

## **SYLLABUS / COURSE DETAILS FOR: PERIODONTOLOGY:**

### **Introduction:**

Relates to the science of diagnosis, prevention and management of the diseases of the tissues and structures surrounding and supporting the teeth.

The Primary objective of the course in Periodontology is to train a General Dental Practitioner who is clinically proficient, scientifically orientated, analytical, empathetic and ethical and committed to the improvement of periodontal health in the community.

The learning outcomes expected from the student on completion of the course are:

To achieve mastery of knowledge in the diverse disciplines involved in providing care for patients with periodontal disease.

To understand the interrelationship between periodontal health and other oral/systemic problems and to be able to work efficiently as a team in improving the quality of life of patients presenting with periodontal disease

To have in depth knowledge of basic science applicable to Periodontology

To be able to communicate with patients effectively to improve the oral health status and adherence with health care recommendation

### **Competencies**

#### *Major Competence*

The new graduate in dental surgery must be competent to manage periodontal diseases in patients of all ages. Specifically, he or she must:

#### *Supporting Competences:*

Understand Occlusion and be able to identify the multidisciplinary approach in the treatment of occlusion related disorders

Be competent at evaluating the periodontium, establishing a diagnosis and prognosis and formulating a treatment plan.

Be competent at educating patients concerning the aetiology of periodontal disease and encourage them to assume responsibility for their oral health.

Be competent at instructing patients in appropriate oral hygiene methods compatible with periodontal health.

Be competent in the use of local periodontal therapeutic substances, in supragingival and subgingival scaling and root debridement, using both powered and manual instrumentation and in stain removal and prophylaxis.

Have knowledge of the secondary periodontal etiological factors.

Be competent to diagnose, explain and discuss the need for advanced periodontal surgical procedures and the proper method of referral for specialty care.

Be competent at evaluating the results of periodontal treatment and establish and monitor a maintenance programme, including a discussion of risk factors

**Periodontology**

**1) The normal Periodontium: Periodontal Anatomy: Clinical & Histological Characteristics**

**2) Etiology of Periodontal Disease/ Microbiology of Periodontal disease**

**3) Classification of Periodontal Disease**

**4) Gingival diseases**

**Course Details**

<b><u>Course Description / Objectives</u></b>	<b><u>Suggested Lectures Hours</u></b>
<p><b><u>Periodontal Anatomy: Clinical &amp; Histological Characteristics:</u></b></p> <p>a) Periodontium &amp; its structures.</p> <p>1) Gingiva</p> <ul style="list-style-type: none"> <li>• <i>Microscopic features:</i></li> <li>• <i>Gingival epithelial</i></li> <li>• <i>Gingival connective tissue</i></li> </ul> <p>2) Periodontal Ligaments</p> <ul style="list-style-type: none"> <li>• <i>Periodontal fibers</i></li> <li>• <i>Cellular element</i></li> <li>• <i>Ground substance</i></li> <li>• <i>Functions of the periodontal ligaments</i></li> </ul> <p>3) Alveolar bone</p> <ul style="list-style-type: none"> <li>• <i>Cells of intercellular matrix</i></li> <li>• <i>Socket wall</i></li> <li>• <i>Bone marrow</i></li> <li>• <i>Periosteum and endosteum</i></li> <li>• <i>Inter dental septum</i></li> <li>• <i>Osseous topography</i></li> <li>• <i>Fenestration and dehiscence</i></li> <li>• <i>Remodeling of alveolar bone</i></li> </ul> <p>4) Cementum</p> <ul style="list-style-type: none"> <li>• <i>Permeability of cementum</i></li> <li>• <i>Cemento enamel junction</i></li> <li>• <i>Cemento dentinal junction</i></li> <li>• <i>Thickness of cementum</i></li> </ul>	<p>12</p>

<ul style="list-style-type: none"> <li>• <i>Cementum resorption and repair</i></li> <li>• <i>Exposure of cementum to oral environment</i></li> </ul> <p>b) Gingiva &amp; its types.</p> <ol style="list-style-type: none"> <li>1) Marginal Gingiva</li> <li>2) Attached Gingiva</li> <li>3) Gingival sulcus</li> <li>4) Interdental Gingiva</li> <li>5) Correlation of clinical and microscopic features</li> </ol> <ul style="list-style-type: none"> <li>• <i>Color</i></li> <li>• <i>Size</i></li> <li>• <i>Contour</i></li> <li>• <i>Shape</i></li> <li>• <i>Consistency</i></li> <li>• <i>Surface texture</i></li> <li>• <i>position</i></li> </ul>	
<p><b><u>Basic Etiology of Periodontal Disease</u></b></p> <p>Etiology of periodontal disease &amp; classify its types</p> <p>Periodontitis</p> <ul style="list-style-type: none"> <li>• <i>Chronic periodontitis</i></li> <li>• <i>Aggressive periodontitis</i></li> <li>• <i>Periodontitis as a manifestation of systemic disease</i></li> <li>• <i>Necrotizing periodontal disease</i></li> <li>• <i>Abscesses of the Periodontium</i></li> <li>• <i>Periodontitis associated with endodontic lesion</i></li> </ul> <p>Types of etiological factors. Plaque and Calculus.</p> <p>Local (extrinsic) factors.</p> <ol style="list-style-type: none"> <li>1) Irritating factors</li> <li>2) Functional factors</li> </ol> <p>Systemic (intrinsic) factors.</p> <p>Intrinsic (systemic) &amp; extrinsic (local) factors.</p> <p>Microbiology of Periodontal disease</p> <ul style="list-style-type: none"> <li>• <i>Diversity of intra oral surfaces for bacterial adhesion</i></li> <li>• <i>Structure and composition of dental plaque</i></li> </ul>	13

<ul style="list-style-type: none"> <li>• <i>Plaque as a biofilm</i></li> <li>• <i>Plaque formation at the ultra-level</i></li> <li>• <i>Growth dynamics of dental plaque</i></li> <li>• <i>Physiologic properties of dental plaque</i></li> <li>• <i>Special bacterial behavior in biofilm</i></li> <li>• <i>Principle of bacterial transmission, translocation or cross-infection</i></li> <li>• <i>Association of plaque microorganisms with periodontal disease</i></li> <li>• <i>Microbial specificity of periodontal disease</i></li> <li>• <i>Key characteristics of specific perio pathogens</i></li> <li>• <i>Future advances in periodontal microbiology</i></li> </ul> <p>Host responses in Periodontal disease</p> <ul style="list-style-type: none"> <li>• <i>Microbiologic aspects of the microbial host interaction</i></li> <li>• <i>Immunologic aspect of the microbial host interaction</i></li> </ul> <ol style="list-style-type: none"> <li>1) Cell-mediated</li> <li>2) Humoral immunity</li> </ol>	
<p><b><u>Classification of Periodontal Disease:</u></b></p> <ol style="list-style-type: none"> <li>a) Periodontal disease according to the tissue affected.</li> <li>b) Bone loss and patterns of bone destruction</li> <li>c) Periodontal response to external forces</li> <li>d) Chronic periodontitis</li> <li>e) Necrotizing ulcerative periodontitis</li> <li>f) Aggressive periodontitis</li> <li>g) Periodontal disease as recommended by ADA.</li> <li>h) Etiological factors and Treatment.</li> </ol>	13
<p><b><u>Gingival Diseases:</u></b></p> <ol style="list-style-type: none"> <li>a) Gingivitis &amp; classify its types.</li> <li>b) The types of gingivitis.</li> <li>c) Acute necrotizing ulcerative gingivitis &amp; give its clinical characteristics.</li> <li>d) Acute primary herpetic gingivostomatitis.</li> <li>e) Gingival diseases in childhood.</li> <li>f) Etiological factors and Treatment of gingival diseases</li> </ol>	8

<p>g) Desquamative gingivitis</p> <p>h) Epidemiology of Gingival and Periodontal diseases</p> <p>i) Gingival Enlargement</p> <p>j) Periodontal diseases</p> <p>k) Early Onset Periodontitis</p>	
<p><b>IMPLANTS</b></p> <p>Oral implantology, basic concepts</p> <p>Biological aspects of oral implants</p> <p>Clinical aspects and evaluation of patient</p> <p>Diagnostic imaging for the implant</p> <p>Standard implant surgical procedures</p> <p>Periodontal implications, implant-mucositis, peri-implantitis and prevention strategies.</p>	6
<p><b>Epidemiology of Gingival and Periodontal diseases</b></p> <p>a) What is Epidemiology?</p> <ul style="list-style-type: none"> <li>• <i>principles of diagnostic testing</i></li> <li>• <i>risk versus prognosis</i></li> <li>• <i>how to measure gingival disease</i></li> <li>• <i>how to measure periodontal disease</i></li> </ul> <p>b) Epidemiologic study designs</p> <p>c) Index, Plaque, gingivitis and periodontitis</p>	2
<p><b><u>Gingival Enlargement:</u></b></p> <p>a) Gingival enlargement.</p> <p>b) Gingival enlargement associated with medications</p> <p>c) Familial gingival enlargement.</p> <p>d) Neoplastic gingival enlargement.</p>	2
<p><b><u>Periodontal diseases</u></b></p> <p>a) Periodontitis &amp; discuss its clinical characteristics.</p> <p>b) Radiographic features of periodontitis.</p> <p>c) Periodontal pocket formation.</p> <p>d) Periodontal pockets – detail and classification</p> <p>e) Pattern of alveolar bone periodontal ligament destruction and bone loss</p> <p>f) Mechanism of periodontal tissue destruction.</p> <p>g) Etiology of periodontitis.</p> <p>h) Gingivitis &amp; periodontitis.</p> <p>i) Treatment of periodontitis.</p> <p>j) Preventive measures for periodontitis</p> <p>k) Systemic manifestations of Periodontal disease</p>	6

l) Oral Malodor m) Smoking and Periodontitis	
<b><u>Early Onset Periodontitis:</u></b>  a) Prepubertal periodontitis. b) Juvenile periodontitis & describe its clinical characteristics. c) Radiographic features of juvenile periodontitis. d) Treatment of juvenile periodontitis. e) Rapidly progressive periodontitis. f) Chronic Periodontitis g) Periodontitis in HIV patients 9) Periodontal Occlusal Trauma: 10) Gingival Recession: 11) Pericoronitis, Gingival Abscess, Periodontal Abscess & Cysts 12) Pathogenesis of Periodontal disease. 13) Role of systemic diseases in periodontal disease	5
<b><u>Periodontal Occlusal Trauma:</u></b> a) Periodontal occlusal trauma & describe its clinical characteristics. b) Radiographic features of periodontal occlusal trauma. c) Histopathology & pathogenesis of periodontal occlusal trauma. d) Etiology of periodontal occlusal trauma. e) Prognosis, treatment & preventive measures of periodontal occlusal trauma. f) Splinting	2
<b><u>Gingival Recession:</u></b> a) Gingival recession & describe its clinical characteristics & radiographic findings b) Histopathology, pathogenesis & etiology of gingival recession. c) Nutritional implications, prognosis, treatment & preventive measures of gingival recession.	2
<b><u>Pericoronitis, Gingival Abscess, Periodontal Abscess &amp; Cysts:</u></b> a) Define pericoronitis & describe its clinical characteristics along with radiographic signs b) Histopathology, pathogenesis & etiology of pericoronitis. c) Treatment & prognosis of	5

<ul style="list-style-type: none"> <li>pericoronitis.</li> <li>d) Dental abscess.</li> <li>e) Gingival abscess.</li> <li>f) Periodontal abscess.</li> <li>g) Gingival &amp; periodontal abscess.</li> <li>h) Clinical characteristics of periodontal abscess.</li> <li>i) Radiographic features of periodontal abscess.</li> <li>j) Etiology &amp; treatment of periodontal abscess.</li> <li>k) Cyst &amp; its types.</li> </ul> <p><b>Treatment of Periodontal disease</b></p> <ul style="list-style-type: none"> <li>12) Periodontal Examination, Diagnosis, Prognosis &amp; Treatment Plan</li> <li>13) Plaque Control In Periodontal Therapy</li> <li>14) Basic Instrumentation for Scaling &amp; Root Planning</li> <li>15) Surgical Periodontal Procedures</li> <li>16) Periodontal medicine</li> <li>17) Saliva</li> </ul>	
<p><b><u>Periodontal Examination, Diagnosis, Prognosis &amp; Treatment Plan:</u></b></p> <ul style="list-style-type: none"> <li>a) Practice periodontal examination.</li> <li>b) Furcation involvement.</li> <li>c) Mucogingival defects.</li> <li>d) Tooth mobility &amp; describe its mobility grades.</li> <li>e) Periodontal treatment plan &amp; describe its phases. <ul style="list-style-type: none"> <li>1) Phase I</li> <li>2) Phase II</li> <li>3) Phase III</li> </ul> </li> </ul>	2
<p><b><u>Plaque Control in Periodontal Therapy:</u></b></p> <ul style="list-style-type: none"> <li>a) Plaque formation &amp; oral hygiene aids</li> <li>b) Types of brushing techniques.</li> <li>c) Types of brushing techniques.</li> <li>d) Bass method &amp; modified bass method.</li> <li>e) Stillman's method &amp; modified stillman's technique.</li> <li>f) Dental floss.</li> <li>g) Disclosing tablets &amp; solutions &amp; its use.</li> <li>h) Dentifrices.</li> <li>i) Dietary counseling in plaque control.</li> <li>j) Preventive periodontics.</li> </ul>	3

<b>Clinical Practical</b>	<b><u>Non- surgical Therapy: Basic Instrumentation for Scaling &amp; Root Planning:</u></b> a) Parts of instruments. b) Instrument grasp 1) Standard pen grasp 2) Modified standard pen grasp 3) Palm & thumb grasp c) Use of scaling instruments. d) Subgingival scaling & root planning instrumentation. e) Procedure of instrument sharpening	4	and
	<b><u>Surgical Periodontal Procedures:</u></b>	5	
	<b><u>Principles of Periodontal Therapy</u></b> a) Gingival curettage. b) Scaling & deep curettage. c) Gingivectomy & its indication. d) Periodontal flap procedures. e) Ostectomy & osteoplasty. f) Treatment of tooth sensitivity. g) Periodontal regeneration procedures h) Periodontal dressing i) Splinting	4	
	<b><u>Periodontal restorative interrelationships</u></b> Biologic considerations Margin placement and biologic width Biologic width evaluation Marginal placement guidelines Clinical procedures in marginal placement Marginal fit Crown contour Esthetic tissue management Occlusal considerations in restorative therapy Special restorative considerations	4	
	<b><u>Periodontal maintenance</u></b> Maintenance program: <i>Examination and evaluation</i> <i>Checking of plaque control</i> <i>Treatment</i> <i>Recurrence of periodontal disease</i>	3	

**requirement in Periodontology:**

**CLINICAL REQUIREMENTS**

<b>Procedure</b>	<b>No. of Cases</b>
Medical history, dental history and its interpretation	25
Extra oral and intra oral exam. With charting	25
Other investigations and their	25



interpretation	
Diagnosis, prognosis and treatment plan	10
Case discussion and case presentation	05
Oral hygiene instruction and follow-up	25
Manual Scaling	25
Polishing	10
Ultrasonic Scaling	10
Fluoride Application	05
Root Planning	02
Gingival Curettage	02

#### **OBSERVED CASES:**

<b>Procedure</b>	<b>No. Of Cases</b>
Gingivectomy (simple)	02
Splinting	02
Various flap procedures	02

#### **BOOKS RECOMMENDED:**

1. Clinical Periodontology by Glickman & Carranza
2. Clinical Periodontology and Periodontics by Reddy, Shanti Priya
3. EOP by Elisabeth & Hoe
4. Periodontics: Current Concepts and Treatment Strategies, Peter N. Galgut, Sherie A Dowsatt
5. Manual of Clinical Periodontics, Francis G Serio, Charles E. Hawley
6. Outline of Periodontics by J.D Manson

#### **JOURNALS RECOMMENDED**

1. Journal of clinical Periodontology
2. Journal of Periodontology
3. Periodontology 2000

#### **SYLLABUS / COURSE DETAILS FOR:**

#### **ORAL MEDICINE/ ORAL DIAGNOSIS & ORAL RADIOLOGY:**

##### **Introduction:**

Oral Medicine is the science of diagnosing, treating, or preventing orofacial disease. According to this specialty treatment of the diseases is done by drugs, diet, exercise, and other nonsurgical means.

#### **Learning Resources**

##### **Textbooks**