Professional Master's Degree

Elaboration and Development of Individualized Medicines

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Professional Master's Degree
Elaboration and Development of Individualized Medicines

- Modality: **online**
- Duration: **12 months**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Website: **www.techtitute.com/us/pharmacy/professional-master-degree/master-production-development-individualized-medicines**

Index

01

Introduction

The development of the industry, and with it, the discovery of new synthetic drugs 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.

Improve your knowledge in the Elaboration and Development of Individualized Medicines through this program, where you will find the best teaching material with real clinical cases. Find out about the latest advances in the speciality here, in order to be able to carry out quality clinical practice"

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 itemized.

The magistral formula understood as the medicine intended for an individualized patient, prepared by a pharmacist or under his direction, to expressly fulfill a detailed medical prescription of the medicinal substances that includes, requires that the professional activity conform to strict and faithfully reproducible procedural guidelines. In this sense, pharmacists need to be up to date 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 main objective of the Professional Master's Degree in Elaboration and Development of Individualized Medicines is to train pharmacists in a unique and exclusive discipline of their profession, specializing professionals who can respond to therapeutic gaps with the formulation of an individualized medicine with the quality and efficacy of an industrialized medicine.

In this sense, the Professional Master's Degree is structured in four specific blocks, focused on the Elaboration and Development of Individualized Medicines, as well as the current legislation and the rules for the correct elaboration of master formulas and officinal preparations.

These theoretical modules will be accompanied by videos of the elaboration of different master formulas prepared by professionals, where the student will be able to visualize the modus operandi of each one of them.

This **Professional Master's Degree in Elaboration and Development of Individualized Medicines** contains the most complete and up-to-date scientific program on the market. The most important features of the program include:

- Development of more than 50 clinical cases presented by experts in Master Formula
- The graphic, schematic, and practical contents with which they are created provide scientific and practical information on the disciplines that are essential for professional
- Contains practical exercises where the self-evaluation process can be carried out to improve learning
- An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course
- Special emphasis on evidence-based medicine and research methodologies in the Elaboration and Development of Individualized Medicines
- All of this will be complemented by theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- Availability of content from any fixed or portable device with internet connection

Update your knowledge through the Professional Master's Degree in Elaboration and Development of Individualized Medicines"

This Professional Master's Degree is the best investment you can make in the selection of a refresher program for two reasons: in addition to updating your knowledge in Elaboration and Development of Individualized Medicines, you will obtain a certificate issued by TECH Technological University"

Increase your decision-making confidence by updating your knowledge through this Professional Master's Degree.

This Professional Master's Degree will generate a sense of confidence when performing clinical practice, which will help you to grow personally and professionally.

The teaching staff includes professionals from the field of master formulation, who bring their experience to this training program, as well as renowned specialists from leading scientific societies.

Thanks to its multimedia content developed with the latest educational technology, it will allow the professional a situated and contextual learning, that is to say, a simulated environment that will provide an immersive learning programmed to train in real situations.

The design of this program focuses on Problem-Based Learning, through which the pharmaceutical professional should try to solve the different situations of professional practice that arise during the course. For this purpose, it will be assisted by an innovative interactive video system created by renowned experts in the field of the Elaboration and Development of Individualized Medicines with extensive teaching experience.

02

Objectives

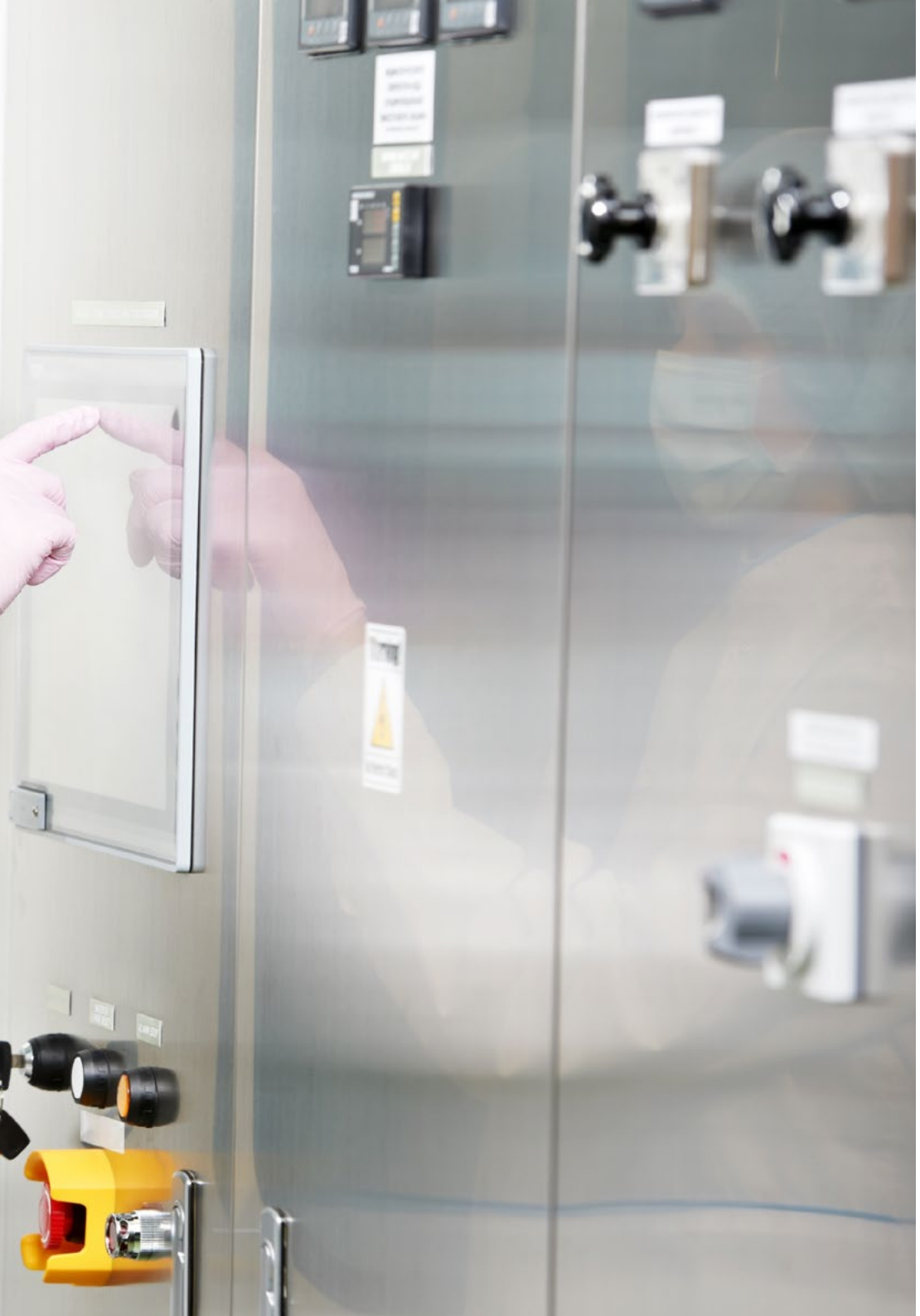
This Professional Master's degree in Elaboration and Development of Individualized Medicines is aimed at offering a complete, detailed and up-to-date view of Pharmacology and Pharmacotherapy as a key element in the care and monitoring of the pharmacy user.

This Professional Master's Degree is designed to help you update your knowledge in Elaboration and Development of Individualized Medicines, with the use of the latest educational technology, to contribute with quality and safety to the decision making and supervision of the patient's treatment"

General Objective

- The Professional Master's Degree in Elaboration and Development of Individualized Medicines aims to guarantee the correct preparation, by the pharmacist, of master formulas and officinal preparations according to current regulations by means of theoretical/practical complementary training to that acquired in the degree, updating knowledge, training skills and developing attitudes

Acquire the necessary skills to specialize in this field and give a boost to your profession"



Specific Objectives

Module 1. Biopharmaceutics and Pharmacokinetics

- Define the evolution of medicines in the body
- Explain the chemical, therapeutic and biological equivalence of medicines
- Define the principles of clinical pharmacokinetics
- Explain release as a limiting factor of absorption
- Explain the different absorption mechanisms
- Describe physiological factors influencing gastrointestinal absorption
- Explain the physical-chemical factors that limit absorption
- Describe the structure of the skin
- Define the factors that influence the absorption of substances through the skin
- Explain the differences between parenteral aqueous solutions and delayed parenteral solutions

Module 2. Basic Operations in the Production of Individualized Formulas

- Know the importance of formulation and objectives in spraying
- Delve into the rheological properties of plastics, exfoliable and elastic
- Differentiate types of filtration systems, deepening microfiltration and ultrafiltration
- Develop the wet and dry heat sterilization process

Module 3. Topical Pharmaceutical Dosage Forms

- Establish suitable laboratory conditions for product preparation
- Explain the registration of raw materials as well as the processing parts
- Explain the proper elaboration 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 pharmaceutical 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 officinal preparations
- Explain resources and sources of consultation in the Master Formulation laboratory
- Describe the proper handling of the equipment
- Proper use of measurement systems
- Explain significant differences and peculiarities in the elaboration of different topical pharmaceutical forms
- Perform the operations entrusted with the elaboration and/or control according to the established norms of correct elaboration and quality control of master formulaes and official preparation
- Make the corresponding records
- Explain what the emulsion sign consists of
- Explain what constitutes the organoleptic characteristics check, final weight/volume

Module 4. Liquid Dosage Forms for Oral Administration

- Explain the solubility and factors involved in the process of developing oral solutions
- Identify potential problems in developing oral solutions
- Explain the elaboration and indications of papers in master formulation
- Define the quality control to be followed in the production of suspensions and syrups
- Describe the application in pediatrics of liquid oral pharmaceutical forms
- Explain the application in geriatrics of liquid oral pharmaceutical forms

Module 5. Solid Dosage Forms for Oral Administration

- Explain the registration of raw materials as well as the processing parts
- Explain the proper elaboration 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 pharmaceutical 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 officinal preparations

Module 6. Pharmaceutical Forms of Administration in Mucous Membranes

- Explain the correct weighing process in the Elaboration of Individualized Formulas
- Explain the correct spraying process and the tools to carry it out
- Define the factors influencing spraying
- Explain the rheological properties of the substances to be sprayed
- Explain the different screening procedures
- Describe the mixing and homogenization process

- Explain the types of sounds according to their humidity
- Define the different sterilization systems and their application
- Explain the different filtration systems and modes in master formulation
- List the stages of the freeze-drying process

Module 7. Sterile Dosage Forms

- Define the concept of sterile in master formulation
- Explain the development of eye drops, as well as the tooling, regulations, etc.
- Describe the production of ophthalmic ointments, as well as the tooling, regulations, etc.
- Explain the development of sterile parenteral formulas in all its variants: intravenous, subcutaneous, intramuscular, etc.
- Describe the parenteral nutrition development process according to criteria of composition, quality, etc.
- Explain different sterilization systems and their characteristics
- Explain how to set expiration dates for sterile pharmaceutical forms
- List the most frequent pathologies with therapeutic vacuum in ophthalmology
- Explain the elaboration of an autologous serum

Module 8. Essential Oils in Master Formulation

- Know the essential oil extraction processes
- Develop the routes of administration of essential oils, both topically, orally and inhaled
- Study the most commonly used essential oils

Module 9. Excipients and Bases Used in Master Formulation

- Differentiate the different types of water used in master formulation
- Develop knowledge around simple excipients
- Delve into the bases of compound excipients

Module 10. Adjuvants in Individualized Formulation

- Explain the correct weighing process in the Elaboration of Individualized Formulas
- Explain the correct spraying process and the tools to carry it out
- Define the factors influencing spraying
- Explain the rheological properties of the substances to be sprayed
- Explain the different screening procedures
- Describe the mixing and homogenization process
- Explain the types of sounds according to their humidity
- Define the different sterilization systems and their application
- Explain the different filtration systems and modes in master formulation
- List the stages of the freeze-drying process

Module 11. Basic physico-chemical operations for processing and control of products

- Perform the operations entrusted with the elaboration and/or control according to the established norms of correct elaboration and quality control of master formulas and officinal preparation
- Make the corresponding records
- Explain what the emulsion sign consists of
- Explain what is involved in the testing of organoleptic characteristics, final weight/volume

03

Skills

After passing the assessments on the Professional Master's Degree in Elaboration and Development of Individualized Medicines, the health professional will have acquired the necessary professional skills for quality, up-to-date practice based on the most recent scientific evidence.

You will be able to master new diagnostic and therapeutic procedures in the Elaboration and Development of Individualized Medicines"

General Skills

- Understand knowledge in such a way as to be able to generate issues or questions that are amenable to research
- Know how to apply knowledge with the ability to solve cases and problems in situations of daily practice
- Acquire the ability to communicate their findings clearly and unambiguously to patients and families
- Acquire the ability to clearly and concisely convey their knowledge in clinical sessions or discussions with colleagues
- Acquire the ability to continue training autonomously

Specific Skills

- Define the needs and requirements to be able to produce an individualized medicine with the quality of an industrialized medicine
- Study and be able to respond to clinical situations where individualized formulation can be a solution
- Propose solutions to therapeutic gaps, shortages or withdrawal of medicines
- Explain the different pharmaceutical forms and their production, in order to provide solutions to possible therapeutic problems
- Update the knowledge for a correct production of the main master formulas (emulsions, capsules, syrups, etc.) reviewing: definitions, classifications, laboratory conditions, registration of raw materials, production reports, patient information leaflet, packaging, quality control, use of active ingredients, etc., for each of the pharmaceutical forms
- Expand knowledge on the search for information and bibliographic documentation of consultation in the magistral formulation laboratory
- Develop skills in laboratory techniques: handling of tools and measuring systems; producing different topical and oral pharmaceutical forms: emulsions, ointments, solutions, suspensions, colloidal dispersions (gels), papers, capsules and powders
- Apply the norms, carry out the operations of production and/or control according to the established norms of correct production and quality control of master formulas and officinal preparations and make the corresponding records
- Perform complementary techniques for quality control of the finished formula: emulsion sign, organoleptic characteristics, final weight/volume

Make the most of this opportunity and take the step to get up to date on the latest developments in the Elaboration and Development of Individualized Medicines"

04

Course Management

The program's teaching staff includes leading specialists in the Elaboration and Development of Individualized Medicines, who bring their years of work experience to this training program. Additionally, other recognized specialists participate in its design and preparation, which means that the program is developed in an interdisciplinary manner.

Learn the latest advances in the field of the Elaboration and Development of Individualized Medicine from leading professionals"

Management

Dr. Sánchez Guerrero, Amelia

- Head of Hospital Pharmacy Service at the U.H Puerta de Hierro Majadahonda since February 2015
- Doctorate degree. PhD Complutense University (Madrid)
- Degree in Pharmacy. Complutense University, (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

Dr. García Sanz, Elena

- Assistant in the Hospital Pharmacy Service of the Puerta de Hierro U.H Majadahonda
- Degree in Pharmacy. Complutense University of Madrid
- Master's Degree in Pharmaceutical Care in the Pharmaceutical Care environment. University of Valencia
- Doctor of Pharmacy. Complutense University of Madrid
- Member of the Procurement Group of the Council. General Subdirectorate of Pharmacy and PS of the Council
- Associate Professor of Student Internships 5th year Pharmacy. Complutense University, (Madrid)

Dr. Gumiel Baena, Inés

- Inpatient pharmaceutical care. Puerta de Hierro U. Hospital Majadahonda (Madrid)
- Degree in Pharmacy. Complutense University of Madrid, Spain. 2010-2015
- Speciality in Hospital Pharmacy. Puerto de Hierro University Hospital Majadahonda, Madrid - 2016 - 2020
- Master's Degree in Health Products. University of Granada. Feb-Dec 2019
- Pharmacokinetics. Severo Ochoa University Hospital
- Primary Care Pharmacy. Northwest Assistance Directorate. SERMAS
- General Subdirectorate of Pharmacy and sanitary products. Ministry of Health of SERMAS
- Antibiotic optimization program. Getafe University Hospital

Dr. Santiago Prieto, Elvira

- Head of the non-hazardous sterile, non-sterile and nutritional drug processing area of the Pharmacy Service of Puerta de Hierro U.H Madrid
- Assistant pharmacist. Puerto de Hierro U.H - Majadahonda
- Specialist Pharmacist in Hospital Pharmacy, hired by the Foundation for Biomedical Research of the Puerta de Hierro University Hospital. 2013-2014
- Resident Pharmacist. Specialization in Hospital Pharmacy. Puerto de Hierro U.H. - Majadahonda. 2009-2013
- Degree in Pharmacy. Faculty of Pharmacy. Complutense University of Madrid
- Master's Degree in Pharmaceutical Sciences. Speciality: "Community pharmacy and quality of care". UCM.

Ms. Rodríguez Marrodán, Belén

- FEA Specialist in Hospital Pharmacy. Pharmacy Department. Puerto de Hierro U.H Majadahonda
- Degree in Pharmacy from the Complutense University of Madrid
- Specialist in Hospital Pharmacy. Ministry of Education and Culture
- Member of the Working Group on Safety in the Use of Medication in Pediatrics. Puerto de Hierro U.H Majadahonda
- Member of the Clinical Research Ethics Committee (CEIm). Puerto de Hierro U.H Majadahonda
- Hospital Pharmacy Resident Tutor. Puerto de Hierro U.H Majadahonda
- Member of the Medicines Committee. Spanish Association of Pediatrics
- SMFH Secretariat. Madrid Society of Hospital Pharmacists
- Member of the Quality of Care and Patient Safety Working Group. Spanish Society of Hospital Pediatrics
- Diploma in Pharmaceutical Oncology. University of Valencia

05

Structure and Content

The structure of the contents has been designed by a team of professionals from the best research centers and universities, aware of the current relevance of training to use drugs safely and with a solid scientific basis based on evidence, and committed to quality teaching through new educational technologies.

This Professional Master's Degree in Elaboration and Development of Individualized Medicines contains the most complete and up-to-date 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 of 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 Limiting Absorption
- 1.4.2. Topical Route
  - 1.4.2.1. Skin Structure
  - 1.4.2.2. Factors Influencing the Absorption of Substances Through the Skin
- 1.4.3. Parenteral Route
  - 1.4.3.1. Parenteral Aqueous Solutions
  - 1.4.3.2. Delayed Parenteral Solutions

Module 2. Basic Operations in the Production of Individualized Formulas

2.1. Weighing
- 2.1.1. Objective
- 2.1.2. Scales
  - 2.1.2.1. Calibration

2.2. Spraying
- 2.2.1. Importance in the Formulation and Objectives
- 2.2.2. Spraying Equipment
  - 2.2.1.1. Manual
  - 2.2.1.2. Industrial
- 2.2.3. Factors that Affect Spraying
  - 2.2.3.1. Size
  - 2.2.3.2. Texture
- 2.2.4. Rheological Properties
  - 2.2.4.1. Plastic fluids
  - 2.2.4.2. Exfoliables
  - 2.2.4.3. Elastic

2.3. Screening
- 2.3.1. Description
- 2.3.2. Sieves
- 2.3.3. Sieving Procedures

2.4. Mixing and Homogenization
- 2.4.1. Objectives
- 2.4.2. Types of Mixtures
- 2.4.3. Homogenization Process
- 2.4.4. Mixing Equipment

2.5. Filtration
- 2.5.1. Concept
- 2.5.2. Filtration Systems
- 2.5.3. Modes of Filtration
  - 2.5.3.1. Conventional Filtration
  - 2.5.3.2. Microfiltration
  - 2.5.3.3. Ultrafiltration
  - 2.5.3.4. Reverse Osmosis
  - 2.5.3.5. Sterilizing Filtration
  - 2.5.3.6. Tangential Filtration

2.6. Drying
- 2.6.1. Types of Sounds According to their Humidity
- 2.6.2. Midwives in Drying
- 2.6.3. The Drying Process
- 2.6.4. Devices for Drying
- 2.6.5. Freeze-Drying
  - 2.6.5.1. Stages of the Freeze-Drying Process
  - 2.6.5.2. Applications

2.7. Sterilization
- 2.7.1. Heat Sterilization
  - 2.7.1.1. Humid Heat
  - 2.7.1.2. Dry Heat
- 2.7.2. Sterilization by Filtration
- 2.7.3. Other Types of Sterilization

Module 3. Topical Pharmaceutical Dosage Forms

3.1. Solutions
- 3.1.1. Aqueous Solutions
- 3.1.2. Alcoholic Solutions
- 3.1.3. Hydroalcoholic Solutions
- 3.1.4. Liposome Solutions or Liposomes
  - 3.1.4.1. Liposomes and Types
  - 3.1.4.2. Composition of Liposomes
  - 3.1.4.3. Functions of Liposomes
  - 3.1.4.4. Production of Liposomes Pharmacy and Industry
  - 3.1.4.5. Quality Control
- 3.1.5. Foams
- 3.1.6. Problems in the Production of Solutions

3.2. Emulsions
- 3.2.1. Definition
- 3.2.2. Emulsion Components

3.2.3. Types of Emulsifiers
3.2.4. Production
3.2.5. HLB Balance
3.2.6. Quality Control
3.2.7. Problems and Solutions in the Production Process
3.3. Gels
3.3.1. Mechanisms for Elaborating a Gel
3.3.2. Classification of Gelling Substances
3.3.3. Quality Control
3.3.4. Problems and Solutions in the Production Process
3.4. Ointments and Pastes
3.4.1. Definition
3.4.2. Types
3.4.3. Quality Control
3.4.4. Problems and Solutions in Paste Processing
3.5. Transdermal Creams
3.5.1. Definition
3.5.2. Mechanism of Action
3.5.3. Most Common Active Ingredients in Transdermals
3.5.4. Production
3.5.4.1. PLO Gel
3.5.4.2. PEN Type TD Creams
3.5.5. Uses
3.5.5.1. Palliative Pain Therapy
3.5.5.2. HRT Therapy
3.5.6. Quality Control
3.6. Application in Dermatology of Pharmaceutical Forms for Topical Administration
3.6.1. Skin Structure and Functions
3.6.1.1. Epidermis
3.6.1.2. Dermis
3.6.1.3. Hypodermis
3.6.2. Common Pathologies
3.6.3. Master Formulas Frequently Used in Dermatology
3.7. Application in Podiatry of Pharmaceutical Forms for Topical Administration
3.7.1. The Foot
3.7.2. Common Pathologies
3.7.3. Master Formulas Frequently Used in Podiatry
3.8. Application in Otorhinology of Pharmaceutical Forms for Topical Administration
3.8.1. Introduction
3.8.2. Common Pathologies
3.8.3. Master Formulas Frequently Used in Otorhinology

Module 4. Liquid Dosage Forms for Oral Administration

4.1. Oral Solutions
4.1.1. Solubility and Factors Involved in this Process
4.1.2. Solvents
4.1.3. Production
4.1.4. Quality Control
4.1.5. Potential Problems in Production
4.2. Suspensions and Syrups
4.2.1. Important Aspects
4.2.2. Production
4.2.3. Quality Control
4.3. Sachets
4.3.1. Production
4.4. Application in Pediatrics of Liquid Oral Pharmaceutical Forms
4.4.1. Common Pathologies
4.4.2. Common Master Formulas
4.5. Application of in Geriatrics of Liquid Oral Pharmaceutical Forms
4.5.1. Common Pathologies
4.5.2. Common Master Formulas

Module 5. Solid Dosage Forms for Oral Administration

5.1. Capsules
- 5.1.1. Definition and General Aspects
- 5.1.2. Types
  - 5.1.2.1. Hard Gelatin Capsules
  - 5.1.2.2. Soft Gelatin Capsules
  - 5.1.2.3. Gastroresistant Capsules
- 5.1.3. Production of Capsules
- 5.1.4. Excipients Capsules

5.2. Tablets I
- 5.2.1. Definition
- 5.2.2. Types
- 5.2.3. Advantages and Disadvantages
- 5.2.4. Preformulation and Property Analysis
- 5.2.5. Flow Properties
- 5.2.6. Formulation
  - 5.2.6.1. Types of Excipients
    - 5.2.6.1.1. Diluents
    - 5.2.6.1.2. Binders
    - 5.2.6.1.3. Disintegrants
    - 5.2.6.1.4. Lubricants
  - 5.2.6.2. Direct Compression Excipients
    - 5.2.6.2.1. Cellulose Derivatives
    - 5.2.6.2.2. Starch Derivatives
    - 5.2.6.2.3. Sugars
    - 5.2.6.2.4. Mineral Products
- 5.2.7. Compression Methods
  - 5.2.7.1. Wet Granulation
    - 5.2.7.1.1. Advantages and Disadvantages
    - 5.2.7.1.2. Granulation and Compression Process
  - 5.2.7.2. Dry Granulation
    - 5.2.7.2.1. Advantages and Disadvantages
    - 5.2.7.2.2. Features
  - 5.2.7.3. Direct Compression
    - 5.2.7.3.1. Advantages and Disadvantages
    - 5.2.7.3.2. Compression Process
- 5.2.8. Quality Control
- 5.2.9. Compression Machines
  - 5.2.9.1 Types
    - 5.2.9.1.1. Eccentric Compression Machines
    - 5.2.9.1.2. Rotary Compression Machines

5.3. Tablets II

Module 6. Pharmaceutical Forms of Administration in Mucous Membranes

6.1. Oral Mucosa
- 6.1.1. Features
- 6.1.2. Pathologies

6.2. Application in Dentistry
- 6.2.1. Introduction
- 6.2.2. Common Pathologies
- 6.2.3. Common Master Formulas

6.3. Vaginal Mucosa
- 6.3.1. Features
- 6.3.2. Ovules
  - 6.3.2.1. Production
  - 6.3.2.2. Excipients
  - 6.3.2.3. Quality Control
- 6.3.3. Pathologies
- 6.3.4. Usual Master Formulas in Gynecology

6.4. Rectal Mucosa
- 6.4.1. Enemas
  - 6.4.1.1. Production
  - 6.4.1.2. Excipients
  - 6.4.1.3. Quality Control

6.4.2. Suppositories
6.4.2.1. Production
6.4.2.2. Excipients
6.4.2.2. Quality Control
6.4.3. Enemas
6.4.3.1. Production
6.4.3.2. Excipients
6.4.3.3. Quality Control
6.4.4. Suppositories and Ovules
6.4.4.1. Production
6.4.4.2. Excipients
6.4.4.3. Quality Control

Module 7. Sterile Dosage Forms

7.1. Definition of Sterile in Master Formulation
7.2. Expiration Dates of Sterile Dosage Forms
7.2.1. Protocols for Producing Sterile Products
7.2.1.1. Work GP
7.2.1.2. Microbiological Control SOPs
7.2.1.3. Lyophilization Protocol
7.3. Sterilization
7.3.1. Heat Sterilization
7.3.1.1. Humid Heat
7.3.1.2. Dry Heat
7.3.1.2.1. Sterilization of Oils
7.3.1.2.2. Sterilization of Glass Materials
7.3.1.2.3. Tindalization
7.3.2. Sterilization by Filtration
7.3.2.1. Types of Filtration
7.3.3. Other Types of Sterilization
7.3.4. Disinfectants
7.3.4.1. Most Frequent Disinfectants
7.4. External Sterile Pharmaceutical Forms. Eye Drops and Ointments
7.5. Internal Sterile Pharmaceutical Forms: Parenteral and Lyophilized

Module 8. Essential Oils in Master Formulation

8.1. Definition of Essential Oil Extraction Processes
8.1.1. Extraction Process
8.2. Quality Criteria Concept of Chemotype Identification Method (Chromatography and Mass Spectrophotometer)
8.2.1. Concept of Chemotype
8.2.2. Method of Identification
8.2.2.1 Chromatography
8.2.2.2. Mass Spectrophotometry
8.3. Instructions for Use of Essential Oils. Pharmaceutical Forms and Routes of Administration. Precautions and Contraindications. Special Recommendations in Pregnancy and Lactation
8.3.1. Topical Route
8.3.2. Oral
8.3.3. By Inhalation
8.4. Essential Oils Most Commonly Used Topically
8.4.1. Pregnancy and Breastfeeding
8.4.2. Pediatrics
8.5. Essential Oils Most Commonly Used Orally
8.5.1. Exotic Basil (Ocinum Basilicum)
8.5.2. Provence Cypress (Cupressus Sempervivens Var. Strict)
8.5.3. Ginger (Zingiber Officinale)
8.5.4. Lavander (Lavándula Angustifolia)
8.5.5. Lemon (Citrus Limón)
8.5.6. Roman Manzanilla (Chamaemelum nobile)
8.5.7. Compact Oregano (Origanum Compactum)
8.6. Essential Oils Most Commonly Used Via Inhalation and Diffuser
8.7. Formulas Most Commonly Used in Dermatology. Dilution Percentages, Vegetable Oils as Excipients or Coadjuvants. Podiatry
8.8. Master Formulas with Essential Oils Frequently Used in Veterinary Medicine
8.9. Master Formulas with Essential Oils Frequently Used in Gynecology

Module 9. Excipients and Bases Used in Master Formulation

9.1. Water, the Most Commonly Used Excipient
- 9.1.1. Types of Water Used in Master Formulation
  - 9.1.1.1. Purified Water
  - 9.1.1.2. Water for Injectables
- 9.1.2. Procurement

9.2. Simple Excipients
- 9.2.1. Non-Aqueous Excipients
- 9.2.2. Other Commonly Used Excipients
- 9.2.3. Excipients of Obligatory Declaration

9.3. Compound Excipients
- 9.3.1. Solid Oral Forms
- 9.3.2. Liquids Oral Forms
- 9.3.3. Compound Bases

Module 10. Adjuvants in Individualized Formulation

10.1. Preservatives
- 10.1.1. Antioxidants
- 10.1.1. Antimicrobials

10.2. Expiration of Master Formulas

10.3. Correctors of Organoleptic Characteristics of a Formula
- 10.3.1. Flavorings
- 10.3.2. Aromatizers
- 10.3.3. Dyes

Module 11. Basic Physical-Chemical Operations for Processing and Control of Products

11.1. Volume Measurement Units, Volumetric Material, Calibration, Cleaning and Recommendations for Use

11.2. Determination of Mass: Mass Units, Scales and Weighing Methods Verification and Calibration

11.3. Concentration: Concept and Expression. Units

11.4. Dilution Techniques. Realization and Calculations

11.5. Density: Concept, Determination and Applications

11.6. Temperature Measurement

11.7. Viscosity: Concept, Determination and Applications

11.8. Melting Point: Concept and Determination

11.9. Solidification Point: Concept and Determination

11.10. Determination of pH. Fundamental Concepts

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

06

Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**

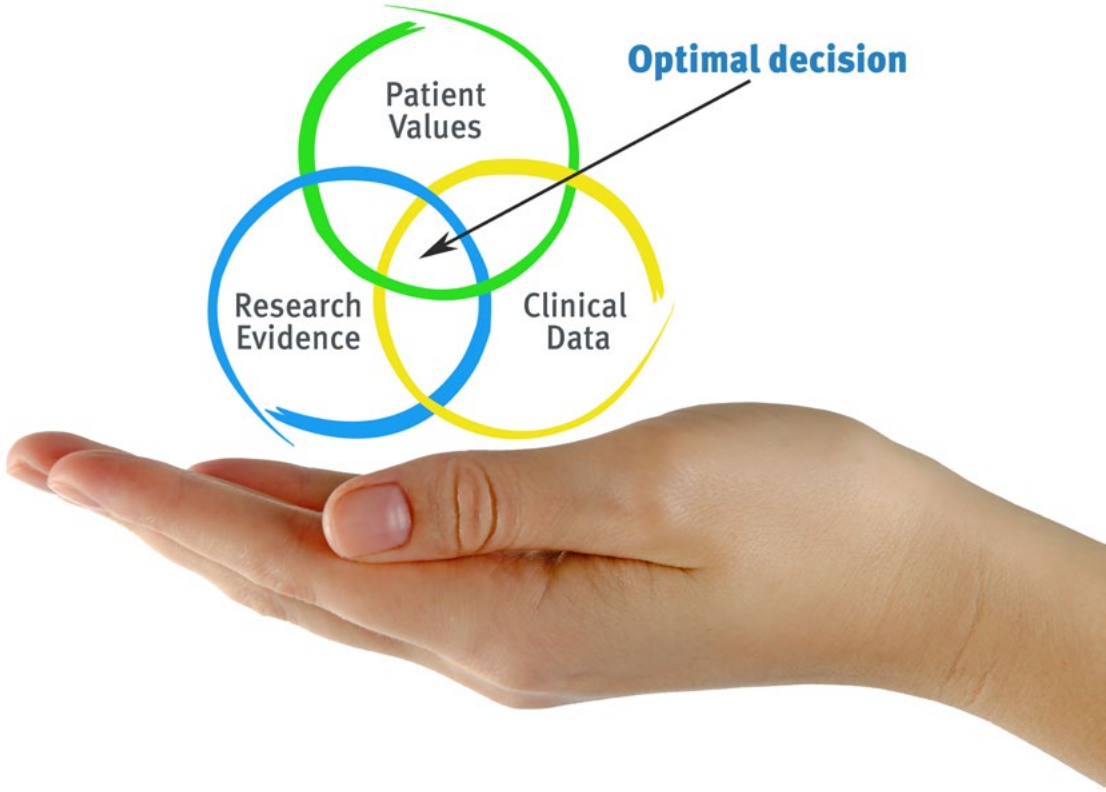
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

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

At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will be confronted with multiple simulated clinical cases based on real patients, in which they will have to investigate, establish hypotheses and ultimately, 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 will experience a way of learning that is shaking the foundations of traditional universities around the world.



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

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:

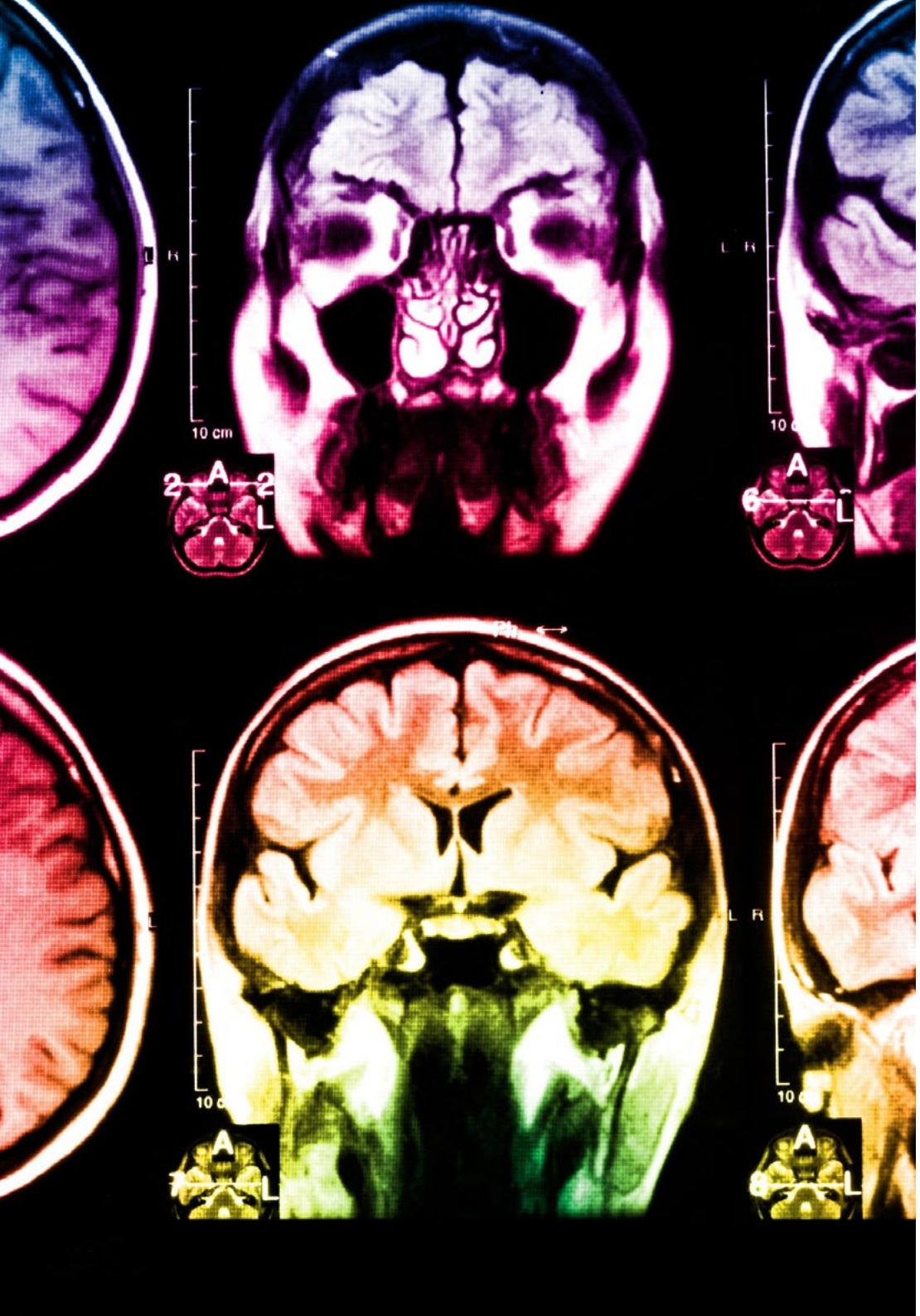
1. Pharmacists who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts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

Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

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 Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology, more than 115,000 pharmacists have been trained with unprecedented success in all clinical specialties, regardless of the surgical load. This 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.

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.

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

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

This program offers the best educational material, prepared with professionals in mind:

Study Material

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

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.

Video Techniques and Procedures

TECH introduces students to the latest techniques, to the latest educational advances, to the forefront of current pharmaceutical care procedures. All of this, first hand, and explained and detailed with precision to contribute to assimilation and a better understanding. And best of all, you can watch them as many times as you want.

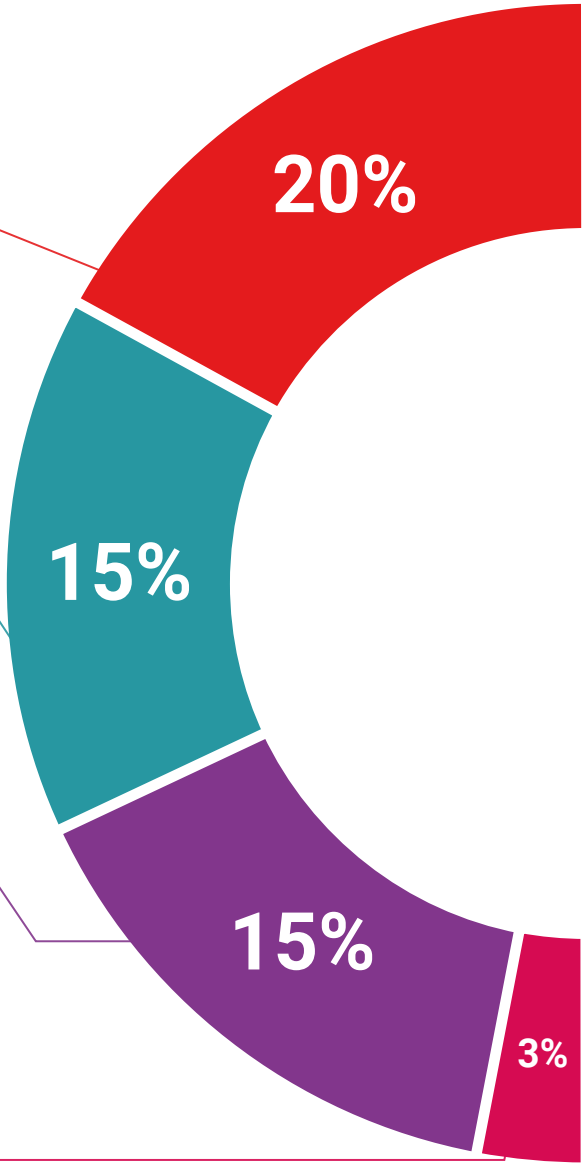
Interactive Summaries

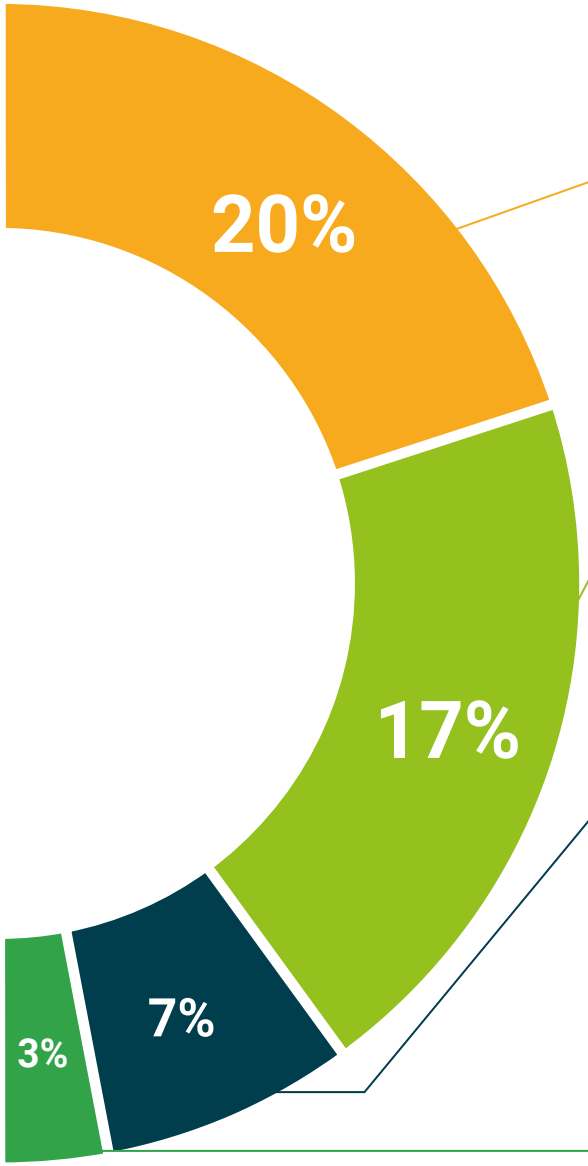
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".

Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





Expert-Led Case Studies and Case Analysis

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

Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.

Classes

There is scientific evidence on the usefulness of learning by observing experts. The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

Quick Action Guides

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

07

Certificate

The Professional Master's Degree in Elaboration and Development of Individualized Medicines guarantees you, in addition to the most rigorous and updated training, access to a Professional Master's Degree issued by TECH Technological University.

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

This **Professional Master's Degree in Elaboration and Development of Individualized Medicines** contains the most complete and updated scientific program on the market.

After the student has passed the assessments, they will receive their corresponding **Professional Master's Degree** issued by **TECH Technological University** via tracked delivery*.

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the Professional Master's Degree, and meets the requirements commonly demanded by labor exchanges, competitive examinations and professional career evaluation committees.

Title: **Professional Master's Degree in Elaboration and Development of Individualized Medicines**

Official Nº of hours: **1,500 h.**


tech technological university

Awards the following

DIPLOMA

to

Mr./Ms. _____, with identification number _____.

For having successfully passed and accredited the following program

PROFESSIONAL MASTER'S DEGREE

in

Elaboration and Development of Individualized Medicines

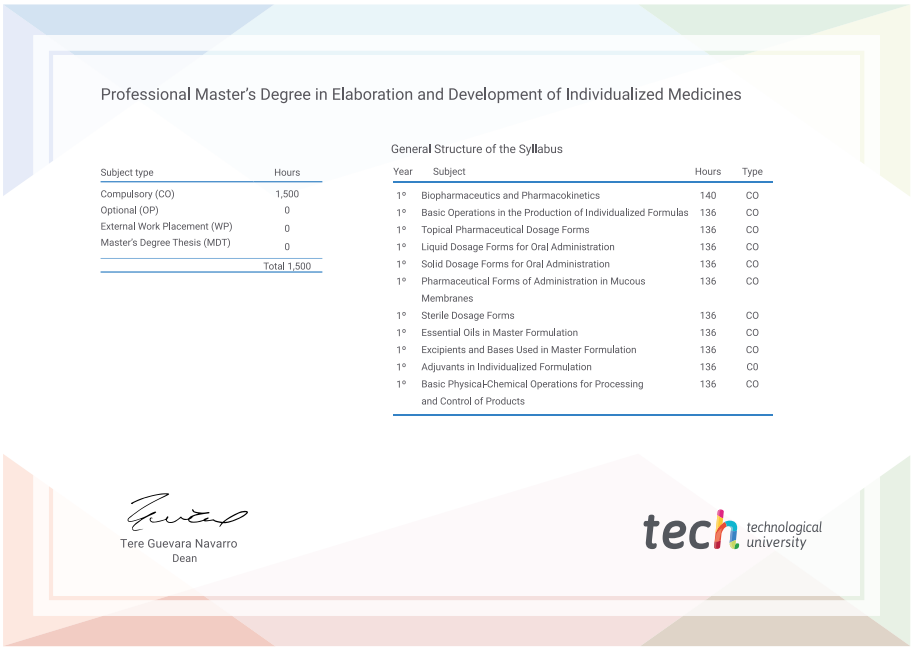
This is a qualification awarded by this University, equivalent to 1,500 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
Dean

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates


Professional Master's Degree in Elaboration and Development of Individualized Medicines

Subject type	Hours
Compulsory (CO)	1,500
Optional (OP)	0
External Work Placement (WP)	0
Master's Degree Thesis (MDT)	0
	Total 1,500

General Structure of the Syllabus

Year	Subject	Hours	Type
1º	Biopharmaceutics and Pharmacokinetics	140	CO
1º	Basic Operations in the Production of Individualized Formulas	136	CO
1º	Topical Pharmaceutical Dosage Forms	136	CO
1º	Liquid Dosage Forms for Oral Administration	136	CO
1º	Solid Dosage Forms for Oral Administration	136	CO
1º	Pharmaceutical Forms of Administration in Mucous Membranes	136	CO
1º	Sterile Dosage Forms	136	CO
1º	Essential Oils in Master Formulation	136	CO
1º	Excipients and Bases Used in Master Formulation	136	CO
1º	Adjuvants in Individualized Formulation	136	CO
1º	Basic Physical-Chemical Operations for Processing and Control of Products	136	CO

Tere Guevara Navarro
Dean

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

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Professional Master's Degree

Elaboration and Development of Individualized Medicines

- Modality: **online**
- Duration: **12 months**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Professional Master's Degree

Elaboration and Development of Individualized Medicines

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