

## Degree Course in Dentistry and Dental Prosthetics 2021/2022

**Integrated Course:** Foundations in Dentistry

**No. CFU:** 13

**Coordinator of the Integrated Course:** Professor Giuseppina Laganà

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**Module:** Introductory clinics

**SSD:** MED/28

**CFU Number:** 5

**Professors' names:**

- Professor Paola Cozza (2 CFU); e-mail: paola.cozza@unicamillus.org
- Professor Giuseppina Laganà (2 CFU); e-mail: giuseppina.lagana@unicamillus.org
- Professor Roberta Lione (1 CFU); e-mail: roberta.lione@unicamillus.org

**Module:** Preventative and Community Dentistry

**SSD:** MED/28

**CFU Number:** 4

**Professors' names:**

- Professor Paola Cozza (1 CFU); e-mail: paola.cozza@unicamillus.org
- Professor Carmen Mortellaro (1 CFU); e-mail: carmen.mortellaro@unicamillus.org
- Professor Giuseppina Laganà (1 CFU); e-mail: giuseppina.lagana@unicamillus.org
- Professor Roberta Lione mail (1 CFU); e-mail: roberta.lione@unicamillus.org

**Module:** Dental Hygiene

**SSD:** MED/50

**CFU Number:** 4

**Professors' names:**

- Professor Raffaella Docimo (1 CFU); email: raffaella.docimo@unicamillus.org
- Professor Leonardo Maggiolini (1 CFU); email: leonardo.maggiolini@unicamillus.org
- Professor Deborah Meleo (1 CFU); email: deborah.meleo@unicamillus.org
- Professor Marco Talocco (1 CFU); email: marco.talocco@unicamillus.org

### PREREQUISITES

Preliminary knowledges are required about these topics:

- Human anatomy
- Oro-maxillofacial anatomy
- Physiology of oro-maxillofacial apparatus

### OBJECTIVES

The student will be prepared to deal safely with the procedures related to:

- first dental examination

- medical records
- importance of oral health
- teeth and occlusion health
- oral functions
- etiology, development, progression and prevention of caries
- role of saliva in the neutralization of harmful acids in the oral environment
- action of fluoride, doses and methods of administration
- use sealants in various age groups
- diet in patients at high risk of caries
- patients with physical and mental disabilities
- home oral hygiene
- professional oral hygiene
- etiopathogenetic factors of bacterial plaque, tartar, carious lesions
- periodontal / peri-implant pathology
- prevention protocol.

## **LEARNING OUTCOMES**

### **Knowledges and comprehension skills**

At the end of the course, the student will be able to evaluate the clinical relevance of bacterial plaque, tartar, carious lesions and periodontal pathology and to comprehend the etiology, to formulate a correct basic dental diagnosis, to acquire useful notions about public oral health, to know the methodology of the organization of health services, to define and formulate priorities, on the basis of community principles and practices, in the planning of interventions aimed to reduce oral diseases in the population.

### **Applying knowledge and understanding skills**

The student will apply the acquired knowledge in order to identify the problems and to solve the patient's clinical needs, identifying the related therapy. He will also be able to effectively manage the relationship with the patient.

### **Communication skills**

The student will learn the communication models referred to the child and the adult patient.

### **Making judgements**

The student will be independent to set up the diagnostic and therapeutic program based on the observation of clinical cases.

### **Learning skills**

At the end of the integrated course, the student will acquire the basic skills to identify dental clinical problems and formulate an adequate prevention and therapy plan.

## **COURSE SYLLABUS**

### **Introductory clinics**

#### *First dental examination*

Anamnesis (family history, personal history: physiological, remote, and upcoming pathological)

Medical records

Objective examination (extra-oral and intra-oral) main signs and symptoms

Ergonomics principles applied to the Dental Clinic

The functional analysis and the main physiological functions: breathing, chewing, swallowing, phonation

Aesthetic analysis

Radiographic examinations

Photographic documentation

Informed consent for dental treatment

Informed consent for minors

#### *Supporting Structures*

Gingival unit

Root canal cement

The alveolar bone

Periodontal ligament

#### *The Tooth: Functions and Terms*

Naming and coding teeth: the dental formula

Function of teeth

Tooth tissues: enamel, cement and dentine

Tooth morphology: root to crown ratio

Surfaces of teeth

Dental anomalies

#### *The occlusion*

Development, form, and eruption of the teeth

Fundamentals of ideal occlusion in permanent dentition

Malocclusions

#### *Anatomy of the craniofacial region*

Osteology of the skull

The jaw bones: development and growth

Oral cavity

Nose, nasal cavity, and paranasal sinuses

Soft palate and pharynx

Temporomandibular Joint

Muscles of Mastication, Hyoid Muscles, and Sternocleidomastoid and Trapezius Muscles

Muscles of Facial Expression

*Tooth anatomy*

Deciduous dentition

Permanent teeth

Essential differences between deciduous and permanent teeth

Drawing of teeth (creation of anatomical tables)

*Topics to be learned in autonomy*

Oral manifestations of exanthematic diseases

Correlation between systemic diseases and lesions of the oral cavity

Informed consent for minors

Dental anomalies

Development of a diagnostic plan

Formulation of the therapeutic plan

### **Preventative and community dentistry**

*Health project: program presentation*

Epidemiology of caries in childhood

Objectives and mission

Explanation of Health Project

*General concepts of prevention*

World Health Organization - WHO

Primary, secondary and tertiary prevention in dentistry

The objectives of prevention in dentistry and the role of the dentist in prevention

Patient motivation and communication

The role of the Pediatrician in the promotion of oral health in childhood

*Pathologies of the hard tissues of the tooth: dental caries*

Epidemiology

Predisposing factors

Multifactorial etiology: oral microflora, diet, saliva

DMFT/dmft index

*Soft tissue pathologies*

Gingivitis: epidemiology, etiology, risk factors

Periodontal disease: epidemiology, etiology, risk factors

Periodontal indices

*Prevention of the main pathologies of the oral cavity*

Mechanical plaque removal: plaque detecting agents, toothbrushes and toothbrushing techniques, interdental plaque control devices, toothpastes, mouthrinses

Professional oral hygiene, the role of the hygienist

Systemic and topical fluoroprophyllaxis

Dental Sealants

*Prevention of dental malocclusions*

Malocclusions

Bad habits

The IOTN index

*Topics to be learned in autonomy:*

Dental Plaque: composition and index

Dental dyschromia and pigmentation

Periodontal disease classification

The baby-bottle syndrome

Dentin hypersensitivity

*Further topics:*

General concepts of prevention

Anatomy of the craniofacial region

Macroscopic tooth anatomy

Oral diseases epidemiology

Primary, secondary, tertiary and quaternary prevention

Individual and group/collective prevention

Basic levels of healthcare

Use of Fluoride for caries prevention

Diet: cariogenic and cariostatic elements

Regular follow-up

Dental sealants

Assessment of risk caries

Timing of eruption of deciduous and permanent teeth

Eruption anomalies

Occlusal anomalies

Dental traumatology

Dental cavities

Periodontal diseases

Growth and development of craniofacial complex

**Dental Hygiene**

General concepts of communication with the patient. Patient information and motivation for home oral care. Patient information and motivation for professional oral care. Oral biofilm, plaque and dental calculus: etiological aspects.

Collection of clinical and photographic data, x-ray status. Dental/medical records.

Hints of etiological and clinical factors in the most frequent oral diseases: gingivitis, periodontal disease, decay, enamel erosion, dental sensitivity, discolored teeth and pigmentations, peri-implant pathology. Prevention strategies and hints of treatment protocols.

Relationship between oral care and systemic diseases with particular attention to bacteria-related pathologies.

Diagnostic tests: plaque delivers, plaque index, periodontal probing depth, clinical attachment level and bleeding index.

Plaque control: oral care devices, toothbrushes, toothpaste, dental floss and others. Brushing techniques and patient compliance. Chemical devices: mouthwashes and periodontal gel.

Professional oral care techniques: scaling and root planing; sonic and ultrasonic instruments. Manual instruments: types of curettes and scalers. Sharpening tools.

Sealants, fluoroprohylaxis, halitosis and dental hyper sensibility treatment.

Type of patient: surgical, implant, prosthetic, orthodontic, pedodontic, geriatric. Special needs patient. Disabled patient.

Maintenance therapy on teeth, implants and prosthesis. Hints of management of perimplant pathologies.

## **COURSE STRUCTURE**

The integrated course consists of frontal lectures, for a total amount of 130 hours, divided in the following modules:

Introductory clinics: 50 hours

Preventative and Community Dentistry: 40 hours

Dental Hygiene: 40 hours

Teachers will use educational tools such as PPT or Keynote presentation files.

Attendance for each module is compulsory.

## **COURSE GRADE DETERMINATION**

The examination procedure will consist of a written and oral exam.

The written exam will be structured of 30 multiple choice question, to be answered in a maximum time of 30 minutes.

During the oral exam, the examining board will evaluate the student's ability to apply his skills.

A basic level of knowledge is required to achieve the objectives. The minimum evaluation for passing the exam is 18/30.

## **READING MATERIALS/BOOKLIST**

- Teaching materials provided by professors on Cranio-facial and Oral Cavity Anatomy



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- Teaching materials provided by professors on Anatomy of the Teeth
- Teaching materials provided by professors
- Limeback H., Ottolenghi L., *Odontoiatria preventiva integrata*, EMSI edition, 2015.
- Strohmer L., Ferro R., *Odontoiatria di comunità*, Masson edition, 2003
- Genovesi A, *La salute della bocca nell'era del microbioma : protocolli clinici nell'igiene orale*. Ed. Tuteur, 2020
- Ireland R, *Clinical textbook of dental hygiene & therapy*, Blackwell Munksgaard, Blackwell Publishing Company, 2006
- Levine R, Stillman-Lowe C, *The Scientific Basis of Oral Health Education*, Eighth Edition (International). Springer Nature Switzerland AG 2019
- Splieth C, *Prevenzione professionale*. Ed. Scienza Tecnica Dentistica, 2001