

Course Title	Pediatric Dentistry III				
Course Code	DES475				
Course Type	Compulsory				
Level	Bachelor (1 st Cycle)				
Year / Semester	4 th year / 8 th semester				
Teacher's Name	TBA				
ECTS	2	Lectures / week	1 hr / 13 weeks + exam week	Clinic / week	2 hrs / 13 weeks + 3 hrs / 6 weeks
Course Purpose and Objectives	<p>The objective of the course is to introduce the student to the Pediatric Dentistry clinical practice, and the EUC Pediatric Dentistry clinic. It includes lectures, workshops, haptic simulation laboratory exercises, and observation of simple pediatric cases dental treatments:</p> <ol style="list-style-type: none"> 1. Lectures on preclinical aspects of Pediatric Dentistry. 2. Preclinical workshops exercise among dental students (in groups of three). 3. Haptic simulation laboratory exercises on pediatric case scenarios. 4. Observation of dental treatment of pediatric patients with simple treatment needs. <p>Students will be working in the Haptic Simulation Laboratory to develop specific psychomotor and cognitive skills through the use of virtual reality-based training that will enhance and augment their training in the Pediatric Dentistry course. Technical skills will be developed through learning preparations with a high-speed handpiece, low speed handpiece, and dental hand instruments in a virtual reality, advanced simulation environment.</p>				
Learning Outcomes	<p>Upon successful completion of this course students should be able to:</p> <ul style="list-style-type: none"> • Apply all the infection control measures for the protection of the patient, the dental assistant and the dentist from infections during dental treatment. • Apply the basic principles of four-handed dentistry in Pediatric Dentistry, by working both as a dentist and as a dental assistant. 				

	<ul style="list-style-type: none"> • Record medical and dental history in pediatric patients and assess the patient's medical history in relation to its dental treatment needs. • Perform intraoral and bite-wing radiographs and diagnose caries and pathology. • Evaluate the caries risk of the patient by using questionnaire based and computer based caries risk assessment systems. Apply in office topical fluoride (gel, varnish or SDF), according to the guidelines. • Write prescriptions for home fluoride use according to the patient's age and caries risk, and to the guidelines. • Design a customized prevention program according to the patient age and caries risk. • Plan treatment for simple pediatric cases. • Give anticipatory guidance to the patient and family according to the age of the patient and oral health needs. • Recall patients appropriately according to their caries and periodontal disease risk. • Apply the concepts of minimal invasive dentistry by managing initial occlusal caries, with topical fluorides, sealants, preventive resin restorations or resin infiltration. • Apply the different techniques for rubber dam isolation both for the anterior and posterior teeth, practicing among students. • Administer local anesthesia painlessly among students, assisted by the dental assistant and know its possible limitations and complications. • Plan appropriate pulpal management for primary teeth. • Know the indications and perform direct, indirect pulp capping and pulpotomy in natural primary teeth. • Perform haptic simulation laboratory exercises on pediatric case scenarios. • Select the appropriate restorative materials for each type of restoration, according to the patient cooperation, age and caries extent. • Classify dental injuries in the primary and permanent dentition, record and evaluate the dental history in such cases, and plan the management. • Know the indications for space maintenance following premature loss of a primary tooth, as well as the appropriate appliance for each case. • Understand the characteristics of the healthy periodontium in pediatric patient and is able to diagnose periodontal pathology through virtual cases. • Know the indications, technique and considerations for primary teeth extractions. 		
Prerequisites	None	Co-requisites	None

Course Content

Lectures:

- Oral clinical exam for the child and adolescent.
- Diagnostic imaging in Pediatric Dentistry.
- CRA systems used in children and adolescents.
- Topical fluorides in Pediatric Dentistry, in office and for home use, with emphasis on the EAPD and AAPD guidelines and techniques of application.
- Design a customized preventive program in Pediatric Dentistry, according to the age of the patient and the caries risk. Recall strategies for the pediatric patient.
- Basic concepts for diagnosis and treatment planning in Pediatric Dentistry.
- Anticipatory guidance in Pediatric Dentistry.
- Minimal invasive dentistry in Pediatric Dentistry.
- Pain and anxiety control in Pediatric Dentistry.
- Pulpal management of primary teeth.
- Operative Dentistry in Pediatric Dentistry.
- Restorative materials used in Pediatric Dentistry and indications to choose the appropriate restorative material according to tooth anatomy, caries extent, patient cooperation.
- Pulpal management of young permanent teeth.
- Dental traumatic Injuries classification and epidemiology in primary and permanent teeth. Management of the primary dentition dental traumatic Injuries.
- Dental traumatic injuries management of the hard dental tissues injuries and the periodontal tissues in permanent teeth.
- Space management in Pediatric Dentistry, space analysis, indications for space maintenance and type of space maintainer indicated.
- Learn about Oral Surgery considerations in Pediatric Dentistry.
- The healthy periodontium and periodontal considerations for the pediatric patient.
- Review.

Labs:

- Infection control, four-handed dentistry in Pediatric Dentistry, medical and dental records, initial visit.
- Workshop on taking bitewing X-rays among students and caries diagnosing.
- Application workshop on determining the caries risk of virtual patients using the Cariogram and ADA proposed CRA system.
- Topical application of NaF and SDF, exercise among dental students. Writing prescriptions for home use topical fluorides.
- Design and application of a preventive customized program in Pediatric Dentistry, on virtual cases, recall strategies.
- Diagnosis and treatment planning of virtual cases.
- Rubber dam isolation and sealant application among students.

	<ul style="list-style-type: none"> • Practice local anesthesia techniques used in children among students, with emphasis to teach on how to minimize discomfort of the patient. • Discussion of cases in the primary dentition needing pulpal management. Perform pulpotomy of a primary tooth, ex vivo. • Haptic simulation laboratory exercises on pediatric case scenarios. • Discussion of cases in need of a permanent tooth pulpotomy. • Discussion of TDI Virtual cases diagnosis and classification. • Discussion of TDI Virtual cases, demonstration of a fractured incisor restoration. • Space analysis in models. Band and loop space maintainers, demonstration of fitting a band, taking an impression and fabrication. • Observation of treating pediatric cases. 								
Teaching Methodology	Face-to-face								
Bibliography	<p>Koch G, Poulsen S, Espelid I, Haubek D. Pediatric Dentistry: A Clinical Approach. Oxford: Wiley Blackwell, 2017.</p> <p>Dean JA. McDonald and Avery's Dentistry for the Child and Adolescent. St. Louis: Elsevier, 2015.</p> <p>European Academy of Pediatric Dentistry Policies and Guidelines https://www.eapd.eu/index.php/policies-and-guidelines</p> <p>American Academy of Pediatric Dentistry Oral Health Policies and Recommendations (The Reference Manual in Pediatric Dentistry) https://www.aapd.org/research/oral-health-policies--recommendations/</p>								
Assessment	<table border="1"> <tr> <td>Final Examination</td> <td>60%</td> </tr> <tr> <td>Laboratory / Clinical Work / Oral presentations</td> <td>30%</td> </tr> <tr> <td>Participation and attendance</td> <td>10%</td> </tr> <tr> <td>Total</td> <td>100%</td> </tr> </table>	Final Examination	60%	Laboratory / Clinical Work / Oral presentations	30%	Participation and attendance	10%	Total	100%
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