate real situations and apply their knowledge.
2. The learning process has a clear focus on 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.



Re-learning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

Our University is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, which represent a real revolution with respect to simply studying and analyzing cases.



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

At the forefront of world teaching, the Re-learning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best Spanish-speaking online university (Columbia University).

With this methodology we have trained more than 115,000 pharmacists with unprecedented success, in all clinical specialties. Our pedagogical methodology is developed in a highly demanding environment, with a university student body with a high socioeconomic profile and an average age of 43.5 years old.

Re-learning 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

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

The overall score obtained by our learning system is 8.01, according to the highest international standards.



In this program you will have access to the best educational material, prepared with you in mind:



Study Material

All teaching material is created specifically for the course by specialist pharmacists who will be teaching the course, so that the didactic development is highly specific and accurate.

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.



Video Techniques and Procedures

We bring you closer to the latest techniques, to the newest educational advances, to the forefront of current pharmaceutical care procedures. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



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 unique multimedia content presentation training system 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 training.





Expert-led case studies and case analysis

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through the development of attention and the resolution of different situations: a clear and direct way to achieve the highest degree of understanding.



Testing & Retesting

We periodically evaluate and re-evaluate your knowledge throughout the program, through assessment and self-assessment activities and exercises: so that you can see how you are achieving your goals.



Classes

There is scientific evidence suggesting that observing third-party experts can be useful.
Learning from an expert reinforces knowledge and memory, and builds confidence in our difficult future decisions.



Quick Action Guides

We offer you the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.



06

Certificate

The Postgraduate Diploma in Elaboration of Individualized Oral Medicines guarantees you, in addition to the most rigorous and up to date training, access to a Postgraduate Diploma issued by TECH Global University





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Successfully complete this training and receive your university degree without travel or laborious paperwork”

This private qualification will allow you to obtain a **Postgraduate Diploma in Elaboration of Individualized Oral Medicines** 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.

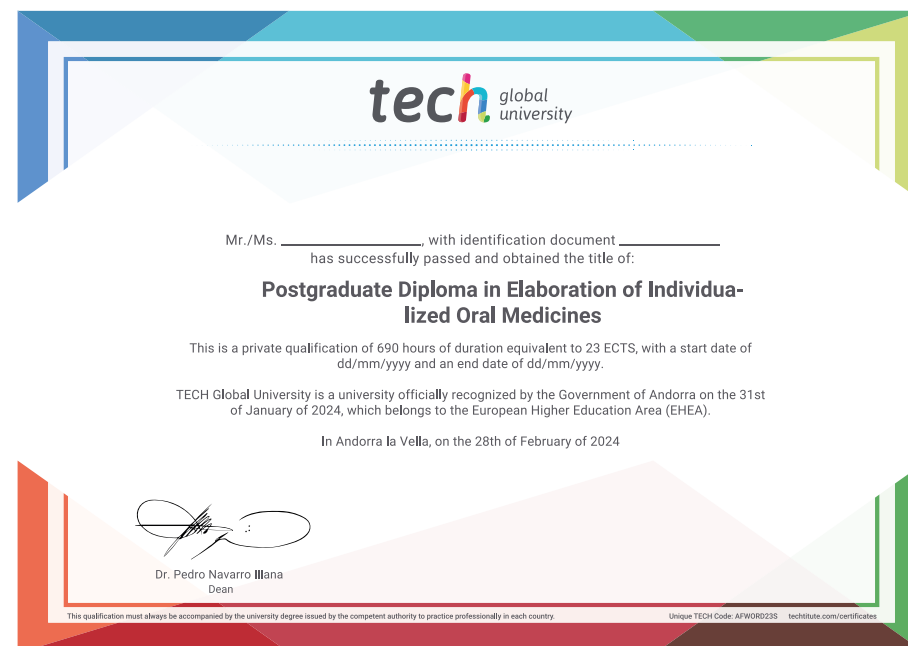
This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Elaboration of Individualized Oral Medicines**

Modality: **online**

Duration: **6 months**

Accreditation: **23 ECTS**



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

future

health confidence people

education information tutors

guarantee accreditation teaching

institutions technology learning

community commitment

tech global
university

personalized service innovation

knowledge present

online training

development languages

classroom

Postgraduate Diploma Elaboration of Individualized Oral Medicines

- » Modality: online
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Postgraduate Diploma

Elaboration of Individualized Oral Medicines