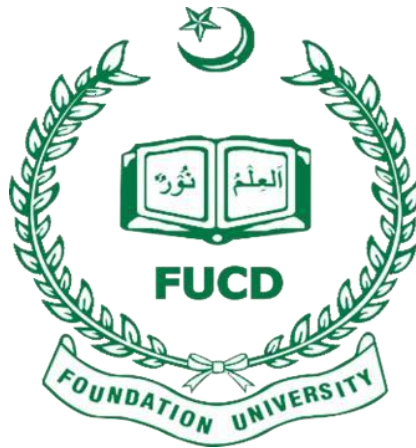


**FOUNDATION UNIVERSITY**  
**COLLEGE OF DENTISTRY**



**PAEDIATRIC DENTISTRY**  
**Study Guide**

**FINAL YEAR BDS**

## **Mission:**

***Equip students with necessary knowledge, skills and attitudes to successfully practice pediatric dentistry component of the undergraduate dentistry course.***

## **Introduction:**

Pediatric dentistry is an age-defined specialty and is distinguished by the art of behavior guidance. Its goal is the delivery of safe and quality dental care in an environment that is as pleasant as possible for children, and promotes a positive attitude towards oral health and future dental care. With the growing needs of the today's world, it is important that teaching strategies are constructed to match the needs of the learners and enhance their academic achievements. We want to ensure Effective teaching that is flexible, creative and in line with principles of adult learning. Our institute is determined to make students completely aware of the prevalent disease in Pakistan so they can play an active and successful role in betterment of society.

Pediatric dentistry is a specialty of dentistry that provides preventive and therapeutic oral health care for children. It also involves management of orofacial conditions related to systemic diseases and developmental disabilities. According to a pathfinder survey conducted by World Health Organization, dental caries is the single most common chronic childhood disease in Pakistan, along with high prevalence of dental fluorosis (63.6%) among children. Efforts in dissemination and communication about commonly encountered dental problems in children such as caries and dental fluorosis are also a priority in the Pediatric Dentistry curriculum.

## **Learning Outcomes of Course of Pediatric Dentistry:**

By the end of this course of pediatric dentistry students of Final year BDS will be able to:

- Recognize common health problems and dental anomalies of children
- Perform clinical examination of pediatric patient.
- Identify preventive treatment needs of a patient
- Define and classify caries
- Diagnose caries on radiographic examination of pediatric patient.
- Apply rubber dam / suitable isolation for performing restorative and endodontic procedures in pediatric patient.
- Demonstrate cavity preparation in pediatric patients.
- Demonstrate placement of restoration in pediatric patient.
- Perform pulpotomy in deciduous and young permanent teeth.
- Perform permanent direct restorations in young permanent teeth
- Perform preventive dental procedure independently.
- Perform endodontic treatment in permanent teeth of pediatric patients

## **Teaching and learning methodologies:**

Teaching and learning methods are primarily focused more on promoting active learning through active participation of the learner. Actively learning students take charge of their own learning, actively seeking guidance and performance feedback from tutors, and routinely conducting self-assessment of their own learning needs.

## **TEACHING & LEARNING MODALITIES**

- Large Group Interactive Sessions (LGIS)
- Small Group Interactive Sessions (SGIS)
- Self-Directed Learning (SDL)

Following teaching modalities may be used for clinical/ small group teaching:

1. Live patient demonstrations by supervisors
2. Video demonstrations
3. Case based learning/clinical scenario-based learning
4. Formative supervised learning events in clinical settings such as
  - a. Mini-CEX (mini clinical evaluation Exercise)
  - b. DOPS (direct Observation of procedural Skills)
  - c. OMP (one minute preceptor)
5. Role plays
6. Students' presentations
7. Discussions
8. Peer learning
9. Projects/ Assignments

**RECOMMENDED REFERENCE MATERIAL:**

**Text book of pediatric dentistry, wellbury.**

**Hand book of pediatric dentistry, Angus C.Cameron.**

**Dental update.**

## FACULTY OF DEPARTMENT

### Head of department:

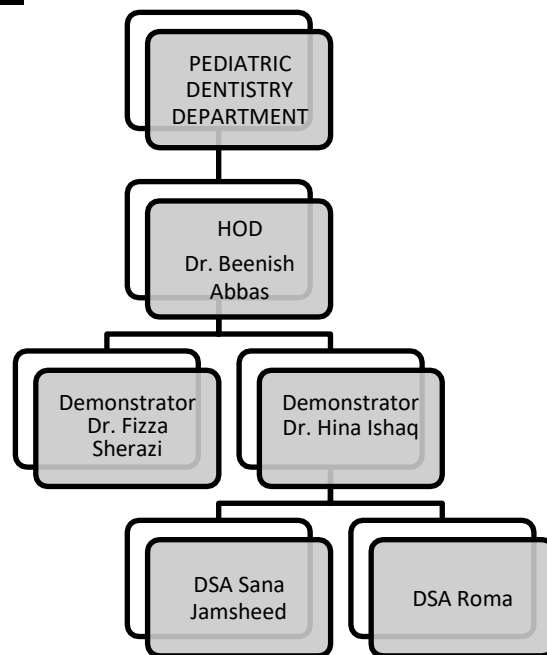
Asst. professor Dr. Beenish Abbas (B.D.S, F.C.P.S)

### Faculty members:

Demonstrator Dr. Hina Ishaq

Demonstrator Dr. Fizza Sherazi

## ORGANOGRAM



## **COURSE OUTLINE**

Course content	Learning Objectives	Instructional strategy	Assessment method
<p><b>1. Behavior management techniques in pediatric patient</b></p> <ul style="list-style-type: none"> <li>a. Definitions</li> <li>b. Techniques</li> <li>c. Stages of consultation visit</li> </ul>	<ul style="list-style-type: none"> <li>• Describe communication principles in pediatric dental practice</li> <li>• Describe behavior management strategies in pediatric dental practice</li> <li>• Describe ethical principles in dental practice</li> </ul>	<p>LGIS(1)</p> <p>SGIS(1)</p>	<p>MCQs</p> <p>SEQs</p> <p>SAQs</p>
<p><b>2. History taking Diagnosis, treatment planning for</b></p> <ul style="list-style-type: none"> <li>a. Patient assessment,</li> <li>b. Examination and diagnosis</li> <li>c. Treatment planning.</li> </ul>	<ul style="list-style-type: none"> <li>• Describe documentation of patients history</li> <li>• Describe steps of intra and extra oral examination of pediatric patients</li> <li>• Perform clinical examination of dental pediatric patient</li> <li>• Prepare portfolio of at least one treated patient including documentation of history, examination, dental charting, clinical photographs, and treatment record and</li> </ul>	<p>LGIS(2)</p> <p>SGIS(2)</p> <p>Demo(2)</p> <p>Chairside teaching/Live Demo(2)</p>	<p>MCQs</p> <p>SEQs</p> <p>OSCE</p> <p>MINI CEX</p> <p>OMP</p>

	relevant investigations		
<b>3. Cariology</b> <ol style="list-style-type: none"> <li>a. Early childhood caries, definitions.</li> <li>b. Pathogens and carious lesion</li> <li>c. Caries risk assessment</li> <li>d. Caries management</li> <li>e. Prevention of caries               <ol style="list-style-type: none"> <li>i. Pit &amp; Fissure Sealants &amp; Preventive resin restorations</li> <li>ii. Fluoride application (Systemic &amp; topical)</li> </ol> </li> </ol>	<ul style="list-style-type: none"> <li>• Define and classify caries</li> <li>• Diagnose caries</li> <li>• Outline modalities of caries management</li> <li>• Apply fluoride varnish to teeth</li> </ul>	LGIS(2)  SGIS(2)  Demo(2)	MCQs  SAQs  OSCE/  OSPE
<b>4. Instruments in pediatric Dentistry</b> <ol style="list-style-type: none"> <li>a. Dental instrument classification, nomenclature</li> <li>b. Types of instruments</li> <li>c. Manual instruments</li> <li>d. Rotary instrument</li> </ol>	<ul style="list-style-type: none"> <li>• Identify instruments used in Field of pediatric Dentistry</li> <li>• Demonstrate instrument grips</li> </ul>	Demo(1)	OSCE
<b>5. Safe guarding children</b> <ol style="list-style-type: none"> <li>a. Categories of abuse</li> <li>b. Child neglect</li> <li>c. Emotional abuse</li> <li>d. Role of dental team in child protection and detection of dental neglect</li> <li>e. Shared responsibilities with child protection services</li> </ol>	<ul style="list-style-type: none"> <li>• Identify basic signs of child abuse</li> <li>• Perform active role in child protection and safety</li> </ul>	Role play(1)  Chairside teaching(2)	OSCE
<b>6. Pharmacological management of anxious patients</b> <ol style="list-style-type: none"> <li>a. Conscious sedation route and drugs</li> <li>b. Intravenous sedation</li> <li>c. Analgesia</li> <li>d. Assessing suitability for general anesthesia</li> </ol>	<ul style="list-style-type: none"> <li>• Enlist basic drugs and routes to administer in conscious sedation</li> <li>• Enumerate indications and contraindications of conscious sedation</li> <li>• Describe steps involved in intravenous sedation.</li> </ul>	LGIS(2)	MCQS  SAQs  SEQs

<p><b>7. Local anesthesia for children</b></p> <ol style="list-style-type: none"> <li>Topical anesthesia /jet injectors</li> <li>Basic injection techniques</li> <li>Complication of local anesthesia</li> <li>Contraindications of local anesthesia.</li> </ol>	<ul style="list-style-type: none"> <li>Perform basic techniques of local anesthesia</li> <li>Perform single tooth anesthesia</li> <li>List indications and contraindications of local anesthesia.</li> <li>Demonstrate LA procedure during clinical rotations</li> </ul>	<p>Demo(4) OMP(misc) LGIS(2)</p>	<p>MCQs OSCE DOPS</p>
<p><b>8. Treatment of early childhood caries</b></p> <ol style="list-style-type: none"> <li>Diagnosis of caries</li> <li>Preventive care</li> <li>Fluoride mechanism of action</li> <li>Fluoride use in different clinical situations</li> </ol>	<ul style="list-style-type: none"> <li>Recognize early childhood caries</li> <li>Counsel patient with preventive advice</li> <li>Describe fluoride use in different clinical situations</li> <li>Apply fissure sealants on teeth</li> </ul>	<p>LGIS(2) SGIS(2) Phantom Head</p>	<p>MCQs SAQs</p>
<p><b>9. Treatment of dental caries in preschool children</b></p> <ol style="list-style-type: none"> <li>Early childhood caries</li> <li>Pain management</li> <li>Principles of diagnosis and treatment planning in preschool children</li> <li>Symptoms of fluoride overdose</li> </ol>	<ul style="list-style-type: none"> <li>Diagnosis of early childhood caries</li> <li>Management of pain at emergency visit</li> <li>Plan basic treatment steps in preschool children</li> <li>Identify symptoms of fluoride overdose</li> </ul>	<p>LGIS(2) SGIS(2)</p>	<p>MCQs SEQ SAQs</p>
<p><b>10. Operative treatment of dental caries in young permanent dentition</b></p> <ol style="list-style-type: none"> <li>Diagnosis of rampant caries</li> <li>Fissure sealants</li> <li>Preventive resin restoration</li> <li>Rubber dam application</li> </ol>	<ul style="list-style-type: none"> <li>Diagnose of rampant caries</li> <li>Apply fissure sealants</li> <li>Describe principles of preventive resin restoration</li> <li>Apply rubber dam</li> </ul>	<p>LGIS(2) SGIS(2)</p>	<p>MCQs SEQ OSCE DOPS</p>

<p><b>11. Advanced restorative dentistry</b></p> <ul style="list-style-type: none"> <li>a. Vital bleaching technique in office /at home</li> <li>b. Non vital inside outside technique</li> <li>c. Micro abrasion technique</li> <li>d. Composite resin veneers</li> </ul>	<ul style="list-style-type: none"> <li>• Describe vital bleaching technique</li> <li>• Describe principles of non-vital bleaching technique</li> </ul>	<p>LGIS(1)</p>	<p>MCQS SAQS</p>
<p><b>12. Regenerative endodontic</b></p> <ul style="list-style-type: none"> <li>a. Stem cells used for regeneration</li> <li>b. Scaffold materials</li> <li>c. Clinical protocol of regeneration</li> <li>d. Advancements in regenerative endodontic</li> </ul>	<ul style="list-style-type: none"> <li>• Describe stem cells used for regeneration</li> <li>• Describe scaffold materials used in regenerative endodontic</li> <li>• Outline clinical steps involved in regeneration</li> </ul>	<p>LGIS(1) SGIS(1)</p>	<p>MCQS SEQs</p>
<p><b>13. Periodontal diseases in children</b></p> <ul style="list-style-type: none"> <li>a. Acute gingival conditions</li> <li>b. Necrotizing ulcerative gingivitis</li> <li>c. Drug induced gingival enlargement</li> <li>d. Screening of periodontal diseases in children</li> </ul>	<ul style="list-style-type: none"> <li>• Describe acute gingival conditions</li> <li>• Describe necrotizing ulcerative gingivitis</li> <li>• Describe drug induced gingival enlargement</li> <li>• Demonstrate clinical ability to screen diseases in children</li> </ul>	<p>LGIS(1) SGIS(1) Video demo(1)</p>	<p>MCQ SAQS OSCE</p>
<p><b>14. Traumatic injuries</b></p> <ul style="list-style-type: none"> <li>a. Classification of traumatic injuries</li> <li>b. Injuries to dental hard tissue and pulp</li> <li>c. Injuries to periodontal tissues</li> <li>d. Injuries to primary dentition</li> <li>e. Sequelae of injuries to the primary dentition</li> <li>f. Injuries to permanent dentition</li> </ul>	<ul style="list-style-type: none"> <li>• Define classify traumatic injuries</li> <li>• Describe injuries to dental hard tissue and pulp</li> <li>• Explain management of injuries to periodontal tissues</li> <li>• Describe injuries to primary dentition</li> <li>• Explain consequence of injuries to primary</li> </ul>	<p>LGIS(3) SGIS(2) Video demonstration(2)</p>	<p>MCQS SAQS SEQs</p>

	<p>dentition on permanent teeth</p> <ul style="list-style-type: none"> <li>Describe injuries to permanent dentition</li> </ul>		
<p><b>15. Amelogenesis Imperfecta</b></p> <ol style="list-style-type: none"> <li>Clinical features</li> <li>Differential diagnosis</li> <li>Phased dental rehabilitation of patient with amelogenesis imperfecta</li> </ol>	<ul style="list-style-type: none"> <li>Discuss clinical features of amelogenesis imperfect</li> <li>Discuss differential diagnosis of disease</li> <li>Explain phased dental rehabilitation of patient with amelogenesis imperfecta</li> </ul>	<p>LGIS(1)</p> <p>SGIS(1)</p> <p>CBL(1)</p>	<p>MCQS</p> <p>SAQS</p>
<p><b>16. Dentinogenesis Imperfecta</b></p> <ol style="list-style-type: none"> <li>Clinical features</li> <li>Differential diagnosis</li> <li>Phased dental rehabilitation of patient with Dentinogenesis Imperfecta</li> </ol>	<ul style="list-style-type: none"> <li>Discuss clinical features</li> <li>Discuss differential diagnosis</li> <li>State steps of Phased dental rehabilitation of patient with Dentinogenesis Imperfecta</li> </ul>	<p>LGIS(1)</p> <p>Video Demo(1)</p>	<p>MCQS</p> <p>SAQS</p> <p>OSCE</p>
<p><b>17. Dentinal Dysplasia</b></p> <ol style="list-style-type: none"> <li>Key features of type 1 dentine dysplasia</li> <li>Key features of type 2 dentine dysplasia</li> <li>Differential diagnosis</li> <li>Important foci of treatment</li> </ol>	<ul style="list-style-type: none"> <li>Elicit key features of type 1 dentine dysplasia</li> <li>Elicit key feature of type 2 dentine dysplasia</li> <li>Explain differential diagnosis</li> <li>Discuss important foci of treatment</li> </ul>	<p>LGIS(1)</p> <p>CBL(1)</p>	<p>MCQS</p> <p>SAQS</p> <p>SEQS</p>
<p><b>18. Molar incisor hypo mineralization</b></p> <ol style="list-style-type: none"> <li>Clinical features</li> <li>Structural changes</li> <li>Systemic association</li> <li>Phased dental management</li> </ol>	<ul style="list-style-type: none"> <li>Enlist clinical features</li> <li>Describe structural changes in dentition</li> <li>Explain systemic</li> </ul>	<p>LGIS(1)</p> <p>Demo(1)</p>	<p>MCQs</p> <p>SAQS</p>

<p>from deciduous dentition to adulthood</p>	<p>associations to MIH</p> <ul style="list-style-type: none"> <li>• Discuss steps of phased dental management from deciduous dentition</li> <li>• Application of pit and fissure sealants in MIH patients</li> </ul>		<p>OSCE</p>
<p><b>19. Pedodontic orthodontic interface</b></p> <ol style="list-style-type: none"> <li>a. Orthodontic assessment</li> <li>b. Index of orthodontic treatment needs</li> <li>c. Balancing /compensating extraction</li> <li>d. Supernumerary teeth location /classification/treatment planning</li> <li>e. Enforced extraction of first molars</li> <li>f. Management of impacted canines</li> <li>g. Space maintainer</li> <li>h. Missing lateral incisor</li> </ol>	<ul style="list-style-type: none"> <li>• State steps of orthodontic assessment</li> <li>• Tabulate index of orthodontic treatment needs</li> <li>• Discuss balancing/compensating extraction</li> <li>• Classify supernumerary teeth</li> <li>• State reasons for enforced extraction of first molars</li> <li>• Manage impacted canines</li> <li>• Plan treatment with space maintainers</li> <li>• Enlist treatment options of missing lateral incisors</li> </ul>	<p>LGIS(2)</p> <p>Demo (2)</p> <p>SGIS(2)</p>	<p>MCQS</p> <p>SAQs</p> <p>SEQs</p>
<p><b>20. Oral Medicine And Oral Surgery In Children</b></p> <ol style="list-style-type: none"> <li>a. Orofacial soft tissue condition</li> <li>b. Pyogenic granuloma</li> <li>c. Oral malignancy in children</li> <li>d. Management of acute orofacial infection</li> <li>e. Auto transplantation of teeth</li> </ol>	<ul style="list-style-type: none"> <li>• Discuss management of orofacial soft tissue conditions</li> <li>• Describe pyogenic granuloma</li> <li>• Discuss oral malignant lesions in children</li> <li>• Describe management of orofacial infections in pediatric patients</li> </ul>	<p>LGIS(2)</p> <p>SGIS(2)</p>	<p>MCQS</p> <p>SAQS</p>

	<ul style="list-style-type: none"> <li>• Manage criteria for autotransplantation of teeth</li> </ul>		
<p><b>21. Medical disability</b></p> <ol style="list-style-type: none"> <li>Dental management of patients with cardiovascular disorders</li> <li>Dental care of patients with bleeding disorder</li> <li>Leukemic patient dental rehabilitation plan</li> <li>Convulsive disorders</li> <li>Organ transplant patient pre and post-operative dental management plan</li> </ol>	<ul style="list-style-type: none"> <li>• Discuss dental management of patients with cardiovascular disorders</li> <li>• State management plan of patients with bleeding disorder</li> <li>• Describe leukemic patient rehabilitation plan</li> <li>• Discuss oral management options for patients with convulsive disorders</li> <li>• State pre and postoperative oral rehabilitation of patients with organ transplantation</li> </ul>	<p>LGIS(2)</p> <p>SGIS(2)</p>	<p>MCQS</p> <p>SAQS</p> <p>SEQS</p>
<p><b>22. Childhood impairment and disability</b></p> <ol style="list-style-type: none"> <li>Downs syndrome</li> <li>Oral considerations of patients with syndrome</li> <li>Dental considerations of patient with cerebral palsy</li> </ol>	<ul style="list-style-type: none"> <li>• Discuss oral management plan for patients with downs syndrome</li> <li>• Describe preventive plan of patients with syndrome</li> <li>• State management options of patients with cerebral palsy</li> </ul>	<p>LGIS(2)</p> <p>SGIS(2)</p>	<p>SEQS</p> <p>MCQS</p> <p>SAQs</p>

## **CLINICAL ROTATION**

The following procedures will be performed under the supervision of department:

<b>NO</b>	<b>LEARNING OBJECTIVES</b>	<b>LEARNING MODALITY</b>
1.	Obtain patient history Perform Clinical Examination	Live patient demo Mini CEX CBD
2.	Administer local anesthesia using appropriate technique.	Live patient demo DOPS
3.	Apply Pit and fissure sealants	Live patient demo DOPS
4.	Perform Atraumatic restorative techniques	Live patient demo OMP
5.	Restore primary dentition using Glass Ionomer	Live patient demo OMP
6.	Restore young permanent dentition using Amalgam for 1. Class I 2. Class II	Live patient demo OMP DOPS
7.	Perform pulpotomy in posterior primary dentition	Live patient demo OMP DOPS
8.	Perform plupectomy in single rooted anterior primary dentition	Live patient demo OMP DOPS
9.	Make a complete portfolio including 1. History 2. Diagnosis 3. Extra oral examination 4. Intra oral examination 5. Relevant diagnostic investigations 6. Differential diagnosis 7. Complete treatment planning 8. Management 9. Follow up	Portfolio Mini CEX CBD

10.	Outline differential diagnosis of dental anomalies	CBL Video Demo
11.	Plan preventive care for patients with learning difficulties	CBL Video demo
12.	Execute Awareness exercise on "World Oral Health Day" regarding dietary advice and oral hygiene measures to pediatric patients at FFH.	SGD/ Assignment

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