Professional Master's Degree Cosmetic Science and Technology

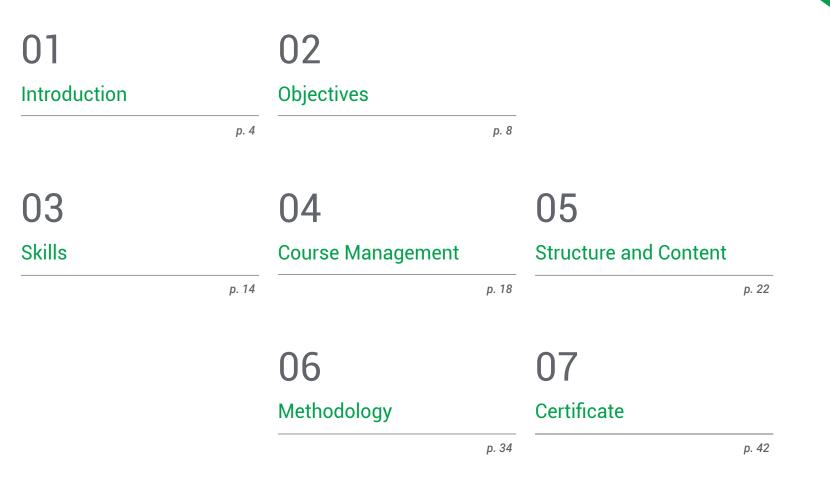




Professional Master's Degree Cosmetic Science and Technology

Course Modality: Online Duration: 12 months Certificate: TECH Technological University Official N° of hours: 1,500 h. Website: www.techtitute.com/us/pharmacy/professional-master-degree/master-cosmetic-science-technology

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01 Introduction

The cosmetics industry is one of the most prevalent in the technology field, as there are constant advances and developments in areas such as skin genetics, active ingredient extraction or nutricosmetics. At the same time, the latest developments in natural and vegan cosmetics are becoming more relevant for customers, which in turn encourages the sector to open up new lines of research. In this context, pharmacists are encouraged to keep up with the pace of the industry with academic programs such as the one presented here, which brings together all facets of the cosmetics market, from its very foundations to manufacturing, commercialization and marketing. All of which will be conveniently presented in a 100% online format, free of in-person classes and preset schedules, making the program compatible with the most demanding professional or personal responsibilities.



Explore the most prominent developments in facial and body care products, examining active ingredients and modern cosmetic forms from the hand of professionals specialized in the area"

tech 06 | Introduction

Investment in innovation is high in the cosmetic and perfume sector, which makes R&D&I departments in the industry the true catalysts of discoveries in specialties as diverse as the study of the skin, preparing formulations or various skin alterations. Therefore, the program offers pharmacists with an interest in this field a wide range of scientific postulates and research of all kinds.

Whether it is in R&D&I laboratories, industrial manufacturing processes, regulatory affairs departments or consulting pharmacies and cosmetic centers, the level of up-to-date knowledge professionals have definitely plays a vital role in carrying out their work based on the most rigorous scientific practice.

Consequently, our academic program has been developed by a team of highly qualified professionals to cover all the most relevant areas of Cosmetic Science and Technology. Researchers, R&D&I managers, analysts and marketing managers have developed a syllabus that covers everything from skin analysis and relevant skin alterations in cosmetics to quality control, product development and marketing specific to the sector.

The program will follow TECH's pedagogical methodology, which exempts students from the constraints of a traditional academic calendar. All the content on this Professional Master's Degree is available in the virtual classroom, and can be downloaded and studied at any time from the comfort of the tablet, computer or smartphone of choice.

The content is reinforced by a multitude of real cases and practical examples, which provide pharmacists with the necessary contextualization of currently specific issues such as natural cosmetics and nutricosmetics. By the end of the course, students will have acquired a broad and updated vision of all Cosmetic Science and Technology, having thoroughly studied the most important competencies for daily professional practice. This **Professional Master's Degree in Cosmetic Science and Technology** contains the most complete and up-to-date scientific program on the market. The most important features include:

- Practical cases presented by experts in Cosmetic Science and Technology
- The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Practical exercises where self-assessment can be used to improve learning
- Its special emphasis on innovative methodologies
- 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

It delves into a multitude of topics surrounding Cosmetic Science and Technology, including nanotechnology in cosmetics, perfumes and new trends in cosmetic marketing" Get up to date with the main novelties in skin permeability, pigmentary alterations, skin aging and natural and synthetic active ingredients"

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

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive specialization programmed to learn in real situations.

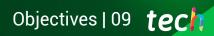
This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise throughout the program. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced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

Download all the content available in the virtual classroom: You decide when, where and how to take on the entire course load.

The large number of self-knowledge exercises and complementary readings for each topic available will help you expand your knowledge in cosmetic areas of great interest to you.

02 **Objectives**

To guarantee an exhaustive and transversal update in all the topics covered, TECH has made sure each knowledge module contains both the most recent scientific postulates in Cosmetic Science and the current professional practice in laboratories, pharmacies and cosmetic manufacturing. Thus, pharmacists will receive the demanding update objectives they pursue, supported by high quality didactic material that will be useful even after completing the course.



It delves into the development and production of modern cosmetics, starting with an exhaustive analysis of the skin and ending with the distribution channels and strategic vision of cosmetic marketing"

tech 10 | Objectives

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General Objectives

- Become familiar with skin structure and features
- Analyze the main active ingredients according to their origin and nature
- Understand the action mechanisms in the most suitable cosmetic ingredients to prepare cosmetic formulations for different skin alterations
- Develop a global vision of the manufacturing process of a cosmetic product, from the initial idea to its launching on the market

Review the most current scientific studies on cosmetic ingredients, cosmetic forms and formulation criteria, with specific topics that delve into facial, body and hair cosmetics"



Objectives | 11 tech





Specific Objectives

Module 1. Cutaneous Application in Cosmetics

- Identify the different layers of the skin and their morphology
- Determine the weight, thickness and coloration of the skin
- Determine the cutaneous microrelief: skin eminences, cones and orifices
- Determine epidermal and dermal physiology
- Determine and identify the cutaneous adnexa, features and physiology
- Analyze skin functions
- Determine and identify the different skin types and features

Module 2. Skin Alterations in Cosmetics

- Identify keratinization alterations
- Determine sebaceous secretion alterations
- Determine pigmentation disorders
- Specify cutaneous aging process alterations
- Introduce hair and scalp alterations
- Determine oral cavity dysfunctions and problems

tech 12 | Objectives

Module 3. Cosmetic Ingredients

- Analyze the most commonly used natural and synthetic active ingredients and main properties
- Evaluate the role of vitamins and biological compounds in cosmetic products
- Examine the main types of sunscreens, properties and features
- Identify the main compounds in cosmetic formulations
- Determine new trends in cosmetic product formulation and their benefits
- Demonstrate how science has enhanced cosmetics

Module 4. Cosmetic Forms and Formulation Criteria I. Face and Body Cosmetics

- Analyze cosmetic forms and applications
- Evaluate the ingredients in skin hygiene
- Identify the importance of skin hydration, relevant factors and how to treat dehydration
- Determine action mechanisms in cosmetic ingredients used in skin disorder care and treatment
- Develop active ingredients and cosmetic forms in aging prevention and treatment products
- Establish action mechanisms in body treatment ingredients
- Compile market novelties in cosmetic ingredients
- Evaluate action mechanisms in active ingredients used in male skin care
- Generate specialized knowledge on the different aspects involved in hair care

Module 5. Cosmetic Forms and Formulation Criteria II. Solar, Decorative and Area Specific Cosmetics

- Analyze the cosmetics used in each sector of the population and to each need
- Compile active ingredients and their uses in each product
- Analyze sun protection as the main factor in preventing skin aging and identify the different products on the market
- Examine market products that include chemical depilatory; advantages and disadvantages
- Evaluate active ingredients with specific activity and how to incorporate them into formulations
- Establish factors in choosing children's products
- Determine the different substances involved in elaborating a perfume and the different olfactory families on the market

Module 6. Natural Cosmetics, Aroma Cosmetics and Nutricosmetics

- Determine the concepts of natural, organic, vegan, marine and thermal cosmetics
- Examine the compounds in plants and develop extraction methods
- Compile the different elements that nature offers to formulate natural cosmetics
- Analyze the phytocosmetic active ingredients available on the market for natural cosmetics formulations
- Develop different types of cosmetic formulations with raw, natural materials
- Develop the concept of Nutricosmetics and analyze the different products on the market

Objectives | 13 tech

Module 7. International Legislation on Cosmetic Products

- Identify the figure of "the person in charge"
- Comprehend Cosmetic Regulation from a practical point of view
- Define the functions of the Cosmetic Regulation department
- Analyze and present the Natural Products standard: ISO Certifications
- Identify and apply CPNP Registration requirements

Module 8. Cosmetics Development and Manufacturing

- Analyze the process that a product goes through from its small-scale creation in the laboratory to its production on an industrial scale
- Develop the different raw materials that make up the skeleton of a cosmetic product one at a time
- Examine the plastics or packaging used in the cosmetic industry
- Determine the different operations and basic manufacturing processes of the different cosmetic forms under the UNE-EN-ISO standard: 22716:2008
- Evaluate the different cosmetic forms on the market
- Establish the importance of R&D&I in cosmetic products development; innovation remains key to consumer requirements
- Compile the steps involved in perfume development, essence and subsequent applicability

Module 9. Quality Control, Efficacy and Safety in Cosmetics

- Examine Quality Controls
- Analyze the importance of GMP in product traceability
- Perform CPNP discharge processes
- Perform Safety Assessment
- Determine the Studies for Safety Assessment
- Identify Studies for Efficacy Justification

Module 10. Marketing in Cosmetics

- Generate growth opportunities
- Propose tools, actions and strategic levers
- Estimate sales units and investment
- Present brand plans
- Build a brand
- Communicate differentiation and added value

03 **Skills**

As one of the pharmaceutical sectors where the most advances are made, the skills developed by specialized professionals in this area are decisive to perform their work as safely and efficiently as possible. Throughout the program, pharmacists will see their analytical and development skills strengthened in all types of cosmetic products, being able to immediately incorporate the most effective methodology and techniques into their daily work as tested by the teaching staff.

Skills | 15 tech

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You will have at your disposal an extensive syllabus aimed at not only the most relevant cosmetic competences today, but also the future of the industry, such as the preparation of organic and vegan cosmetics"

tech 16|Skills



General Skills

- Develop 100% natural cosmetic formulations
- Analyze ingredient inventories, distinguishing ingredient nomenclature and basic functions
- Analyze the processes involved from the reception of raw materials to their final distribution
- Develop and carry out sensory analyses
- Analyze cosmetic product efficacy and safety



Whether you choose to work in an R&D&I laboratory or in direct customer consultancy, the skills you will develop on this Professional Master's Degree will have a direct impact on your daily practice"



Skills | 17 tech

Specific Skills • Analyze microvascularization alterations • Adapt marketing strategies to different customers, markets and channels • Elaborate a Safety Dossier • Master the developments derived from using new biofermentation technologies applied to cosmetics to create new products: prebiotics and postbiotics • Carry out a project analysis of a cosmetic laboratory

- Evaluate the potential and efficacy of solid natural cosmetics
- Identify the composition of decorative cosmetic products
- Develop cosmetic formulas using different types of compounds
- Analyze connective tissue and subcutaneous alterations
- Analyze skin permeability and determine how to improve it

04 Course Management

The professionals in charge of developing this program have been carefully selected by TECH not only for their academic and professional merits, but also for their own multidisciplinary profile in the different areas that comprise Cosmetic Science and Technology. Thus, the objective of creating a program that covers all relevant areas in Cosmetic Science, written from the experience of professionals who work in different areas on a daily basis, is achieved with an interdisciplinary teaching staff.

You will be advised by professionals who have first-hand knowledge of the most demanding reality in the cosmetic and technology sectors"

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Management



Dr. Mourelle Mosqueira, María Lourdes

- FA2 Group Researcher, Department of Applied Physics, Faculty of Sciences, University of Vigo
- Technical Director at Balcare
- President of the Iberoamerican Society of Thalassotherapy
- Secondary Education Teacher specializing in Personal Image Consultancy and Processes
- PhD in Applied Physics, University of Vigo
- Degree in Pharmacy, University of Santiago de Compostela
- Diploma in Nutrition and Dietetics, University of Granada

Professors

Dr. Vérez Cotelo, Natalia

- Pharmacist in Primary Care
- Municipal Pharmaceutical Inspector and Community Pharmacist, Consellería de Sanidad, Xunta de Galicia
- Pharmaceutical Technical Director at a company that manufactures medicines and animal health products
- Military Health Corps Reservist
- PhD in Psychology, UNED
- Degree in Pharmacy, University of Santiago de Compostela

Dr. Pando Rodríguez, Daniel

- Managing Director at INdermal and Nanovex Biotechnologies
- Researcher at Oviedo and Cagliari Universities
- PhD in Chemical Engineering, University of Oviedo
- Degree in Chemical Engineering, University of Oviedo
- Master's Degree in Business Administration and Project Management, ENEB

Course Management | 21 tech

Ms. González Berdugo, Antonia María

- Cosmetics Technical Manager at Best Medical Diet
- Head of Cosmetic R&D&I at Best Medical Diet
- R&D Specialist at Aromatheka
- Master's Degree in Biotechnology, Pablo de Olavide University
- Master's Degree in Cosmetics and Dermopharmacy, CESIF

Dr. Abril González, Concepción

- Chemist and Chromatography Specialist, Bordas S.A.
- Food Products Analyst for foreign trade at the Technical Inspection of Soivre in Seville
- Chromatography Analyst at Agrama Laboratories
- Researcher in the Analytical Chemistry Department at Anquimed
- PhD in Analytical Chemistry, University of Seville
- Degree in Chemisty, University of Seville
- Master's Degree in Professional Specialization in Pharmacy: Pharmaceutical Industry, University of Seville
- Master's Degree in Cosmetics and Dermopharmacy

Dr. Etxebeste Mitxeltorena, Mikel

- Postdoctoral Researcher in Medicinal Chemistry at CIB-CSIC
- Assistant Pharmacist at Juan de Soto Pharmacy
- PhD in Pharmacy, UNAV
- Degree in Human Pharmacy and Nutrition and Dietetics, UNAV

Ms. Aguado Ruiz, Belén

- Manager at ABAR COSMETICS
- Training Manager and Safety Assessment Experto at ABAR COSMETICS
- Quality Department Director at Gaher Química
- Technical R&D Manager at Larrosa Laboratorios
- Technical Office Bellssan Healthcare Partner
- Degree Chemical Sciences, University of Alcalá Henares
- International Master's Degree in Toxicology, Official College of Chemists of Seville

Ms. Seghers Carreras, Beatriz

- Marketing Team Manager at Cantabria Labs
- Product Manager at Cantabria Labs
- Marketing Coordinator at Apivita
- Cosmetic Product Safety Assessment Assistant at Bellssan Healthcare
- Graduada en Ciencias Químicas por la Universidad Complutense de Madrid
- Master's Degree in Cosmetics and Dermopharmacy, CESIF
- Master's Degree in Marketing and Communication Management, Vertice
 Business School

05 Structure and Content

To ensure the greatest possible efficiency throughout the academic process, TECH uses the Relearning pedagogical methodology to develop all the contents on this Professional Master's Degree. That means pharmacists will not have to invest extensive hours of study in acquiring and updating all their knowledge regarding Cosmetic Science and Technology, but rather, the key concepts will be progressively and naturally presented throughout the entire syllabus. Thus, the time saved can be invested in delving deeper into each topic covered, thanks to the large amount of audiovisual and support material available for each.

Detailed videos, video summaries, real clinical cases and exercises to test your

knowledge await you in a virtual classroom available 24 hours a day"

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Module 1. Cutaneous Application in Cosmetics

- 1.1. Skin. Cosmetics and the Skin Barrier
 - 1.1.1. Skin: The Skin Barrier
 - 1.1.2. The Skin Surface: Cosmetics and Skin Microclimate
 - 1.1.3. Cosmetics and Skin Protection
- 1.2. Epidermis: First in Cosmetics Action
 - 1.2.1. Structure Relation with Alterations of Cosmetic Relevance
 - 1.2.2. Epidermis Cell junctions and Cohesion: Relation to Cosmetics
 - 1.2.3. Epidermis Layers: Relation to Cosmetics
- 1.3. Dermis and Subcutaneous Cellular Tissue: Second in Cosmetics Action
 - 1.3.1. Dermis. Structure Relation and Physiology with Alterations of Cosmetic Relevance
 - 1.3.2. Fatty Subcutaneous Cellular Tissue: Structure Relation and Physiology with Alterations of Cosmetic Relevance
 - 1.3.3. Skin Vascularization and Innervation: Relation to Cosmetic Alterations
 - 1.3.4. Relation to Cosmetic Alterations
- 1.4. Keratogenesis and Melanogenesis: Relation to Cosmetics
 - 1.4.1. Keratogenesis: Relation to Alterations of Cosmetic Relevance
 - 1.4.2. Melanogenesis: Relation to Alterations of Cosmetic Relevance
 - 1.4.2.1. Melanins: Relevance to Skin Protection
- 1.5. Sebaceous and Sweat Glands: Relation to Cosmetics
 - 1.5.1. Sebaceous Glands: Structure Relation and Physiology with Alterations of Cosmetic Relevance
 - 1.5.2. Sweat Glands: Structure Relation and Physiology with Alterations of Cosmetic Relevance
 - 1.5.3. Skin Secretions: Relation to Applying Cosmetics
- 1.6. Hair: Relation to Cosmetics
 - 1.6.1. Hair Structure and Chemistry: Link to Applying Cosmetics
 - 1.6.2. Hair Physiology: Relation to Cosmetic Hair Treatments
 - 1.6.3. Hair Renewal Cycles: Link to Cosmetic Hair Treatments

- 1.7. Nails: Relation to Cosmetics
 - 1.7.1. Nail Anatomy and Physiology: Relation to Cosmetic Application
 - 1.7.2. The Nail Plate: Relation to Cosmetic Application
 - 1.7.3. Factors that Affect Nail Growth: Relation to Cosmetic Nail Treatments
- 1.8. Cutaneous Functions: Relation to Cosmetics
 - 1.8.1. Skin Functions: Relation to Cosmetic Application
 - 1.8.2. The Skin Barrier and Skin Protection
 - 1.8.3. Cutaneous Microbiota and Its Importance in Cosmetic Care
- 1.9. Skin Typology and Cosmetic Advice
 - 1.9.1. Skin Type Classification according to Epicutaneous Emulsion: Cosmetic Advice 1.9.1.1. Eudermic Skin
 - 1.9.1.2. Dry Skin
 - 1.9.1.3. Oily Skin
 - 1.9.2. Other Skin Types: Cosmetic Advice
 - 1.9.3. Factors that Affect Skin Condition
 - 1.9.4. Skin according to Sex and Ethnicity
 - 1.9.5. Skin during Pregnancy
 - 1.9.6. Skin in the Elderly
- 1.10. Skin Permeability: Relation to Cosmetic Penetration
 - 1.10.1. Percutaneous Absorption
 - 1.10.2. The Corneal Barrier
 - 1.10.3. Cutaneous Penetration Routes
 - 1.10.4. Topical Substance Penetration
 - 1.10.5. Factors that Affect Penetration
 - 1.10.6. Mechanisms that Promote Penetration

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Module 2. Skin Alterations in Cosmetics

- 2.1. Keratinization Alterations
 - 2.1.1. Diffuse and Regional Hyperkeratosis
 - 2.1.2. Squamous Keratoses
 - 2.1.3. Preepitheliomatous Keratoses
 - 2.1.4. Warts
 - 2.1.5. Circumscribed Keratosis
 - 2.1.6. Dermatitis and Eczemas
- 2.2. Sebaceous Secretion Alterations
 - 2.2.1. Seborrhea
 - 2.2.2. Acne
 - 2.2.2.1. Types of Lesions
 - 2.2.2.2. Mechanism in Acne Production
 - 2.2.2.3. Factors that Aggravate Acne
 - 2.2.2.4. Types of Acne
- 2.3. Microvascularization Alterations
 - 2.3.1. Eritemas
 - 2.3.2. Telangiectasias
 - 2.3.3. Rosacea and Couperose
 - 2.3.4. Varicose Veins and Microvaricose Veins
 - 2.3.5. Angiomas
- 2.4. Pigmentary Alterations
 - 2.4.1. Hyperchromias
 - 2.4.1.1. Melasma
 - 2.4.1.2. Lentigos
 - 2.4.1.3. Nevi or Moles
 - 2.4.1.4. Ephelides
 - 2.4.1.5. Senile Pigmentations
 - 2.4.1.6. Hyperchromia due to Photosensitization

- 2.4.2. Achromias
- 2.4.3. Hypochromias
 - 2.4.3.1. Vitiligo
 - 2.4.3.2. Eczematides
 - 2.4.3.3. Hypomelanosis Guttata
- 2.5. Skin aging
 - 2.5.1. General Visible Changes
 - 2.5.2. Histological Changes
 - 2.5.3. Causes of Skin Aging
 - 2.5.4. Photoaging
 - 2.5.5. Skin Phototypes
- 2.6. Body Alterations in Connective and Subcutaneous Tissues
 - 2.6.1. Overweight and Obesity
 - 2.6.2. Stretch Marks
 - 2.6.3. Flaccidity
 - 2.6.4. Elastosis
- 2.7. Body Alterations related to Microvascularization
 - 2.7.1. Cellulite
 - 2.7.1.1. The Way They Are Formed
 - 2.7.1.2. Features
 - 2.7.1.3. Evolution
 - 2.7.1.4. Types of Cellulite
 - 2.7.1.5. Diagnosis
 - 2.7.1.6. Factors that Trigger the Disease
 - 2.7.2. Heavy Legs
- 2.8. Hair Quantity Alterations
 - 2.8.1. Hypotrichosis
 - 2.8.2. Hypertrichosis
 - 2.8.3. Hirsutism

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- 2.9. Scalp and Hair Alterations
 - 2.9.1. Scalp Alterations
 - 2.9.1.1. Seborrhea
 - 2.9.1.2. Dehydration
 - 2.9.1.3. Pityriasis
 - 2.9.2. Hair Alterations
 - 2.9.2.1. Structural Hair Alterations
 - 2.9.2.2. Chromatic Hair Alterations
 - 2.9.3. Alopecia
- 2.10. Oral Cavity Dysfunctions and Problems
 - 2.10.1. Cavities
 - 2.10.2. Gingivitis and Periodontitis
 - 2.10.3. Xerostomia
 - 2.10.4. Oral and Dental Hygiene

Module 3. Cosmetic Ingredients

- 3.1. Active Ingredients of Natural Origin I: Plant Origin
 - 3.1.1. Plant-Derived Active Ingredients in Skin Care
 - 3.1.2. Plant-Derived Active Ingredients in Hair Care
 - 3.1.3. Other Applications of Plant-Derived Active Ingredients
- 3.2. Active Ingredients of Natural Origin II: Animal and Mineral Origin
 - 3.2.1. Animal and Mineral-Derived Active Ingredients in Skin Care
 - 3.2.2. Animal and Mineral-Derived Active Ingredients in Hair Care
 - 3.2.3. Other Applications of Animal and Mineral-Derived Active Ingredients
- 3.3. Synthetic Active Ingredients
 - 3.3.1. Synthetically Derived Active Ingredients in Skin Care
 - 3.3.2. Synthetically Derived Active Ingredients in Hair Care
 - 3.3.3. Other Applications of Synthetically Derived Active Ingredients

- 3.4. Vitamins and Biological Compounds
 - 3.4.1. Vitamins in Cosmetics
 - 3.4.2. Proteins Peptides in Cosmetics
 - 3.4.3. Prebiotics and Probiotics in Cosmetics
 - 3.4.4. Other Biological Compounds in Cosmetics
- 3.5. Sunscreens
 - 3.5.1. Sunscreens in Cosmetics: Function and Classification
 - 3.5.2. Chemical Sunscreens
 - 3.5.3. Physical Sunscreens
- 3.6. Surfactants, Emulsifiers and Rheology Modifiers
 - 3.6.1. Surfactants and Emulsifiers: Structures, Properties and Types
 - 3.6.2. Use of Surfactants and Emulsifiers in Cosmetic Formulations
 - 3.6.3. Rheology Modifiers
- 3.7. Colorants and Pigments
 - 3.7.1. Natural and Synthetic Dyes
 - 3.7.2. Organic and Inorganic Pigments
 - 3.7.3. Formulations with Dyes and Pigments
- 3.8. Preservatives
 - 3.8.1. Uses of Preservatives in Cosmetics
 - 3.8.2. Preservatives of Natural Origin
 - 3.8.3. Preservatives of Synthetic Origin
- 3.9. Biotechnology in Cosmetics
 - 3.9.1. Biotechnology in Cosmetics
 - 3.9.2. Biotechnological Tools for Cosmetics
 - 3.9.3. Cosmetic Active Ingredients Derived from Biotechnology
- 3.10. Nanotechnology in Cosmetics
 - 3.10.1. Nanotechnology in Cosmetics
 - 3.10.2. Nanotechnological Tools and Systems in Cosmetics
 - 3.10.3. Uses of Nanotechnological Systems: Advantages and Benefits

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Module 4. Cosmetic Forms and Formulation Criteria I. Face and Body Cosmetics

- 4.1. Cosmetic Forms
 - 4.1.1. Cosmetic Forms. Chemical Basis
 - 4.1.2. Cosmetic Forms Classification
 - 4.1.3. Cosmetic Forms
 - 4.1.3.1. Features
 - 4.1.3.2. Components
 - 4.1.3.3. Applications
- 4.2. Facial Hygiene Cosmetics
 - 4.2.1. Facial Hygiene and Detoxification
 - 4.2.2. Facial Hygiene Cosmetics: Gels, Scrubs, Emulsions, Foams, Micellar Waters, Toners, Oils, etc.
 - 4.2.3. Cosmetic Ingredients Used in Facial Hygiene
- 4.3. Facial Maintenance and Moisturizing Cosmetics
 - 4.3.1. Moisturizing and Skin Care
 - 4.3.2. Factors Leading to Skin Dehydration
 - 4.3.3. Cosmetic Textures according to Facial Application and Skin Type
 - 4.3.4. Novel Active Ingredients with Moisturizing Efficacy
- 4.4. Cosmetics for the Treatment of Facial Skin Alterations I. Acne, Atopy and Rosacea
 - 4.4.1. Cosmetics for Dermatological Alterations: Acne, Hyperseborrhea and Oily Skin 4.4.1.1. Acne
 - 4.4.1.2. Hyperseborrhea
 - 4.4.1.3. Oily Skin
 - 4.4.2. Cosmetics for Dermatological Alterations: Atopic Skin and Atopic Dermatitis 4.4.2.1. Atopic Skin
 - 4.4.2.2. Atopic Dermatitis
 - 4.4.3. Cosmetics for Dermatological Alterations: Couperose and Rosacea 4.4.3.1. Couperose
 - 4.4.3.1. Couperos
 - 4.4.3.2. Rosacea

- 4.5. Cosmetics for the Treatment of Facial Skin Alterations II. Hyperpigmentation
 - 4.5.1. Cosmetics for Dermatological Alterations
 - 4.5.1.1. Hyperpigmentation
 - 4.5.1.2. Skin Blemishes: Vitiligo
 - 4.5.1.3. Melasma
 - 4.5.2. Cosmetic Active Ingredients for Specific Alterations
 - 4.5.3. New Market Products for the Treatment of Skin Alterations
- 4.6. Antiaging Cosmetics
 - 4.6.1. Factors that Cause Skin Aging
 - 4.6.2. Premature Aging Prevention
 - 4.6.3. Novel Active Ingredients to Prevent and Treat Skin Aging
- 4.7. Body Cosmetics
 - 4.7.1. Body Hygiene and Treatment: Cosmetic Forms
 - 4.7.2. Body Alterations: Causes and Treatments
 - 4.7.2.1. Cellulite-Stretch Marks-Vascularization
 - 4.7.2.2. Active Ingredients and Cosmetic Forms
 - 4.7.3. Hand and Foot Care
 - 4.7.4. Prototype Formulations
 - 4.7.4.1. Active Ingredients Mechanism of Action
- 4.8. Male Cosmetics
 - 4.8.1. Male Skin Physiology: Differential Aspects
 - 4.8.2. Shaving Cosmetics: Follicle Alterations
 - 4.8.3. Beard Care
 - 4.8.3.1. Cosmetic Forms Proposals
 - 4.8.3.2. New Products on the Market
- 4.9. Hair Cosmetics I. Hygiene, Moisturizing and Treating Alterations
 - 4.9.1. Hair and Scalp Alterations
 - 4.9.2. Cosmetics for Hair Fiber Hygiene and Care
 - 4.9.3. Cosmetics for the Treatment of Greasy Scalp
 - 4.9.4. Cosmetics for the Treatment of Pityriasis
 - 4.9.5. Cosmetics for the Prevention and Treatment of Hair Loss
 - 4.9.6. Novel Active Ingredients for Hair Care

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- 4.10. Hair Cosmetics II. Cosmetics for Changes in Color
 - 4.10.1. Undulating Cosmetics: Active Substances and Mechanisms of Action
 - 4.10.2. Types of Cosmetics for Color Changes: Bleaches and Dyes
 - 4.10.3. Vegetable Dyes and Metallic Dyes: Ingredients and Mechanisms of Action
 - 4.10.4. Permanent and Semi-Permanent Dyes
 - 4.10.4.1. Ingredients and Mechanisms of Action

Module 5. Cosmetic Forms and Formulation Criteria II. Solar, Decorative and Area Specific Cosmetics

- 5.1. Sun Protection I. Effects of Solar Radiation
 - 5.1.1. Solar Radiation
 - 5.1.1.1. UV Radiation, VIS Light and IR Radiation
 - 5.1.1.1.1. HEV Radiation or Blue Light
 - 5.1.2. Beneficial and Harmful Effects
 - 5.1.3. Sunscreen Formulation and Requirements
- 5.2. Solar Protection II. Sun Protection Cosmetics
 - 5.2.1. Sun Protection Cosmetics
 - 5.2.2. Self-Tanning Cosmetics
 - 5.2.3. Tanning Accelerator Cosmetics
- 5.3. Decorative Cosmetics I. Ingredients
 - 5.3.1. Ingredients and Cosmetic Forms
 - 5.3.2. Components of Cosmetic Makeups
 - 5.3.3. Natural and Synthetic Pigments
- 5.4. Decorative Cosmetics II. Types
 - 5.4.1. Facial Makeup
 - 5.4.2. Eye Makeup
 - 5.4.3. Lipstick
 - 5.4.4. Nail Varnishes: Features and Evaluation Methods Used

- 5.5. Cosmetics for Hair Treatment
 - 5.5.1. Depilatory Cosmetics
 - 5.5.2. Advantages and Disadvantages of Depilatory Cosmetics
 - 5.5.3. Waxes
 - 5.5.3.1. Cold Waxes
 - 5.5.3.2. Warm Waxes
 - 5.5.3.3. Hot Waxes
 - 5.5.4. Bleaching Agents
 - 5.5.5. Hair Growth Retardant Active Ingredients
- 5.6. Deodorants and Antiperspirants
 - 5.6.1. Sweat Physiology
 - 5.6.2. Deodorants and Antiperspirants
 - 5.6.3. Specific Active Ingredients
- 5.7. Children's Cosmetics
 - 5.7.1. Features of Children's Skin
 - 5.7.2. Possible Alterations in Children's Skin
 - 5.7.3. Children's Cosmetics
- 5.8. Oral Cavity Cosmetics
 - 5.8.1. Mouthwash Components
 - 5.8.2. Toothpaste Components
 - 5.8.3. Toothbrushes and Oral Irrigators
- 5.9. Intimate Hygiene Cosmetics
 - 5.9.1. General aspects
 - 5.9.2. Active Ingredients and Uses
 - 5.9.3. Gels and Ointments
- 5.10. Perfumes
 - 5.10.1. Perfume
 - 5.10.2. Odoriferous Substances
 - 5.10.2.1. Essential Oils.
 - 5.10.2.2. Extracts
 - 5.10.2.3. Pure Chemical Substances
 - 5.10.2.4. Synthetic Essences
 - 5.10.3. Olfactory Families

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Module 6. Natural Cosmetics, Aroma Cosmetics and Nutricosmetics

- 6.1. Natural Cosmetics
 - 6.1.1. Natural vs. Conventional Cosmetics
 - 6.1.2. Reasons to Choose Natural Cosmetics
 - 6.1.3. Ecological Benefits of Natural Cosmetics
 - 6.1.4. Safety of Natural Cosmetic Ingredients
- 6.2. Ingredients for Natural and Organic Cosmetics
 - 6.2.1. Vegetable Oils and Butters
 - 6.2.2. Emulsifiers
 - 6.2.3. Vitamins
 - 6.2.4. Preservatives and Perfumes
- 6.3. Extraction Methods for Natural Cosmetics
 - 6.3.1. Hydroalcoholic Extracts
 - 6.3.2. Oleomacerates
 - 6.3.3. Glycerin Extracts
 - 6.3.4. Aqueous Extracts
 - 6.3.5. Plants Extracts for Natural Cosmetics
- 6.4. Phytocosmetic Active Ingredients
 - 6.4.1. Natural Water-Soluble Active Ingredients
 - 6.4.2. Natural Liposoluble Active Ingredients
 - 6.4.3. Clays
- 6.5. Essential Oils and Aromatherapy
 - 6.5.1. Essential Oils and Essences
 - 6.5.2. Extraction Methods for Essential Oils
 - 6.5.3. Chemotype
 - 6.5.4. Essential Oils of Major Cosmetic Relevance
 - 6.5.5. Hydrolats

- 6.6. Thermal and Marine Cosmetics
 - 6.6.1. Thermal Cosmetics
 - 6.6.2. Marine Cosmetics
 - 6.6.3. Marine Active Ingredients
 - 6.6.4. Sands, Salts, Algae, Microalgae and Marine Plants
- 6.7. Solid Natural Cosmetics
 - 6.7.1. Solid Cosmetics
 - 6.7.2. Solid Soaps, Shampoos and Conditioners
 - 6.7.3. Creams in Solid Form
- 6.8. Specific Regulations to Develop Natural Cosmetics
 - 6.8.1. Existing Legislation on Natural Cosmetics
 - 6.8.2. Natural Cosmetics Certifications
 - 6.8.3. Vegan Cosmetics
- 6.9. Natural and Organic Cosmetics Formulation
 - 6.9.1. Micellar Water Formulation
 - 6.9.2. Emulsion Formulation
 - 6.9.3. Gel Formulation
 - 6.9.4. Soap and Shampoo Formulation
- 6.10. Nutricosmetics
 - 6.10.1. Nutricosmetics and Nutritional Supplements for Skin Care
 - 6.10.2. Benefits of Nutricosmetics
 - 6.10.3. Safety in Nutricosmetics Consumption
 - 6.10.4. Main Active Ingredients in and Types of Nutricosmetics

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Module 7. International Legislation on Cosmetic Products

- 7.1. Regulations in Europe
 - 7.1.1. European Regulations-Legislation
 - 7.1.2. Regulation 1223/2009
 - 7.1.3. Borderline Products
- 7.2. Cosmetics Manufacturing Laboratory Requirements in Europe
 - 7.2.1. Registering Manufacturing Activities
 - 7.2.2. Good Manufacturing Practices
 - 7.2.3. Standard Operating Procedures
- 7.3. Requirements for Importers, Distributors and Providers Placing the Product on the Market
 - 7.3.1. Definitions Based on European Legislation
 - 7.3.2. Obligation Based on European Legislation
 - 7.3.3. Product Notification Portal Registration
- 7.4. Cosmetic Laboratory Areas
 - 7.4.1. Department Definitions
 - 7.4.2. Materials and Personnel Flow
 - 7.4.3. Industrial Equipment and Instrumentation
- 7.5. Regulatory Department: Functions
 - 7.5.1. Safety Assessor
 - 7.5.2. Safety Assessment and Product Dossier
 - 7.5.3. Safety Assessment: Studies
- 7.6. ISO Standards and Certifications
 - 7.6.1. Good Manufacturing Practices
 - 7.6.2. Natural Cosmetic Products
 - 7.6.3. Quality
- 7.7. Regulations: The USA, Latin America and Asia
 - 7.7.1. USA Legislation
 - 7.7.2. Latin American Legislation
 - 7.7.3. Legislation in Asia
 - 7.7.4. Export Requirements

- 7.8. Transversal Legislation
 - 7.8.1. REACH Legislation
 - 7.8.2. CLP Legislation
 - 7.8.3. Other Legislation: Toys, Biocides, Others
- 7.9. Other Legislation
 - 7.9.1. European Legislation: Borderline Products
 - 7.9.2. Personal Care Products
 - 7.9.3. Aerosol Legislation
- 7.10. Registration Requirements for Cosmetic Products in Other Countries (FDA, USA)
 - 7.10.1. Customs Services
 - 7.10.2. Labeling Requirements
 - 7.10.3. Differences in Definition between Cosmetics and Medication

Module 8. Cosmetics Development and Manufacturing

- 8.1. The Cosmetic Industry
 - 8.1.1. The Cosmetic Industry Sector
 - 8.1.2. Briefing or Initial Idea
 - 8.1.3. Laboratory to Pilot Testing
- 8.2. Cosmetic Product Manufacturing Processes
 - 8.2.1. Manufacturing and Subsequent Quality Control
 - 8.2.2. Packaging, Conditioning and Labeling
 - 8.2.3. Storage and Distribution
- 8.3. Raw Materials for Cosmetics Manufacturing
 - 8.3.1. Water Used in the Cosmetic Industry
 - 8.3.2. Antioxidants and Preservatives
 - 8.3.3. Moisturizers, Emulsifiers, Silicones and Polymers
- 8.4. Cosmetic Packaging
 - 8.4.1. Materials
 - 8.4.2. Trends in Cosmetic Packaging
 - 8.4.3. Packaging for Children's Cosmetics

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- 8.5. Manufacturing Operations and Processes in Different Cosmetic Forms
 - 8.5.1. Good Manufacturing Practices for Cosmetic Products UNE-EN-ISO: 22716:2008
 - 8.5.2. Formulations Prior to Cosmetic Development
 - 8.5.3. Prototypes Preparation and Formulation Examples
- 8.6. R&D in Cosmetic Product Development
 - 8.6.1. New Cosmetic Forms
 - 8.6.2. TOP Cosmetic Ingredients
 - 8.6.3. New Plant-Derived Ingredients
- 8.7. Solution, Suspension and Emulsion Preparation
 - 8.7.1. Textures
 - 8.7.2. Aqueous, Micellar and Oily Solutions
 - 8.7.3. Suspensions and Emulsions
 - 8.7.4. Gels and Creamgels
- 8.8. Solid and Semi-Solid Cosmetics Preparation
 - 8.8.1. Sustainability and Practicality
 - 8.8.2. Sensoriality and Efficiency: New Formats
 - 8.8.2.1. Soaps and Syndets
 - 8.8.2.2. Ointments and Salves
 - 8.8.3. Loose vs. Compact Powders: Uses
- 8.9. Other Cosmetic Forms and Substrates
 - 8.9.1. Aerosols
 - 8.9.2. Foams
 - 8.9.3. Single Doses
 - 8.9.3.1. Mask Tissue
 - 8.9.3.2. Impregnated Wipes
- 8.10. Perfume Manufacturing
 - 8.10.1. Perfume: Background
 - 8.10.2. Raw Material Origin, Composition and Application
 - 8.10.3. Alcoholic Fine Perfumery
 - 8.10.4. IFRA Standards

Module 9. Quality Control, Efficacy and Safety in Cosmetics

- 9.1. Quality Control
 - 9.1.1. Stability-Compatibility
 - 9.1.2. Preservative Efficacy
 - 9.1.3. Process Control
- 9.2. Article 19 Cosmetics Regulation Based on Study Results
 - 9.2.1. ISO Definitions for Products Susceptible of Microbiological Risk
 - 9.2.2. Shelf Life and ODP Calculation
 - 9.2.3. Labeling Analysis
- 9.3. Good Manufacturing Practices
 - 9.3.1. Standard Operating Procedures: Manufacturing and Packaging
 - 9.3.2. Third Party Contracts
 - 9.3.3. Hygiene and Personnel Training
- 9.4. Traceability
 - 9.4.1. Standard Operating Procedures: Off-Spec Products
 - 9.4.2. Cosmetovigilance
 - 9.4.3. Product Recalls
- 9.5. European Portal Registration Procedures
 - 9.5.1. Registering the Person in Charge
 - 9.5.2. Cosmetic Product Registration
 - 9.5.3. Framework Formula
- 9.6. Cosmetic Product Safety Report
 - 9.6.1. Regulation 1223/2009: Annex I
 - 9.6.2. Product Dossier
 - 9.6.3. Safety Assessment: Toxicological Profile
- 9.7. Skin Compatibility Studies
 - 9.7.1. Skin, Ocular and Mucosal Compatibility Studies
 - 9.7.2. Labeling Claims
 - 9.7.3. SPF Studies

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9.8. Cosmetic Efficacy Studies

- 9.8.1. Studies on Efficacy
- 9.8.2. In Vitro In Vivo
- 9.8.3. Ex Vivo In Silico
- 9.9. Sensory Analysis
 - 9.9.1. Sensory Analysis Studies
 - 9.9.2. Instrumental Tests
 - 9.9.3. Questionnaires and Assessment Criteria

9.10. Claims Regulation

- 9.10.1. Regulation 655/2013: Common Criteria
- 9.10.2. Guidelines to Substantiate Claims
- 9.10.3. "Free" Labeling Claims

Module 10. Marketing in Cosmetics

- 10.1. Applied Marketing
 - 10.1.1. Marketing Elements
 - 10.1.2. Marketing Terms
 - 10.1.3. Cosmetic Sector Particularities
- 10.2. Customers and Target Markets
 - 10.2.1. Segmentation Criteria
 - 10.2.2. Targeting Strategies
 - 10.2.3. Customer Relationship Management (CRM)
- 10.3. Distribution Channels
 - 10.3.1. Distribution Channels
 - 10.3.2. Types of Distribution Channels
 - 10.3.3. Selecting Distribution Channels
- 10.4. Strategic Vision for Marketing in Cosmetics
 - 10.4.1. Analysis
 - 10.4.2. Value proposition
 - 10.4.3. Growth Drivers
- 10.5. Branding and Performance
 - 10.5.1. Conversion Funnel
 - 10.5.2. Branding Strategies
 - 10.5.3. Performance Strategies





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- 10.6. Offline and Online Tools
 - 10.6.1. Conventional B2C Tools
 - 10.6.2. Offline B2B Tools
 - 10.6.3. B2C and B2B Digital Tools
- 10.7. Key Metrics
 - 10.7.1. Online Metrics
 - 10.7.2. Offline Metrics
 - 10.7.3. Sales Metrics
- 10.8. Financial Aspects
 - 10.8.1. Financial Aspects: Terms10.8.2. Margins and Profitability
 - 10.8.3. P&L
- 10.9. New Trends in Cosmetic Marketing
 - 10.9.1. Trends in Cosmetic Product Formulation
 - 10.9.2. Trends in Cosmetic Product Sales
 - 10.9.3. New Consumer Habits
- 10.10. Interaction with Other Areas and Commercial Departments10.10.1. Marketing and Communication10.10.2. Marketing and Sales10.10.3. Marketing and Training

You will gain access to reference material that, once downloaded, will be of great use as a reference guide in your daily practice"

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"

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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.

 Patient
 Optimal decision

 Research
 Clinical

 Data
 Output

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.



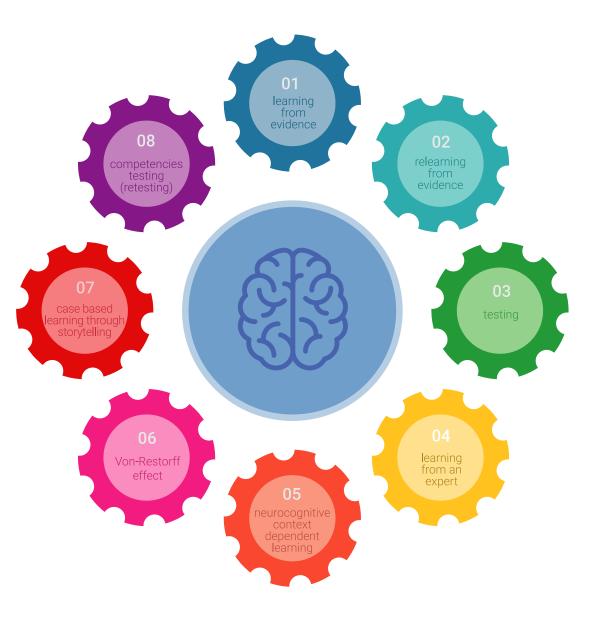
tech 38 | Methodology

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.



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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.



tech 40 | Methodology

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.

20%

15%

3%

15%

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.

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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.

20%

7%

3%

17%



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.



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 Cosmetic Science and Technology guarantees students, in addition to the most rigorous and up-to-date education, access to a Professional Master's Degree issued by TECH Technological University.

Certificate | 43 tech

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Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork"

tech 44 | Certificate

This **Professional Master's Degree in Cosmetic Science and Technology** contains the most complete and up-to-date 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 job exchanges, competitive examinations, and professional career evaluation committees.

Title: Professional Master's Degree in Cosmetic Science and Technology Official N° of hours: 1,500 h.



*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.

technological university **Professional Master's** Degree **Cosmetic Science** and Technology Course Modality: Online Duration: 12 months Certificate: TECH Technological University Official Nº of hours: 1,500 h.

Professional Master's Degree Cosmetic Science and Technology

