Advanced Master's Degree

Orthodontics and Dentofacial Orthopedics

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Advanced Master's Degree
Orthodontics and Dentofacial Orthopedics

- Modality: **online**
- Duration: **2 years**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Website: **www.techtitute.com/pk/dentistry/advanced-master-degree/advanced-master-degree-orthodontics-dentofacial-orthopedics**

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01

Introduction

Having a healthy mouth is one of the essential conditions to enjoy a good state of health. This premise is already one of the most widely accepted by the general population. This has made the practice of dentistry grow in work volume, but, above all, in intervention methods and responses to the different therapeutic situations faced in a professional setting.

With increasingly earlier start times for orthopedic and orthodontic interventions, esthetic treatments that now begin at considerably advanced ages and much more specific and extensive esthetic expectations on the part of patients, it is imperative for professionals in this field to be exhaustively updated.

The Advanced Maser's Degree in Orthodontics and Dentofacial Orthopedics allows you to acquire the most updated specialization in all areas of dentistry and dentofacial orthopedics: A special program, of greater intensity, duration and impact, created to provide a highly qualified response to the most demanding professionals"

Dentofacial Orthopedics aims to correct the width, length, or height of the jaws; to stimulate or inhibit jaw growth when it is altered; or to improve dental eruption. But there are other abnormalities that can be prevented or cured thanks to this specialty, such as the reduction or elimination of dental crowding; the correction of habits such as thumb sucking or abnormal swallowing, or asymmetry problems, as well as preserving spaces for permanent teeth that have not yet erupted. All these treatments have seen changes in the way they work and intervene in recent times, with the irruption of new materials, work systems and methodologies that increase treatment success, optimize treatment time and achieve a greater cost-work benefit for professionals.

Moreover, the demand for orthodontic treatment has increased. Earlier and earlier intervention has turned children into patients, sometimes at a very young age. And conversely, also older patients of ages that were not previously common in this field.

This makes up-to-date specialization an inexcusable necessity for all professionals in these fields of work. In-depth knowledge of new developments and possible answers to special conditions is the only way to offer patients the most appropriate means of improvement under optical conditions.

Intensive training is the only way to remain competitive and to offer first-class quality care. A stance that is becoming the only way to achieve job objectives in an increasingly demanding market.

This **Advanced Master's Degree in Orthodontics and Dentofacial Orthopedics** is the most complete and up-to-date scientific program on the market. The most important features of the program include:

- Clinical cases presented by experts in the different specialties. 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.
- The latest innovations in diagnosis, intervention, treatment and new materials.
- Presentation of practical workshops on techniques and procedures.
- Real high-resolution images in demonstrations.
- Practical exercises where the self-evaluation process can be carried out to improve learning.
- Algorithm-based interactive learning system for decision-making in the presented clinical situations.
- All of this will be complemented by theoretical lessons, questions to the expert, debate forums on
- controversial topics, and assignments.
- Content that is accessible from any fixed or portable device with an Internet connection.

An Advanced Master's Degree created especially for professionals seeking the highest qualification, with the best didactic material, working on real cases and learning from the best professionals in the field"

This Advanced Master's Degree may be the best investment you can make when choosing a refresher program for two reasons: in addition to updating your knowledge of Odontology, you will obtain a qualification from TECH - Technological University: the world's largest and most prestigious digital educational institution in Spanish"

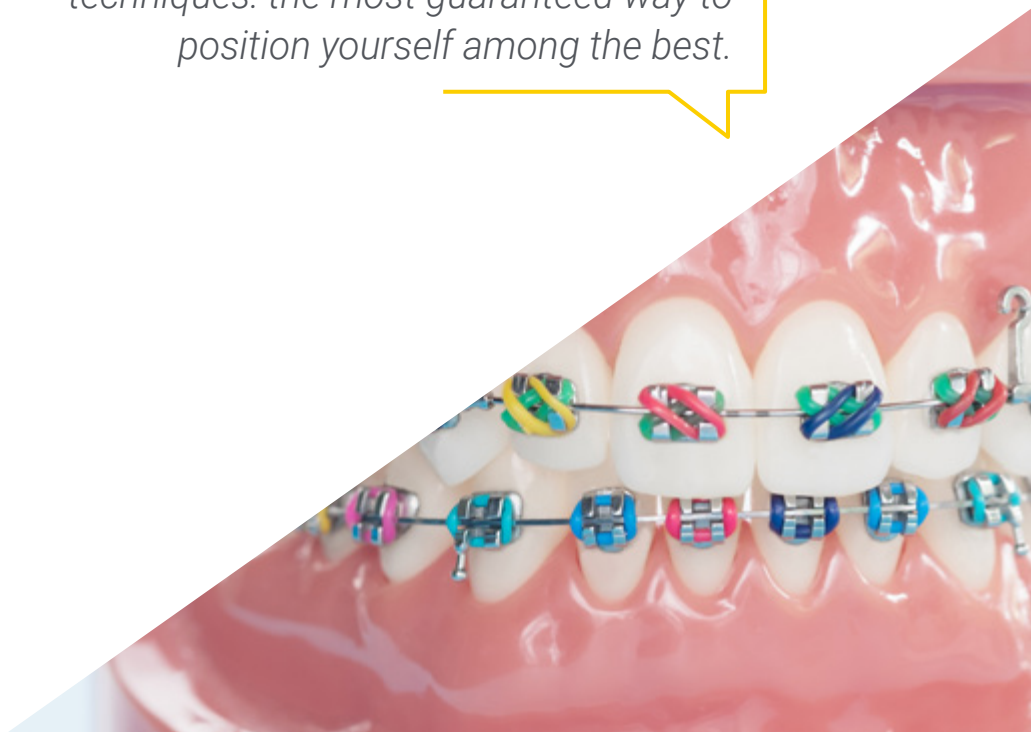
The teaching staff includes health professionals from the field, who bring their experience to this program, as well as renowned specialists from leading scientific societies.

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

This program is designed around Problem Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the course. For this reason, you will be assisted by an innovative, interactive video system created by renowned and experienced experts in the field of Odontology with extensive teaching experience.

Increase your decision-making confidence by updating your knowledge through this Two Year Master's Degree of a program created to train the best.

Make the most of this opportunity and learn about the latest advances in Orthodontics and Dentofacial Orthopedics and improve patient care, offering them the latest treatments and most innovative techniques: the most guaranteed way to position yourself among the best.



02

Objectives

This **Advanced Master's Degree in Orthodontics and Dentofacial Orthopedics** is disgned to offer a complete, detailed and updated vision of the work in Dentofacial Orthopedics and Dentistry, as a key element in the maintenance and improvement of patient health for any age and condition. Our goal is to train you with the best quality in the teaching market, thus ensuring your professional growth toward excellence.

This Advanced Master's Degree has been designed so that you can acquire or update your knowledge in Orthodontics and Dentofacial Orthopedics with the use of the latest educational technology, achieving in a fluid, efficient and safe way the ability to create, supervise and work with the most avant-garde techniques"

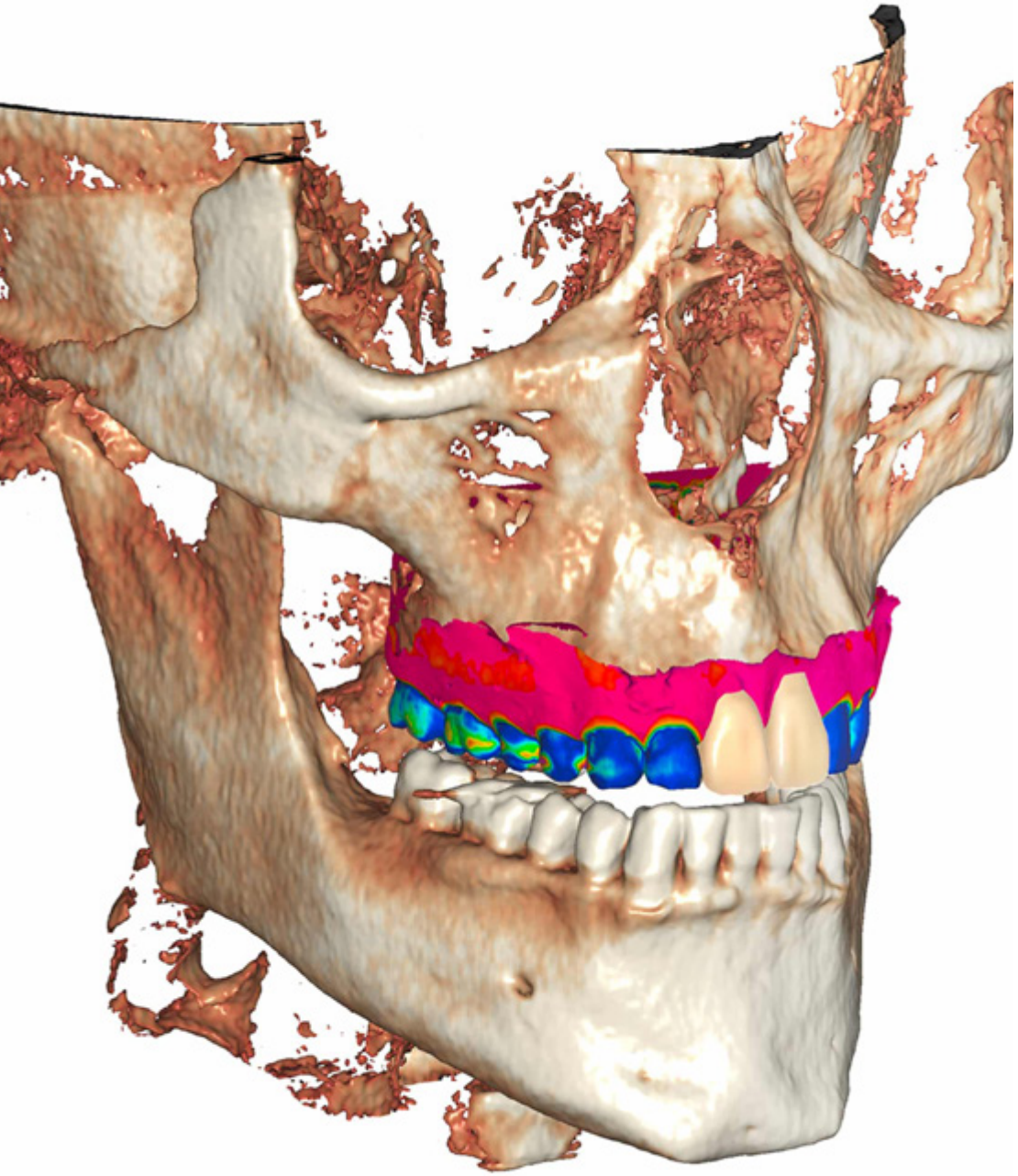
General Objectives

Dentofacial Orthopedics

- Learn the basic principles of dentomaxillary orthopedics
- Master the growth process to know how to try to guide it during orthopedic treatment
- Be able to master the dental eruption process, as well as any possible anomalies
- Recognize all the structures present in the tests to make a complete and accurate diagnosis, which is essential when choosing the ideal treatment
- Learn how to perform the most commonly used cephalometry tests, which will provide important data on growth and will allow you to choose the best treatment
- Be able to identify vertical problems present in the patient and explain their most common manifestations
- Learn to identify the manifestations of transversal problems in growth and their causes
- Learn about all anteroposterior malocclusions and their complexities in order to choose the best possible treatment in each case
- Learn the rules that must be followed in order to obtain harmonious growth, as well as the devices that exist to achieve it
- Discover the impact that habits have on craniofacial development and the appliances we can use to correct them and allow the patient to develop correctly
- Be able to identify asymmetries and define their etiology

Orthodontics

- Update the theoretical and practical knowledge in the different areas of Orthodontics and and Dentofacial Orthopedics based on evidence
- Know how to apply acquired knowledge and problem-solving skills in new or unfamiliar environments with a multidisciplinary approach within broader contexts related to Health Sciences
- Transmit learning skills to students that will allow them to continue their education in an autonomous and self-directed manner, developing habits of excellence and quality in professional practice.
- Ability to integrate knowledge and face the complexity of making judgments, while reflecting on the social and ethical responsibilities linked to the application of their knowledge and judgments.
- Encourage the acquisition of technical skills and abilities, through a powerful audiovisual system, and the possibility of development through online simulation workshops and/or specific training.
- Encourage professional stimulation through continuing education and research



Specific Objectives

Dentofacial Orthopedics

- Learn the basic concepts of Orthopedics
- Know the differences between Orthodontics and Dentofacial Orthopedics
- Study the different types of forces present
- Identify the classification and etiology of malocclusions
- Discover the differences between interceptive and corrective treatments
- Learn the importance of performing treatments in two phases
- Recognize the limits of treatment in Orthopedics and the possibility of resorting to Orthognathic Surgery
- Learn the fundamental concepts of craniofacial growth
- Recognize the different phases that occur during growth
- Understand the different accepted theories regarding skeletal growth
- Know and identify cleft lip and palate
- Learn the importance of performing orthopedic treatments when the patient is at the peak of growth
- Learn the chronology and times of eruption
- Recognize the possible abnormalities of tooth formation that can be found in patients
- Understand the anomalies in eruption and how to identify them in patients
- Be able to perform bone-tooth discrepancy and Bolton discrepancy analysis.
- Know how to identify all the structures present in the orthopantomographies, as well as any abnormalities that may exist
- Be able to identify and analyze teleradiographs, and extract as much information as possible from them
- Learn how to take quality intraoral and extraoral photographs for case studies and monitoring

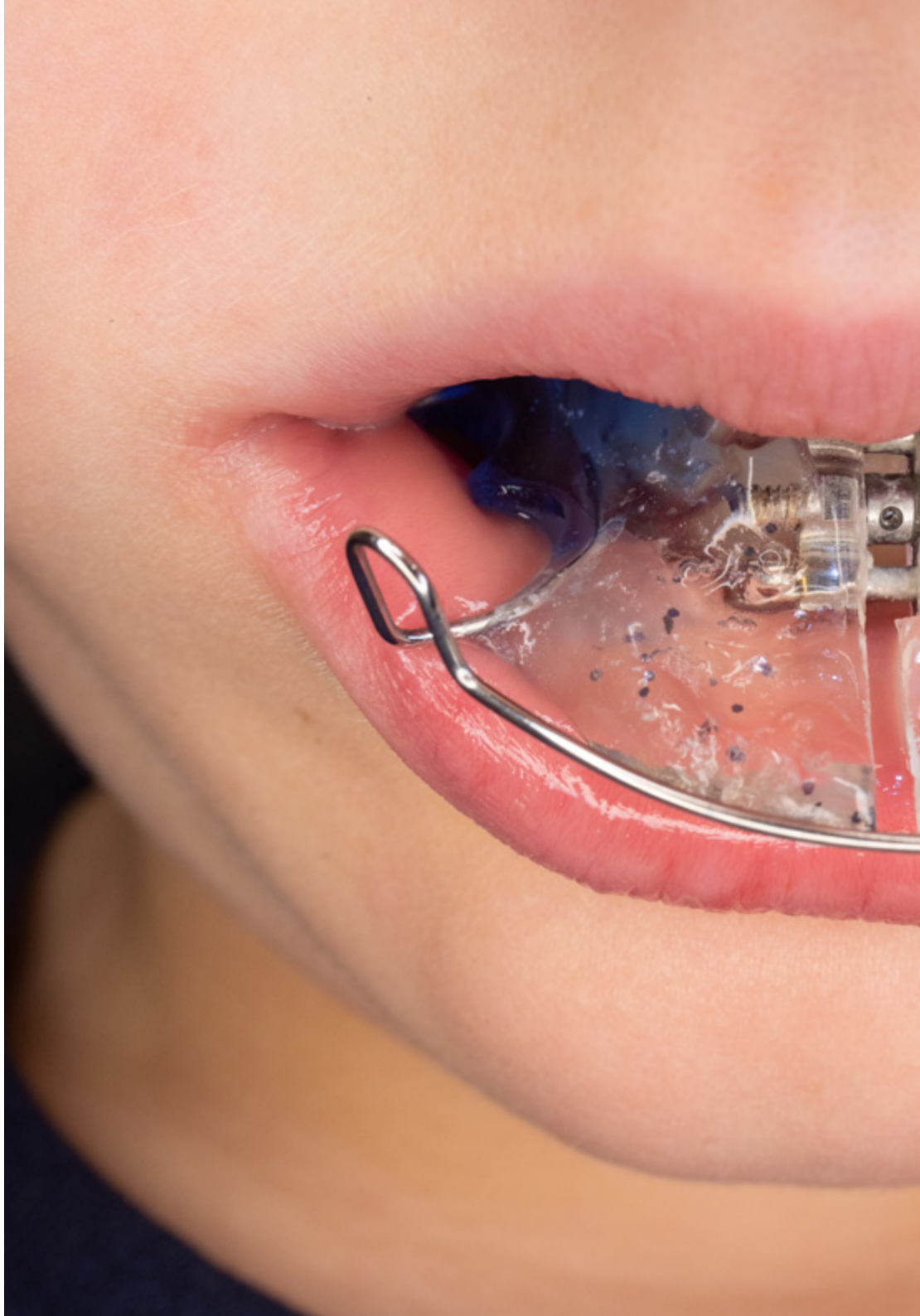
- Identify the latest 3D diagnostic images and the useful information obtained from them
- Learn the basic concepts on which cephalometric studies are based
- Identify patients' current growth stage based on Hassel's studies
- Perform the most commonly used cephalometric analyses, such as those developed by Steiner, Ricketts, McNamara, and Jarabak, and learn how to interpret the results
- Recognize the use of overlays as a useful element to assess treatment progress
- Identify frontal cephalometry, its structures, and the useful information it provides
- Learn about wrist radiography for studying skeletal growth
- Be able to identify a comprehensive diagnostic picture of the patient's problems for detailed study
- Delve into the vertical problem of craniofacial growth
- Recognize the clinical manifestations of vertical problems, such as open bite and deep bite
- Describe the different vertical growth patterns, which will be very useful when choosing potential treatments
- Recognize the prevalence and etiology of vertical growth disorders
- Learn how to diagnose these vertical problems by using various diagnostic tests
- Understand how the occlusal plane is managed with the various appliances to try to improve patient vertical growth
- Learn about transverse syndrome and its manifestations
- Identify the close relationship between transverse bone problems and the upper airway
- Recognize the manifestations of a possible dentoalveolar compensation, masking a skeletal origin
- Identify possible treatments for these transverse problems, such as maxillary disjunction or dentoalveolar expansion
- Learn about the different appliances available to treat these malocclusions
- Recognize the relationship of these transversal problems to skeletal Class IIIs
- Know the latest forms of cross-sectional diagnostics and how to interpret them
- Learn about anteroposterior syndrome and its possible manifestations
- Learn about the relationship between anteroposterior problems and the lower airways
- Recognize the prevalence and etiology of these malocclusions and learn to distinguish between a bone problem and a dental problem
- Delve into normal occlusion or Class I to know which is the ideal occlusion
- Identify Class II malocclusion and its particularities
- Carefully analyze the treatment forms and appliances for skeletal and dental Class II
- Learn the latest methods of mandibular advancement with clear aligners with the Invisalign System
- Know Class III malocclusion, both osseous and dental
- Obtain the necessary knowledge to manage these malocclusions, as well as the most effective appliances to treat them
- Learn the use of appliances, such as the chin and face mask, which are very useful in these patients with skeletal Class III
- Apply skeletal Class III treatment with Bollard mini-plates outlined by Le Clerk, which, despite being more invasive, obtains a highly significant result
- Review patient habits that influence these anteroposterior malocclusions
- Learn the functional rehabilitation method described by Dr. Pedro Planas
- Recognize the classification of functional lesions present in patients
- Learn the fundamental laws of occlusion for normal craniofacial development
- Identify the most effective treatments, from simple occlusal grinding to placing tracks

- Know how to use functional devices in order to restore the patient's normal function
- Recognize the importance of habits and the intimate relationship with the correct craniofacial development
- Understand mouth breathing, its possible causes and treatment
- Learn about muscular hypotonia syndrome and the most effective devices used to treat it
- Learn to identify dysfunctional swallowing, how it affects the rest of the stomatognathic apparatus and its possible treatment
- Identify the most common habits, such as lingual and labial interposition, their relationship with other malocclusions, and the importance of their treatment
- Recognize thumb sucking habits in patients and how to prevent them from persisting over time
- Know the most useful devices for treating habits
- Recognize the importance of working together with a speech therapist to allow for normal craniofacial development over time
- Identify the asymmetries present in patients and their particularities
- Classify the asymmetries that can be found in order to improve the efficiency of treatments
- Recognize the etiology and prevalence of asymmetries in order to more effectively identify them
- Learn the protocols for asymmetries according to their origin and current growth stage
- Recognize the different existing devices available to treat asymmetries

Orthodontics

- Consolidate structural and radiological anatomical knowledge, as well as the practical considerations that students should apply in the diagnosis, prognosis and therapeutic planning of orthodontic patients
- Train students in the field of Diagnostic Imaging, especially in the area of dentistry. To do so, students should become familiar with the various imaging techniques available
- Students will learn about oral radiology, intra and extrabuccal, with special emphasis on lateral and frontal skull teleradiography. Students will also receive training in other techniques such as simple radiology, ultrasound, CT, CBCT and MRI, especially for the cervico-facial area, with its indications and limitations
- Train students in the skills to be able to diagnose, describe, classify, transmit and plan malocclusions treatment, being able to distinguish between skeletal and dental problems
- Acquire sufficient training to diagnose, classify and treat dental malocclusions caused by osseo-dental discrepancy
- Know how to identify the different malocclusive syndromes and craniofacial deformities
- Be able to identify disorders that require treatment, as well as the ideal age to treat each type of disorder: to determine the specific therapeutic objectives of each treatment
- Determine the individual characteristics of patients, both physical, psychological and social
- Take medical histories, examine patients and take records
- Know how to identify the different malocclusive syndromes and craniofacial deformities, as well as the functional alterations of the stomatognathic system that accompany morpho-logical alterations
- Know how to take clinical histories and perform usual examinations, as well as request and interpret the complementary examinations used in comprehensive patient diagnosis
- Understand the indications, contraindications and limits of orthodontics, dentofacial orthopedics and orthognathic surgery. Be able to predict the efficacy and efficiency of the different treatments and correction stability

- Know how to apply the retention protocols for different deformities, as well as the principles and mechanisms involved in physiological rebound and malocclusions recurrence
- Be able to identify and prevent or treat risk factors for patient relapse
- Review the basic therapeutic principles of the other specialties in medicine and dentistry
- Identify alterations, pathologies or special characteristics that should be treated in collaboration with other Health Science specialists
- Know Orthodontic Specialist skills within a multidisciplinary team for treating special patients with dentofacial deformity and malocclusion
- Develop competences in the search and organization of documentation, and in presenting and communicating their work adequately to the scientific community
- Update on research methodologies that allow for evidence-based orthodontics and dentofacial orthopedics
- Know and understand the different parts in elaborating scientific articles
- Know how to handle different databases in Health Sciences
- Develop strategies for searching and organizing information
- Review the latest developments in advanced treatments in conventional orthodontics and multidisciplinary treatments
- Update on the latest developments in esthetic and/or invisible orthodontics



Our goal is to help you achieve yours, through a very unique program of specialization that will become an unparalleled professional growth experience”

03

Skills

After passing the evaluations for this **Advanced Master's Degree in Orthodontics and Dentofacial Orthopedics** you will have acquired the necessary professional skills for high quality practice, updated on the basis of the latest scientific evidence and supported by the largest compendium of knowledge and experience available in the current educational market. A leap towards high-level praxis.

This Advanced Master's Degree in Orthodontics and Dentofacial Orthopedics will propel you to the highest positions in the field, backed by the most up-to-date expert qualifications and skills, and the mastery of new techniques, procedures and materials"

After passing training the professional will be able to:

Basic Skills

Dentofacial Orthopedics

- Recognize craniofacial growth and correct maxillofacial abnormalities
- Correctly diagnose maxillofacial disorders
- Identify the most effective techniques for the different problems patients may have
- Offer accurate and effective treatments to patients, taking into account the latest advances in the field

Orthodontics

- Possess and understand knowledge in their field of study that builds on the foundation of general secondary education. While relying on advanced textbooks, it also includes some aspects that involve knowledge from the forefront of this field of study.
- Apply their knowledge to their work or vocation in a professional manner and possess the skills that are usually demonstrated through the development and defence of arguments and problem solving within their area of study.
- Gather and interpret relevant data (usually within their area of study) to make judgments that include a reflection on relevant social, scientific or ethical issues.
- Convey information, ideas, problems, and solutions to both specialized and non-specialized audiences.
- Develop the necessary learning skills to undertake further studies with a high degree of autonomy

Specific Skills

Dentofacial Orthopedics

- Differentiate between orthopedics and orthodontics for more effective daily practice
- Classify malocclusions
- Recognize the boundary between orthopedics and orthognathic surgery
- Recognize the different stages of maxillofacial growth and the complexity of the process
- Identify the growth rate of different body parts
- Make more accurate diagnoses in order to treat patients better
- Identify the entire eruption process, as well as the abnormalities during it
- Use different tools for dentofacial treatments
- Identify and treat the different types of cephalometry
- Perform different types of x-rays according to the disorder
- Offer patients comprehensive diagnoses
- Identify the different vertical problems in craniofacial growth
- Address the prevalence of malocclusions according to sex and race
- Modify the occlusal plane with treatment, using functional and orthopedic appliances
- Identify the transverse planes of malocclusions
- Perform the two essential forms of treatment for this type of transversal problem
- Differentiate between a transverse bone problem and a dentoalveolar compression
- Distinguish a sagittal bone problem from a dental problem
- Recognize the population groups in which malocclusions and facial biotypes are most frequently found
- Identify the different types of malocclusions, both dental and skeletal
- Recover muscular function through the influence of mastication on skull development
- Understand how the chewing function can influence the correct development of certain malocclusions
- Perform treatments to rehabilitate occlusal function, from simple occlusal selective grinding on primary teeth, to placing tracks, and also by using functional appliances
- Identify the importance of habits in bone and muscle growth and development in the head and the rest of the body
- Recognize and correct the different habits that affect patients in this area
- Know the most important functional devices, which will help correct common habits and allow patients to regain optimal muscular and skeletal function
- Identify asymmetries, both functional and skeletal
- Classify asymmetries by location and also by whether they are skeletal or non-skeletal
- Use specific protocols to treat asymmetries, whether functional or skeletal, depending also on whether they are growing or not

Orthodontics

- Know anatomical craniofacial structures to establish dynamic relationships with stomatognathic apparatus and dental occlusion functions
- Know and understand the interpretation of complementary tests through imaging and their application in differential diagnosis for malocclusions and dentofacial deformities
- Know the biological principles that determine the pathophysiology of bone apposition and resorption processes, and tooth movement. Learn to predict and interpret hard and soft tissues response to the application of therapeutic forces
- Know the principles and mechanisms of craniofacial growth and dental eruption, as well as the different functions of the stomatognathic apparatus and the oro-facial region
- Identify the etiological, genetic, epigenetic and environmental factors of different malocclusions and dentofacial deformities, know their epidemiology, and be able to predict their evolution according to current scientific evidence

- Know the historical origin and evolution of orthodontic and dentofacial orthopedic appliances, as well as the current scientific evidence that supports their clinical use
- Understand and know how to apply the action principles and mechanisms of the appliances, as well as their indications and contraindications according to the type of malocclusion and/or the individual characteristics of patients
- Know how to perform the clinical and laboratory procedures for the design, manufacture, fitting and clinical control of prostheses and appliances used in orthodontics and dentofacial orthopedics
- Know how to identify the different malocclusive syndromes and craniofacial deformities, as well as the functional alterations of the stomatognathic system that accompany morphological alterations
- Know how to take clinical histories and perform usual examinations, as well as request and interpret the complementary examinations used in comprehensive patient diagnosis
- Be able to identify disorders that require treatment, as well as the ideal age to treat each type of disorder: to determine the specific therapeutic objectives of each treatment
- Be able to make logical treatment plans integrating all therapeutic objectives, and design and/or prescribe the appropriate mechanics and therapeutic sequencing according to the type of deformity and the individual characteristics of the patient
- Know and understand the indications, contraindications and limits of orthodontics, dentofacial orthopedics and orthognathic surgery. Be able to predict the efficacy and efficiency of the different treatments and correction stability
- Know how to apply the retention protocols for different deformities, as well as the principles and mechanisms involved in physiological rebound and malocclusions recurrence
- Be able to identify and prevent or treat recurrence risk factors (predisposing and/or triggering)
- Know and understand the basic therapeutic principles of other specialties in medicine and dentistry
- Be able to identify the alterations, pathologies or special characteristics that must be treated in collaboration with other Health Science specialists
- Know Orthodontic Specialist skills within a multidisciplinary team for treating special patients with dentofacial deformity and malocclusion
- Be able to perform all the clinical procedures for malocclusions and dentofacial deformities diagnosis. Clinical history, inspection, palpation, auscultation of the temporomandibular joint, functional manipulation, etc.
- Be able to identify individual patient characteristics, physical, psychic and/or social, which may condition the treatment plan and/or the opportunity for treatment
- Be able to create an adequate treatment plan and a logical therapeutic sequence for real patients, and acquire the ability to present and defend the results in a clinical session
- Be able to apply treatment protocols and clinical monitoring in real patients, and acquire the ability to systematically collect clinical data from each patient Know how to identify adverse effects and/or clinical complications present in orthodontic and dentofacial orthopedic treatments, as well as the clinical protocols for subsequent resolution and treatment
- Identify failure to cooperate and possible causes
- Know how to deal with medical emergencies characteristic of orthodontic treatments
- Know and understand the functions of orthodontic specialists within a multidisciplinary team
- Know the different therapeutic guidelines and/or the different possible therapeutic protocols when planning treatments for specific deformityies
- Acquire adequate interprofessional communication skills

- Develop competences in the search and organization of documentation, and in presenting and communicating their work adequately to the scientific community
- Know research methodologies that allow for evidence-based orthodontics and dentofacial orthopedics
- Know and understand the different parts in elaborating scientific articles
- Know how to handle different databases in Health Sciences
- Develop strategies for searching and organizing information
- Incorporate scientific research and evidence-based practice as part of professional culture
- Develop adequate communication and presentation strategies to inform the scientific community
- Develop an educational attitude toward improvement by constantly searching for information and professional progress
- Develop autonomous learning to keep professional knowledge, skills, abilities and aptitudes up to date

04

Course Management

The teaching staff is made up of reference specialists in **Orthodontics and Dentofacial Orthopedics**, who pour into this specialization the experience of their work. Additionally, other recognized specialists participate in its design and preparation, which means that the program is developed in an interdisciplinary manner. A teaching staff of specialists chosen for their professional trajectory and teaching capacity that will allow you to learn from the direct experience of the best in the sector.

Learn from the best with this exceptional and very broad teaching staff prepared by the best professionals in the field, which will allow you to learn from the direct experience of the most renowned specialists in all areas of Dentistry"

Management

Dr. Martínez Font, Juan

- PhD in Dentistry from CEU Cardenal Herrera University
- Professor for the Master's Degree in Orthodontics and Dentofacial Orthopedics (CEU Cardenal Herrera University)
- Associate Professor of Orthodontics II, III and IV in the Department of Dentistry at CEU Cardenal Herrera University
- Master's Degree in Orthodontics and Dentofacial Orthopedics at CEU Cardenal Herrera University
- Postgraduate Diploma in Orthodontics and Dentofacial Orthopedics at CEU Cardenal Herrera University
- Degree in Dentistry from CEU Cardenal Herrera University
- Member of the Spanish Society of Orthodontics (SEDO)
- Invisalign Certification
- Private practice Orthodontics and Dentofacial Orthopedics dentofacial

Ms. Merino González, Belén

- Degree in Dentistry from the European University of Madrid
- Postgraduate Degree in Surgery, Periodontics, and Implantology from the University of Alcalá de Henares
- Surgery Department Management at Ziving Clinic
- Collaborator for the Master's Degree in Surgery
- Associate Professor at Rey Juan Carlos University, Madrid Surgery Department 2014-2015
- Speaker at Madrid Dental Association Conferences
- Surgery Course Director
- Daily practice in a private clinic specializing in Surgery, Implantology, and Periodontics

Co-Direction

Mr. Merino González, Ramón

- Degree in Dentistry from CEU - San Pablo University
- Postgraduate Degree in Orthodontics and Dentomaxillary Dentofacial Orthopedics from the University of Alcalá de Henares
- Orthodontics and Orthopedics Management Department at Ziving Clinic
- Pre-clinical Master's Degree from I.U. Mississippi
- Orthodontist in a private clinic

Professors

Ms. Alfonso Chulvi, Purificación

- Professor of Specialization in Orthodontics (Catholic University of Valencia)
- Associate Professor of Ortho I and II in the Department of Dentistry in English (Catholic University of Valencia)
- Postgraduate Course in Orthodontics Center for Orthodontic Studies, Gnathos, Madrid

Dr. Arias de Luxán, Santiago

- Graduate in Medicine and Surgery from Universidad de Navarra
- Specialist in Stomatology from the Complutense University of Madrid
- Postgraduate Specialization in Orthodontics from the University of Valencia

Dr. Bolás Colvée, Belén

- PhD in Dentistry from the University of Valencia
- Associate Professor of Orthodontics at the European University
- Master's Degree in Orthodontics and Dentofacial Orthopedics CEU Cardenal Herrera University

Ms. Cañada Luna, Isabel

- Professor for the Master's Degree in Orthodontics and Dentofacial Orthopedics (CEU Cardenal Herrera University)
- Master's Degree in Orthodontics and Dentofacial Orthopedics at CEU Cardenal Herrera University
- Postgraduate Diploma in Orthodontics and Dentofacial Orthopedics at CEU Cardenal Herrera University

Dr. Castañer Peiro, Amparo

- PhD in Medicine and Surgery from the Autonomous University of Madrid
- Degree in Medicine and Surgery from the University of Valencia
- Speciality in Stomatology from the University of Valencia Dr. Ferrer Serrador, Clara María
- Professor for the Master's Degree in Comprehensive Orthodontics at the Catholic University of Valencia Professor for the Master's Degree in Comprehensive Orthodontics at the Catholic University of Valencia Professor of Orthodontics I and II for the Degree in Dentistry at the Catholic University of Valencia

Dr. Galán López, Lidia

- PhD in Dentistry from the Catholic University of Valencia
- Professor for the Master's Degrees in Comprehensive Orthodontics and in Comprehensive Orthodontics

  Professor of Orthodontics I and II in the Department of Dentistry at the Catholic University of Valencia

Dr. Guinot Barona, Clara

- Degree in Dentistry from the University of Valencia
- PhD in Dentistry from CEU Cardenal Herrera University
- Postgraduate Diploma in Orthodontics from CEU Cardenal Herrera University
- Mr. Iñaki Orozco, Aparicio
- Degree in Dentistry from the University of Valencia
- Master's Degree in Orthodontics and Dentofacial Orthopedics from the University of Valencia
- Professor for the Master's Degree in Orthodontics and Dentofacial Orthopedic and in Orthodontics Specialization Degree, CEU Cardenal Herrera University

Dr. Laparra Hernández, Raquel

- PhD in Dentistry from the University of Valencia Associate Professor of Orthodontics at CEU Cardenal Herrera University
- Professor for the Master's Degree in Orthodontics and Dentofacial Orthopedics at CEU Cardenal Herrera University

Dr. Molina Villar, Sara

- PhD in Dentistry from CEU Cardenal Herrera University
- Master's Degree in Orthodontics and Dentofacial Orthopedics, CEU Cardenal Herrera University
- Diploma in Orthodontics and Dentofacial Orthopedics from CEU Cardenal Herrera University

Mr. Perez-Barquero, Jorge Alonso

- Degree in Dentistry from the University of Valencia
- Associate Professor, University of Valencia
- Professor for the Master's Degree in Dental Prosthesis at the University of Valencia

Ms. Primo Trullenque, Anna

- Master's Degree in Orthodontics and Dentofacial Orthopedics, CEU Cardenal Herrera University
- Postgraduate Diploma in Orthodontics and Dentofacial Orthopedics at CEU Cardenal Herrera University
- Master's Degree in Adhesive and Minimally Invasive Esthetic Dentistry, University of Valencia

Ms. Sanz-Orrio Soler, Icíar

- Associate Professor in the English program for the Degree of Dentistry of the Catholic University of Valencia.
- Professor for the Specialization Degree in Orthodontics (CEU Cardenal Herrera University) Master's Degree in Orthodontics and Dentofacial Orthopedics at CEU Cardenal Herrera University

Dr. Sánchez Albero, Ana

- PhD in Dentistry from CEU Cardenal Herrera University
- Professor for the Master's Degree in Orthodontics and Dentofacial Orthopedics (CEU Cardenal Herrera University)
- Professor for the Specialization Degree in Orthodontics (CEU Cardenal Herrera University)

Dr. Sánchez García, María José

- PhD in Dentistry at the University of Murcia..
- Degree in Dentistry from the University of Murcia Postgraduate Diploma in Periodontics from the University of Murcia

Ms. Torrella Girbes, Mar

- Degree in Dentistry from the University of Valencia
- Award for an extraordinary academic record from the University of Valencia Master's Degree in Orthodontics and Dentofacial Orthopedics from the University of Valencia

Ms. Valero Remohi, Paloma

- Professor for the Master's Degree in Orthodontics and Dentofacial Orthopedics (CEU Cardenal Herrera University)
- Professor for the Specialization Degree in Orthodontics (CEU Cardenal Herrera University) Associate Professor in charge of Orthodontics I and Orthodontis II in the Department of Dentistry at the University of Chile

05

Structure and Content

The content structure has been designed by a team of professionals from the best research centers and universities in Spain. They are aware of the relevance of current specialization and the need to support each study and its application on a solid scientific basis of evidence; they have also created a didactic path in which each topic will address one of the relevant aspects for the development of a highly competent professional. All of this makes up a high intensity and unparalleled quality syllabus, which includes state-of-the-art virtual theory and practice, and which will propel you to the most complete level of mastery in this area.

This Advanced Master's Degree is an incomparable opportunity to obtain, in a single specialization, all the necessary knowledge in Orthodontics and Dentofacial Orthopedics"

Module 1. Introduction to Orthopedics

1.1. Basic Concepts
1.2. The Difference between Orthopedics and Orthodontics
1.3. Type of Forces
  1.3.1. Physiological Forces
  1.3.2. Functional Forces
  1.3.3. Orthodontic Forces
  1.3.4. Orthopedic Forces
1.4. Biomechanics
1.5. Etiology of Malocclusions
1.6. Malocclusions Classification
1.7. Interceptive Treatment
1.8. Corrective Treatment
1.9. Importance of Two-Phase Treatment
1.10. Boundary between Orthopedics and Orthognathic Surgery

Module 2. Growth

2.1. Definitions
  2.1.1. Growth
  2.1.2. Development
  2.1.3. Translocalization
  2.1.4. Maturation
2.2. Regularities of Growth and Development
2.3. Complexity of the Process
2.4. Growth Rate of Different Body Parts
2.5. Craniofacial Growth Theories
2.6. Cranial Vault and Base Growth
2.7. Nasomaxillary Complex Growth
2.8. Labiopalatal Fissures
2.9. Jaw Growth
2.10. Peak Growth Treatment

Module 3. Early Dentofacial Orthopedics

3.1. Early Orthopedics: Neuro-Occlusal Rehabilitation
  3.1.1. Concept and Justification
  3.1.2. Planas' Law of Minimum Vertical Dimension and Planas' Functional Masticatory Angle
  3.1.3. Planas' Laws Stomatognathic System Development
  3.1.4. First Year Treatement
  3.1.5. First Dentition Therapeutics
  3.1.6. Mixed and Second Dentition Therapeutics
3.2. Treatments in Deciduous Dentition and Mixed First Phase
  3.2.1. Class III and Anterior Crossbite
  3.2.2. Class II
  3.2.3. Open Anterior Bite
  3.2.4. Overbite
  3.2.5. Posterior Crossbite and Transverse Problems Facial Assymetry in Children Treating Children with Alveolar Osteitis (Dry Socket)
  3.2.6. Eruption Alterations Canines Incisors Premolars and Molars
  3.2.7. Space Constaints

Module 4. Late Dentofacial Orthopedics

4.1. Treatment in Permanent Dentition: Late Orthopedics
  4.1.1. Etiology
  4.1.2. Treatment Indications
  4.1.3. Limitations
4.2. Class III Treatments
  4.2.1. Etiology
  4.2.2. Treatment Indications
  4.2.3. Limitations
4.3. Class II Treatments
  4.3.1. Etiology
  4.3.2. Treatment Indications
  4.3.3. Limitations

4.4. Open Anterior Bite Treatment
- 4.4.1. Open Anterior Bite Definition
- 4.4.2. Open Anterior Bite Treatment
- 4.4.3. Late Therapies for Open Anterior Bitee

4.5. Overbite Treatment
- 4.5.1. Etiology
- 4.5.2. Treatment Indications
- 4.5.3. Limitations

4.6. Child and Adolescent Posterior Crossbite and Transverse Problems
- 4.6.1. Concept and Classification
- 4.6.2. Epidemiology
- 4.6.3. Etiology
- 4.6.4. Diagnosis
- 4.6.5. Treatment
- 4.6.6. New Technologies

Module 5. Malocclusions and Dentofacial Deformities Etiology

5.1. Craneofacial Growth and Development
- 5.1.1. Types of Postnatal Growth
- 5.1.2. Integrating Facial Development
- 5.1.3. Upper Jaw Growth
- 5.1.4. Jaw Growth

5.2. Tooth Eruption Pathophysiology
- 5.2.1. Eruption Phases
- 5.2.2. Tooth Eruption in Adults
- 5.2.3. Eruption Mechanisms
- 5.2.4. Dentition General Development

5.3. Dentoalveolar Growth and Adaptation in Different Malocclusions and Dentofacial Deformities
- 5.3.1. Dentoalveolar Growth and Adaptation in Transverse Malocclusions
- 5.3.2. Dentoalveolar Growth and Adaptation in Vertical Malocclusions
- 5.3.3. Dentoalveolar Growth and Adaptation in Sagittal Malocclusions

5.4. Differential Diagnosis of Etiological Factors
- 5.4.1. Malocclusion Etiological Factors
- 5.4.2. Specific Causes of Maloccusion
- 5.4.3. Genetic Influences
- 5.4.4. Environmental Influences
- 5.4.5. Current Etiological Perspective

Module 6. Diagnosis

6.1. Introduction to Diagnosis
6.2. Eruption Chronology
6.3. Formation Abnormalities
- 6.1.1. Agenesis
- 6.1.2. Supernumerary Teeth
- 6.1.3. Mesiodens

6.4. Eruption Abnormalities
- 6.4.1. Ectopic Eruption
- 6.4.2. Included Teeth
- 6.4.3. Retained Teeth

6.5. Bone-Tooth Discrepancy
6.6. Bolton Discrepancy
6.7. Orthopantomography
6.8. Lateral Skull Teleradiography
6.9. Intraoral and Extraoral Photographs
6.10. 3D Imaging (CBCT, CT)

Module 7. Cephalometrics

7.1. Introduction to Cephalometry
7.2. Hassel's Growth Stages
- 7.2.1. Initiation
- 7.2.2. Acceleration
- 7.2.3. Transition
- 7.2.4. Deceleration
- 7.2.5. Maturation.
- 7.2.6. Completion

7.3. Steiner's Cephalometric Analysis
7.4. Ricketts' Cephalometric Analysis
7.5. McNamara's Cephalometric Analysis
7.6. Jarabak's Cephalometric Analysis
7.7. Superpositions
7.8. Frontal X-Ray
7.9. Wrist X-Ray
7.10. Comprehensive Diagnosis

Module 8. Vertical Problems

8.1. Definition
8.2. Open Bite
8.3. Deep Bite
8.4. Mesofacial Pattern
8.5. Dolicofacial Pattern
8.6. Brachyfacial Pattern
8.7. Diagnosis
8.8. Prevalence
8.9. Etiology
8.10. Occlusal Plane Management

Module 9. Tranversal Problems

9.1. Definition of Transversal Syndrome
9.2. Relationship with the Airways
9.3. Dentoalveolar Compensation (Pedro Lorente Table)
9.4. Dentoalveolar Expansion
9.5. Maxillary Disjunction
9.6. Types of Disjunctions
9.7. Relation with Class III (Chin Strap and Facial Mask)
9.8. New Diagnostic Methods

Module 10. Sagittal Problems

10.1. Definition of Anteroposterior Syndrome
10.2. Relationship with the Airways
10.3. Prevalence
10.4. Etiology
10.5. Difference between Dental Class and Bone Class
10.6. Class I Malocclusion
10.7. Class II Malocclusion
  10.7.1. Particularities
  10.7.2. Herbst Appliance
  10.7.3. Twin-Block Apparatus
  10.7.4. Functional Appliances
  10.7.5. Constructive Bite
  10.7.6. ITMA (Invisalign®)
10.8. Class III Malocclusion
  10.8.1. Particularities.
  10.8.2. Anterior Maxillary Traction
  10.8.3. Facial Mask
  10.8.4. Chin Strap
  10.8.5. Protocols
  10.8.6. Le Clerk Bollard Mini-Plates
10.9. Associated Habits

Module 11. Neuroocclusal Rehabilitation

11.1. Concepts
11.2. Minimally Invasive Orthodontics
11.3. Classification of Functional Injuries
11.4. Planar Laws
11.5. Selective Grinding
11.6. Direct Tracks
11.7. Appliances

Module 12. Habits

12.1. Importance and Relationship with Development
12.2. Mouth Breathing
12.3. Muscle Hypotonia
12.4. Dysfunctional Swallowing
12.5. Lingual Interposition
12.6. Lip Interposition
12.7. Thumb Sucking
12.8. Habit Control Devices
12.9. Speech Therapy

Module 13. Asymmetries

13.1. Definition
13.2. Classification of Asymmetries
13.3. Etiology
13.4. Functional Asymmetries Protocol
13.5. Skeletal Asymmetries in Growth Protocol
13.6. Asymmetric Appliances
13.7. Functional Asymmetric Appliances
13.8. Case Studies

Module 14. Initial Diagnosis

14.1. Sitematic Diagnosis in Dentistry
  14.1.1. First Visit and Clinical History
  14.1.2. Patient Exploration
  14.1.3. Ordinay Records
  14.1.4. Complementary Records
  14.1.5. Myofunctional Records
14.2. Staged Orthodontic Diagnosis
  14.2.1. Establishing Problem Listing
  14.2.2. Establishing Therapeutic Objectives
  14.2.3. Mechanotherapy Planning and Equipment

Module 15. Advanced Diagnosis

15.1. Cephalometric Analysis 3D Diagnosis CBCT y CT
  15.1.1. Cephalometric Analysis
    15.1.1.1. Introduction
    15.1.1.2. Craniometric Points Description
    15.1.1.3. Steiner Cephalometric Analysis
    15.1.1.4. Ricketts Cephalometric Analysis
  15.1.2. 3D Diagnosis
    15.1.2.1. Introduction
    15.1.2.2. System Fundamentals
    15.1.2.3. CBCT vs. Computed Tomography
    15.1.2.4. Advantages
    15.1.2.5. Disadvantages
    15.1.2.6. Voxel
    15.1.2.7. Image Interpretation
    15.1.2.8. Radiation
    15.1.2.9. Clinical Application of CBCT
  15.2. Diagnosis and Treatment of Habits
    15.2.1. Introduction
    15.2.2. Atypical Swallowing in Children
    15.2.3. Nutritional Sucking Habits
      15.2.3.1. Breastfeeding
      15.2.3.2. Feeding Bottles
    15.2.4. Non-Nutritional Sucking Habits
      15.2.4.1. Digital Sucking
      15.2.4.2. Pacifier Habits
    15.2.5. Mouth Breathing
    15.2.6. Dyslalia
    15.2.7. Other Habits

15.3. Early Diagnosis of Patients at Risk
- 15.3.1. Cavities and White Spots: Current Techniques Preventive Treatment for Enamel Demineralization
- 15.3.2. Root Resorption Current Techniques Preventive Treatment for Root Resorption
- 15.3.3. Differential Diagnosis of the Most Frequent Temporomandibular Disorders in Orthodontic Patients
- 15.3.4. Idiopathic Condylar Resorption: Current Diagnostic Techniques Preventive Treatment for Severe Progressive Open Bite

Module 16. Treatment Plans

16.1. Concepts and Objectives
- 16.1.1. List Prioritization for Orthodontic Problems
- 16.1.2. Establishing Treatment Possibilities and Therapeutic Sequencing
- 16.1.3. Potential Treatment Factors
- 16.1.4. Types of Treatment
- 16.1.5. Treating Orthodontic Disorders

16.2. Evidence-Based Orthodontics PICO, Databases and Critical Reading
- 16.2.1. Formulating Clinical Questions
- 16.2.2. Literature Consultation
- 16.2.3. Types of Clinical Studies
- 16.2.4. Bias and Confusion Factors
- 16.2.5. Evidence Levels and Degrees of Recommendation
- 16.2.6. Critical Evaluation of Results

16.3. Limits to Orthodontics and Dentofacial Orthopedics: Malocclusion Type and Patient Age
- 16.3.1. Growth Modification in Skeletal Problem Treatments
- 16.3.2. Biological Limits
- 16.3.3. Soft Tissue Limitations

16.4. Early or Late Treatment Indications
- 16.4.1. Determining Skeletal Maturity
- 16.4.2. Malocclusion Evolution during Growth
- 16.4.3. Early Treatment for Malocclusions

16.5. Determining the Need for Therapeutic Extractions
- 16.5.1. Definition of Volumetric Malocclusions
- 16.5.2. Premolar Therapeutic Extractions
- 16.5.3. Special Extraction Cases
- 16.5.4. Stripping Technique as an Alternative to Tooth Extractions

16.6. Preparing Individualized Treatment Plans
- 16.6.1. General Considerations in Individualized Treatment Planning
- 16.6.2. Determining Individualized Treatment Plans
- 16.6.3. Auxiliary Tools to Determine Individual Treatment Plans: Steiner's Case

Module 17. Advanced Clinical Biomechanics

17.1. Biomechanics Applied to Orthodontics and Dentofacial Orthopedics
- 17.1.1. Active Removable Plaques
- 17.1.2. Functional Equipment
- 17.1.3. Action Modes
- 17.1.4. Orthopedic Action
- 17.1.5. Dental Action

17.2. Bracket and Band Cementing Techniques
- 17.2.1. Direct Cementing
- 17.2.2. Indirect Cementing
- 17.2.3. Indications and Limitations

17.3. Microscrews
- 17.3.1. General Indications
- 17.3.2. Limitations of Use

17.4. Surgical Aids to Tooth Movement
- 17.4.1. Periodontium Anatomy
- 17.4.2. Orthodontic Tooth Movement Physiology
- 17.4.3. Why Teeth Move Faster
- 17.4.4. Types of Surgical Aids

Module 18. Conventional Orthodontics

18.1. Treatments for Stage 2 Mixed and Early Permanent Dentition
- 18.1.1. Treatment Protocols
- 18.1.2. Indications and Contraindications Fixed Equipment
  - 18.1.2.1. Advantages and Disadvantages Fixed Equipment
- 18.1.3. Malocclusions
  - 18.1.3.1. Transversal Malocclusions
  - 18.1.3.2. Vertical Malocclusions
- 18.1.4. Retention/Relapse

18.2. Bracket Cementation Specification: Malocclusion Type and/or Therapeutic Objectives
- 18.2.1. Installing Pre-Adjusted Equipment
  - 18.2.1.1. Bracket and Tube Location
  - 18.2.1.2. Mesiodistal Location
  - 18.2.1.3. Vertical Position ("Height")
  - 18.2.1.4. Inclination
  - 18.2.1.5. Vestibular Face Fitting
- 18.2.2. Cementing in Case of Deep Spee's Curve
- 18.2.3. Cementing in Case of Class II Molar
  - 18.2.3.1. Cementing Fractured or Abraded Teeth

18.3. First Phase: Alignment and Leveling Types of Intrusion
- 18.3.1. Diet
  - 18.3.1.1. Selection Principles for Alignment Arches
  - 18.3.1.2. Symmetric Crowding Alignment
  - 18.3.1.3. Alignment in Case of Premolar Extraction
  - 18.3.1.4. Alignment in Non-Extraction Cases
- 18.3.2. Leveling
  - 18.3.2.1. Extrusion Leveling (Relative Intrusion)
  - 18.3.2.2. Intrusion Leveling

18.4. Second Phase: Work, Closing Extraction Spaces
- 18.4.1. Molar Ratio Correction
  - 18.4.1.1. Differential Growth in Class II Patients
  - 18.4.1.2. Differential Anchoring of Extraction Spaces
  - 18.4.1.3. Distalization
- 18.4.2. Closing Extraction or Residual Spaces
  - 18.4.2.1. Continuous Bow with Locking Handles or DKL Bow
  - 18.4.2.2. Sliding
- 18.4.3. Overjet and Overbite Correction
- 18.4.4. Middle Line Centering

18.5. Third Phase: Completion Retention Design
- 18.5.1. Retention Definition
- 18.5.2. Types of Retainers
  - 18.5.2.1. Fixed Retainers
  - 18.5.2.2. Removable Retainers
- 18.5.3. Retention Duration
  - 18.5.3.1. Cases Where Retention May Not Be Required
  - 18.5.3.2. Cases Requiring Permanent or Semipermanent Retention
  - 18.5.3.3. Cases Requiring a Variable Retention Period

Module 19. Advanced Treatments in Conventional Orthodontics

19.1. Implants and Microscrews as Anchorage
- 19.1.1. Microscrew Indications and Limitations
  - 19.1.1.1 Main Indications
  - 19.1.1.2. Skeletal Anchorage Limitations and Complications
- 19.1.2. Clinical and Laboratory Techniques to Improve System Effectiveness and Efficiency Current Evidence-Based Protocols
  - 19.1.2.1. Microscrew Placement
  - 19.1.2.2. Microscrew Activation

19.2. Surgical and Non-Surgical Aids to Speed Up Movement
- 19.2.1. Chemical Techniques
- 19.2.2. Physical Techniques
- 19.2.3. Surgical Techniques
- 19.2.4. Micro-Osteoperforation Indications

19.3. Impacted Teeth Treatment and Other Eruption Disorders
- 19.3.1. Non-Erupted or Impacted Teeth
- 19.3.2. Retained Canines
- 19.3.3. Treating Other Eruption Disorders

19.4. Treating Open Bites: Multipass Technique

19.4.1. Structure and Function of Multihandles
19.4.2. Multihandle Technique Diagnosis
19.4.3. Treating Class III High Angle
19.4.4. Treating Class III Low Angle
19.4.5. Treating Class I Open Bite
19.4.6. Treating Class II Open Bite

Module 20. Multidisciplinary Treatments

20.1. Treating Periodontal Patients
20.1.1. Specific Characteristics in Adult Patients
20.1.2. Periodontium Anatomy
20.1.3. Multidisciplinary and Interdisciplinary Treatments
20.1.4. Diagnosing Adult Patients and Determining Treatment Goals
20.1.5. Preparing Adult Orthodontic Patients for Orthodontic Treatment
20.1.6. Stripping Tool as an Essential Element in Adult Periodontal Patients
20.1.7. A Special Entity: Posterior Bite Collapse in Adult Patients
20.2. Treatment and Esthetics in Anterior Fronts Orthodontics and Prosthetics
20.2.1. Fundamental Requirements for Successful Occlusal Therapy, Proposed by Dawson
20.2.2. The 6 Decisions Affecting the Functional Anatomy Matrix
20.2.3. Previous Guidelines
20.2.4. Fundamental Esthetic Criteria
20.3. Orthodontics and Treating SAHS in Children
20.3.1. Respiratory System Anatomy
20.3.2. Lymphoid System
20.3.3. General Sleep Concepts: Sleep and Breathing
20.3.4. Clinical Examination in Children with Suspected SAHS
20.4. Orthodontics and Treating SAHS in Adults
20.4.1. Sleep Medicine
20.4.2. Sleep Apnea-Hypopnea Syndrome (SAHS)
20.4.3. Efficacy of Mandibular Advancement Devices (MADs)
20.4.4. Therapy Management and Monitoring Protocol

Module 21. Lingual Orthodontics

21.1. History and Introduction to Lingual Equipment
21.2. Why Lingual Orthodontics
  21.2.1. Review of the Different Global Systems Available
21.3. Basic Necessary Materials for Predetermined Systems
  21.3.1. Expendable Materials
  21.3.2. Non-Expendable Materials
21.4. Patient Selection and Record Keeping
  21.4.1. Characteristics of Lingual Patients
  21.4.2. Silicone Impressions: Procedure
  21.4.3. Digital Leap: Scanner
  21.4.4. Preparing Lab Sheest and Selecting Prescriptions
21.5. Keys to Consider in Lingual Orthodontic Treatments
  21.6. Vestibular vs. Lingual Biomechanical Differences Apparatus Update for 3 Planes of Space
21.7. Laboratory Procedures
  21.7.1. Apparatus Manufacturing Using the Hiro System
    21.7.1.1. Introduction
    21.7.1.2. Step-by-Step Procedure
    21.7.1.3. Maxillary Arch
    21.7.1.4. Mandibular Arch
    21.7.1.5. Using a Full-Arch Archwire
    21.7.1.6. Bracket Placement
    21.7.1.7. Individual Tray Manufacture
    21.7.1.8. Perfecting Bracket Base
  21.7.2. Apparatus Manufacturing Using the incognito™System
    21.7.2.1. Production Process
    21.7.2.2. Set-Up
    21.7.2.3. Computer-Assisted Bracket Design
    21.7.2.4. Prototyping
    21.7.2.5. Casting and Quality Control
    21.7.2.6. Arch Bending
    21.7.2.7. Individual Tray Cementing

21.8. Set-Up Receipt and Approval
- 21.8.1. Manual Set-Up
- 21.8.2. Digital Set-Up

21.9. Case Reception and Cabinet Preparation
- 21.9.1. Case Reception
- 21.9.2. Scheduling Appointments
- 21.9.3. Cabinet Preparation

21.10. Indirect Cementing According to Individual Tray Selection
- 21.10.1. Indirect Cementing with Transparent Silicone Tray
- 21.10.2. Indirect Cementing with Opaque Silicone Tray

21.11. Type and Use of Basic Ligatures
- 21.11.1. Self Retaining Slot
- 21.11.2. Conventional Elastic Ligatures
- 21.11.3. Metallic Ligatures
- 21.11.4. Overtie
- 21.11.5. Steel Overtie
- 21.11.6. Power Tie
- 21.11.7. Elastic Lasso
- 21.11.8. Conventional Lasso
- 21.11.9. O-Lasso
- 21.11.10. Chicane

21.12. Arch Selection and Placement
- 21.12.1. Lingual Bracket Slot Characteristics
- 21.12.2. Arch Sequencing
- 21.12.3. Overextended Arches
- 21.12.4. Initial Arch Placement and Manipulating the Arch in the Mouth

21.13. Prevention, Emergency Solutions and Common Complications
- 21.13.1. Prevention and Emergency Solutions
- 21.13.2. Bracket Recementing
- 21.13.3. Bracket Decementing

21.14. Lingual Orthodontics and Periodontics

21.15. Lingual Orthodontics and Microscrews

21.16. Lingual Orthodontics Retention

Module 22. Orthodontics and Orthognathic Surgery

22.1. Introduction and Diagnosis
- 22.1.1. Esthetic and Functional Treatment Objectives
- 22.1.2. Age and Opportunity for Treatment
- 22.1.3. Patient Motives, Demands and Psychology
- 22.1.4. Clinical Exam
- 22.1.5. Records Required for Orthognathic Surgery, Sagittal and Frontal Analysis

22.2. Temporomandibular Joint
- 22.2.1. TMJ and Orthodontic Surgery
- 22.2.2. Centric Relation and Orthognathic Surgery
- 22.2.3. TMJ Radiographic Study
- 22.2.4. Progressive Condylar Resorption: Concept, Diagnosis and Management
- 22.2.5. Condylar Hyperplasia as a Cause of Facial Asymmetries: Concept, Diagnosis and Management

22.3. Splints and Orthognathic Surgery
- 22.3.1. Pre-diagnostic Splint for Joint Pathologies
- 22.3.2. Pre-surgical Splint to Locate True Hinge Axis
- 22.3.3. Pre-surgical Splint to Stabilize Condyles and Ligaments
- 22.3.4. Pre-surgical Splint to Diagnose the Mandibular Midline

22.4. Pre-Surgery Orthodontics
- 22.4.1. Diagnosis and Keys
- 22.4.2. Sagittal Problems
- 22.4.3. Vertical Problems
- 22.4.4. Assymmetric Patients

22.5. Pre-Surgery Planning
- 22.5.1. Introduction to Cephalometric Predictions
- 22.5.2. Predicting Treatments: VTO and STO
- 22.5.3. Dentoalveolar and Gingival Biotype: Need for Grafting?
- 22.5.4. Bone Movement: Repercussions on Soft Tissues
- 22.5.5. SARPE: Indications and Limitations

22.6. Modeling Surgery
- 22.6.1. Pre-Surgical Working Models
- 22.6.2. Modeling for Mono-Maxillary Surgery
- 22.6.3. Modeling for Bi-Maxillary Surgery
- 22.6.4. Articulator and Axiography

22.7. Post-Surgical Treatment and Completion
- 22.7.1. Immediate Postoperative Surgery
- 22.7.2. Immediate Postoperative Orthodontics
- 22.7.3. Post-Surgical Orthodontic Objectives and Case Completion

Module 23. Thermoplastic Orthodontics

23.1. Introduction to Clear Splints or Dental Aligners
- 23.1.1. History of Aligners
- 23.1.2. Current Use of Transparent Splints

23.2. Record Keeping
- 23.2.1. Prior to Aligner Registrations
- 23.2.2. Extraoral and Intraoral Photography
- 23.2.3. Lateral Skull Orthopantomography and Teleradiography
- 23.2.4. Taking Imprints
- 23.2.5. Intraoral Scanner

23.3. Attachments and Pressure Points
- 23.3.1. Pressure Points
- 23.3.2. Introduction to Attachments
- 23.3.3. Optimized Attachments
- 23.3.4. Conventional Attachments
- 23.3.5. Hierarchy for Placing Attachments According to Tooth Movement Per Tooth
- 23.3.6. Common Movements that Prevent Placing Attachments
- 23.3.7. Placing Attachments

23.4. Aligner Movements
- 23.4.1. Introduction to Aligner Movements
- 23.4.2. Predictable and Unpredictable Aligner Movements
- 23.4.3. Comparing Different Movement Predictability
- 23.4.4. Predictable Malocclusions Using Aligners

23.5. Reviewing and Correcting the Virtual Video
- 23.5.1. What Can Be Seen through Virtual Video
- 23.5.2. How to Proceed upon Receiving the Virtual Video
- 23.5.3. Modifying the Virtual Video
- 23.5.4. Indirectly Modifying the Virtual Video

Module 24. Dental Aligner Correction in 3 Planes of Space

24.1. Correcting Sagittal Plane Malocclusions
- 24.1.1. Correcting Sagittal Plane Malocclusions: Class II
- 24.1.2. Correcting Sagittal Plane Malocclusions: Class III

24.2. Correcting Vertical Plane Malocclusions
- 24.2.1. Overbite
- 24.2.2. Open Bite

24.3. Correcting Transversal Plane Malocclusions
- 24.3.1. Single-Tooth Crossbite
- 24.3.2. Unilateral Posterior Crossbite
- 24.3.3. Bilateral Posterior Crossbite
- 24.3.4. Scissor Bite
- 24.3.5. Midline Bite Discrepancy

Module 25. Transparent Splints in Orthognathic and Oral Surgery

25.1. Introduction to Preparing Surgical Patients for Transparent Splints
25.2. Added Canines
25.3. Added Teeth

Module 26. Multidisciplinary Thermoplastic Orthodontics and Case Completion

26.1. Aligners Together with Other Dental Specialties
26.2. Managing Extractions with Thermoplastic Orthodontics
26.3. Case Completion
26.4. Auxiliary Equipment

A unique, key and decisive specialization experience to boost your professional development as afforded by the support of the largest online educational institution"

06

Methodology

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

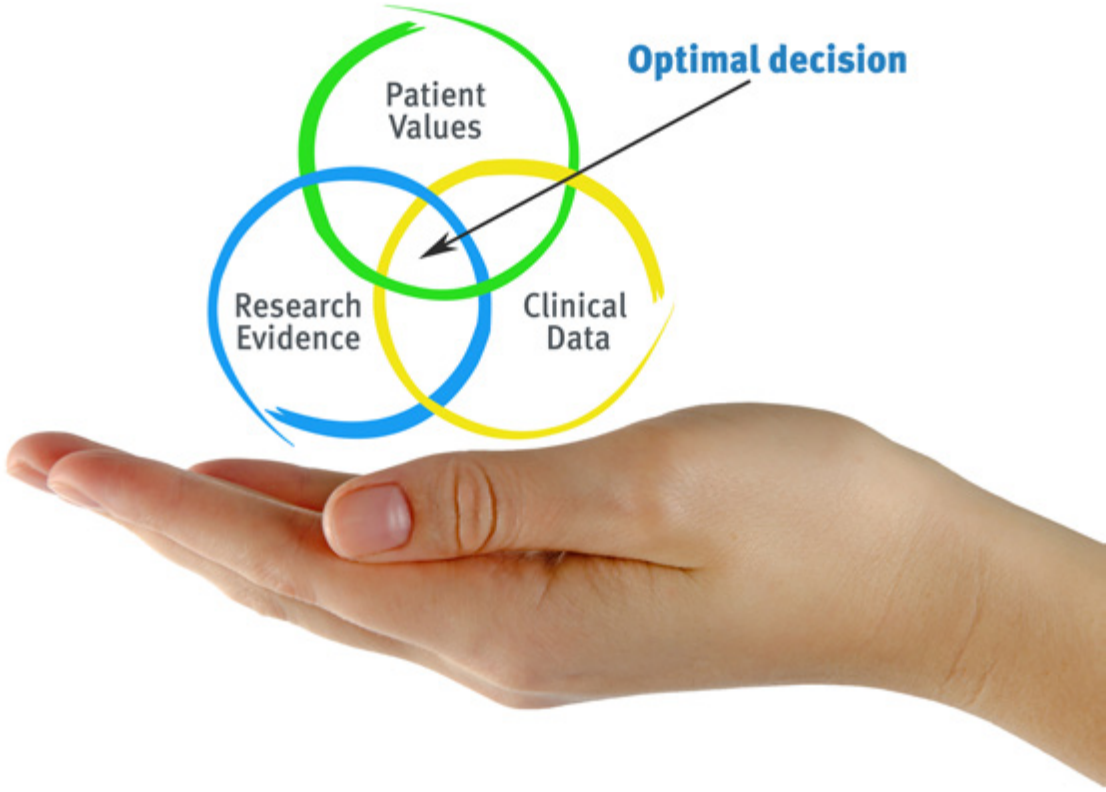
This teaching system is used in the most prestigious medical schools in the world, and major publications such as the ***New England Journal of Medicine*** have considered it to be one of the most effective.

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

At TECH we use the Case Method

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

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



According to Dr. 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 potential 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 dentist's professional practice.

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

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

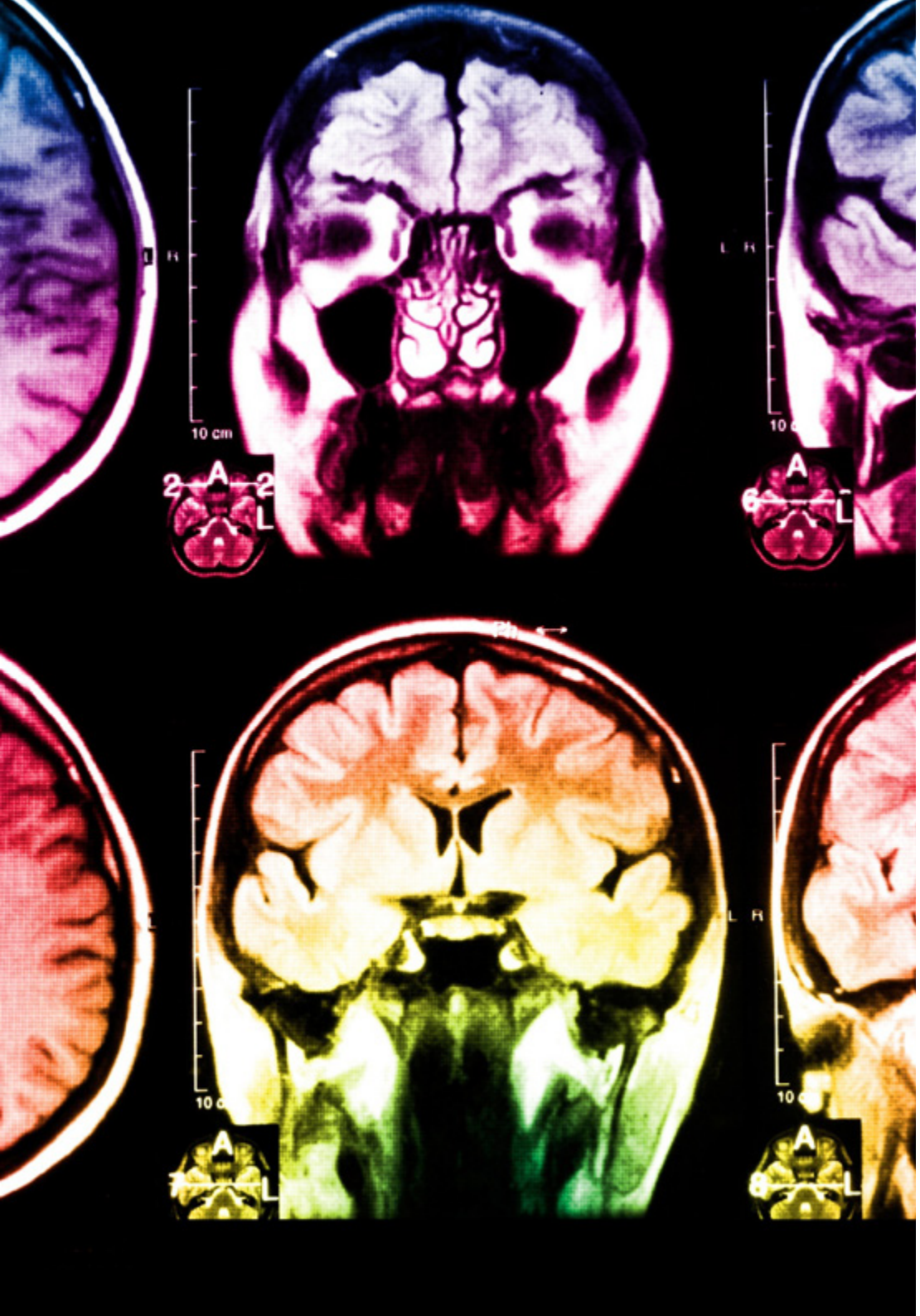
1. Students who follow this method not only grasp concepts, but also develop their mental capacity by means of exercises to evaluate real situations and apply their knowledge.
2. The learning process has a clear focus on practical skills that allow the student to better integrate into the real world.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

Re-learning Methodology

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

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

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



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

With this methodology we have trained more than 115,000 students with unprecedented success, in all clinical specialties regardless of the surgical load. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

Re-learning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.

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

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

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

Study Material

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

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.

Surgical Techniques and Procedures on Video

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

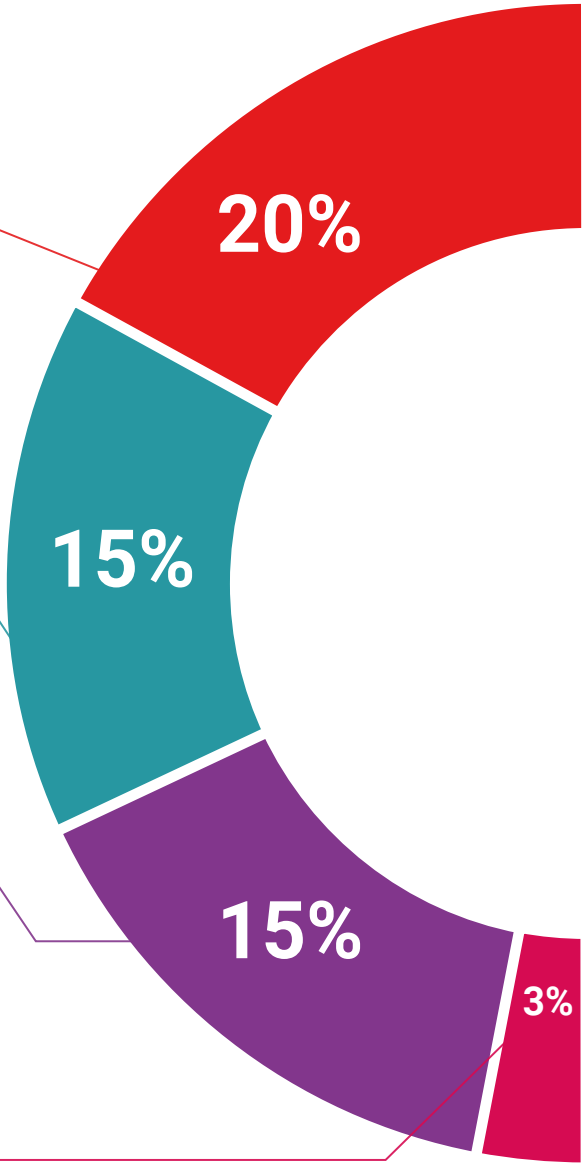
Interactive Summaries

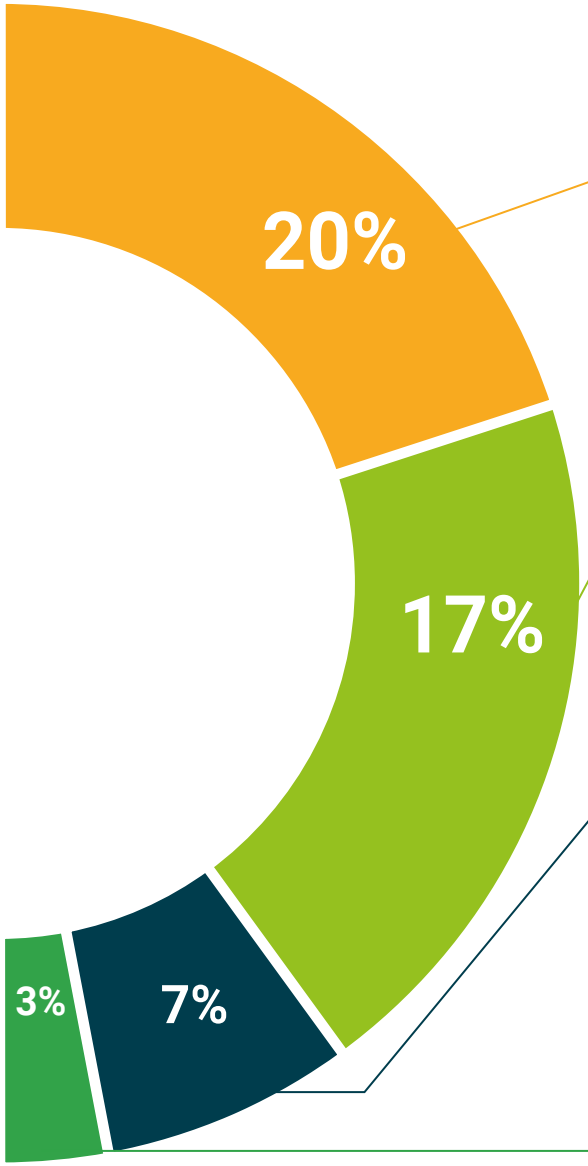
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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

Additional Reading

Recent articles, consensus documents, international guides. in our virtual library you will have access to everything you need to complete your training.





Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through 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 your knowledge throughout the program, through assessment and self-assessment activities and exercises: so that you can see how you are achieving your goals.

Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an expert strengthens knowledge and memory, and generates confidence in our difficult future decisions.

Quick Action Guides

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

07

Certificate

Through a different and stimulating learning experience, you will be able to acquire the necessary skills to take a big step in your training. An opportunity to progress, with the support and monitoring of a modern and specialized university, which will propel you to another professional level.

The Advanced Master's Degree in Orthodontics and Dentofacial Orthopedics contains the largest body of knowledge in the industry: A degree with a highly qualified added value for any professional in this area"

This **Advanced Master's Degree in Orthodontics and Dentofacial Orthopedics** is the most complete and up-to-date scientific program on the market.

After the student has passed the evaluations, they will receive their corresponding certificate issued by **TECH - Technological University via tracked delivery.**

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

Title: **Advanced Master's Degree in Orthodontics and Dentofacial Orthopedics**

ECTS: **120**

Official Number of Hours: **3,000**


tech technological university

Awards the following

CERTIFICATE

to

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

For having successfully passed and accredited the following program

ADVANCED MASTER'S DEGREE

in

Orthodontics and Dentofacial Orthopedics

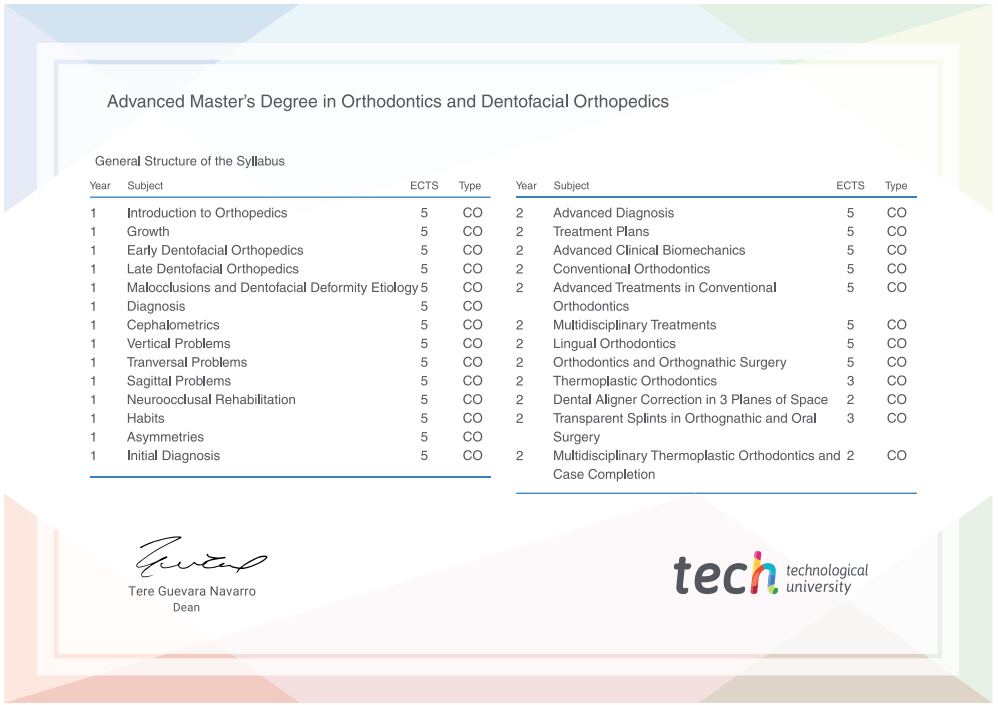
This is a qualification awarded by this University, with 120 ECTS credits and equivalent to 3,000 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

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

June 17, 2020

Tere Guevara Navarro
Dean

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


Advanced Master's Degree in Orthodontics and Dentofacial Orthopedics

General Structure of the Syllabus

Year	Subject	ECTS	Type
1	Introduction to Orthopedics	5	CO
1	Growth	5	CO
1	Early Dentofacial Orthopedics	5	CO
1	Late Dentofacial Orthopedics	5	CO
1	Malocclusions and Dentofacial Deformity Etiology	5	CO
1	Diagnosis	5	CO
1	Cephalometrics	5	CO
1	Vertical Problems	5	CO
1	Tranversal Problems	5	CO
1	Sagittal Problems	5	CO
1	Neuroocclusal Rehabilitation	5	CO
1	Habits	5	CO
1	Asymmetries	5	CO
1	Initial Diagnosis	5	CO
2	Advanced Diagnosis	5	CO
2	Treatment Plans	5	CO
2	Advanced Clinical Biomechanics	5	CO
2	Conventional Orthodontics	5	CO
2	Advanced Treatments in Conventional Orthodontics	5	CO
2	Multidisciplinary Treatments	5	CO
2	Lingual Orthodontics	5	CO
2	Orthodontics and Orthognathic Surgery	5	CO
2	Thermoplastic Orthodontics	3	CO
2	Dental Aligner Correction in 3 Planes of Space	2	CO
2	Transparent Splints in Orthognathic and Oral Surgery	3	CO
2	Multidisciplinary Thermoplastic Orthodontics and Case Completion	2	CO

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Dean

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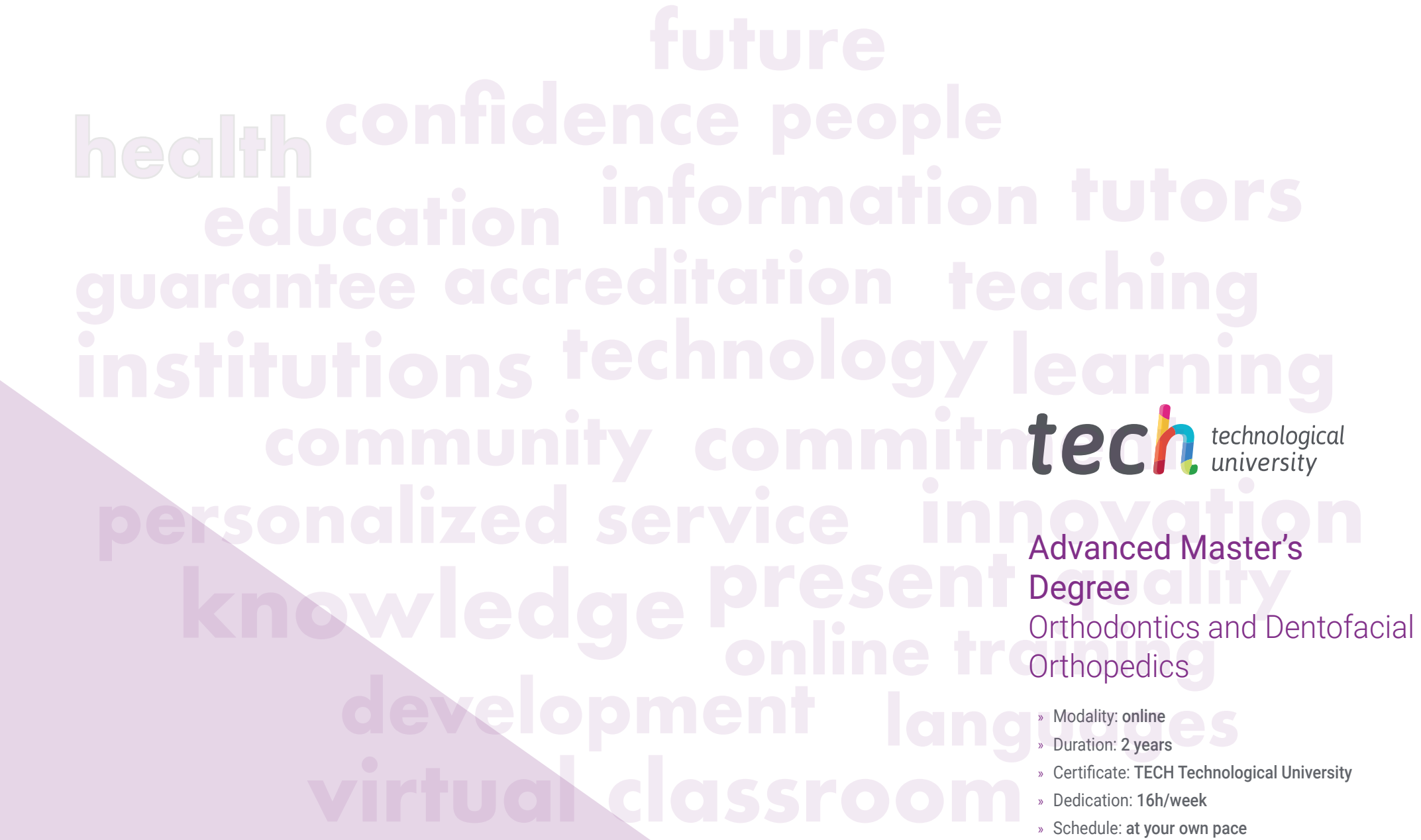
*Apostille Convention. In the event that the student wishes to have their paper certificate issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.



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Advanced Master's Degree

Orthodontics and Dentofacial Orthopedics

- Modality: **online**
- Duration: **2 years**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Advanced Master's Degree

Orthodontics and Dentofacial Orthopedics

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