



# Cosmetic Science and Technology

» Modality: online

» Duration: 12 months

» Certificate: TECH Global University

» Credits: 60 ECTS

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/medicine/master-degree/master-cosmetic-science-technology

# Index

01		02			
Presentation		Objectives			
	p. 4		p. 8		
03		04		05	
Skills		Course Management		Structure and Content	
	p. 14		p. 18		p. 24
		06		07	
		Methodology		Certificate	
			p. 36		p. 44

# 01 Presentation

The use of beauty and cosmetic care products is the order of the day. Concern for a better personal image and a more well-cared-for skin has led to numerous scientific discoveries and developments in recent decades. The medical field cannot be oblivious to these changes, as research into skin alterations and cosmetic ingredients has a direct impact on the daily work of numerous specialists.

Therefore, this program offers a broad vision of Cosmetic Science and Technology for the purpose of a reliable update in this area. Specialists who decide to take this course will embark on a path that will take them from cosmetic skin applications through quality control and efficacy. What is more, they have the guarantee of a 100% online format that respects their most urgent professional obligations.



# tech 06 | Introduction

Given the Cosmetic sector's innate interest in skin care, R&D&I departments and research laboratories are a great source of discoveries, developments and constant advances in skin alterations. Many of these alterations and affections have a logical medical competence, but many others can be alleviated or alleviated with cosmetic products, which generates an obligation to know about these cosmetics a must to be aware of the latest news about these cosmetics.

New trends in the use of cosmetic active ingredients, the science they are based on and the development pathways still in the making, such as cosmetic biotechnology and nanotechnology, are all points of special interest for specialists and practitioners in different areas. This Professional PROGRAM precisely compiles the latest scientific studies on skin, relevant cosmetic formulation criteria and the important advances in specialties such as natural cosmetics, aromacosmetics or nutricosmetics.

All of which guarantees a complete update in Cosmetic Science and Technology, supported by a teaching team of professional researchers, analysts and pharmacists who collectively combine professional merits and years of experience in the field. The didactic material takes on a theoretical-practical approach that allows for all the advances studied to be applied in the clinical field, supported by a large number of audiovisual references and real case studies.

The program's 100% online methodology grants access to all the contents from any device with an Internet connection, including downloading them for further study. Specialists will be able to take on the course load at their own pace, without being pressured by pre-set academic calendars, specific schedules or in-person classes.

This **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 it is conceived scientific and practical information on those disciplines that are essential for professional practice
- Practical exercises where the self-assessment process can be carried out to improve learning
- 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



Access a syllabus that expands and broadens the knowledge of natural and synthetic active ingredients, cosmetic forms and novelties in sun protection formulation, self-tanning and tanning accelerators"



The program provides an exhaustive study of the evolution, diagnosis and production mechanisms of cellulite, as well as various body alterations of special relevance in cosmetics"

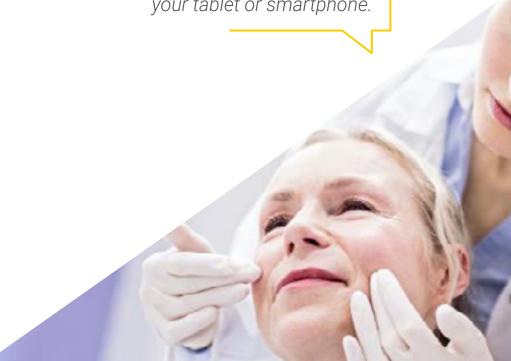
The program includes, in its teaching staff, professionals from the sector who bring to this program the experience of their work, in addition to recognized specialists from prestigious reference societies and universities.

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 education 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 during the academic year For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

You will be able to address all your doubts directly with a teaching staff composed of multidisciplinary specialists in various areas of Cosmetic Science and Technology.

You will have the freedom to take on the course load at your own pace, being able to study from the comfort of your tablet or smartphone.









# tech 10 | Objectives



# **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



The program delves into skin alterations such as scaly keratoses, warts, acne or hyperchromia, with the most advanced cosmetic treatments to tackle each of them"





### 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

- Identificar las alteraciones de la queratinización
- 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 the prevention of 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

#### 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 the CPNP discharge criteria

#### 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



Take the opportunity to learn about the latest advances in this field in order to apply it to your daily practice"







# tech 16 | Skills

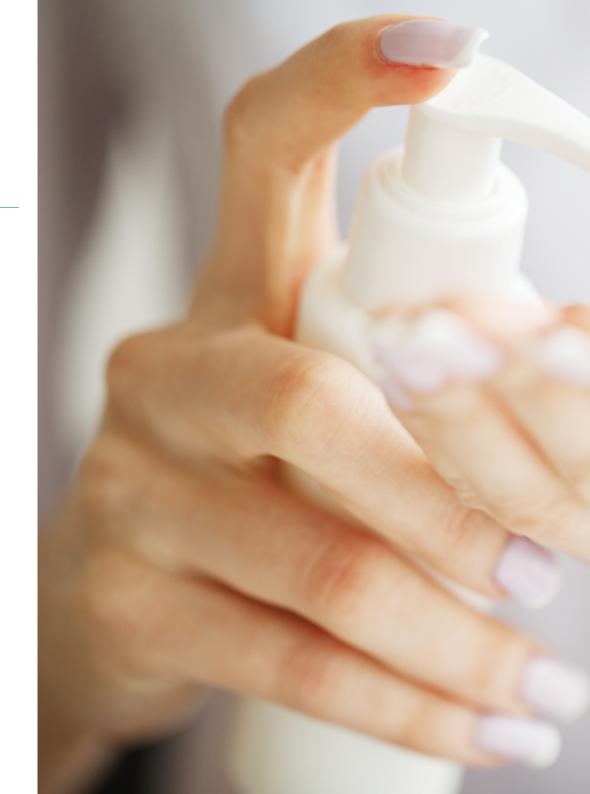


#### **General Skills**

- 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



Enhance and perfect your skills in natural cosmetics, cosmetic safety and skin alterations with the most up-to-date content on the subject"







# 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

TECH has assembled a multidisciplinary teaching team experienced in Cosmetic Science and Technology to create a set of academic contents that covers not only the main novelties in the discipline, but does so from all possible angles. Specialists will benefit from the support of researchers, pharmacists, analysts and even marketing specialists and business managers so as to have a global vision of the cosmetic industry and its most important advances.



#### Management



#### Dr. Mourelle Mosqueira, María Lourdes

- Expert researcher in Cosmetic Science
- Technical Director at Balcare
- Researcher of the FA2 group of the Applied Physics Department of the University of Vigo.
- Author of publications on Cosmetic Science
- Lecturer in undergraduate and graduate programs related to Cosmetic Science.
- President of the Iberoamerican Society of Thalassotherapy
- Secretary of the Galician Society of Thermal Peloids
- 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
- Municipal Pharmaceutical Inspector, advice de Sanidad, Xunta de Galicia
- Primary Care Pharmacist
- Assistant pharmacist
- Researcher specializing in Pharmaceutical Care and Pharmacotherapeutic Follow-up
- Author of several articles published in specialized magazines. Author of Multiple articles published in Specialised journals
- Teacher in university studies of Pharmacy
- PhD in Psychology, UNED.
- Degree in Pharmacy, University of Santiago de Compostela

#### Dr. Pando Rodríguez, Daniel

- CEO y cofundador de Nanovex Biotechnologies
- Director of INdermal
- Researcher in Biotechnology for Medicine and Cosmetics
- PhD in Chemical Engineering, University of Oviedo
- Degree in Chemical Engineering, University of Oviedo
- Master's Degree in Business Administration and Project Management, ENEB.

#### Ms. González Berdugo, Antonia María

- Responsable técnica de Cosmética en Best Medical Diet
- Head of Cosmetic R+D+i at Best Medical Diet
- R&D laboratory technician at The Colomer Group
- R&D Laboratory Technician at Biomedal
- Master's Degree in Biotechnology, Pablo de Olavide University
- Master's Degree in Cosmetics and Dermopharmacy from the Centro de Estudios Superiores de Industria of the Pharmaceutical Industry

#### Dr. Abril González, Concepción

- Chemistry Specialist in Chromatography at 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
- Master's Degree in Professional Specialization in Pharmacy: Pharmaceutical Industry
- by the University of Seville
- Master's Degree in Cosmetics and Dermopharmacy from the University of Seville
- Master's Degree in Chemisty, University of Seville

#### Dr. Etxebeste Mitxeltorena, Mikel

# tech 22 | Course Management

- Researcher in the Department of Medicinal Chemistry and Translational Biology of the CIB-CSIC
- Assistant Pharmacist at Juan de Soto Pharmacy
- D. in Pharmacy from the University of Navarra
- Graduated in Pharmacy and Human Nutrition and Dietetics from the University of of Navarra
- Master's Degree in Dermocosmetics and Formulation from the UDIMA University

#### Ms. Aguado Ruiz, Belén

- Cosmetic Safety Advisor at ABAR Cosmetics
- Technical Director at Larrosa Laboratorios
- Quality Department Director at Gaher Química
- Cosmetic Safety Supervisor at LAB&CLIN ALLIANCE
- Cosmetics Technical Expert at Bellssan Healthcare
- International Master's Degree in Toxicology from the Official College of Chemists of Seville
- Master's Degree in Chemical Sciences from the University of Alcalá

#### Ms. Seghers Carreras, Beatriz





# Course Management | 23 tech

- Marketing Manager at Cantabria Labs
- Marketing Coordinator at Apivita
- Cosmetic Product Safety and Evaluation Assistant at Bellssan Healthcare
- Master's Degree in Cosmetics and Dermopharmacy from the Centro de Estudios Superiores de la Industria Farmacéutica of the Pharmaceutical Industry (CESIF)
- Master's Degree in Marketing and Communication Management, Vertice Business School
- Professional Master' sDegree in Chemical Sciences from the Complutense University of Madrid



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

# **Structure and Content**

In developing all the didactic contents of this program, TECH has made use of the Relearning pedagogical the pedagogical methodology of Relearning. This implies that the specialist who accesses this program will assimilate the concepts of Cosmetic Science and Technology in a natural way, without having to invest excessive hours of study in this work and Technology in a natural way, without having to invest excessive hours of study in this work. The support of high quality audiovisual content, abundant real casuistry and complementary readings for each topic give the specialist the opportunity to delve even deeper into those of greatest interest, gaining access to high quality reference material the opportunity to delve even deeper into those of greatest interest, gaining access to high quality reference material.



# tech 26 | Structure and Content

#### Module 1. Cutaneous Application in Cosmetics

- 1.1. Skin: Cosmetics and the Skin Barrier
  - 1.1.1. The Skin: the cutaneous border
  - 1.1.2. The skin surface: skin microclimate and cosmetics
  - 1.1.3. Skin protection and cosmetics
- 1.2. Epidermis: First in Cosmetics Action
  - 1.2.1. Relationship of its structure with alterations of cosmetic interest
  - 1.2.2. Epidermis Cell junctions and Cohesion: Relationship with cosmetics
  - 1.2.3. The layers of the epidermis Relation to Cosmetics
- 1.3. Dermis and Subcutaneous Cellular Tissue: Second site of action of cosmetics
  - 1.3.1. Dermis. Relationship of its structure and physiology with alterations of cosmetic of cosmetic interest
  - 1.3.2. Fatty subcutaneous cellular tissue Relationship of their structure and physiology with alterations of cosmetic interest
  - 1.3.3. Cutaneous vascularization and innervation. Relationship to cosmetic cosmetic alterations
  - 1.3.4. Link to Cosmetic Alterations
- 1.4. Keratogenesis and melanogenesis: link to cosmetics
  - 1.4.1. Keratogenesis: Relation to Alterations of Cosmetic Relevance
  - 1.4.2. Melanogenesis: Relation to Alterations of Cosmetic Relevance1.4.2.1. Melanins. Relevance to skin protection
- 1.5. Sebaceous and sweat glands: link to cosmetics
  - 1.5.1. Sebaceous Glands: Relationship of their structure and physiology with alterations of cosmetic interest
  - 1.5.2. Sweat Glands: Relationship of their structure and physiology with alterations of cosmetic interest
  - 1.5.3. Cutaneous secretions: Relation to Cosmetic Application
- 1.6. Hair and hair: linkage with cosmetics
  - 1.6.1. Hair structure and chemistry: Relation to Cosmetic Application
  - 1.6.2. Hair and hair physiology Linkage with cosmetic hair treatments
  - 1.6.3. Hair renewal cycles. Link with hair cosmetic hair cosmetics

- 1.7. Nails: Relation to Cosmetics
  - 1.7.1. Nail Anatomy and Physiology: Linkage to cosmetics application of cosmetics
  - 1.7.2. The Nail Plate: Relation to Cosmetic Application
  - .7.3. Factors that Affect Nail Growth: Link with nail cosmetic treatments
- 1.8. Cutaneous Functions: Relation to Cosmetics
  - 1.8.1. Functions of the Skin. 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
    - 1911 Fudermic Skin
    - 1.9.1.2. Dry Skin
    - 1.9.1.3. Oily Skin
  - 1.9.2. Other Skin Types: Cosmetic Advice
  - 193 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

#### Module 2. Skin Alterations in Cosmetics

- 2.1. Keratinization Disorders
  - 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 eczema
- 2.2. Sebaceous Secretion Alterations
  - 2.2.1. Seborrhea
  - 2.2.2. Acne
    - 2.2.2.1. Types of Lesions
    - 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. Eccematides
    - 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. Photoageing
  - 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
- 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

# tech 28 | Structure and Content

- 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: vegetable origin
  - 3.1.1. Plant-Derived Active Ingredients in Skin Care
  - 3.1.2. 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. Active ingredients of animal and mineral origin 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. Synthetic 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: operation 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

# **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

# Structure and Content | 29 tech

- 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 skins
    - 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. Couperosis
    - 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. Anit-Aging 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

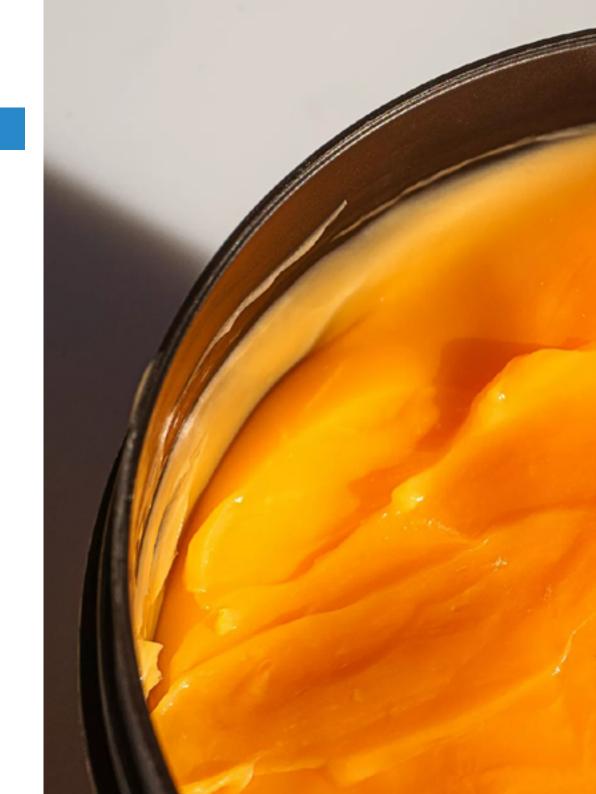
#### 4.7. Body Cosmetics

- 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
- 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

# tech 30 | Structure and Content

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

- 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. Sun 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





# Structure and Content | 31 tech

5.6.	Deodorants	and Anti	perspirants

- 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 Ingredientes 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

#### Module 6. Natural Cosmetics, Aroma Cosmetics and Nutricosmetics

#### 6.1. Natural Cosmetics

- 6.1.1. Natural cosmetics 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

# tech 32 | Structure and Content

6.2.	_	ents for Natural and Organic Cosmetics
		Vegetable Oils and Butters
		Emulsifiers
		Vitamins
		Preservatives and Perfumes
6.3.	Extract	ion 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.	Phytoc	osmetic Active Ingredients
	6.4.1.	Natural Water-Soluble Active Ingredients
	6.4.2.	Natural Liposoluble Active Ingredients
	6.4.3.	Clays
6.5.	Essent	ial Oils and Aromatherapy
	6.5.1.	Essential oils and essences
	6.5.2.	Methods for obtaining Essential Oils
	6.5.3.	Chemotype
	6.5.4.	Essential Oils of Major Cosmetic Relevance
	6.5.5.	Hydrolats
6.6.	Therma	al 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 N	latural Cosmetics
	6.7.1.	Solid Cosmetics
	6.7.2.	Solid Soaps, Shampoos and Conditioners
	6.7.3.	Creams in Solid Form
6.8.	Specifi	c 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 the skin
  - 6.10.2. Benefits of Nutricosmetics
  - 6.10.3. Safety in Nutricosmetics Consumption
  - 6.10.4. Main Active Ingredients in and Types of Nutricosmetics

#### 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. Requirements for importers, distributors and those responsible for placing the product on the market.
  - 7.2.1. Definitions based on European legislation
  - 7.2.2. Obligations based on European legislation
  - 7.2.3. Product Notification Portal Registration
- 7.3. Cosmetic Laboratory Areas
  - 7.3.1. Department Definitions
  - 7.3.2. Materials and Personnel Flow
  - 7.3.3. Industrial Equipment and Instrumentation
- 7.4. Regulatory Department: functions
  - 7.4.1. Safety Assessor
  - 7.4.2. Safety Assessment and Product Dossier
  - 7.4.3. Safety Assessment: Studies
- 7.5. ISO Standards and Certifications
  - 7.5.1. Good Manufacturing Practices
  - 7.5.2. Natural Cosmetic Products
  - 7.5.3. Quality

- 7.6. Regulations: The USA, Latin America and Asia
  - 7.6.1. USA Legislation
  - 7.6.2. Latin American Legislation
  - 7.6.3. Legislation in Asia
  - 7.6.4. Export Requirements
- 7.7. Cross-cutting legislation
  - 7.7.1. REACH Legislation
  - 7.7.2. CLP Legislation
  - 7.7.3. Other Legislation: Toys, Biocides, Others
- 7.10. Other legislation
  - 7.10.1. European legislation: Borderline products
  - 7.10.2. Personal Care Products
  - 7.10.3. Aerosol Legislation
- 7.11. Registration Requirements for Cosmetic Products in Other Countries (FDA, USA)
  - 7.11.1. Customs Services
  - 7.11.2. Labeling Requirements
  - 7.11.3. Differences in Definition between Cosmetics and Medication

#### Module 8. Cosmetics Development and Manufacturing

- 8.1. The Cosmetic Industry
  - 8.1.1. The cosmetics 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
- 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 Cremigels
- 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 powder vs. Compacts: 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

# tech 34 | Structure and Content

8.10.	8.10.1. 8.10.2. 8.10.3.	e Manufacturing Perfume: background Raw Material Origin, Composition and Application Alcoholic Fine Perfumery IFRA Standards
Mod	ule 9. C	Quality Control, Efficacy and Safety in Cosmetics
9.1.	Quality	Controls
	9.1.1.	Stability-compatibility
	9.1.2.	Preservative efficacy
	9.1.3.	Controls in process
9.2.	Article 1	9 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 M	lanufacturing 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.	Traceab	pility
	9.4.1.	Standard operating procedures: off-spec products out of specification
	9.4.2.	Cosmetovigilance
	9.4.3.	Product Recalls
9.5.	Europea	an Portal Registration Procedures
	9.5.1.	Registering the Person in Charge
	9.5.2.	Cosmetic Product Registration
	9.5.3.	Framework Formula
9.6.	Cosmet	ic product safety report
	9.6.1.	Regulation 1223/2009: Annex I
	9.6.2.	Product Dossier
	9.6.3.	Safety Assessment: Toxicological Profile

5.7.	Skin Co	mpatibility Studies
	9.7.1.	Skin, Ocular and Mucosal Compatibility Studies
	9.7.2.	Labeling Claims
	9.7.3.	SPF Studies
9.8.	Cosmet	tic 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	y 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 - guidelines to support the claims
	9 10 3	"Free" Labeling Claims
	21.10.01	· ·
Мо		Marketing in Cosmetics
	dule 10.	
	dule 10. Applied	Marketing
	dule 10. Applied 10.1.1.	
	dule 10. Applied 10.1.1. 10.1.2.	Marketing Marketing Elements
10.1	dule 10.  Applied 10.1.1. 10.1.2. 10.1.3.	Marketing Marketing Elements Marketing Terms
10.1	dule 10.  Applied 10.1.1. 10.1.2. 10.1.3. Custom	Marketing Marketing Elements Marketing Terms Cosmetic Sector Particularities
10.1	dule 10.  Applied 10.1.1. 10.1.2. 10.1.3. Custom 10.2.1.	Marketing Marketing Elements Marketing Terms Cosmetic Sector Particularities ners and Target Markets
10.1	dule 10. Applied 10.1.1. 10.1.2. 10.1.3. Custom 10.2.1. 10.2.2.	Marketing Marketing Elements Marketing Terms Cosmetic Sector Particularities ners and Target Markets Segmentation Criteria
10.1	dule 10.  Applied 10.1.1. 10.1.2. 10.1.3. Custom 10.2.1. 10.2.2. 10.2.3.	Marketing Marketing Elements Marketing Terms Cosmetic Sector Particularities hers and Target Markets Segmentation Criteria Targeting Strategies
10.1	dule 10.  Applied 10.1.1. 10.1.2. 10.1.3. Custom 10.2.1. 10.2.2. 10.2.3. Distribut	Marketing Marketing Elements Marketing Terms Cosmetic Sector Particularities ners and Target Markets Segmentation Criteria Targeting Strategies Customer Relationship Management (CRM)
10.1	dule 10. Applied 10.1.1. 10.1.2. 10.1.3. Custom 10.2.1. 10.2.2. 10.2.3. Distribu 10.3.1.	Marketing Marketing Elements Marketing Terms Cosmetic Sector Particularities ners and Target Markets Segmentation Criteria Targeting Strategies Customer Relationship Management (CRM) tion Channels

- 10.4. Strategic vision of cosmetic marketing
  - 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
- 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. Offlines Metrics
  - 10.7.3. Sales Metrics
- 10.8. Financial Aspects
  - 10.8.1. Financial Aspects: Terms
  - 10.8.2. Margins and Profitability
  - 10.8.3. P and G
- 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 Departments
  - 10.10.1. Marketing and Communication
  - 10.10.2. Marketing and Sales
  - 10.10.3. Marketing and Training



You will be able to download all the material available in the Master's Degree and use it as a reference guide in your daily work"



# tech 38 | Methodology

#### At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, 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, trying to recreate the real conditions in the physician'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:

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





### Relearning Methodology

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

This 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, a real revolution with respect to the mere study and analysis of cases.

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





### Methodology | 41 tech

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 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

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 42 | Methodology

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



#### **Study Material**

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

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.



#### **Surgical Techniques and Procedures on Video**

TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.



#### **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 exclusive educational system for presenting multimedia content 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, TECH presents real cases in which the expert will guide students, 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.

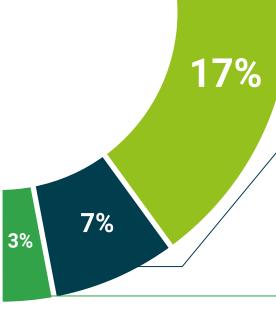
The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### **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.









### tech 46 | Certificate

This program will allow you to obtain your **Master's Degree diploma** in **Cosmetic Science and Technology** 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** title 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: Master's Degree in Cosmetic Science and Technology

Modality: online

Duration: 12 months

Accreditation: 60 ECTS



<sup>\*</sup>Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, certificate will make the necessary arrangements to obtain it, at an additional cost.

tech global university



# Master's Degree Cosmetic Science and Technology

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Global University
- » Credits: 60 ECTS
- » Schedule: at your own pace
- » Exams: online

