



## Syllabus

### PEDIATRIC AND PREVENTIVE DENTISTRY BDS THEORY COURSE CURRICULUM 3<sup>rd</sup>& 4<sup>th</sup> BDS part 1 and part 2

#### **GOAL:**

The dental graduates during training in the institutions should acquire adequate knowledge, necessary skills and reasonable attitude so as to provide comprehensive oral health care to children & those with special health care needs.

#### **OBJECTIVES:**

1. Candidate should be able to acquire knowledge and understanding of pediatric dentistry.
2. Instill a positive attitude and behaviour in children.
3. Understand the principles of preventive dentistry right from birth to adolescence
4. Guide and counsel the parents in regards to various treatment modalities including different facets of preventive dentistry.
5. In Paediatric dentistry, the students should concentrate on clinical management, efficacy of preventive measures, treatment needs particularly for children with disabilities.
6. The value of behavioral methods of anxiety management should be emphasized.

#### **SKILLS:**

1. Should be competent to treat dental diseases which are occurring in child patient.
2. Manage the disabled children effectively and efficiently, tailored to the needs of individual requirement and conditions.

#### **ATTITUDES:**

1. Professional honesty and integrity are to be fostered
2. Respect child patient's rights and privileges, including child patient's right to information and right to seek a second opinion.



## COMPETENCIES:

On completion of the undergraduate training programme the graduate should:

- Be able to instill a positive attitude and behavior in children towards oral health and understand the principles of prevention and
- preventive dentistry right from birth to adolescence.
- Be able to guide and counsel the parents/guardian in regards to various treatment modalities including different facets of preventive dentistry.
- Be able to treat dental diseases occurring in child patient
- Be able to manage the physically and mentally challenged / disabled children effectively and efficiently, tailored to the needs of individual requirement and conditions.

## SYLLABUS

Sl. No.	Topic	Hours
	<b>THEORY TOPICS FOR III YEAR {15 hours}</b>	
1	<b>INTRODUCTION TO PAEDIATRIC AND PREVENTIVE DENTISTRY</b> Definition, Scope, Objectives and Importance	1
2	<b>DENTAL ANATOMY AND HISTOLOGY</b> ♦ Chronology of Eruption of teeth ♦ Differences between primary and permanent teeth ♦ Eruption disorders and their management including teething, ectopic eruption, ankylosis etc. ♦ Importance of first permanent molar	1
3	<b>GROWTH AND DEVELOPMENT</b> <b>(will be covered by Department of Orthodontics also)</b> ♦ Importance of study of growth and development in Pedodontics ♦ Prenatal and postnatal factors in growth and development ♦ Theories of growth and development ♦ Methods to measure growth ♦ Development of maxilla and mandible and age related changes	2



4	<b>DEVELOPMENT OF OCCLUSION FROM BIRTH TO ADOLESCENCE</b> <ul style="list-style-type: none"><li>◆ Mouth of neonate &amp; gumpads</li><li>◆ Primary Dentition period</li><li>◆ Mixed dentition period</li><li>◆ Establishment of occlusion</li><li>◆ Study of variation and abnormalities</li></ul>	2
5	<b>CASE HISTORY RECORDING</b> <ul style="list-style-type: none"><li>◆ Principles of history taking, examination, investigations,</li><li>◆ diagnosis and treatment planning</li></ul>	1
6	<b>CHILD PSYCHOLOGY</b> <ul style="list-style-type: none"><li>◆ Definition and Importance of understanding Child Psychology in Pedodontics</li><li>◆ Theories and Psychological development from birth through adolescence</li><li>◆ Dental fear, anxiety and their management, types of cry</li><li>◆ Application of Psychology principles in management of child patients in the dental office</li><li>◆ Psychological disorders including anorexia, bulimia</li><li>◆ Child abuse and neglect</li></ul>	4
7	<b>BEHAVIOUR AND BEHAVIOR MANAGEMENT</b> <ul style="list-style-type: none"><li>◆ Definition, ◆ Classification and types of behavior</li><li>◆ Factors influencing child behavior</li><li>◆ Non- Pharmacologic management of behavior</li><li>◆ Pharmacologic management of behavior</li><li>◆ Conscious sedation including nitrous oxide- oxygen inhalational anesthesia</li><li>◆ Pharmacological principles in Paediatric Dentistry- drug dosage formulae</li><li>◆ Analgesics, anti-inflammatory and antibiotics commonly prescribed for children</li></ul>	4



	<b>THEORY TOPICS FOR FINAL YEAR PART I {20 hours}</b>	
8	<b>DENTAL CARIES</b> <ul style="list-style-type: none"><li>◆ Diagnostic procedures and caries detection</li><li>◆ Caries pattern in primary, young permanent and permanent teeth</li><li>◆ Early childhood Caries, rampant caries- definition, classification, etiology, pathogenesis, clinical features, complications and management</li><li>◆ Role of diet and nutrition in dental caries and sugar substitutes</li><li>◆ Diet counseling and diet modifications</li><li>◆ Caries activity tests , caries prediction, susceptibility and their clinical application</li></ul>	3
9	Dental Radiology as related to Pedodontics	1
10	Dental materials used commonly in children and adolescents <b>(Outline revision)</b>	1
11	<b>PAEDIATRIC OPERATIVE DENTISTRY</b> <ul style="list-style-type: none"><li>◆ Principles of Operative Dentistry</li><li>◆ Isolation- Importance and techniques</li><li>◆ Young Permanent Teeth and clinical considerations</li><li>◆ Modifications in cavity preparation and recent cavity designs for primary and young permanent teeth</li><li>◆ Atraumatic / Alternative Restorative Technique (ART)</li><li>◆ Other methods of caries removal</li><li>◆ Restoration of carious teeth ( Primary, young permanent and permanent teeth) using various restorative materials like glass ionomers, composites, silver amalgam</li><li>◆ Preformed crowns: Stainless steel, polycarbonate and strip crowns</li></ul>	5
12	<b>GINGIVAL AND PERIODONTAL DISEASES IN CHILDREN</b> <ul style="list-style-type: none"><li>◆ Normal gingival and periodontium in children</li><li>◆ Definition, classification</li><li>◆ Etiology, Pathogenesis and management of gingival and periodontal condition seen in children and adolescents</li></ul>	2
13	<b>FLUORIDES</b> <ul style="list-style-type: none"><li>◆ Historical background</li><li>◆ Systemic fluorides: Availability, agents, concentrations, advantages and disadvantages</li></ul>	4



	<ul style="list-style-type: none"> <li>◆ Topical fluorides: agents, composition, method of application both for professional and home use, advantages and disadvantages</li> <li>◆ Mechanism of action and its anticariogenic effect</li> <li>◆ Fluoride toxicity and its management</li> <li>◆ Defluoridation techniques</li> </ul>	
14	<p><b>PAEDIATRIC ENDODONTICS</b></p> <p>Principles and diagnosis          Classification of pulp pathology          Management of pulpally involved primary, young permanent and permanent teeth including materials used and techniques followed:          Pulp capping, Pulpotomy , Pulpectomy , Apexogenesis          Apexification</p>	4
<p><b>THEORY TOPICS FOR FINAL YEAR PART II {30 hours}</b></p>		
15	<p><b>TRAUMATIC INJURIES TO TEETH</b></p> <p>Definition, classification Etiology and incidence          Management of trauma to primary teeth          Sequelae and reaction following trauma to primary teeth          Management of trauma to young permanent teeth          Prevention of trauma: mouth protectors</p>	5
16	<p><b>PREVENTIVE ORTHODONTICS</b></p> <p>Importance and functions of deciduous dentition          Effects of premature loss of primary teeth</p> <p><b>Preventive Orthodontics:</b>          Definition, Preventive measures , Space loss          Space maintenance and space management          Space maintainers: definition, classification, indications and contra indications, advantages and disadvantages including construction of fixed space maintainers          Space regainers          Mixed dentition analysis          Serial extraction</p>	5
17	<p><b>INTERCEPTIVE ORTHODONTICS</b></p> <p>Oral Habits in children          Definition, classification and etiology of all habits</p>	4



	Clinical features of deleterious oral habits including non- nutritive sucking, mouth breathing, non functional grinding, masochistic and occupational habits Management of oral habits in children Other problems seen during primary and mixed dentition period and their management	
18	<b>DENTAL MANAGEMENT OF CHILDREN WITH SPECIAL NEEDS</b> Definition, classification, etiology, clinical features, special considerations in the dental management of : Physically handicapping conditions Mentally handicapping conditions Medically compromising conditions Genetic disorders and importance of genetic counseling including cleft lip and palate and its management	5
19	<b>ORAL SURGICAL PROCEDURES IN CHILDREN</b> Indications and contra indications for extraction Minor surgical procedures in children Knowledge of local and general anesthesia	2
20	<b>PREVENTIVE DENTISTRY</b> Definition, principles and scope Levels and types of prevention Infant oral health care and first dental visit <b>PREVENTIVE MEASURES:</b> Minimal intervention Pit and fissure sealants Preventive resin restorations Newer agents available for caries prevention and demineralization Caries vaccine	4
21	Nanodentistry – Introduction, principles and technique – an outline	1
22	Dental Health Education and school dental health programmes	1
23	Importance of Dental HOME and anticipatory guidance	1
24	Dental emergencies in children and their management	1
25	Setting up of paediatric dental practice including ethics	1



## RECOMMENDED TEXT BOOKS

- 1) Dentistry for the Child and Adolescence - Mc. Donald.
- 2) Pediatric Dentistry (Infancy through Adolescence) - Pinkham.
- 3) Pediatric Dentistry: Total Patient Care – Stephen H.Y. Wei
- 4) Clinical Pedodontics – Sidney B. Finn
- 5) Fundamentals of Pediatric Dentistry – R.J. Mathewson
- 6) Handbook of Clinical Pedodontics - Kenneth. D.
- 7) Text Book of Pedodontics- Shobha Tandon
- 8) Pediatric Dentistry - Damle S. G.
- 9) Kennedy's Pediatric Operative Dentistry - Kennedy & Curzon.
- 10) Handbook of Pediatric Dentistry – Cameron and Widmer
- 11) Pediatric Dentistry - Richard R. Welbury
- 12) Pedodontics: A Clinical Approach - Goran Koch
- 13) Orthodontics and Pediatric Dentistry (Colour Guide) - D Millet & R Welbury
- 14) Color Atlas of Oral Diseases in Children and Adolescents - George Laskaris
- 15) Dental Management of the Medically Compromised Patient –J.W. Little
- 16) Pediatric Dentistry – Scientific Foundations and Clinical Practice – Stewart and Barber.
- 17) Clinical Use of Fluorides - Stephen H. Wei.
- 18) Understanding of Dental Caries - Niki Foruk.
- 19) Essentials of Community & Preventive Dentistry - Soben Peters.
- 20) Behaviour Management – Wright
- 21) Traumatic Injuries - Andreason.
- 22) Occlusal Guidance in Pediatric Dentistry - Stephen H. Wei / Nakata
- 23) Pediatric Oral & Maxillofacial Surgery - Kaban.
- 24) Pediatric Medical Emergencies - P. S. Whatt.
- 25) An Atlas of Glass Ionomer Cements - G. J. Mount.
- 26) Textbook of Pediatric Dentistry - Braham Morris.
- 27) Primary Preventive Dentistry - Norman O. Harris.
- 28) Preventive Dentistry - Forrester.



- 29) Contemporary Orthodontics – Profitt.
- 30) Preventive Dentistry - Depaola.
- 31) Endodontics - Ingle.
- 32) Pathways of Pulp - Cohen.
- 33) Management of Traumatized anterior Teeth - Hargreaves.

<b>YEAR</b>	<b>THEORY HOURS</b>	<b>CLINICAL HOURS</b>	<b>TOTAL</b>
3 <sup>rd</sup> Year	15	60	75
Final Part I	20	140	160
Final Part II	30	120	350
Total	65	320	385