# Master's Degree

Antiaging





# Master's Degree

# Antiaging

» 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-antiaging

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Society's obsession with beauty nowadays means that more and more people are deciding to go to a specialist to improve their physical appearance. This also rings true in most developed societies, where physical appearance does not go hand in hand with age, but rather with our state of mind.

For this reason, many people who find that their appearance does not reflect their attitude or the way they feel about themselves resort to rejuvenation treatments that allow them to improve themselves both physically and psychologically. At TECH we have set out to improve the standard of training available to professionals working in this field, offering them the most up-to-date and thorough specialization in the field of Antiaging.



# tech 06 | Introduction

The significant increase in life expectancy the world over has led to people increasingly wanting to look and feel better for longer. It is evident that this is the case when the majority of people in their sixth decade are still considered "young" and yet, in sociological terms, from the age of 65 onwards, one can officially be considered elderly.

This program favors an entirely different method of approaching the patient, it will provide medical professionals with a much deeper understanding of the unavoidable aging process, of the known factors involved and their interrelation, and of the way they can affect the human being.

Once the factors that affect aging have been addressed, aging itself can be investigated and, in particular, how to avoid its acceleration and to delay the undesirable effects that this process entails not only physically, but also psychologically, cognitively, aesthetically and even sexually.

For all these reasons, TECH has designed this program, which provides professionals with the necessary tools to carry out a comprehensive review of their patients needs from a multidisciplinary point of view, thanks to the unique content which has been specially prepared by doctors from different specialties, psychologists, nutritionists and pharmacists. This is done in order to demonstrate that only from a source of knowledge taken from a variety of disciplines, which at first may seem independent from one another but which are in fact closely related, can a process as complex as aging be tackled with any guarantee of success.

This Master's Degree is an intense program designed to teach students about the technology, materials and treatments within this discipline and to provide a complete overview of anti-aging techniques that will allow you to specialize in an ethical and responsible way. This Master's Degree provides high-level training that seeks to create professionals of the highest quality. In addition, its 100% online format will allow you to continue your studies from wherever you choose, without the need to travel..

This **Master's Degree in Antiaging** contains the most complete and up-to-date scientific program on the market. The most important features include:

- Practical cases presented by experts in Antiaging
- The graphic, schematic, and eminently practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- News on anti-aging techniques
- Practical exercises where the self-assessment process can be carried out to improve learning
- Special emphasis on innovative methodologies in anti-aging techniques
- 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



Expand your knowledge on this Professional Master's Degree and achieve excellence in this field"

# Introduction | 07 tech



This Master's Degree may be the best investment you can make in the selection of an up-to-date program for two reasons: in addition to updating your knowledge in antiaging, you will obtain a degree from TECH Global University"

The teaching staff includes professionals from the field of aesthetics medicine, who bring their experience to this training program, as well as renowned specialists from leading societies and prestigious universities.

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

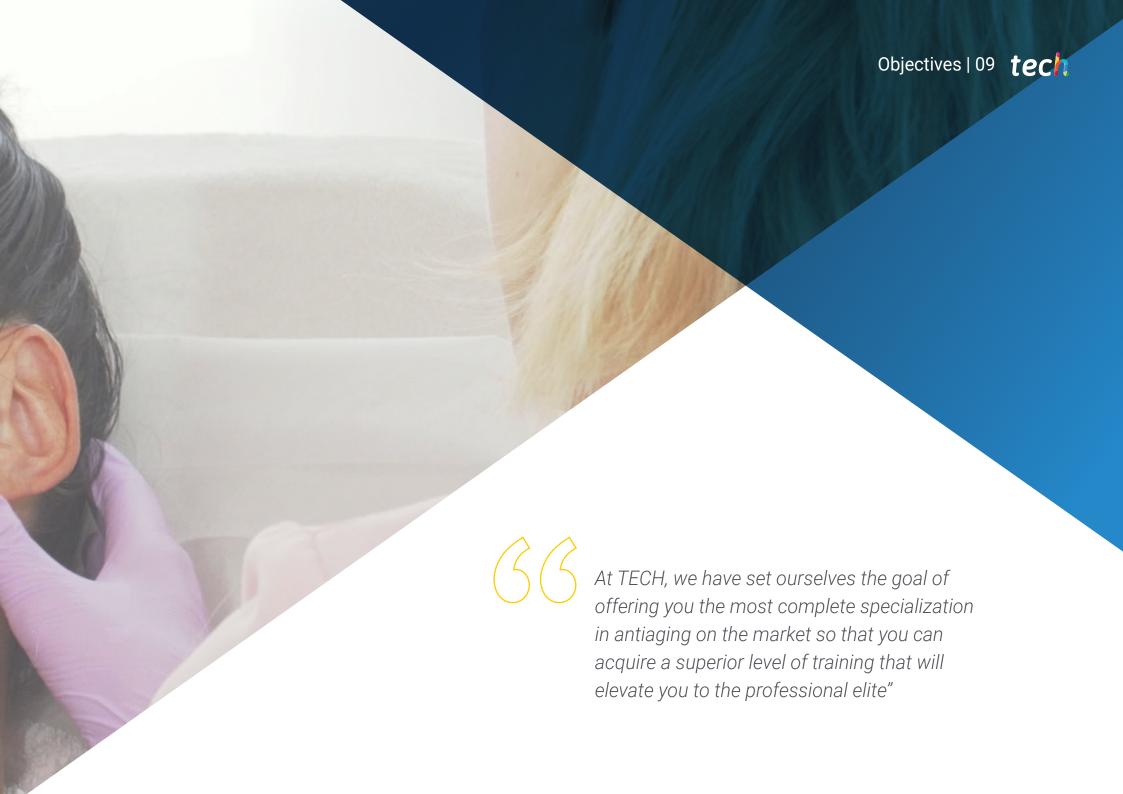
This program is designed around Problem-Based Learning, whereby the surgeon must try to solve the different professional practice situations that arise during the academic year. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts in antiaging with extensive experience.

Don't hesitate to sign up for this unique learning experience with TECH, you will find the best teaching material and online lessons.

This 100% online program will allow you to combine your studies with your professional work while increasing your knowledge in this field.







# tech 10 | Objectives



### **General objectives**

- Examine the major developments in anti-aging medicine
- Assimilate the terminology and basic concepts in anti-aging medicine
- Understand the main theories of aging, both at the intracellular, extracellular and environmental levels, and their interrelation and progression
- Establish the critical relationship between endocrinology and aging
- Analyze the integrated effect of senescence at the hormonal level
- Propose hormonal therapeutic alternatives in relation to hormonal failure
- Establish the physiological fundamentals for understanding the functioning of the human organism during physical exercise
- Identify organ adaptations and training programs, as well as physiological assessment and implementation in order to improve physical performance
- Develop a physical activity plan adapted to the patient's particular characteristics
- Establish the specific approach to obesity through the use of medication
- Develop the different types of nutrients found in foods
- Examine different types of foods with particular health benefits
- Present specific types of diets
- · Analyze the psychological and neurological aspects of aging
- Knowledge of neurovegetative and neuroadaptive therapies

- Identify the management of practices to improve people's quality of life
- Determine the psychological aspects that influence the aging process
- Examine the principal minimally invasive therapies available in anti-aging medicine
- Analyze how minimally invasive therapies act and slow down the aging process
- Establish a connection between the patient's needs and the treatment to be followed
- Analyze facial anatomy and common aging patterns
- Know the most common therapies applied in aesthetic medicine practices with anti-aging treatments
- Define home care strategies in dermo-cosmetics
- Determine the need for the use of equipment as part of an anti-aging protocol
- Generate specialized knowledge on the main types of lasers with applications in anti-aging medicine
- Present technologies other than lasers with beneficial effects on aging
- Understand the importance of sexual health in the aging process
- Know the main non-surgical techniques used in genital anti-aging
- Demystify society's deeply held beliefs about aging at the sexual level
- Analyze the patient comprehensively
- Evaluate results and follow-ups together with the patient and other specialties





### **Specific objectives**

#### Module 1. Antiaging Medicine

- Present the historical background on which anti-aging medicine is based
- Define and become familiar with the most frequently used concepts in Antiaging medicine
- Examine the most accepted theories of aging and interrelate them with each other
- Understand the aging mechanisms associated with mitochondria
- Define telomere-related aging processes
- Establish the relationship between immunosenescence, aging and disease onset
- Analyze the importance of circadian rhythms in aging and acquire the skills to treat their alterations in an appropriate manner
- Evaluate the importance of the exposome in aging and generate channels to adapt it to the needs and expectations of the individual

#### Module 2. Hormones and Their Connection to Aging Hormone Therapy

- Address the complex endocrinological system of the human being
- Describe the role of stress and related hormones in relation to aging
- Develop the close interrelationship between neurodegeneration and melatonin deficiency
- Determine the important role played by GH in the different stages of human life
- Analyze the hormonal aspects involved in menopause as an accelerated example of aging in women
- Determine the difference between synthetic and bioidentical hormones, and understand their usefulness in anti-aging medicine
- Achieve the capabilities to initiate hormone therapy prescribing



# tech 12 | Objectives

#### Module 3. Physical Activity. Sedentary Lifestyle. Obesity

- Examine the metabolic response during physical exercise
- Determine the different techniques for the physiological evaluation of the patient
- Analyze the basic principles of sports training to develop an adapted physical activity plan
- Know the importance of physical activity on certain pathologies such as cancer, musculoskeletal, cardiovascular and respiratory pathologies
- Analyze trends for recovery and readaptation to effort
- Establish how obesity and sedentary lifestyles contribute to accelerated aging
- Determine the guidelines and indications for pharmacological treatment of obesity

#### Module 4. Nutrition

- Establish the contribution of micronutrients to normal nutritional status
- Identify diseases developed by nutritional deficiencies and how to avoid them
- Present the different types of functional foods, nutraceuticals, as well as the differences between the two
- Examine the health contribution of prebiotics and probiotics
- Analyze the theory of aging associated with cellular oxidation and the role of antioxidants present in foods
- Identify the different food additives and their functions in foods
- Present specific types of diets and their contribution to improving the body's functions

#### Module 5. Neurological and Psychological Aspects of Antiaging Medicine

- Examine the psychological and neurological aspects of aging
- Address both stress and ways to manage, control and combat it
- Complement, from a psychological point of view, the aspects related to chronobiology
- Analyze the applications of mindfulness to anti-aging therapy
- Study the main aspects of Scener therapies
- Develop neural therapy and its applications
- Analyze the relationship between the perception of self and the aging process

#### Module 6. Minimally Invasive Therapies

- Understand the fundamentals and applications of regenerative medicine
- Compile the therapeutic alternatives available in anti-aging medicine consultations
- Examine the mechanisms of action of the different therapies presented in the block
- Analyze the advantages and disadvantages of the therapies presented,
   learning the indications and contraindications of the proposed treatments
- Establish a therapeutic plan consistent with the patient's needs at all times
- Eliminate taboos regarding therapies related to hematic derivatives

#### Module 7. Alliances Between Aesthetic Medicine and Antiaging

- Analyze and learn about facial structures and their temporal evolution
- Diagnose facial aging in relation to the subunits that compose its structure
- · Plan strategies for preventive action against facial aging
- Propose treatment plans for signs of aging established on the face and other photoexposed body structures
- Evaluate the degree of skin aging and be able to develop a cosmetic treatment plan accordingly in consultation
- Identify cosmetic home treatment needs based on diagnosis

#### Module 8. Equipment and Lasers Applied to Antiaging Medicine

- Address the physical principles of light sources
- Differentiate between the main types of lasers and the technologies that make them unique
- Develop applications in the prevention and treatment of skin aging and other tissues
- Analyze the mechanisms of action of other complementary technologies such as cryolipolysis, plasmalasers and radiofrequency
- Apply available knowledge to the development of treatment protocols
- Combine the different types of apparatus
- Identify the side effects that can occur with each piece of equipment

#### Module 9. Genital Antiaging Medicine

- Analyze the importance of psychological processes associated with agerelated sexual dysfunction
- Review the anatomy and histology of the male and female sex organs
- Diagnose the main problems associated with female genital aging, whether or not associated with menopause
- Determine the applicability of different female genital rejuvenation techniques and be able to combine them with each other
- Study male sexual dysfunctions associated with aging
- Identify non-age-related male sexual dysfunctions that may impair the individual's sexual health
- Assimilate the different techniques available in male genital rejuvenation

# Module 10. The Antiaging Medicine Practice Practical Aspects Overall Approach to the Patient

- Apply an appropriate marketing strategy in the practice and when recruiting patients
- Establish basic aspects of the patient's medical history
- Define a comprehensive approach to the anti-aging medicine patient when dealing with them in the consultation room
- List the main laboratory tests necessary for a complete anti-aging medicine consultation, as well as to be able to expand to more advanced studies
- Plan an integrative and adequate treatment
- Evaluate results and schedule follow-up, as well as interdisciplinary relationships if necessary





# tech 16 | Skills

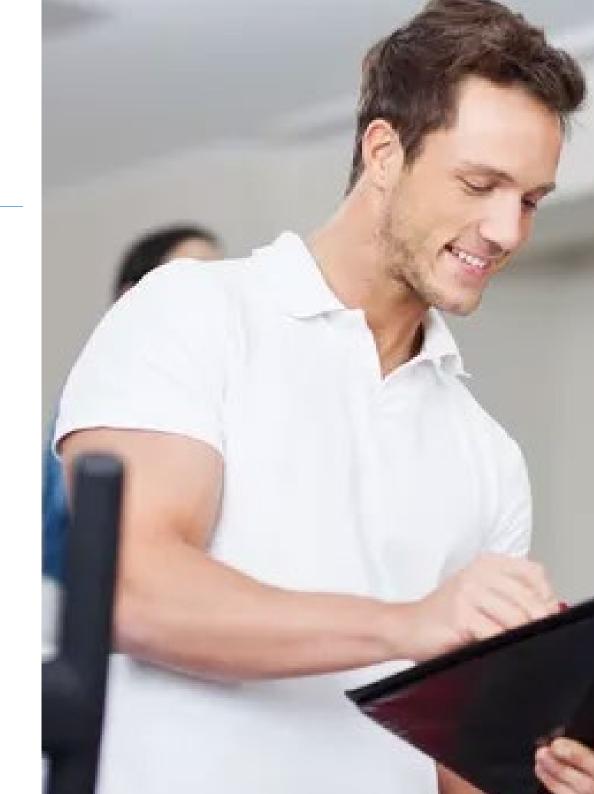


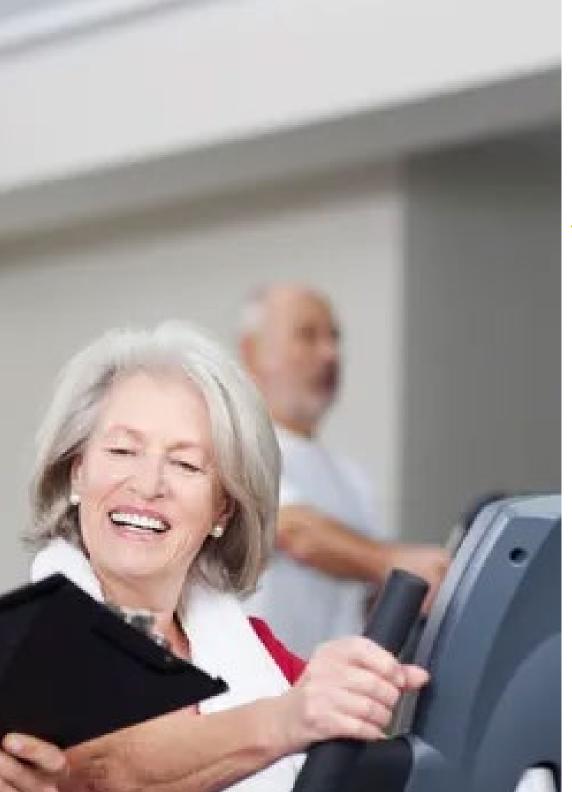
### **General skills**

- Gain a comprehensive view of their patients and a broad understanding of the processes that affect the aging process
- Address the multiple facets that affect your patients' health
- Improve patients' quality of life, and improve their health from a holistic perspective



A unique specialization that will allow you to acquire superior knowledge and progress in this highly competitive field"







### Specific skills

- Apply the main anti-aging techniques to patients
- Gain an in-depth understanding of the relationship between the endocrine system and aging
- Prescribe appropriate exercise for each patient to prevent aging and obesity
- Prescribe different types of diets according to the patient's needs
- Know how the aging process can affect the patient psychologically
- Apply the most appropriate therapeutic plan for each patient
- Undertake facial rejuvenation strategies
- Achieve a thorough understanding of the different techniques and tools that can be applied in each type of treatment
- Take into account the conditions related to genital aging and apply anti-aging techniques
- Perform comprehensive anti-aging treatments to achieve major benefits for patients





#### Management



#### Dr. Morante Tolbaños, María Cristina

- Hair Surgeon at the Medical Laser Institute
- Professor on the Master's Degree in Hair Transplantation at the Catholic University of Murcia
- Professor on the Master's Degree in Medicine and Hair Transplantion at the University of Alcalá de Henares
- Medical Director at the Hair Surgery Unit of the MAN Madrid Clinic
- Degree in Medicine and Surgery from the Complutense University of Madrid
- Doctorate in Legal and Forensic Medicine from the Complutense University of Madrid
- Master's Degree in Hair Medicine and Transplantion at Alcalá de Henares University
- Master' Degree in Aesthetics and Antiaging Medicine from Complutense University of Madrid
- Master's Degree in Accident and Emergency Medicine from the Complutense University of Madrid
- Master's Degree in Health and Social Action Center Management from the Complutense University of Madrid

#### **Professors**

#### Dr. Burgos Ferrer, María del Mar

- Aesthetic Physician at Doctor López Cano Hospital, Dorsia Clinics and KER Medical Center
- Aesthetic Physician at Noval Clinic, Hedonai Medical Centers and Vivanta Clinics
- Graduate in Medicine from the University of Cadiz
- Master's Degree in Aesthetic Medicine from the Distance University of Madrid
- Course Dermatoscopy applied to Aesthetic Medicine by SEME

#### Dr. Calvache Castillo, Sergio

- Resident physician in Pneumology at Dr. Peset Hospital
- Sports Service Technical Team, University of Granada
- Lecturer at massive cardiopulmonary resuscitation conferences
- Degree in Physical Activity and Sports Sciences, University of Granada
- · Graduate in Medicine and Surgery, University of Granada
- Master's Degree in Clinical Medicine from the Camilo José Cela University

#### Dr. Blanco Ramos, Indira

- Medical Director at PB Clinical SLP Health Institute in Barcelona
- Collaborating assistant physician at the ALLERCEN Drug Allergy
  Unit in Barcelona
- Collaborating associate physician at the Dermatological Institute Dr.
   Pablo Umbert in Barcelona
- Degree in Medicine from the National University Francisco de Miranda
- MIR in Clinical Pharmacology at the Marqués de Valdecilla Hospital
- MIR at Clinical Pharmacology at the Marqués de Valdecilla Hospital
- Master's Degree in Clinical Dermatology, CEU-Cardenal Herrera University

#### Dr. Gennaro della Rossa, María Natalia

- Head of Aesthetic Genital Surgery at Dorsia Clinic and throughout the whole of Spain
- CEO and Medical Director at Club Antiaging Forever Young and Dr Natalia
   Gennaro Private Clinic
- Head of the Gynecological Surgery Department at the Ruber Juan Bravo Hospital, Madrid
- Degree in Medicine from the University of Córdoba, Argentina
- Master's Degree in Antiaging and Hormones from the American Antiaging Academy

#### Dr. Rodrigo Algaba, Verónica

- · Clinical Psychotherapist of the Central Nervous System,
- · Psychologist and counselor at "Plena Inclusión", Madrid
- Psychologist at Casta Salud
- Educational psychologist at Torrent City Hall
- Degree in Psychology from the University of Valencia
- Master's Degree in Health, Integration and Disability, Complutense University of Madrid

#### Dr. Rodríguez Cobos, Elvira

- In charge of specialized consultation of movement disorders at Quirón Hospital Marbella
- Aesthetics doctor at Medical Imbrain and Clavero Clinic Alhaurin de la Torre
- Graduated in Medicine and Surgery from the University of Malaga
- Master's Degree in Aesthetic and Antiaging Medicine from the Complutense University of Madrid
- Neurology specialist at the the Puerta de Hierro University Hospital

# tech 22 | Course Management

#### Dr. García Medina, Noemí

- Medical Aesthetic Director at Dorsia Castellón Clinic
- Medical Aesthetician at the Benicarló Health Center
- Medical Aesthetician at Art Clinic
- Degree in Medicine and General Surgery from the Complutense University of Madrid
- MIR in the Emergency Department and Family and Community Medicine Service of the Regional Hospital of Vinarós
- Master's Degree in Aesthetic Medicine, University of Valencia

#### Dr. Soriano Micó, María

- Head of the Brain Injury Unit at the Military Hospital of Mislata
- Assistant physician in Rehabilitation Dept. at Manises Hospital
- Degree in Medicine from the University of Miguel Hernández de Elche
- MIR in Physical Medicine and Rehabilitation, Doctor Peset University Hospital, Valencia
- Master's Degree in Manual Medicine at the Complutense University of Madrid and San Carlos Clinical Hospital
- Master's Degree in Musculoskeletal Ultrasound and Ultrasound-Guided Interventionism

#### Dr. Valle Rodríguez, María Mercedes

- Aesthetics doctor in clinics in Valladolid, Cuenca and Madrid
- Degree in Medical Sciences from Francisco Marroquín University, Guatemala City
- Master's Degree in Clinical Nutrition from CEU Cardenal Herrera University
- Master's Degree in Aesthetic and Antiaging Medicine from the Complutense University of Madrid
- Collaboration with internships for master's degree students in aesthetic medicine from various universities and clinics in Madrid







#### Dr. Villacampa Crespo, Beatriz

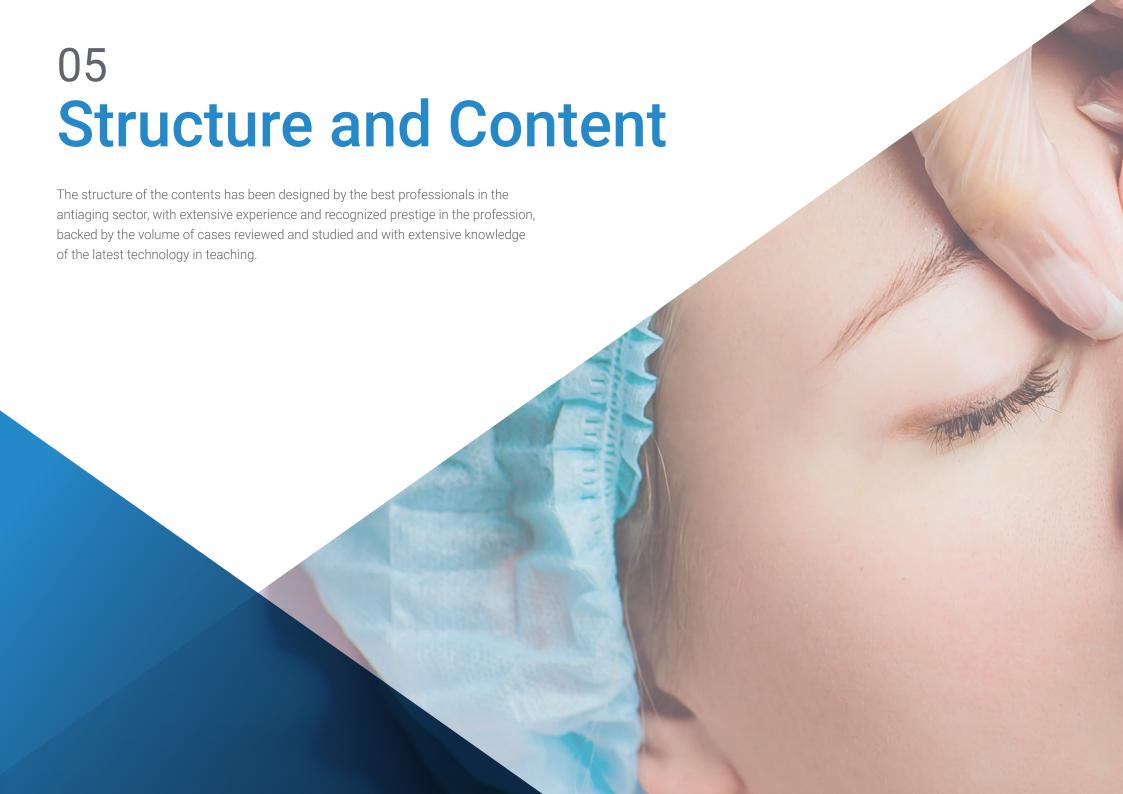
- Primary care pharmacist at the General Hospital of Elche
- Assistant pharmacist in pharmacy office in Vinaroz
- Pharmacist on the REFAR program (Review of chronic polymedicated from patients) in the department of Vinaroz
- Degree in Pharmacy from the University of Valencia
- Diploma in Human Nutrition and Dietetics from the University of Valencia

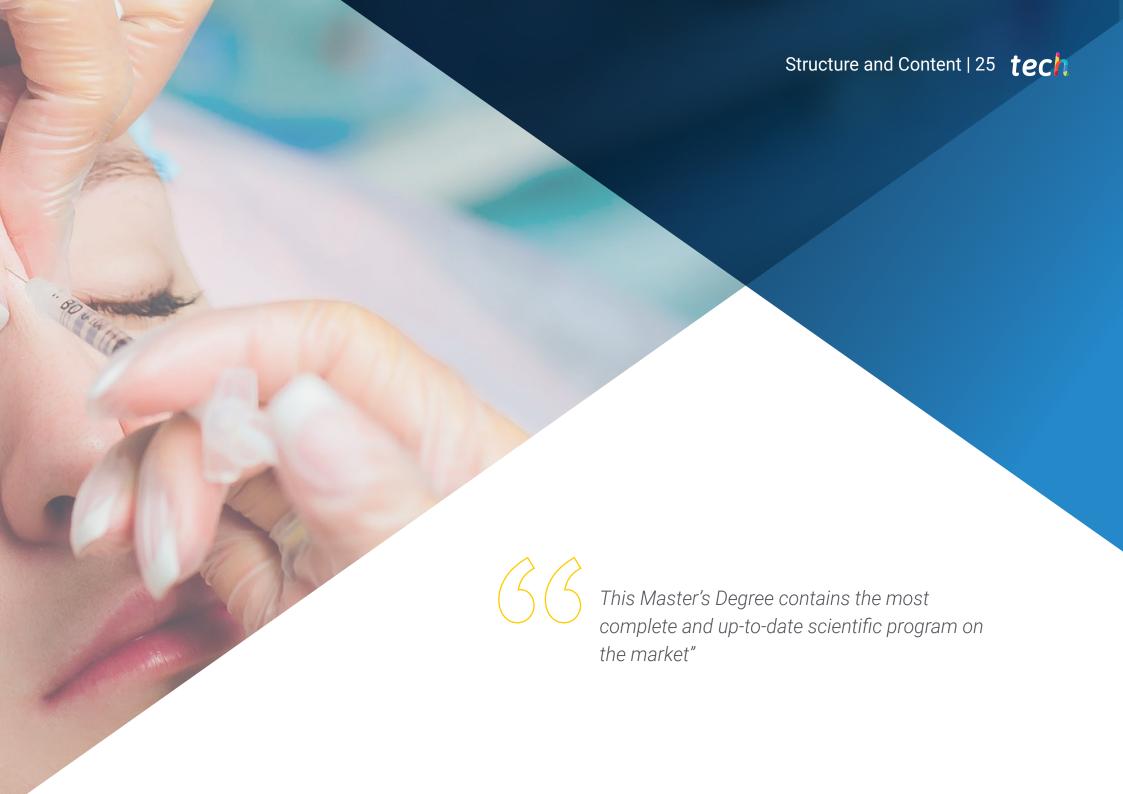
#### Ms. Vera López, Inés

- Dietitian and nutritionist at Dorsia Clinics
- Graduate in Human Nutrition and Dietetics from the University of Valencia
- Indoor cycling instructor
- Master's Degree in Nutrition and Health, Open University of Catalonia (UOC)
- · Master's Degree in Nutrition in Physical Activity and Sport, Open University of Catalonia (UOC)



Make the most of this opportunity to learn about the latest advances in this subject to apply it to your daily practice"



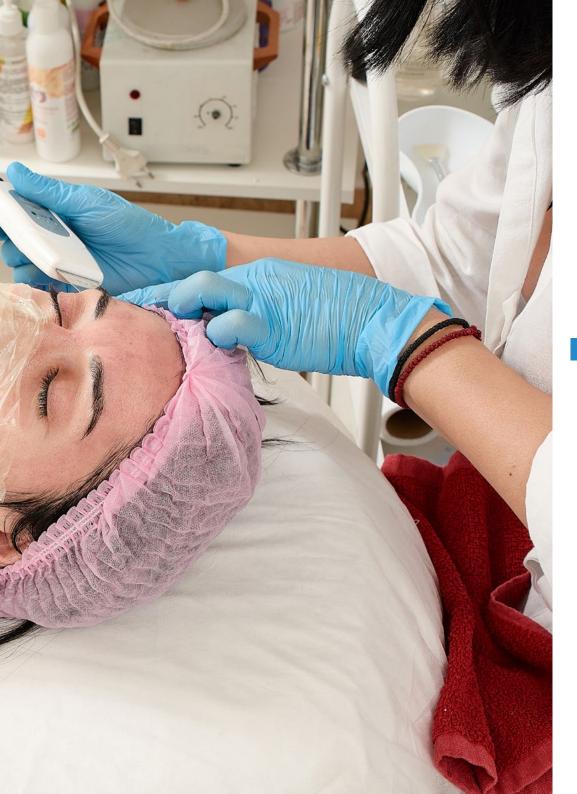


# tech 26 | Structure and Content

#### Module 1. Antiaging Medicine

- 1.1. Antiaging Medicine
  - 1.1.1. Empirical Knowledge
  - 1.1.2. Scientific Knowledge
  - 1.1.3. Looking to the Future. Immortality
- 1.2. Theories of Aging. Pathophysiology
  - 1.2.1 Evolutionary and Genetic Theories
  - 1.2.2. Physiological Theories
  - 1.2.3. Theories of Fatigue
  - 1.2.4. Conclusions
- 1.3. Species and Longevity
  - 1.3.1. Concept of Longevity
  - 1.3.2. Animal, Plant and Organic Longevity
  - 1.3.3. Human Longevity
- 1.4. Mechanisms of Cellular Aging
  - 1.4.1. The Weissman and Minot Concept
  - 1.4.2. Free Radical Theories
  - 1.4.3 Integrative Theory of Aging
- 1.5. Mitochondrias
  - 1.5.1. The Mitochondrion as an Organelle. Prokaryotic Origin
  - 1.5.2. Mitochondrial Structure
  - 1.5.3. Generating Energy
  - 1.5.4. Oxidative Processes
- 1.6. Chronobiology 1. Suprachiasmatic Pineal Nucleus. Circadian Rhythm
  - 1.6.1. Structure of the Pineal Gland
  - 1.6.2. Physiology of the Pineal Gland
  - 1.6.3. Circadian Rhythms
  - 1.6.4. Other Biological Rhythms
- 1.7. Chronobiology 2. Sleep and Sleeplessness
  - 1.7.1. Sleep Phases
  - 1.7.2. Neuroendocrine Activity According to Sleep Phases
  - 1.7.3. Jet Lag





# Structure and Content | 27 tech

- Immunity. Immunosenescence
  - 1.8.1. Humoral Immunity
  - 1.8.2. Cellular Immunity
  - 1.8.3. Immunomodulation, AM3
- 1.9. Telomeres and Telomerase
  - 1.9.1. Genome Structure and Tolomers
  - 1.9.2. Role of Telomerases
  - 1.9.3. Telomeric Diseases
- 1.10. Expososma and Aging
  - 1.10.1. Concept of Exposoma
  - 1.10.2. Classification of the Factors Involved
  - 1.10.3. Actions to Control the Effect of the Exposome on Aging

#### Module 2. Hormones and Their Connection to Aging Hormone Therapy

- 2.1. Endocrinology and Antiaging
  - 2.1.1. Hormone Synthesis
  - Hormone Transport 2.1.2.
  - 2.1.3. Degradation of Hormones
- Neuroimmunoendocrine Axis
  - 2.2.1. Hypothalamus/Pituitary/Thyroid Axis
  - Hypothalamus/Pituitary/Liver Axis
  - 2.2.3. Hypothalamus/Pituitary/Pituitary/Adrenal Axis
- Stress and Premature Aging
  - 2.3.1. Oxidative Stress
  - 2.3.2. Inflammation
  - 2.3.3. Neurodegeneration
- Thyroid + Adrenal Cortex
  - 2.4.1. Thyroid Hormone

  - Alteration of the Thyroid Gland

# tech 28 | Structure and Content

2.5.

2.6.

2.7.

2.8.

2.9.

2.10.

2.10.4. Hormone Therapy

2.4.3.	Cortisol, Aldosterone and Steroid Hormones Synthesized in the Adrenal Cortex
	2.4.3.1. Synthesis
	2.4.3.2. Neuroendocrine Regulation
	2.4.3.3. Pathologies Derived from the Alteration of Hormone Secretion
	2.4.3.3.1. Pathologies Related to the Secretion of Cortisol
	2.4.3.3.2. Pathologies Related to Aldosterone Secretion
	2.4.3.3.3. Pathologies Related to Sex Hormone Synthesis
Melator	nin and Neurodegeneration
2.5.1.	Melatonin, Neuroendocrine Synthesis and Regulation
2.5.2.	Functions of Melatonin and its Role in Neurodegeneration
2.5.3.	Clinical Uses of Melatonin
Growth	Hormone
2.6.1.	Synthesis
2.6.2.	Neuroendocrine Regulation
2.6.3.	Functions
Growth	and Antiaging Hormone
2.7.1.	Clinical Applications
2.7.2.	Side Effects:
2.7.3.	Treatment
Menopa	ause
2.8.1.	Hormonal Changes in Menopause
2.8.2.	Clinical Manifestations
2.8.3.	Treatment
Implicat	tions for Aging Due to Menopause
2.9.1.	Osteoporosis. Types
2.9.2.	Pathogenic Factors
2.9.3.	Microbiological
2.9.4.	Treatment
Synthet	ic and Bioidentical Hormones. Hormone Therapy
	Basic Concepts
2.10.2.	Advantages and Disadvantages of Bioidentical Hormones
2.10.3.	Hormone Therapy

#### Module 3. Physical Activity. Sedentary Lifestyle. Obesity

- 3.1. Physiology of Physical Activity
  - 3.1.1. Nervous and Muscular Control of Movement
  - 3.1.2. Metabolism in Exercise
  - 3.1.3. Adaptive Responses to Physical Exercise
    - 3.1.3.1. Hematology
    - 3.1.3.2. Cardiovascular
    - 3.1.3.3. Pulmonary
    - 3.1.3.4. Muscular
- 3.2. Physiological Evaluation and Interpretation I
  - 3.2.1. Anthropometry
  - 3.2.2. Aerobic and Anaerobic Functional Capacity
  - 3.2.3. Laboratory Tests
  - 3.2.4 Field Tests
- 3.3. Physiological Evaluation and Interpretation II
  - 3.3.1. Stress Tests
  - 3.3.2. Stress Test Interpretation
  - 3.3.3. Clinical Cases
- 3.4. Personalized Prescription of Physical Activity in Young Adults
  - 3.4.1. Fundamentals of Strength Training
  - 3.4.2. Fundamentals of Endurance Training
  - 3.4.3. Injury Prevention
    - 3.4.3.1. Sensory-Motor Training
    - 3.4.3.2. Flexibility Training
- 3.5. Personalized Prescription of Physical Activity for the Elderly
  - 3.5.1. Fundamentals of Cardiovascular Training and its Differences in Young Adults
  - 3.5.2. Fundamentals of Strength and Endurance Training
  - 3.5.3. Prevention from Falls

# Structure and Content | 29 tech

3.6.	Physical	Activity.	Longevity	and C	)uality	of Life

- 3.6.1. Cardiovascular Diseases
- 3.6.2. Pulmonary Diseases
- 3.6.3. Neuromuscular Diseases
- 3.6.4. Musculoskeletal Disorders
- 3.6.5. Special Populations
  - 3.6.5.1. Pregnancy
  - 3.6.5.2. Advanced Age

#### 3.7. Strategies for Rehabilitation and Recovery from Exertion

- 3.7.1. Recovery Techniques
  - 3.7.1.1. Physical Measurements
  - 3.7.1.2. Nutrition (Hydration, Diet)
- 3.7.2. Hypoxic Preconditioning

#### 3.8. Sedentary Lifestyles and Obesity

- 3.8.1. Current Situation of Obesity Worldwide
- 3.8.2. Obesity as a Metabolic Disease
- 3.8.3. Obesity Prevention Strategies and Sedentary Lifestyles

#### 3.9. Pharmacological Treatment of Obesity. GLP1- Liraglutide

- 3.9.1. Pharmacological Mechanism of Action
- 3.9.2. Indications and Contraindications
- 3.9.3. Usefulness in Clinical Practice and its Applications

#### 3.10. Dietary Supplementation

- 3.10.1. Vitamins.
- 3.10.2. Antioxidants
- 3.10.3. Coenzyme Q10
- 3.10.4. Calcium
- 3.10.5. Chondroprotectors
- 3.10.6. Nutricosmetics

#### Module 4. Nutrition

- 4.1. Micronutrition
  - 4.1.1. Micronutrient Concept
  - 4.1.2. Vitamins.
  - 4.1.3. Minerals
  - 4.1.4. Trace Elements
  - 4.1.5. Other Micronutrients
- 4.2. Orthomolecular Nutrition
  - 4.2.1. Orthomolecular Nutrition Concept
  - 4.2.2. Nutripharmaceuticals
  - 4.2.3. Orthomolecular Nutrition Benefits
- 4.3. Supplementation
  - 4.3.1. Concept of Nutritional Supplements
  - 4.3.2. Types of Nutritional Supplements
  - 4.3.3. Usefulness of Nutritional Supplements in Antiaging Medicine
- 4.4. Nutrigenetics. Nutrigenomics.
  - 4.4.1. Nutrigenetics Concept
  - 4.4.2. Nutrigenomics Concept
  - 1.4.3. Applications of Nutrigenetics and Nutrigenomics
- 4.5. Vitamins and Disease Prevention
  - 4.5.1. Types of Vitamins
  - 4.5.2. Hypovitaminosis and Hypervitaminosis
  - 4.5.3. Hypovitaminosis Treatment and Prevention
- 4.6. Food Additives
  - 4.6.1. Food Additive Concept
  - 4.6.2. Functions of Food Additives
  - 4.6.3. Classification and Identification of Foodstuffs
- 4.7. Integrated Nutrition and Feeding
  - 4.7.1. Concept and foundations of Integrative Nutrition
  - 4.7.2. Anti-Inflammatory Foods
  - 4.7.3. Integrative Nutrition and the Future

## tech 30 | Structure and Content

- 4.8. Nutraceuticals
  - 4.8.1. Nutraceuticals
  - 4.8.2. Differences Between Nutraceuticals and Food Supplements
  - 4.8.3. Most Representative Nutraceuticals
- 4.9. Prebiotics and Probiotics
  - 4.9.1. Concept of Prebiotic. Benefits of Prebiotics
  - 4.9.2. Probiotic Concept. Benefit of Probiotics
  - 4.9.3. Symbiotic Concept. Benefits of Symbiotic
- 4.10. Free Radicals and Antioxidants
  - 4.10.1. Concept of Free Radicals and their Role in Cellular Aging
  - 4.10.2. Function and Types of Antioxidants
  - 4.10.3. Role of Antioxidants in the Prevention of Aging

#### Module 5. Neurological and Psychological Aspects of Antiaging Medicine

- 5.1. Psychological Aspects of Aging
  - 5.1.1. Psychological Aspects of Aging. What Are They?
  - 5.1.2. Psychosocial States of Aging
  - 5.1.3. Psychological Changes in Aging (Attention, Memory, Intelligence, Creativity)
- 5.2. Neurological Aspects of Aging
  - 5.2.1. Neurological Aspects of Aging. What Are they?
  - 5.2.2. Neurological Changes Associated with Aging
  - 5.2.3. Neurobiological Foundations of Neuronal Aging
  - 5.2.4. Proteins
- 5.3. Neuroimmunoendocrine Axis
  - 5.3.1. Neuroimmunoendocrine System
  - 5.3.2. Neuroimmunoendocrinology of the Nervous System
  - 5.3.3. Neuroendocrine Regulation of the Immune System
- 5.4. Stress Management
  - 5.4.1. Definition of Stress
  - 5.4.2. How Does Stress Affect Aging?
  - 5.4.3. Treatment of Stress in Adulthood

- 5.5. Mindfulness (Meditation and Neurological Rejuvenation)
  - 5.5.1. What is Mindfulness?
  - 5.5.2. How to Practice Mindfulness? Exercises
  - 5.5.3. Neurological Changes with the Practice of Mindfulness
- 5.6. Scenar Therapy
  - 5.6.1. Introduction to Scenar Therapy
  - 5.6.2. Benefits of Scenar Therapy
  - 5.6.3. Scenar Devices
- 5.7. Neural Therapy
  - 5.7.1. What is Neural Therapy and What is it For?
  - 5.7.2. How Does Neural Therapy Work?
  - 5.7.3. Main Indications for Neural Therapy
  - 5.7.4. Treatment
- 5.8. Functional Changes and Aging
  - 5.8.1. Functional Aging
  - 5.8.2. Physiological Changes Associated with Aging
  - 5.8.3. Cognitive Changes Associated with Aging
  - 5.8.4. Strategies to Slow Aging
- 5.9. Importance of Circadian Rhythms (Chronobiology)
  - 5.9.1. Circadian Rhythms in Humans
  - 5.9.2. Circadian Rhythms and Sleep
  - 5.9.3. Circadian Rhythms and Jet Lag
  - 5.9.4. Chronobiology of Aging
- 5.10. Self-Concept of the Aging Process
  - 5.10.1. Definition of Self-Concept
  - 5.10.2. Chronological Age
  - 5.10.3. Biological Age
  - 5.10.4. Functional Age



# Structure and Content | 31 tech

#### Module 6. Minimally Invasive Therapies

6.1. Regenerative Medi	licine
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- 6.1.1. General Introduction
- 6.1.2. Concept
- 6.1.3. Types of Fabrics 6.1.3.1. Cell Types
- 6.1.4. Advantages and Disadvantages
- 6.1.5. Medical Application
- 6.2. Regenerative Medicine Treatments
  - 6.2.1. Types of Treatment
  - 6.2.2. The Choice of Treatment
  - 6.2.3. Results
- 6.3. Ozone Therapy
  - 6.3.1. Theoretical Basis
  - 6.3.2. Indications and Contraindications in Medicine
  - 6.3.3. Applicability and Treatment

#### 6.4. Hyperbaric Medicine

- 6.4.1. Theoretical Basis
- 6.4.2. Indications and Contraindications in Medicine
- 6.4.3. Applicability and Treatment

#### 6.5. Carboxytherapy

- 6.5.1. Theoretical Basis
- 6.5.2. Indications and Contraindications in Medicine
- 6.5.3. Applicability and Treatment

#### 6.6. Oxidermotherapy

- 6.6.1. Theoretical Basis
- 6.6.2. Indications and Contraindications in Medicine
- 6.6.3. Applicability and Treatment

## tech 32 | Structure and Content

6.7.	Stem C	ell Therapy		
	6.7.1.	Fundame		
	6.7.2.	Stem Cell		
	6.7.3.	Stem Cell		

- 6.7.1. Fundamentals and Theoretical Foundations
- 6.7.2. Stem Cell Therapy in the Aging Process
- 5.7.3. Stem Cell Research and Other Applications
- 6.8. Autohemotherapy
  - 6.8.1. Fundamentals and Theoretical Foundations
  - 5.8.2. Autohemotherapy Applicable to Regenerative Medicine
  - 6.8.3. Applications in Classical Medicine
- 6.9. Plasma Which Is Rich in Growth Factors
  - 6.9.1. Theoretical Background, Biochemical Basis and History
  - 6.9.2. Applications in Regenerative Medicine 6.9.2.1. Other Applications
  - 6.9.3. Procedure and Tissue Effects
- 6.10. Intraparenteral Supplementation
  - 6.10.1. Theoretical Foundations of Parenteral Nutrition and Supplementation
  - 6.10.2. Types of Nutrients
  - 6.10.3. Applications in Regenerative Medicine and Complications

#### Module 7. Alliances Between Aesthetic Medicine and Antiaging

- 7.1. Facial Anatomy
  - 7.1.1. Skeletal Structure
  - 7.1.2. Fat Structure
  - 7.1.3. SMAS
  - 7.1.4. Skin and Skin Appendages
- 7.2. Botulinum Toxin. Facial Upper Third
  - 7.2.1. Mechanism of Action
  - 7.2.2. Most Common Muscle Patterns
  - 7.2.3. Application Techniques
  - 7.2.4. Adverse Effects
- 7.3. Volumetrics Facial Upper Third
  - 7.3.1. Orbit
  - 7.3.2. Temporal Fossa
  - 7.3.3. Fillers and Other Techniques Used

- 7.4. Volumetrics Midface
  - 7.4.1. Cheekbone
  - 7.4.2. Eye
  - 7.4.3. Nose
- 7.5. Volumetrics Lower Third of the Face
  - 7.5.1. Lips and Perioral Region
  - 7.5.2. Chin
  - 7.5.3. Jaw
- 7.6. Biostimulation
  - 7.6.1. Sutures
  - 7.6.2. Liquid Biostimulation
- 7.7. Neck, Neckline, Hands
  - 7.7.1. Common Features
  - 7.7.2. Neck
  - 7.7.3. Neckline
  - 7.7.4. Hands
- 7.8. Skin. Infiltrative Treatments
  - 7.8.1. The Mesotherapeutic Technique
  - 7.8.2. Homeopathic Mesotherapy
  - 7.8.3. Allopathic Mesotherapy
  - 7.8.4. Hydrobalance Mesotherapy
- 7.9. Skin. Dermocosmetics 1
  - 7.9.1. Classification of Skin Aging
  - 7.9.2. Superficial Medical Peels
  - 7.9.3. Medium Medical Peels
- 7.10. Skin. Dermocosmetics 2 Home Antiaging Protocols
  - 7.10.1. Mild Skin Aging
  - 7.10.2. Moderate Skin Aging
  - 7.10.3. Advanced Skin Aging
  - 7.10.4. Severe Skin Aging

#### Module 8. Equipment and Lasers Applied to Antiaging Medicine

- 8.1. Physical Principles of Light Sources
  - 8.1.1. Laser Definition
  - 8.1.2. Properties
  - 8.1.3. Laser Types
- 8.2. Intense Pulsed Light (IPL)
  - 8.2.1. Mechanism of Action
  - 8.2.2. Indications
  - 8.2.3. Protocol
  - 8.2.4. Side Effects and Contraindications
- 8.3. O-Switched Laser
  - 8.3.1. Mechanism of Action
  - 8.3.2. Indications
  - 8.3.3. Protocol
  - 8.3.4. Side Effects and Contraindications
- 8.4. Erbium Laser
  - 8.4.1. Mechanism of Action
  - 8.4.2. Indications
  - 8.4.3. Protocol
  - 8.4.4. Side Effects and Contraindications
- 8.5 NFODIMIO-YAG Laser
  - 8.5.1. Mechanism of Action
  - 8 5 2 Indications
  - 8.5.3. Protocol
  - 8.5.4. Side Effects and Contraindications

- 8.6. Fractional CO2 Laser
  - 8.6.1. Mechanism of Action
  - 8.6.2. Indications
  - 8.6.3. Protocol
  - 8.6.4. Side Effects and Contraindications
- 8.7. Plasmalaser
  - 8.7.1. Mechanism of Action
  - 8.7.2. Indications
  - 8.7.3. Protocol
  - 8.7.4. Side Effects and Contraindications
- 8.8. Radiofrequency
  - 8.8.1. Mechanism of Action
  - 8.8.2. Indications
  - 8.8.3. Protocol
  - 8.8.4. Side Effects and Contraindications
- 8.9. Antiaging Biostimulators
  - 8.9.1. Mechanism of Action
  - 8.9.2. Indications
  - 8.9.3. Protocol
  - 8.9.4. Side Effects and Contraindications
- 8.10. Cryolipolysis
  - 8.10.1. Mechanism of Action
  - 8.10.2. Indications
  - 8.10.3. Protocol
  - 8.10.4. Side Effects and Contraindications

# tech 34 | Structure and Content

#### Module 9. Genital Antiaging Medicine

- 9.1. Psychological Aspects of Aging at the Sexual Level
  - 9.1.1. Sexuality and Aging
  - 9.1.2. Sexual Dysfunctions. Medical and Psychological Aspects
  - 9.1.3. Treatment
- 9.2. Anatomical and Histological Reminder of the Female Sex Organs
  - 9.2.1. External Genitalia
  - 9.2.2. Internal Genitals
  - 9.2.3. Cosmetic and Functional Female Intimate Pathology
- 9.3. Platelet-Rich Plasma in Female Genital Antiaging Medicine
  - 9.3.1. Explanation of the Technique
  - 9.3.2. Benefits
  - 9.3.3. Contraindications
- 9.4. Carboxytherapy and Radiofrequency in Antiaging Medicine for Female Genitalia
  - 9.4.1. Carboxytherapy
    - 9 4 1 1 Beneficial Effects
    - 9.4.1.2. Contraindications
  - 9.4.2. Radiofrequency
    - 9.4.2.1. Types of Radiofrequency
    - 9.4.2.2. Beneficial Effects
    - 9.4.2.3. Contraindications
- 9.5. Laser and LED light in Female Genital Antiaging Medicine
  - 951 Laser
    - 9.5.1.1. Explanation of the Technique
    - 9.5.1.2. Benefits
    - 9.5.1.3. Contraindications
  - 9.5.2. LED Light
    - 9.5.2.1. Explanation of the Technique
    - 9.5.2.2. Benefits
    - 9 5 2 3 Contraindications

- 9.6. Hyaluronic Acid Fillers in Female Genital Antiaging Medicine
  - 9.6.1. External Genitalia
    - 9.6.1.1. Explanation of the Technique
    - 9.6.1.2. Benefits
    - 9.6.1.3. Contraindications
  - 9.6.2. Internal Genitals
    - 9.6.2.1. Explanation of Available Techniques
    - 9.6.2.2. Benefits
    - 9.6.2.3. Contraindications
- 9.7. Anatomical and Histological Reminder of the Male Sex Organs
  - 9.7.1. External Genitalia
  - 9.7.2. Internal Genitals
  - 9.7.3. Cosmetic and Functional Male Intimate Pathology
- 9.8. Platelet-rich Plasma in Male Genital Antiaging Medicine
  - 9.8.1. Explanation of the Technique
  - 9.8.2. Benefits
  - 9.8.3. Contraindications
- 9.9. Carboxytherapy and Shock Wave Therapy in Male Genital Antiaging Medicine
  - 9.9.1. Carboxytherapy
    - 9.9.1.1. Explanation of the Technique
    - 9.9.1.2. Expected Benefits
  - 9.9.2. Shock Waves
    - 9.9.2.1. Explanation of the Technique
    - 9.9.2.2. Expected Benefits
- 9.10. Hyaluronic Acid Fillers in Male Genital Antiaging Medicine
  - 9.10.1. Indications
  - 9.10.2. Benefits
  - 9.10.3. Contraindications

# **Module 10.** The Antiaging Medicine Practice. Practical Aspects. Overall Approach to the Patient

- 10.1. Marketing. Social Media. Ethical Aspects. Medicine and Advertising
  - 10.1.1. Marketing Plan
    - 10.1.1.1. Situation Analysis (PESTEL, SWOT)
    - 10.1.1.2. Plan of Objectives
    - 10.1.1.3. Action Plan
  - 10.1.2. Digital Communication
    - 10.1.2.1. Social Media Plan
    - 10.1.2.2. Social Networks
  - 10.1.3. New Technologies
- 10.2. Medical History and Informed Consent
  - 10.2.1. Types of Medical Records
  - 10.2.2. Content of a Medical Record
    - 10.2.2.1. Informed Consent
- 10.3. General Approach to the Patient in the Antiaging Clinic
  - 10.3.1. Psychology of Patient Approach
  - 10.3.2. Coaching Adapted to the Consultation
  - 10.3.3. Identification of Patient Problems and Demands
- 10.4. Biological Age Assessment
  - 10.4.1. Definition of Concepts
  - 10.4.2. Evaluation Methods
  - 10.4.3. Other Calculators
- 10.5. Basic Laboratory Analysis
  - 10.5.1. Hemogram and Basic Biochemistry
  - 10.5.2. Vitamins
  - 10.5.3. Early Detection of Diabetes Mellitus and Dyslipidemia
  - 10.5.4. Thyroid Profile

- 10.6. Specific Laboratory Analyses
  - 10.6.1. Free Radicals Study
  - 10.6.2. Telomeric Length Test
  - 10.6.3. Pathology Screening
    - 10.6.3.1. Colorectal Cancer
    - 10.6.3.2. Breast Cancer
    - 10.6.3.3. Neurodegenerative Diseases
- 10.7. Evaluation of Results and Integrated Prescription
  - 10.7.1. Detailed Study of Results
  - 10.7.2. Definition of Objectives
  - 10.7.3. Integrative Treatment
- 10.8. Monitoring
  - 10.8.1. Consultation Planning
  - 10.8.2. Need for Complementary Tests
  - 10.8.3. Resetting of Objectives and Motivational Consultation
- 10.9. Complementary Specialties and the Need for Referral
  - 10.9.1. Need for Collaboration
  - 10.9.2. Diagnosis of Incidental Disease
  - 10.9.3. Related Specialties
    - 10.9.3.1. Family and Community Medicine
    - 10.9.3.2. Endocrinology and Nutrition
    - 10.9.3.3. Plastic and Reconstructive Surgery
    - 10.9.3.4. Psychiatry/Psychology



## 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**

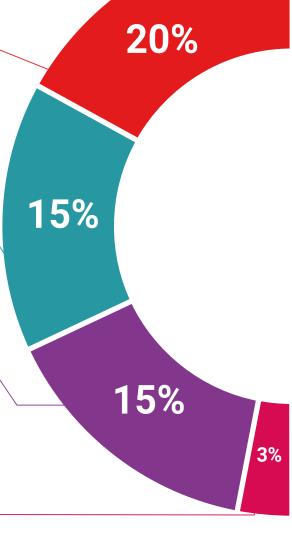
TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many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

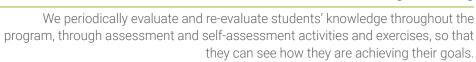
Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.

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



**Testing & Retesting** 



and direct way to achieve the highest degree of understanding.



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.



17% 7%





### tech 46 | Certificate

This program will allow you to obtain your **Master's Degree diploma in Antiaging** 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 Antiaging

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, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.

tech global university

# Master's Degree Antiaging

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

