Professional Master's Degree
Digital Dentistry

tech technological university

Professional Master's Degree
Digital Dentistry

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

Website: **www.techtitute.com/pk/dentistry/professional-master-degree/master-digital-dentistry**

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01
Introduction

Technological advances have enabled the development of digital tools that help to perform dental treatments with maximum efficiency and precision. In this line, it is possible to undertake computer-guided procedures to maximize the fit of prostheses and orthodontic appliances, enhancing patient comfort and quality of life and minimizing human error during the process. Therefore, an in-depth knowledge of these state-of-the-art devices is a must for the specialists who want to keep up-to-date in their field. Consequently, TECH has created this program, which enables the student to identify the operation of the software used in Orthodontics or guided surgery. All this, online and without leaving your home.

Through this program, you will delve into the particularities and operation of the digital tools used to undertake the placement of brackets or implants"

Digital Dentistry is a discipline that has experienced a dizzying growth in recent years, favored by the constant evolution of the technology used. In this way, the implementation of digital tools in clinical practice has made it possible to perform surgical interventions, prosthesis carving, and the placement of brackets and implants with the utmost rigor, with the process being guided by a computer. This results in higher esthetic quality and excellent durability, which means that these techniques are becoming more and more popular with patients. As a result, dentists must be aware of these advances in order to be at the forefront of their profession.

That is why TECH has designed this Professional Master's Degree, through which the student will delve into the most relevant and cutting-edge aspects of Digital Dentistry. During 12 months of intensive learning, you will delve into the operation of software to undertake crown, bridge or denture designs and delve into the use of technological tools for planning Endodontics and Periodontics. In addition, you will identify CAM system options that allow the fabrication of dental restorations.

All this, following a revolutionary 100% online methodology, which will enable the students to combine their enriching update with their professional and personal tasks. In the same way, you will have at your disposal teaching resources in cutting-edge formats such as the explanatory video, the interactive summary or the self-evaluation exercises. As a result, you will be able to adapt your study to your own educational needs, fully optimizing your learning process.

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

- Practical cases presented by experts in Dentistry
- The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Practical exercises where self-assessment can be used to improve learning
- Its special emphasis on innovative methodologies
- Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- Content that is accessible from any fixed or portable device with an Internet connection

Identify software that streamlines the process of preparing, designing, and performing dental surgeries"

" The 100% online methodology of this Professional Master's Degree will allow you to study without having to give up your personal and professional needs"
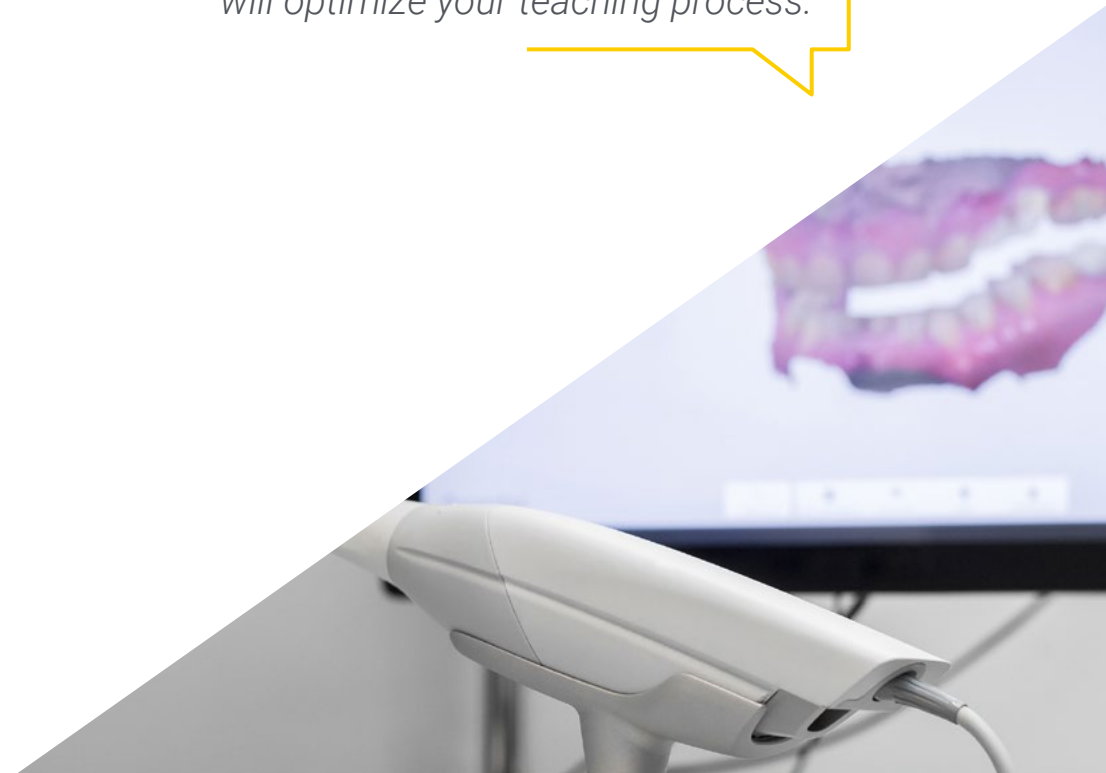
Get up-to-date in Digital Dentistry with the best specialists in this discipline.

Learn in a dynamic and effective way, using teaching formats such as video or interactive summaries that will optimize your teaching process.

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

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

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

02
Objectives

The Professional Master's Degree in Digital Dentistry has been designed with the premise of providing the professional with the most up-to-date knowledge in this discipline in only 6 weeks. Throughout your educational experience, you will be able to identify the keys to using digital tools in the planning of invisible orthodontics or guided surgery. In addition, your learning will be guaranteed by following the general and specific objectives that TECH has outlined for this program.

Understand perfectly the operation of the digital tools used for cephalometric analysis"

General Objectives

- Increase the professional's knowledge of the application of digital technologies in the diagnosis, treatment and planning of clinical cases
- Know the techniques of digital orthodontics and computer-guided implant planning
- Develop skills in interdisciplinary communication and collaboration in teamwork, using digital technology as a tool
- Examine the application of acquired knowledge in clinical practice, in this way improving the quality of patient care

Delve into the cutting-edge applications of open and closed source design software in the world of dentistry"
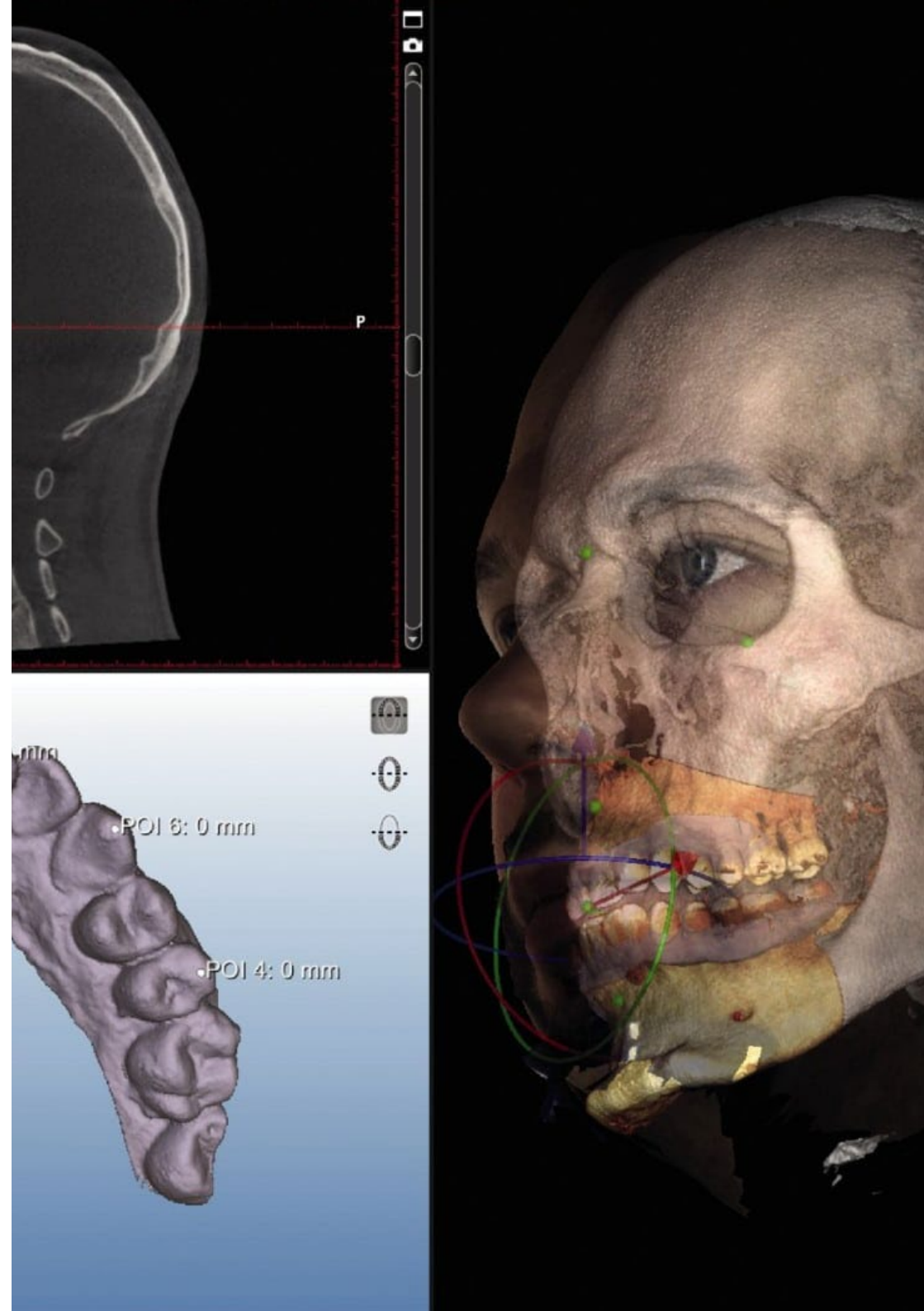
Specific Objectives

Module 1. Equipment digitization

- Understand the basic concepts of digitization and its importance in clinical practice
- Know the different types of equipment that can be digitized and the technologies used for this purpose
- Examine the use of specialized digitizing equipment and software, such as 3D scanners, digital cameras, CAD/CAM software, among others
- Develop skills in editing and manipulating digital data obtained from digitized equipment
- Understand the ethical and legal implications of digitization of equipment, including data privacy and intellectual property
- Integrate digitized equipment into clinical practice
- Interpret and use digital data obtained from digitized equipment for clinical decision making

Module 2. Cephalometric analysis and photography

- Comprehend the basic concepts of cephalometric analysis and its importance in the diagnosis and planning of orthodontic and/or maxillofacial treatments
- Become familiar with the different types of cephalometric analysis and the interpretation of the data obtained
- Know the different types of cameras and lighting equipment used in clinical photography
- Effectively communicate the results of cephalometric analysis and photography to the patient and the interdisciplinary team

Module 3. Closed source design software

- Understand the basic concepts of closed source design software and its importance in the creation of software solutions
- Use closed source design software for the creation of graphical, user interface and user experience designs
- Develop skills in editing and manipulating graphic elements, such as images, shapes and typefaces
- Understand the basic concepts of programming and how they relate to the use of closed source design software

Module 4. Open source design software

- Know the main features of open source design software, including its interface, functions and tools
- Develop skills in editing and manipulating graphic elements, such as images, shapes and typefaces
- Understand the basics of programming and how they relate to the use of open source design software
- Understand the philosophy of open source software and how it differs from other types of software
- Understand the ethical and legal implications of using open source design software, including software licensing and copyrights

Module 5. Digital Flow and Invisible Orthodontics Planning and software

- Understand the basics of invisible orthodontics and digital treatment planning
- Know the different types of digital scanning and planning technologies used in invisible orthodontics, such as intraoral scanners and planning software
- Understand the importance of pre-planning in the success of invisible orthodontic treatment
- Develop skills in the interpretation of data obtained through digital technology and its use in treatment planning
- Learn how to use the results of digital analysis to create customized aligners and other invisible orthodontic appliances

Module 6. Digital Flow and Aesthetic Planning DSD

- Understand the basics of dental aesthetic planning and the importance of digital smile design
- Learn to use digital tools for aesthetic planning, such as digital photography, intraoral scanning and design softwares
- Know the techniques and protocols for performing facial and dental diagnosis, including smile analysis, midline, golden ratio and smile type
- Develop skills in communicating with the patient to present and discuss the aesthetic treatment plan
- Integrate aesthetic planning with other aspects of dental treatment, such as orthodontics, implantology and oral rehabilitation

Module 7. Digital Flow and Guided Surgery Planning and software

- Understand the basic concepts of guided surgery and digital planning in Dentistry
- Use digital tools for guided surgery planning, such as computed tomography (CT), magnetic resonance imaging (MRI), and design software
- Know the techniques and protocols for performing virtual surgical planning, including three-dimensional (3D) reconstruction of the dental and maxillofacial anatomy
- Understand the importance of pre-planning in the success of guided surgery and patient satisfaction

Module 8. Digital Flow Endodontic and periodontal guides

- Understand the basic concepts of digital flow in dentistry and its application in Endodontics and Periodontics
- Learn how to use digital tools for endodontic and periodontic planning, such as computed tomography (CT) and design software
- Know the techniques and protocols for endodontic and periodontic planning, including three-dimensional (3D) reconstruction of the dental and periodontal anatomy
- Design surgical and endodontic guides through the use of digital tools

Module 9. Digital Flow Minimally invasive preparations, cam systems, laboratory and chairside

- Understand the basic principles of minimally invasive tooth preparation and its relationship to the preservation of natural tooth structure
- Identify the different CAM system options for the fabrication of dental restorations, both in the dental laboratory and in the dental office
- Develop skills in the use of chairside CAM systems, which allow the fabrication of dental restorations on the same day of the patient's appointment

Module 10. Virtual articulator and occlusion

- Understand the basic principles of dental occlusion and the importance of centric relation in the diagnosis and treatment of occlusion
- Employ digital tools for the capture of data related to dental occlusion, including the capture of images and the use of specific software
- Detect the different types of virtual articulators and their use in the planning and design of dental occlusion treatments
- Use virtual articulators for the planning and design of dental occlusion treatments

03
Skills

This Professional Master's Degree has been created with the intention that the student will be able to identify and apply in their daily practice the most relevant tools of Digital Dentistry, such as the software used for different dental tasks. In this way, you will be prepared to incorporate these advances into your day-to-day work, putting you at the forefront of your profession. All this while enjoying quality content designed by the best specialists in this field.

Use in your daily practice the most advanced software for Digital Dentistry thanks to this complete program from TECH"

General Skills

- Integrate digital technology into daily clinical practice
- Efficient and effective use of technology in clinical practice
- Handle design and planning software, such as CAD/CAM software, and digital scanning technology
- Use laser technology in clinical practice and dental prosthetics fabrication

Acquire a series of cutting-edge competencies that will enable you to become a leading professional in the field of Dentistry"
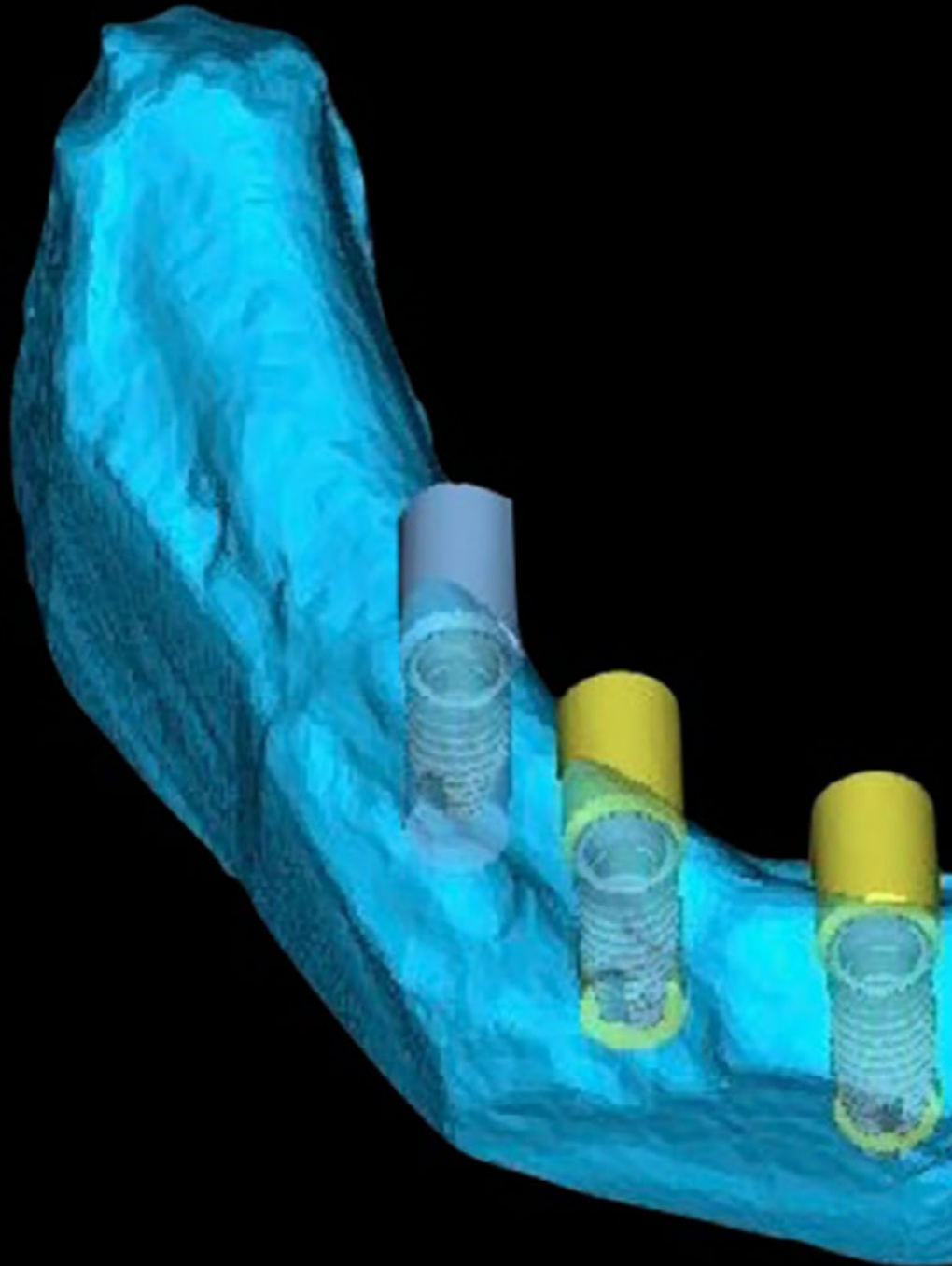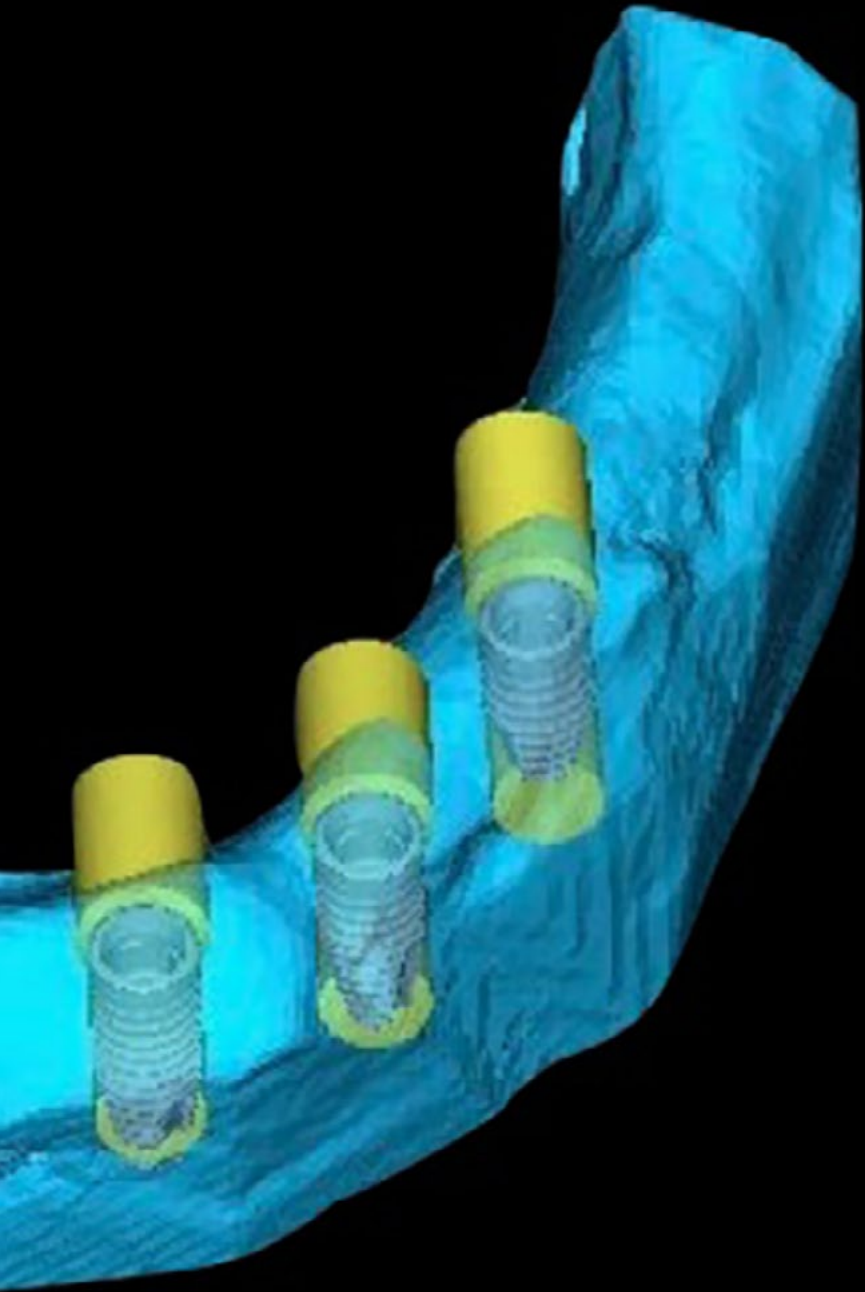
Specific Skills

• Employ specialized software for cephalometric analysis and photography

• Perform measurements and tracings on cephalometric radiographs

• Use open source design software for the creation of graphic, interface, and user experience designs

• Handle digital planning software to create an invisible orthodontic treatment plan and adjust tooth movements

• Design an aesthetic smile through the use of digital tools such as DSD

• Carry out the design of a surgical guide through the use of digital tools

• Use digital tools for the planning and design of dental restorations

04

Course Management

In order to preserve intact the high educational level that characterizes TECH's programs, the Professional Master's Degree in Digital Dentistry is directed and taught by professionals with extensive clinical experience in the field. Since these experts are in charge of the elaboration of all the teaching contents of the program, the knowledge they will provide to the student will preserve a great applicability in daily practice.

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Together with the best experts in Digital Dentistry, you will gain the most relevant and cutting-edge knowledge in this field"

Management

Dr. Ulman, Darío

- Dentist Specializing in Implant Dentistry and Orthodontics
- Dentist in own practice
- International Intraoral Scanner Trainer
- Speaker Corner FONA
- Director of training courses for dentists
- Degree in Dentistry

Dr. Roisentul, Alejandro

- Director of the Oral and Maxillofacial Surgery Unit of Ziv Medical Center
- Clinical Instructor, Bar-Ilan University School of Medicine
- Regional Delegate for Asia of the Latin American Association of Buccomaxillofacial Surgery and Traumatology
- President of the Israeli Association of Oral and Maxillofacial Surgeons
- Winner of numerous awards and honorable mentions

Professors

Dr. Badía Montoya, Alberto Luis
- Dentist Specializing in Orthodontics
- Creator and Developer of Orthokit
- Graduate in Dentistry from the University of Granada
- Master's Degree in Orthodontics from the University of Oviedo
- Member of: AAO,WFO, AESOR and SEDO

Ms. López, Inés
- Laboratory Manager and Cad Designer in Dentalesthetic
- Cad Designer at Denteo Cad Cam Iberia
- Cad Designer at AlignTechnology
- Superior Technician of Dental Prosthesis

Ms. Roisentul, Juliana
- Manager and Dental Hygienist at Roisentul Dental
- Dental Hygienist at MaccabbiDent
- Dental hygienist at the ICHILOV Medical Center
- Teacher and Responsible for studies related to Photography and Dental Hygiene
- Course in Graphic Design

Ms. Maturana, María
- CAD Area Manager at Ztech Digital & Esthetics-Denteo
- 3D dental prostheses designer at the Angel Lorenzo Chiscano Laboratory
- 3D dental prosthesis designer at Ledesma Dental SL
- Expert in dental prosthesis in Luis Somoza Dental Laboratory

Ms. Nuche, María
- Orthodontist Specializing in Invisible Treatments
- Orthodontist at Xplora 3D Center
- Orthodontist in Dr. Lobato Clinic
- Orthodontist at Dra. Clinic Moreno
- Author of communications for dental congresses
- Degree in Dentistry
- Master in Orthodontics

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

05
Structure and Content

The syllabus of this program is composed of 10 complete modules through which the dentist will obtain the most advanced knowledge on Digital Dentistry, delving into the planning and design of aesthetic and functional interventions using digital tools. The teaching content available to you during the duration of the program is presented in formats such as video, interactive summary or evaluative tests. In this way, and enjoying an online teaching, you will enjoy learning adapted to your personal circumstances and study preferences.

"

This Professional Master's Degree has a Relearning methodology that will allow you to adapt your studies to your own pace"

Module 1. Equipment digitization

1.1. Video Evolution
    1.1.1. Why Be Digital
    1.1.2. Multidisciplinary
    1.1.3. Time/Expenses
    1.1.4. Advantages/Costs
1.2. Digital Flow
    1.2.1. File Types
    1.2.2. Types of Meshes
    1.2.3. Reliability
    1.2.4. Comparison of Systems
1.3. Digital Camera and Cell Phone
    1.3.1. Lighting Techniques in Dentistry
    1.3.2. Clinical Dental Photography
    1.3.3. Aesthetic Dental Photography Techniques
    1.3.4. Image Editing
1.4. Digital Radiology
    1.4.1. Types of Dental Radiographs
    1.4.2. Digital Radiology Technology
    1.4.3. Take Digital Dental Radiographs
    1.4.4. AI Interpretation of Dental Radiographs
1.5. CBCT
    1.5.1. CBCT Technology
    1.5.2. Interpretation of CBCT Images
    1.5.3. Diagnostic CBCT Imaging
    1.5.4. CBCT Applications in Implant Dentistry
    1.5.5. CBCT Applications in Endodontics
1.6. Dental Scanner
    1.6.1. Scanning of the Dentition and Soft Tissues
    1.6.2. Digital Modeling in Dentistry
    1.6.3. Design and Fabrication of Digital Dental Prostheses
    1.6.4. Applications of the Dental Scanner in Orthodontics

1.7. Dynamic Stereoscopy
    1.7.1. Dynamic Stereoscopic Imaging
    1.7.2. Interpretation of Dynamic Stereoscopic Images
    1.7.3. Integration of Dynamic Stereoscopy into the Dental Work Flow
    1.7.4. Ethics and Safety in the Use of Dynamic Stereoscopy
1.8. PIC Photogranulometry
    1.8.1. PIC Phonogranulometry Technology
    1.8.2. Interpretation of Phonogranulometric Records PIC
    1.8.3. Applications of PIC Phonogranulometry in Dental Occlusion
    1.8.4. Advantages and Disadvantages of the PIC Phonogranulometry
1.9. Facial Scanner
    1.9.1. Facial Scanner Recording
    1.9.2. Facial Data Analysis and Assessment
    1.9.3. Integration of the Facial Scanner in the Dental Work Flow
    1.9.4. Future of Facial Scanning in Dentistry
1.10. Files
    1.10.1. Types of Digital Files in Dentistry
    1.10.2. Digital File Formats
    1.10.3. File Storage and Management
    1.10.4. Security and Privacy of Digital Files

Module 2. Cephalometric analysis and photography

2.1. Basics of Photography
    2.1.1. The Non-Digital Image
    2.1.2. The Digital Image
    2.1.3. The Detail
    2.1.4. Advice
2.2. Photography in Science
    2.2.1. Photography Uses
    2.2.2. Case Documentation
    2.2.3. Hospital Photography
    2.2.4. Social Media

2.9. BSB Digital Cephalometry

    2.9.1. Fundamentals of Digital Cephalometry in Dentistry

    2.9.2. Scanning Technologies in Digital Cephalometry

    2.9.3. Interpretation of Digital Cephalometric Data

    2.9.4. Clinical Applications of Digital Cephalometry

2.10. Digital Cephalometry Programs ((Ortokid)

    2.10.1. Program Installation

    2.10.2. Patient Discharge

    2.10.3. Placement of Reference Points

    2.10.4. Study Selection

Module 3. Closed source design software

3.1. Exocad Design

    3.1.1. Data Upload

    3.1.2. Work Order

    3.1.3. CAD design, File Import

    3.1.4. CAD Design, Design Tools

3.2. Exocad Design of Temporary Crowns

    3.2.1. Work Order

    3.2.2. Material Selection

    3.2.3. Crown Design

    3.2.4. File Export

3.3. Exocad Bridge Design

    3.3.1. Work Order

    3.3.2. Material Selection

    3.3.3. Bridge Design

    3.3.4. File Export

3.4. Inlay Design with Exocad

    3.4.1. Work Order

    3.4.2. Material Selection

    3.4.3. Inlay Design

    3.4.4. File Export

3.5. Design of Crowns on Implants with Exocad

    3.5.1. Work Order

    3.5.2. Material Selection

    3.5.3. Crown Design on Implants

    3.5.4. File Export

3.6. Blender Design of Geller Models

    3.6.1. File Import

    3.6.2. Geller Model Design

    3.6.3. Geller Model Tools

    3.6.4. Geller Model Manufacturing

3.7. Blender Design of Discharge Cell Design

    3.7.1. File Import

    3.7.2. Geller Model Design

    3.7.3. Geller Model Tools

    3.7.4. Geller Model Manufacturing

3.8. Blender Design of Occlusal Guard

    3.8.1. File Import

    3.8.2. Geller Model Design

    3.8.3. Geller Model Tools

    3.8.4. Geller Model Manufacturing

3.9. Blender Design of Occlusal Map

    3.9.1. Blender Software Functions and Tools for Occlusal Mapping

    3.9.2. Occlusal Map

    3.9.3. Occlusal Map Interpretation

    3.9.4. Occlusal Map Analysis

3.10. Design with Blender for 3D Printing Model Preparation

    3.10.1. Data Science

    3.10.2. Model Selection

    3.10.3. Digital Model Repair

    3.10.4. Model Labeling and Export

Module 4. Open source design software

4.1. Mesh Meshmixer Design
    4.1.1. Meshmixer Software Functions and Tools on Meshes
    4.1.2. Mesh Import
    4.1.3. Mesh Repair
    4.1.4. Model Printing

4.2. Mirror Copy Meshmixer Design
    4.2.1. Functions and Tools of the Meshmixer Mirroring Software
    4.2.2. Tooth Design
    4.2.3. Model Export
    4.2.4. Mesh Adjustment

4.3. Screw-In Temporary Meshmixer Design
    4.3.1. Functions and Tools of the Meshmixer Software in Bolting
    4.3.2. Bolt-On Design
    4.3.3. Screwed Fabrication
    4.3.4. Adjustment and Placement of Bolting

4.4. Meshmixer Design with Eggshell Provisional
    4.4.1. Eggshell Meshmixer Software Functions and Tools
    4.4.2. Eggshell Design
    4.4.3. Eggshell Manufacturing
    4.4.4. Adjustment and Placement of Eggshells

4.5. Libraries
    4.5.1. Import of Libraries
    4.5.2. Different Uses
    4.5.3. Autosave
    4.5.4. Data Recovery

4.6. Design with BSB of Tooth-Supported Splints
    4.6.1. Basis of Use
    4.6.2. Types
    4.6.3. Guided Surgery Systems
    4.6.4. Fabrication

4.7. Crown and Bridge Design
    4.7.1. File Import
    4.7.2. Crown Design
    4.7.3. Bridge Design
    4.7.4. File Export

4.8. Denture
    4.8.1. File Import
    4.8.2. Denture Design
    4.8.3. Tooth Design
    4.8.4. File Export

4.9. Model Editing
    4.9.1. Functions and Tools of the BSB Software in Immediate Implant
    4.9.2. Immediate Implant Design
    4.9.3. Immediate Implant Fabrication
    4.9.4. Immediate Implant Fitting and Placement

4.10. Chairside Splints
    4.10.1. Functions and Tools of BSB Software in Surgical Splinting
    4.10.2. Surgical Splint Design
    4.10.3. Fabrication of Surgical Splint
    4.10.4. Adjustment and Placement of Surgical Splint

Module 5. Digital Flow and Invisible Orthodontics Planning and software

5.1. Different Software Available to Create
    5.1.1. Open Source
    5.1.2. BSB
    5.1.3. Code Closed
    5.1.4. Teacher

5.2. Nemocast
    5.2.1. Import, Orientation
    5.2.2. Top and Bottom Model Segmentation
    5.2.3. Setup and Placement of Cofferdams
    5.2.4. Stl Export

Module 6. Digital Flow and Aesthetic Planning DSD

Module 7. Digital Flow and Guided Surgery Planning and software

Module 8. Digital Flow Endodontic and periodontal guides

8.1. Endodontic Guides

    8.1.1. Virtual Planning of Endodontic Guidewire Placement Using 3D Design Software

    8.1.2. Assessment of the Accuracy and Effectiveness of Digital Flow for Endodontic Guidewire Placement

    8.1.3. Material Selection and 3D Printing Techniques for the Production of Endodontic Guides

    8.1.4. Use of Endodontic Guides for Root Canal Preparation

8.2. Import File in Endodontic Guides

    8.2.1. 2D and 3D Image File Processing for Virtual Planning of Endodontic Guidewire Placement

    8.2.2. Assessment of the Accuracy and Effectiveness of File Import in Endodontic Guide Planning

    8.2.3. Selection of 3D Design Software and File Formats for Import into Endodontic Guide Planning

    8.2.4. Customized Design of Endodontic Guides Using Imported Medical Image Files

8.3. Localization of the Canal in Endodontic Guides

    8.3.1. Digital Image Processing for Virtual Planning of Root Canal Location in Endodontic Guidewires

    8.3.2. Assessment of the Accuracy and Effectiveness of Root Canal Location in Endodontic Guide Planning

    8.3.3. Selection of 3D Design Software and File Formats for Root Canal Location in Endodontic Guide Planning

    8.3.4. Customized Design of Endodontic Guides Using Root Canal Location in Planning

8.4. Fixing the Endodontic Guide Ring

    8.4.1. Assessment of Different Types of Rings and Their Relationship to Endodontic Guidance Accuracy

    8.4.2. Selection of Materials and Techniques for the Fixation of the Ring in the Endodontic Guide

    8.4.3. Assessment of the Accuracy and Effectiveness of Ring Fixation in Endodontic Guidance

    8.4.4. Custom Design of the Ring Fixation on the Endodontic Guide Using 3D Design Software

8.5. Dental Anatomy and Periapical Structures in Endodontic Guides

    8.5.1. Identification of Key Anatomical Structures in the Planning of Endodontic Guides

    8.5.2. Anatomy of Anterior and Posterior Teeth and Its Implications in Endodontic Guide Planning

    8.5.3. Anatomy Considerations and Variations in Endodontic Guide Planning

    8.5.4. Dental Anatomy in the Planning of Endodontic Guides for Complex Treatments

8.6. Periodontal Guides

    8.6.1. Design and Production of Periodontal Guides Using Digital Planning Software

    8.6.2. Importing and Recording CBCT Image Data for Periodontal Guide Planning

    8.6.3. Periodontal Guide Fixation Techniques to Ensure Precision in Surgery

    8.6.4. Digital Work Flows for Bone and Soft-Tissue Graft Placement in Guided Periodontal Surgery

8.7. Import File in Periodontal Guides

    8.7.1. Types of Files Used in the Import of Digital Periodontal Guides

    8.7.2. Procedure for Importing Image Files for the Creation of Digital Periodontal Guides

    8.7.3. Technical Considerations for File Import in Digital Periodontal Guide Planning

    8.7.4. Selection of Suitable Software for Importing Files into Digital Periodontal Guides

8.8. Coronary Lengthening Guide Design in Periodontal Guides

    8.8.1. Definition and Concept of Coronary Lengthening Guide in Dentistry

    8.8.2. Indications and Contraindications for the Use of Coronary Lengthening Guides in Dentistry

    8.8.3. Procedure for the Digital Design of Coronary Lengthening Guidewires Using Specific Software

    8.8.4. Anatomical and Aesthetic Considerations for the Design of Coronary Lengthening Guides in Digital Dentistry

8.9. Stl Export in Periodontal Guides

    8.9.1. Dental Anatomy and Periodontal Structures Relevant to the Design of Periodontal and Endodontic Guides

    8.9.2. Digital Technologies Used in the Planning and Design of Endodontic and Periodontal Guides, such as Computed Tomography, Magnetic Resonance Imaging and Digital Photography

    8.9.3. Periodontal Guide Design

    8.9.4. Endodontic Guide Design

8.10. Dental Anatomy and Periodontal Structures

    8.10.1. Virtual Dental and Periodontal Anatomy

    8.10.2. Design of Customized Periodontal Guides

    8.10.3. Assessment of Periodontal Health Using Digital Radiographs

    8.10.4. Guided Periodontal Surgery Techniques

Module 9. Digital Flow Minimally invasive preparations, cam systems, laboratory and chairside

9.1. First Fit Veneer System
   9.1.1. Record Taking
   9.1.2. Web Loading
   9.1.3. *Mockup*
   9.1.4. Milling Sequence
9.2. Cementation in the Clinic
   9.2.1. Types of Dental Cements and Their Properties
   9.2.2. Selection of the Appropriate Dental Cement for Each Clinical Case
   9.2.3. Cementation Protocol for Veneers, Crowns and Bridges
   9.2.4. Preparation of the Tooth Surface Prior to Cementation
9.3. Laboratory
   9.3.1. Digital Dental Materials: Types, Properties and Applications in Dentistry
   9.3.2. Fabrication of Ceramic Veneers and Crowns with CAD/CAM Systems
   9.3.3. Fabrication of Fixed Bridges Using CAD/CAM Systems
   9.3.4. Fabrication of Removable Prostheses Using CAD/CAM Systems
9.4. 3D Printing
   9.4.1. Types of 3D Printers Used in Digital Dentistry
   9.4.2. Design and 3D Printing of Studio and Working Models
   9.4.3. 3D Printing of Surgical Guides and Surgical Splints
   9.4.4. 3D Printing of Models for the Manufacture of Surgical Guides and Surgical Splints
   9.4.5. 3D Printing of Models for the Fabrication of Dental Prostheses
9.5. XY Resolution and Z Resolution
   9.5.1. Selection and Use of Materials for Digital Dental Restorations
   9.5.2. Integration of Digital Dentistry in the Clinic
   9.5.3. XY Resolution and Z Resolution 3D Printers
   9.5.4. Virtual Planning of Dental Restoration

9.6. Resin Types
   9.6.1. Model Resins
   9.6.2. Sterilizable Resins
   9.6.3. Temporary Tooth Resins
   9.6.4. Resins for Definitive Teeth
9.7. Millers
   9.7.1. Milling Machines for Direct Restorations
   9.7.2. Milling Machines for Indirect Restorations
   9.7.3. Milling Cutters for Fissure Sealing and Caries Prevention
   9.7.4. Orthodontic Milling Cutters
9.8. Sinterizers
   9.8.1. Synthesizers and Their Role in the Preparation of Conservative Dental Crowns
   9.8.2. Application of CAD/CAM Technology for the Preparation of Minimally Invasive Preparations in Digital Dentistry
   9.8.3. New Digital Techniques and Technologies for Minimally Invasive Preparation of Dental Inlays and Onlays
   9.8.4. Virtual Tooth Preparation Software Systems and Their Use in Minimally Invasive Preparation Planning
9.9. Model Pro Model Manufacturing
   9.9.1. Accurate Model Fabrication Using Intraoral Scanning Technology for Minimally Invasive Preparations
   9.9.2. Minimally Invasive Preparation Planning Using Digital Models and CAD/CAM Technology
   9.9.3. Fabrication of Models for the Preparation of Minimally Invasive Dental Veneers
   9.9.4. Digital Modes and Their Role in the Preparation of Conservative Dental Crowns
9.10. Dental Printers vs. Generic Printers
   9.10.1. Dental Printers versus Generic Printers
   9.10.2. Comparison of the Technical Characteristics of Dental and Generic Printers for the Fabrication of Dental Restorations
   9.10.3. Dental Printers and Their Role in Minimally Invasive Preparation of Customized Dentures
   9.10.4. Generic Printers and Their Adaptability to the Fabrication of Dental Prostheses

Module 10. Virtual articulator and occlusion

10.1. Virtual Articulator

    10.1.1. Virtual Articulator and Its Use in the Planning of Dental Prostheses in Digital Dentistry

    10.1.2. New Techniques and Digital Technologies for the Use of Virtual Articulators in Digital Dentistry

    10.1.3. Occlusion in Digital Dentistry and Its Relation with the Use of Virtual Articulator

    10.1.4. Digital Occlusion Planning and the Use of the Virtual Articulator in Aesthetic Dentistry

10.2. TEKSCAN

    10.2.1. File Import

    10.2.2. Implant Placement

    10.2.3. Splint Design

    10.2.4. Stl Export

10.3. TEETHAN

    10.3.1. File Import

    10.3.2. Implant Placement

    10.3.3. Splint Design

    10.3.4. Stl Export

10.4. Different Virtual Articulators

    10.4.1. The Most Important

    10.4.2. Development and Application of Virtual Articulator Technologies in the Assessment and Treatment of Temporomandibular Disorders (TMD)

    10.4.3. Application of Virtual Articulator Technologies in the Planning of Dental Prostheses in Digital Dentistry

    10.4.4. Use of Virtual Articulator Technologies in the Assessment and Diagnosis of Dental Occlusion Disorders in Digital Dentistry

10.5. Design of Dental Restorations and Prostheses with Virtual Articulator

    10.5.1. Use of Virtual Articulator in the Design and Fabrication of Removable Partial Dentures in Digital Dentistry

    10.5.2. Design of Dental Restorations with Virtual Articulator for Patients with Dental Occlusion Disorders in Digital Dentistry

    10.5.3. Total Denture Design with Virtual Articulator in Digital Dentistry: Planning, Execution and Follow-Up

    10.5.4. Use of Virtual Articulator in Interdisciplinary Orthodontic Planning and Design in Digital Dentistry

10.6. MODJAW

    10.6.1. UUse of MODJAW in Orthodontic Treatment Planning in Digital Dentistry

    10.6.2. Application of MODJAW in the Assessment and Diagnosis of Temporomandibular Disorders (TMD) in Digital Dentistry

    10.6.3. Use of MODJAW in the Planning of Dental Prostheses in Digital Dentistry

    10.6.4. MODJAW and Its Relationship to Dental Aesthetics in Digital Dentistry

10.7. Positioning

    10.7.1. Files

    10.7.2. Tiara

    10.7.3. Butterfly

    10.7.4. Models

10.8. Transaction Log

    10.8.1. Protrusion

    10.8.2. Opening

    10.8.3. Lateralities

    10.8.4. Chewing

10.9. Location of Mandibular Axis

    10.9.1. Centric Relation

    10.9.2. Maximum Opening without Displacement

    10.9.3. Click Log

    10.9.4. Bite Restructuring

10.10. Export to Design Programs

    10.10.1. Use of Export to Design Programs in Orthodontic Treatment Planning in Digital Dentistry

    10.10.2. Application of Export to Design Programs in Dental Prostheses Treatment Planning in Digital Dentistry

    10.10.3. Export to Design Programs and Their Relationship with Dental Aesthetics in Digital Dentistry

    10.10.4. Export to Design Programs in the Assessment and Diagnosis of Dental Occlusion Disorders in Digital Dentistry

Methodology

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

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

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

At TECH we use the Case Method

In a given situation, what should a professional do? 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.
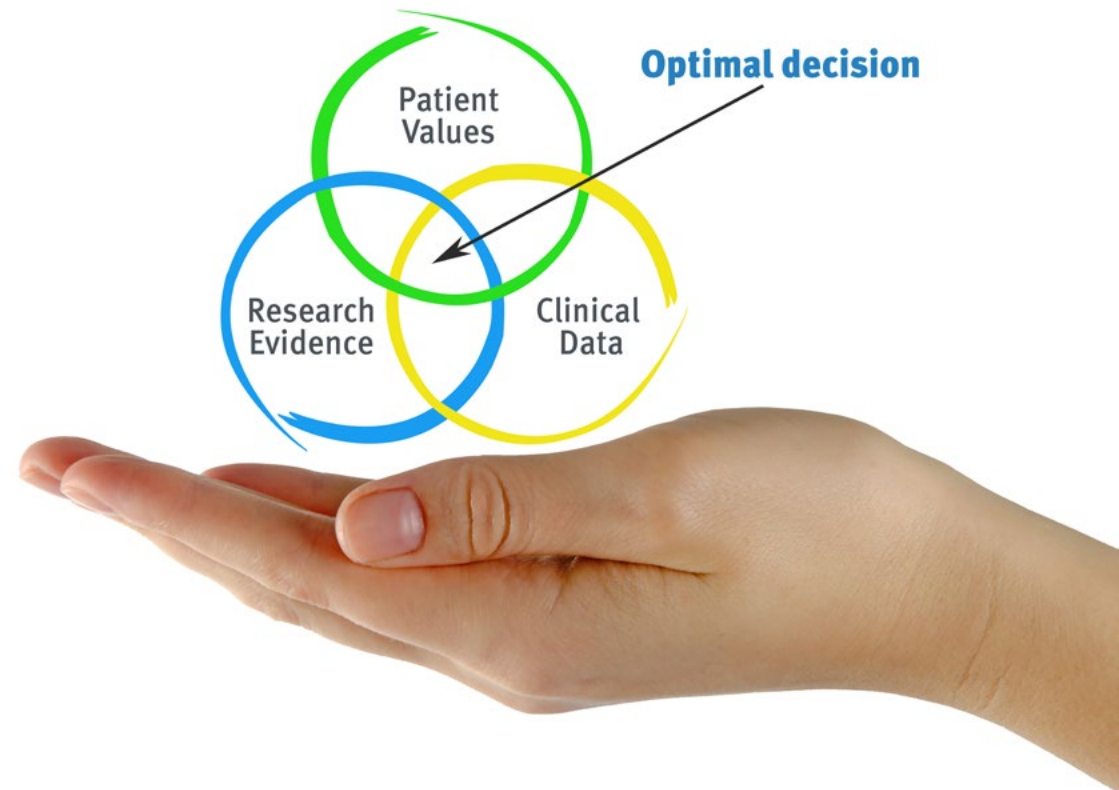
According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions in the 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. Dentists 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. 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.

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.

01
learning from evidence

02
relearning from evidence

03
testing

04
learning from an expert

05
neurocognitive context dependent learning

06
Von-Restorff effect

07
case based learning through storytelling

08
competencies testing (retesting)

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 we have trained more than 115,000 dentists with unprecedented success, in all specialties regardless of the workload. 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 training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.

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

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

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

Study Material

All teaching material is 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.

Educational Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances, and to the forefront of 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.

20%

15%

15%

3%

20%

17%

7%

3%

Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.

Testing & Retesting

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

Classes

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

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.

Certificate

The Professional Master's Degree in Digital Dentistry guarantees students, in addition to the most rigorous and up-to-date education, access to a Professional Master's Degree diploma issued by TECH Technological University.

Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork"
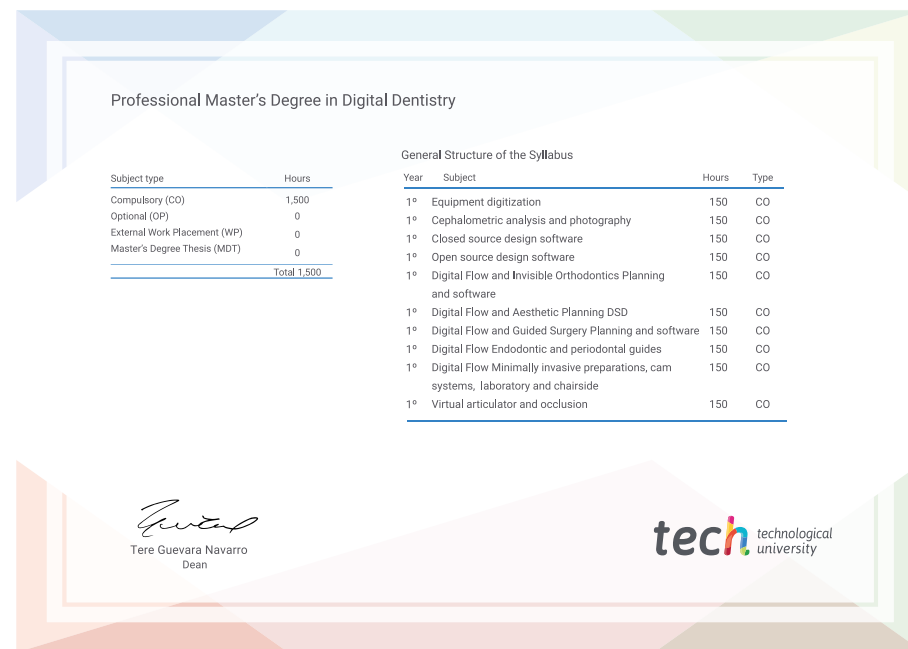
This **Professional Master's Degree in Digital Dentistry** contains the most complete and up-to-date scientific on the market.

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

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

Title: **Professional Master's Degree in Digital Dentistry**
Official Nº of Hours: **1,500 h.**

tech technological university

Awards the following
CERTIFICATE
to

Mr./Ms. _____, with identification number _____.
For having successfully passed and accredited the following program

PROFESSIONAL MASTER'S DEGREE
in

Digital Dentistry

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

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

June 17, 2020

Tere Guevara Navarro
Dean

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

Professional Master's Degree in Digital Dentistry

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

General Structure of the Syllabus

Year	Subject	Hours	Type
1º	Equipment digitization	150	CO
1º	Cephalometric analysis and photography	150	CO
1º	Closed source design software	150	CO
1º	Open source design software	150	CO
1º	Digital Flow and Invisible Orthodontics Planning and software	150	CO
1º	Digital Flow and Aesthetic Planning DSD	150	CO
1º	Digital Flow and Guided Surgery Planning and software	150	CO
1º	Digital Flow Endodontic and periodontal guides	150	CO
1º	Digital Flow Minimally invasive preparations, cam systems, laboratory and chairside	150	CO
1º	Virtual articulator and occlusion	150	CO

Tere Guevara Navarro
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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Professional Master's Degree
Digital Dentistry

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

Professional Master's Degree
Digital Dentistry

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