

**NORMAL PERIODONTIUM**  
**(Credit Hours 0.29)**

<b>Expected outcome</b>	<b>Intended learning objectives</b>	<b>Teaching learning methods</b>	<b>Assessment tools</b>
This module will provide information regarding gingival and its parts	Know about background and definitions	Attended lectures, seminars in the department.	Written examination
Microscopic features and clinical features	Parts of gingival- marginal gingiva, attached gingiva, interdental gingiva, gingival epithelium and connective tissue	Independent study	Multiple choice questions
Co-relation of clinical and microscopic features	Color, contour, consistency, size, shape, surface texture and position	Clinical teaching in Periodontology clinic	Asking questions Searching for and acquiring the evidence
Tooth supporting structures	Fibers,cellular elements,ground substance Permeability of cementum,CEJ,Restoration and repair		
Periodontal ligament Cementum	Osseous topography,fenestration and dehiscence		
Alveolar process	Physiologic migration of teeth		
Development of Attachment Process	Effects of aging on periodontium		
Aging in periodontium	Gingival diseases		

## CLASSIFICATION AND EPIDEMIOLOGY OF PERIODONTAL DISEASES

(Credit Hours 0.29)

Expected outcome	Intended learning objectives	Teaching learning methods	Assessment tools
This module will provide information regarding classification and epidemiology of periodontal diseases	Know about classifications, conditions affecting the periodontium and epidemiology of gingival and periodontal diseases	Attended lectures, seminars in the department.	Written examination
Classification of diseases conditions and affecting the periodontium	Gingival diseases Periodontitis Necrotizing periodontal diseases Abscesses of the periodontium Periodontitis associated with endodontic lesions Developmental or acquired deformities and conditions Mucogingival deformities and conditions Occlusal trauma	Independent study	Multiple choice questions
Epidemiology of gingival and periodontal diseases	Definitions Diagnosis Risk versus prognosis Gingival disease Chronic periodontitis Aggressive periodontitis	Clinical teaching in Periodontology clinic	Asking questions Searching for and acquiring the evidence

## ETIOLOGY OF PERIODONTAL DISEASES

(Credit Hours 0.29)

Expected outcome	Intended learning objectives	Teaching learning methods	Assessment tools
This module will provide information regarding etiology of periodontal diseases	Know about microbiology of periodontal diseases, role of dental calculus, genetic factors, immunity, inflammation, microbial interactions, smoking and host modulation	Attended lectures, seminars in the department.	Written examination
Microbiology of periodontal diseases	<p>Diversity of intraoral surfaces for bacterial adhesion .</p> <p>Structure and composition of dental plaque.</p> <p>Plaque as a biofilm.</p> <p>Plaque formation at the ultra structural level .</p> <p>Growth dynamics of dental plaque.</p> <p>Physiological properties of dental plaque</p> <p>Specific bacterial behavior In biofilms .</p> <p>Principles of bacterial transmission or cross infection .</p> <p>Association of plaque microorganisms with periodontal diseases.</p> <p>Microbial specificity of periodontal diseases.</p> <p>Microorganism associated with specific periodontal diseases.</p> <p>Key characteristics of specific periopathogens .</p> <p>Future advances in periodontal microbiology.</p>	Independent study	Multiple choice questions

Role of dental calculus	Calculus. Other predisposing factors.	Clinical teaching in Periodontology clinic	Asking questions Searching for and acquiring the evidence
Genetic factors associated with periodontal diseases	Genetic study designs. Aggressive periodontal diseases. Chronic periodontitis. Clinical implications of genetic studies. Future of genetic studies in Periodontology.		
Immunity and inflammation	Cells of Immunity and inflammation Complement. Tran endothelial migration. Leukocyte functions. Specific immune responses.		
Microbial interactions with the host in periodontal diseases	Microbial aspects of the microbial host interaction. Immunological aspects of the microbial host interaction . Microbiology and immunology in gingival health. Microbiology and immunology in periodontal diseases.		
Smoking and periodontal diseases	Effect of smoking on prevalence and smoking of periodontal disease. Effect of smoking on etiology and pathogenesis of periodontal disease. Effect of smoking on response to periodontal therapy.		
Host modulation	Historical perspective. Host response and potential targets for Host modulation . Host modulation therapy. Host modulation factors.		

<b>Periodontal disease and systemic health</b> <b>Periodontal pathology - Part 1-6</b> <b>(Credit Hours 0.29)</b> <b>Gingival diseases</b> <b>(Credit Hours 0.29)</b>			
<b>Expected outcome</b>	<b>Intended learning objectives</b>	<b>Teaching learning methods</b>	<b>Assessment tools</b>
This module will provide information regarding influence of endocrine disorders, hormonal changes on the periodontium.	To know the influence of endocrine disorders like diabetes and female sex as well as corticosteroid hormones and hyperparathyroidism on periodontium	Attended lectures, seminars in the department.	Written examination
Hematological disorders and immune deficiencies on the periodontium.	To know the effect of leukemia, anemia, thrombocytopenia and leukocyte disorders on periodontium		Multiple choice questions (MCQ) OSCE & OSPE
Stress and psychosomatic disorders on the periodontium.	To learn the effect of psychosocial stress, depression and stress induced immunosuppressant on periodontium as well as on periodontal therapy.		
Nutrition and Other systemic conditions	Study the role of vitamins and protein deficiency on periodontal diseases	Independent study	
Periodontal medicine: Impact of periodontal medicine on systemic health (CVD's, Stroke, diabetes mellitus, pregnancy and pulmonary diseases.	To know pathobiology of periodontitis, focal infection theory, evidence based clinical practice.	Clinical teaching in Postgraduate clinic	
Oral malodor	To know epidemiology, extra oral and intraoral causes of malodor, diagnosis and treatment of malodor.	Independent study	

<b>Expected outcome</b>	<b>Intended learning objectives</b>	<b>Teaching learning methods</b>	<b>Assessment tools</b>
Defence mechanism of the gingival	To know the role of junctional and sulcular epithelium as well as saliva in defence mechanism	Attended lectures, seminars in the department.	Written examination
Gingival inflammation Clinical features of gingivitis	Know about stages of gingivitis Causative factors of gingival bleeding and associated clinical and systemic changes	Independent study	Multiple choice questions (MCQ) OSCE & OSPE
Gingival enlargement	To know causes and histopathology of gingival enlargement	Clinical teaching in clinic	
Acute gingival infections	Know about clinical features, etiology and diagnosis of NUG, Primary herpetic gingivostomatitis and pericoronitis.	Demonstration, training and practice in Postgraduate clinic	
Gingival diseases in childhood Desquamative gingivitis	To know Periodontium of deciduous dentition, physiological gingival changes associated with tooth eruption and traumatic changes in the periodontium. Know systematic diagnosis approach and differential diagnosis of desquamative gingivitis.		

<b>Periodontal pathology : Part –II Periodontal diseases (Credit Hours 0.29)</b>			
<b>Expected outcome</b>	<b>Intended learning objectives</b>	<b>Teaching learning methods</b>	<b>Assessment tools</b>
Periodontal pocket	To know classification, clinical features, pathogenesis, histopathology of pockets. Relationship of attachment loss and bone loss to pocket depth, Infrabony and suprabony pockets.	Attend lectures/seminars within the department	Written examination
Bone loss and pattern of bone destruction	To know mechanism, rate, period of bone destruction by extension of gingival inflammation, other causes, factors determining bone morphology in periodontal diseases and pattern of bone destruction.	Independent study	Multiple choice questions
Periodontal responses to external forces, Trauma from occlusion (TFO)	To know adaptive capacity of the periodontium to occlusal forces, stages of tissue responses, clinical and radiographic signs of TFO and pathologic tooth migration	Clinical teaching	Asking questions Searching for and acquiring the evidence
Masticatory systemic disorders	To know TMJ, centric relation, biomechanics of masticatory systemic.	Demonstration, training and practice in Postgraduate clinic	
Chronic periodontitis	Know about its clinical features, prevalence and risk factors involved.		
Necrotising ulcerative periodontitis (NUP)	To know clinical and microscopic description, characteristic features and etiology of NUP.		
Aggressive periodontitis	To know clinical and radiographic findings of localized and generalized aggressive periodontitis and its risk factors.		
Pathology and management of periodontal problems in patients with HIV infection	To know pathogenesis, epidemiology and staging of HIV, oral and periodontal manifestation of HIV infection, gingival and periodontal diseases in HIV and treatment protocol.		

**Treatment of periodontal diseases-I**  
**(Credit Hours 0.29)**

Expected outcome	Intended learning objectives	Teaching learning methods	Assessment tools
Clinical and radiographic diagnosis of periodontal diseases,Radiographic aids for diagnosis	History, oral examination and laboratory aids.To know distortions in radiographic techniques, radiographic appearance of periodontal diseases and pattern of bone destruction.	Ward teaching	Written examination
Advanced diagnostic techniques	To know limitations of conventional periodontal diagnosis,advances in clinical and radiographic assessment, CADIA system, advances in microbiologic analysis and characterizing the host response.	Web based e-learning	Multiple choice questions (MCQ) OSCE & OSPE
Risk assessment, Level of clinical significance	To know risk factors, risk determinants, risk indicators and risk markers for periodontal diseases. To know size of the treatment effect and four levels of clinical significance	Clinical teaching	
Determination of prognosis	Know about definition, type and determining factors of prognosis, relationship between diagnosis and prognosis and reevaluation of prognosis after phase I therapy.	Demonstration, training and practice in Postgraduate clinic	
Treatment plan	To know master plan for total treatment and therapeutic procedure.		



Rationale for periodontal treatment	To know local and systemic therapy, factors affecting healing, regeneration, repair and new attachment.	Clinical teaching and exercises	
Periodontal therapy in female patient	Know about periodontal manifestations of menses, pregnancy, its clinical management and treatment.	Independent study	
Periodontal treatment of medically compromised patients	To know the periodontal treatment of patients having cardiovascular diseases, endocrine disorders, renal diseases, pulmonary diseases, immunosuppression and radiation therapy, pregnancy, hemorrhagic disorders and infectious diseases. To know therapeutic modalities and treatment planning of aggressive periodontitis, refractory periodontitis and necrotizing ulcerative periodontitis.	Attend lectures/seminars within the department	
Treatment of aggressive and atypical forms of periodontitis	To know treatment, healing, additional treatment considerations of Acute gingival diseases and Acute Herpetic Gingivostomatitis.	Web based e-learning	
Treatment of acute gingival diseases	To know classification of abscesses and specific treatment approaches		
Treatment of periodontal abscess			

**Non-Surgical Therapy for periodontal treatment  
(Credit Hours 0.29)**

<b>Expected outcome</b>	<b>Intended learning objectives</b>	<b>Teaching learning methods</b>	<b>Assessment tools</b>
<p>This module will provide information regarding Non-surgical Therapy of Periodontal diseases</p> <p><u>Phase 1 periodontal therapy:</u></p> <ul style="list-style-type: none"> <li>- Rationale of the procedure</li> <li>- Treatment sessions</li> <li>- Sequence of procedures</li> <li>- Results</li> <li>- Healing</li> <li>- Decisions to refer to specialist</li> </ul>	<p>To make the student understand the basics of the non-surgical component of the periodontal therapy</p>	<p>Lectures/Seminars through audio visual methods.</p>	<ul style="list-style-type: none"> <li>- Clinical exercises</li> <li>- Multiple choice type question based assessments.</li> <li>- Written examinations</li> </ul>
<b>Plaque control for periodontal patients</b>			
<p>In this module plaque controlling methods and procedures would be discussed</p>	<p>How to control dental plaque with different methods will be covered in this module</p>	<p>Lectures/Seminars through audio visual methods</p>	<ul style="list-style-type: none"> <li>- Clinical exercises</li> <li>- Multiple choice type question based assessments.</li> <li>- Short questions based written examination</li> </ul>

<p><b><u>Physical Methods of Plaque control</u></b></p> <ul style="list-style-type: none"> <li>- Manual toothbrush</li> <li>- Powered toothbrush</li> <li>- toothbrushing Methods</li> <li>- Interdental Cleansing Aids</li> <li>- Gingival massage</li> <li>- Oral Irrigation</li> </ul> <p><b><u>Chemical Methods of Plaque control:</u></b></p> <ul style="list-style-type: none"> <li>- Chlorhexidine</li> <li>- Non-prescription essential oils</li> <li>- Disclosing agents</li> <li>- Frequency of plaque removal</li> <li>- Frequency of Plaque control</li> <li>- Patient motivation and education</li> </ul>	<p>How to control dental plaque with different methods will be covered in this module</p>	<p>Lectures/Seminars through audio visual methods</p> <p>Demonstration of the procedure on clinical subjects</p>	<ul style="list-style-type: none"> <li>- Clinical exercises</li> <li>- Multiple choice type question based assessments.</li> <li>- Short questions based written examination</li> </ul>
<p><b>Module: Scaling and Root Planing</b></p>			
<p>In this module the procedure of scaling and root planning will be covered</p> <ul style="list-style-type: none"> <li>- Classification of Instruments</li> <li>- Periodontal probes</li> <li>- Explorers</li> <li>- Scaling and curettage instruments</li> <li>- Cleansing and polishing Instruments</li> </ul>	<p>Procedure of scaling and root planning will be explained all aspects of the procedure from instrumentation to principles will be covered in this module</p>	<p>Lectures/Seminars through audio visual methods</p> <p>Demonstration of the procedure on clinical subjects</p>	<ul style="list-style-type: none"> <li>- Clinical exercises</li> <li>- Multiple choice type question based assessments.</li> <li>- Short questions based written examination</li> </ul>

<p><b><u>General Principles of Periodontal Instrumentation</u></b></p> <ul style="list-style-type: none"> <li>- Accessibility: positioning of patient and operator</li> <li>- Visibility, illumination and retraction</li> <li>- Condition and sharpness of instrument</li> <li>- Maintaining a clean field</li> <li>- Instrument stabilization</li> <li>- Instrument activation</li> <li>- Instruments for scaling and root planing</li> </ul> <p><b><u>Principles of Scaling and root Planing</u></b></p> <ul style="list-style-type: none"> <li>- Definition and Rationale</li> <li>- Detection Skills</li> <li>- Supragingival scaling technique</li> <li>- Subgingival scaling and root planning technique</li> <li>- Ultrasonic scaling</li> <li>- Evaluation</li> </ul> <p><b><u>Instruments sharpening</u></b></p> <ul style="list-style-type: none"> <li>- Evaluation of sharpness</li> <li>- Objective of sharpening</li> <li>- Sharpening stones</li> <li>- Principles of sharpening</li> <li>- Sharpening individual instruments</li> </ul>			
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<b>Chemotherapeutic Agents</b>			
<ul style="list-style-type: none"> <li>- Systemic Administration of antibiotics</li> <li>- Serial and Combination of antibiotic therapy</li> <li>- Host Modulation</li> <li>- Local delivery of antibiotics</li> <li>- Local delivery of Antiseptic agent</li> </ul>	The role of various chemotherapeutic agents used in the treatment of periodontal disease would be covered in this module	Lectures/Seminars through audio visual methods	<ul style="list-style-type: none"> <li>- Multiple choice type question based assessments.</li> <li>- Short questions based written examination</li> </ul>
<b>Host Modulation Agents</b>			
<ul style="list-style-type: none"> <li>- Host response</li> <li>- Host Modulatory therapy</li> <li>- Host modulation and comprehensive periodontal management</li> <li>- Subantianial microbial- Dose Doxycycline</li> <li>- Emerging host modulatory therapies</li> </ul>	Host modulation mechanisms and therapies would be covered in this module	Lectures/Seminars through audio visual methods	<ul style="list-style-type: none"> <li>- Multiple choice type question based assessments.</li> <li>- Short questions based written examination</li> </ul>
<b>Supragingival and Subgingival irrigation</b>			
<ul style="list-style-type: none"> <li>- Professionally delivered irrigation</li> <li>- Efficacy</li> <li>- Clinical outcomes</li> <li>- Home (self applied irrigation)</li> <li>- Mechanism of actionsafety</li> <li>- Clinical outcomes</li> <li>- Plaque removal and calculus reduction</li> <li>- Gingival bleeding on probing and probing depth reductions</li> <li>- Periodontal pathogens and inflammatory mediators</li> <li>- Patients with special considerations</li> </ul>	The procedure of sub and supra gingival irrigation will be covered in this module	Lectures/Seminars through audio visual methods  Demonstration of procedure	<ul style="list-style-type: none"> <li>- Clinical skill assesment</li> <li>- Multiple choice type question based assessments.</li> <li>- Short questions based written examination</li> </ul>

**Occlusion evaluation and therapy**  
**(Credit Hours 0.29)**

<b>Expected outcome</b>	<b>Intended learning objectives</b>	<b>Teaching learning methods</b>	<b>Assessment tools</b>
<ul style="list-style-type: none"> <li>- Terminology</li> <li>- Functional anatomy of masticatory system</li> <li>- Biologic basis of occlusion function</li> <li>- Clinical evaluation procedures</li> <li>• temporomandibular disorder screening examination</li> <li>• intraoral evaluation of occlusion</li> <li>• role of articulated casts</li> <li>- Interpretation and treatment planning</li> <li>- Occlusaltherapy</li> <li>- intraoral appliance therapy</li> <li>occlusal adjustment</li> </ul>	<p>Evaluation of occlusion with the therapy would be covered in this module</p>	<p>Lectures/Seminars through audio visual methods</p> <p>Demonstration of procedure</p>	<ul style="list-style-type: none"> <li>- Multiple choice type question based assessments.</li> <li>- Short questions based written examination</li> </ul>

<b>Adjunctive role of Orthodontic therapy</b>			
<p>❖ <b>Benefits of orthodontic therapy</b></p> <p>❖ <b>Periodontic osseous surgery</b></p> <ul style="list-style-type: none"> <li>- osseous craters</li> <li>- three wall intrabony defects</li> </ul> <p>❖ <b>Orthodontic treatment of osseous defects</b></p> <ul style="list-style-type: none"> <li>- hemiseptal defects</li> <li>- advanced horizontal bone loss</li> <li>- furcation defects</li> <li>- root proximity</li> <li>- fractured teeth and forced eruption</li> <li>- hopeless teeth maintained for orthodontic anchorage</li> </ul> <p>❖ <b>Orthodontic treatment of gingival discrepancies</b></p> <ul style="list-style-type: none"> <li>- uneven gingival margins</li> <li>- significant abrasion and overeruption</li> <li>- open gingival embrasures</li> </ul>	<p>Association of Perio and ortho treatment protocols will be covered in this module</p>	<p>Lectures/Seminars through audio visual methods</p> <p>Demonstration of procedure</p>	<ul style="list-style-type: none"> <li>- Multiple choice type question based assessments.</li> <li>- Short questions based written examination</li> </ul>

## The Periodontic-Endodontic Continuum (Credit Hours 0.29)

Expected outcome	Expected outcome	Expected outcome	Expected outcome
<ul style="list-style-type: none"> <li>❖ <b><u>Pulpal diseases</u></b> <ul style="list-style-type: none"> <li>- etiologic factors</li> <li>- classification</li> <li>- effects on the periodontium</li> </ul> </li> <li>❖ <b>Effects of periodontitis on dental pulp</b></li> <li>❖ <b>Differentiation between periodontal and pulpal lesions</b> <ul style="list-style-type: none"> <li>- signs and symptoms of periodontitis</li> <li>- signs and symptoms of pulpal diseases</li> <li>- differentiation between pulpal and periodontal abscesses</li> </ul> </li> <li>❖ <b>Therapeutic management of pulpal and periodontal diseases</b> <ul style="list-style-type: none"> <li>- primary endodontic lesions</li> <li>- independent periodontal and endodontic lesions</li> <li>- combined periodontal and endodontic lesions</li> </ul> </li> <li>❖ <b>Special issues in endodontic therapy</b> <ul style="list-style-type: none"> <li>- potential complications</li> <li>- restorative implications</li> </ul> </li> </ul>	<p>Association of Perio and endo treatment protocols in combination will be covered in this module</p>	<p>Lectures/Seminars through audio visual methods</p> <p>Demonstration of procedure</p>	<ul style="list-style-type: none"> <li>- Multiple choice type question based assessments.</li> <li>- Short questions based written examination</li> </ul>



**Surgical therapy(Phase II Periodontal therapy)**  
**(Credit Hours 0.29)**

<b>Expected outcome</b>	<b>Expected outcome</b>	<b>Expected outcome</b>	<b>Expected outcome</b>
<ul style="list-style-type: none"> <li>❖ Objectives of surgical phase <ul style="list-style-type: none"> <li>- surgical pocket therapy</li> <li>- results of pocket therapy</li> </ul> </li> <li>❖ Pocket elimination versus pocket maintenance</li> <li>❖ Reevaluation after phase I therapy</li> <li>❖ Indications for periodontal surgery</li> <li>❖ Methods of pocket therapy</li> </ul>	<p>All aspects of periodontal surgery would be covered in this module</p>	<p>Lectures/Seminars through audio visual methods</p> <p>Demonstration of procedure</p>	<ul style="list-style-type: none"> <li>- Multiple choice type question based assessments.</li> <li>- Short questions based written examination</li> </ul>
<b>General Principles of periodontal Surgery</b>			
<ul style="list-style-type: none"> <li>❖ <b>Outpatient surgery</b> <ul style="list-style-type: none"> <li>- patient preparation</li> <li>- emergency equipment</li> <li>- sedation and anesthesia</li> <li>- tissue management</li> <li>- scaling and root planning</li> <li>- hemostasis</li> <li>- periodontal dressing(periodontal pack)</li> <li>- postoperative instructions</li> <li>- first postoperative week</li> <li>- removal of pack and return visit</li> <li>- mouth care between procedures</li> <li>- management of post operative pain</li> </ul> </li> <li>❖ <b>Hospital periodontal surgery</b></li> </ul>	<p>The general principles of Periodontal surgery would be discussed</p>	<p>Lectures/Seminars through audio visual methods</p> <p>Demonstration of procedure</p>	<ul style="list-style-type: none"> <li>- Multiple choice type question based assessments.</li> <li>- Short questions based written examination</li> </ul>

<ul style="list-style-type: none"> <li>- indications</li> <li>- patient preparation</li> <li>- postoperative instructions</li> </ul> <p>❖ <b>Surgical instruments</b></p> <ul style="list-style-type: none"> <li>- excisional and incisional instruments</li> <li>- surgical curettes and sickles</li> <li>- periosteal elevators</li> <li>- surgical chisels</li> <li>- tissue forceps</li> <li>- scissors and nippers</li> <li>- needle holders</li> </ul>			
<b>Surgical Anatomy of the Periodontium and Related Structures</b>			
<ul style="list-style-type: none"> <li>- Mandible</li> <li>- maxilla</li> <li>- Muscles</li> <li>- Anatomic spaces</li> </ul>	Anatomy of the periodontium from surgical point of view would be covered in this module	<p>Lectures/Seminars through audio visual methods</p> <p>Demonstration</p>	<ul style="list-style-type: none"> <li>- Multiple choice type question based assessments.</li> <li>- Short questions based written examination</li> </ul>

<b>Gingival Surgical Techniques</b>			
<b>❖Gingival Curettage</b> <ul style="list-style-type: none"> <li>- rationale</li> <li>- indications</li> <li>- procedure</li> <li>- healing after scaling and curettage</li> <li>- clinical appearance after scaling and curettage</li> </ul> <b>❖Gingivectomy</b> <ul style="list-style-type: none"> <li>- indications and contraindications</li> <li>- surgical gingivectomy</li> <li>- gingivoplasty</li> <li>- healing after surgical gingivectomy</li> <li>- gingivectomy by electrosurgery</li> <li>- gingivectomy by laser</li> <li>- gingivectomy by chemosurgery</li> </ul>	The gingival surgical technique would be covered in this module	Lectures/Seminars through audio visual methods  Demonstration	<ul style="list-style-type: none"> <li>- Multiple choice type question based assessments.</li> <li>- Short questions based written examination</li> </ul>
<b>Treatment of Gingival Enlargement</b>			
<ul style="list-style-type: none"> <li>- Chronic inflammatory enlargement</li> <li>- Periodontal and gingival abscess</li> <li>- Drug associated gingival enlargement</li> <li>- Leukemic gingival enlargement</li> <li>- Gingival enlargement in pregnancy</li> <li>- Gingival enlargement in puberty</li> <li>- Recurrence of gingival enlargement</li> </ul>	All aspects and treatment modalities of gingival enlargement will be covered in this module	Lectures/Seminars through audio visual methods  Demonstration of procedure	<ul style="list-style-type: none"> <li>- Multiple choice type question based assessments.</li> <li>- Short questions based written examination</li> </ul>

<b>The Periodontal Flap</b>			
<ul style="list-style-type: none"> <li>❖ Classification of flaps</li> <li>❖ Flap design</li> <li>❖ Incisions               <ul style="list-style-type: none"> <li>- horizontal incisions</li> <li>- vertical incisions</li> </ul> </li> <li>❖ Elevation of the flap</li> <li>❖ Suturing techniques               <ul style="list-style-type: none"> <li>- Technique</li> <li>- ligation</li> <li>- types of sutures</li> </ul> </li> <li>❖ Healing after flap surgery</li> </ul>	All aspects of periodontal flaps will be covered in this module	<p>Lectures/Seminars through audio visual methods</p> <p>Demonstration of procedure in various clinical conditions</p>	<ul style="list-style-type: none"> <li>- Multiple choice type question based assessments.</li> <li>- Short questions based written examination</li> </ul>
<b>The flap technique for pocket therapy</b>			
<ul style="list-style-type: none"> <li>❖ <b><u>Technique for access and pocket depth reduction/elimination</u></b> <ul style="list-style-type: none"> <li>- Incisions</li> <li>- reconstructive techniques</li> <li>- Modified Widman flap</li> <li>- Undisplaced flap</li> <li>- palatal flap</li> <li>- Apically displaced flap</li> </ul> </li> <li>❖ <b><u>Flap for reconstructive surgery</u></b> <ul style="list-style-type: none"> <li>- papilla preservation flap</li> <li>- conventional flap</li> </ul> </li> <li>❖ <b><u>Distal molar surgery</u></b> <ul style="list-style-type: none"> <li>- Maxillary molars</li> <li>- Mandibular molars</li> </ul> </li> </ul>	The principles and techniques of flap surgeries would be covered in this module	<p>Lectures/Seminars through audio visual methods</p> <p>Demonstration of procedure in various clinical conditions</p>	<ul style="list-style-type: none"> <li>- Multiple choice type question based assessments.</li> <li>- Short questions based written examination</li> </ul>

## **Sonic and ultrasonic instrumentation**

- Mechanism of action
- Types of power instruments
- Efficacy and clinical outcomes
- Efficiency
- Special considerations aerosol production cardiac pacemakers
- Principles of instrumentations

### ❖ **Flap for reconstructive surgery**

- papilla preservation flap
- conventional flap

### ❖ **Distal molar surgery**

- Maxillary molars
- Mandibular molars

All aspects of sonic and ultrasonic techniques of instrumentation will be covered in this module

Lectures/Seminars through audio visual methods

Demonstration of procedure

- Clinical skill assesment
- Multiple choice type question based assessments.
- Short questions based written examination

Expected outcome	Intended learning objectives	Teaching learning methods	Assessment tools
<b>Resective Osseous surgery (Credit Hours 0.29)</b>			
<b>This module will provide information regarding:</b> -Normal alveolar bone morphology -Selection of treatment technique -Factors in selection of respective osseous surgery -Methods of respective osseous surgery	-Osseous resection technique -Instrumentation -Vertical grooving -Radicular blending -Flattening interproximal bone -Gradualizing marginal bone -Flap placement and closure -Post operative maintenance	-Attend lectures / seminars -Clinical teaching -Demonstration -Independent study	-Written examination -MCQs -OSCE & OSPE
<b>Reconstructive Periodontal surgery(Credit Hours 0.29)</b>			
<b>This module will provide information regarding:</b> - New attachment - Periodontal reconstruction	-Clinical and radiographical methods to assess reconstruction. -Surgical Reentry -Histological methods -Graft materials -Non Bone graft procedures	- Attend lectures / seminars -Clinical teaching -Demonstration -Independent study -web based e-learning	-Written examination -MCQs -OSCE & OSPE
<b>Furcation involvement and treatment(Credit Hours 0.29)</b>			
<b>This module will provide information regarding:</b> -Diagnosis of furcation defects -Classification of furcation defects -Treatment -Prognosis	-Etiological agents -Diagnosis and classification of furcation defects -Anatomy of bony lesions. -Patterns of attachment loss. -therapeutic classes of furcation defects. - Surgical Treatment Root resection Hemisection Reconstruction	- Attend lectures / seminars -Clinical teaching -Demonstration -Independent study -web based e-learning	-Written examination -MCQs -OSCE & OSPE



Expected outcome	Intended learning objectives	Teaching learning methods	Assessment tools
<b>Periodontal Plastic and esthetic surgery(Credit Hours 0.29)</b>			
<b>This module will provide information regarding:</b> -Mucogingival problems. -Mucogingival therapy. -Periodontal plastic surgical procedure -Factors affecting surgical outcome. - selection of technique.	-Problems associated with attached gingiva, shallow vestibule, aberrant frenum. -Etiology of marginal tissue recession. -Techniques to increase attached gingiva, to deepen the vestibule, to remove frenum.	- Attend lectures / seminars -Clinical teaching -Demonstration -Independent study -web based e-learning	-Written examination -MCQs -OSCE & OSPE
<b>Recent advances in surgical technology(Credit Hours 0.29)</b>			
<b>This module will provide information regarding:</b>  -Microsurgery -Periodontal microsurgery -Lasers	-Magnification systems- magnifying loops, surgical microscope, -Periodontal microsurgical procedure, -Root preparation, Microsurgical instruments, -Ergonomics -Application of LASERS in dentistry, advantages and disadvantages.	- Attend lectures / seminars -Clinical teaching -Demonstration -Independent study -web based e-learning	-Written examination -MCQs



## Periodontal-Restorative interrelationship(Credit Hours 0.29)

<p><b>This module will provide information regarding:</b></p> <ul style="list-style-type: none"> <li>-Biological considerations</li> <li>-Pre-Prosthetic surgery.</li> <li>-Restorative interrelationship.</li> <li>-Occlusal considerations</li> </ul>	<ul style="list-style-type: none"> <li>-Rationale for therapy.</li> <li>-Sequence of treatment</li> <li>-Control of active treatment.</li> <li>-Management of mucogingival problems.</li> <li>-Preprosthetic surgery</li> <li>- Biologic width evaluation and correcting biologic width violation,</li> <li>-Marginal placement guidelines,</li> <li>-tissue retraction</li> <li>-Provisional restoration</li> <li>-Crown contour</li> <li>-Esthetic tissue management</li> <li>-Occlusal consideration in restorative therapy</li> <li>-Root resected teeth</li> <li>-Splinting</li> <li>-Anterior esthetic surgery</li> </ul>	<ul style="list-style-type: none"> <li>- Attend lectures / seminars</li> <li>-Clinical teaching</li> <li>-Demonstration</li> <li>-Independent study</li> <li>-web based e-learning</li> </ul>	<ul style="list-style-type: none"> <li>-Written examination</li> <li>-MCQs</li> </ul>
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## ORAL IMPLANTOLOGY (BIOLOGY AND DIAGNOSIS) (Credit Hours 0.29)

Expected outcome	Intended learning objective	Teaching learning objective	Assessment Tools
<p>This module will provide the basic knowledge of oral implantology.</p> <p><u>Per implant</u>  <u>Anatomy,Biology&amp;Function</u></p> <ul style="list-style-type: none"> <li>-Implant Geometry(macrodesign)</li> <li>-Implant Surface Characteristics(microdesign)</li> <li>-Hard Tissue Interface</li> <li>-Soft Tissue Interface</li> <li>-Clinical comparison of teeth&amp;Implants</li> </ul> <p><u>Clinical Evaluation of the Implant Patients</u></p> <ul style="list-style-type: none"> <li>-Case Types&amp;Indications</li> <li>-Pretreatment Evaluation</li> <li>-Risk factors&amp;Contraindications</li> <li>-Post Treatment Evaluation</li> </ul> <p><u>Diagnostic Imaging</u></p> <ul style="list-style-type: none"> <li>-Standard Projections</li> <li>-Cross-Sectional Imaging</li> <li>-Interactive Simulation Software Programs</li> <li>-Patients Evaluation</li> <li>-Clinical Selection of Diagnostic Imaging</li> </ul>	<ul style="list-style-type: none"> <li>-understand the implant geometry&amp; surface characteristics , as well as the anatomical &amp; biological relationship of peri-implant tissues</li> <li>-know about the clinical aspects of dental implant therapy,including an assessment of possible risk factors&amp;contraindications</li> <li>-achieved competency for the pretreatment evaluation of potential implant patients,post treatment evaluation&amp;implant maintenance</li> <li>-know about common imaging technique used for evaluation of the implant patient. Indications for each technique are outlined, along with the advantages and limitations</li> </ul>	<ul style="list-style-type: none"> <li>-Attend lectures/Seminars</li> <li>-Audio&amp; Video methods of learning</li> <li>-Web based e-learning sources</li> </ul>	<ul style="list-style-type: none"> <li>-Written examinations based on short answer Types questions</li> <li>-Exercises</li> <li>-Clinical demonstrations</li> <li>-Multiple choice questions</li> </ul>

## ORAL IMPLANTOLOGY (SURGICAL PROCEDURES) (Credit Hours 0.29)

Expected outcome	Intended learning objective	Teaching learning objective	Assessment Tools
<p>This module will provide the basic knowledge of Surgical Procedures in oral implantology.</p> <p><u>Standard Implant Surgical Procedures</u></p> <ul style="list-style-type: none"> <li>-General Principles of Implant Surgery</li> <li>-Two-Stage Implant placement</li> <li>-One stage Implant placement</li> <li>-Flap design,Incision&amp;Elevation</li> <li>-Implant Site Preparation</li> <li>-Flap closure&amp;Suturing</li> <li>-Postoperative Care</li> </ul> <p><u>Localized Bone Augmentation &amp;Implant Site development</u></p> <ul style="list-style-type: none"> <li>-Guided Bone Regeneration</li> <li>-Localized Ridge Augmentation</li> <li>-Alveolar Ridge Preservation/Management of Extractions</li> </ul> <p><u>Advanced Implant Surgical Procedures</u></p> <ul style="list-style-type: none"> <li>-Maxillary Sinus Elevation&amp;Bone Augmentation</li> <li>-Supracrestal/Vertical Bone Augmentation</li> <li>-Growth Factors in Bone Augmentation</li> </ul>	<ul style="list-style-type: none"> <li>-know about general surgical considerations&amp;outlines the standard surgical procedures for the placement of dental implants utilizing either one stage/two stage protocols</li> <li>-know about the surgical bone augmentation procedures used to correct / to prevent alveolar ridge deficiencies for the optimal placement of dental implants</li> <li>-know about the advanced surgical procedures used to treat the most challenging type of bone loss,which is deficiency in vertical bone height</li> </ul>	<ul style="list-style-type: none"> <li>-Attend lectures/Seminars</li> <li>-Audio&amp; Video methods of learning</li> <li>-Web based e-learning sou</li> </ul>	<ul style="list-style-type: none"> <li>-Written examinations based on short answer Types questions</li> <li>-Exercises</li> <li>-Clinical demonstrations</li> <li>-Multiple choice questions</li> </ul>

## ORAL IMPLANTOLOGY (BIOMECHANICS&COMPLICATIONS) (Credit Hours 0.29)

Expected outcome	Intended learning objective	Teaching learning objective	Assessment Tools
<p>This module will discuss the important biochemical considerations &amp; Treatment planning guidelines for the use of dental Implants.</p> <p><u>Biomechanics, Treatment Planning</u> <u>Prosthetic Considerations</u></p> <p>-Biomechanical Considerations -Treatment Planning&amp;Dental Implants -Strategies to avoid overload</p> <p><u>Implant-Related</u> <u>Complications&amp;Failures</u></p> <p>-Surgical Complications -Biologic Complications -Complication related to augmentation procedures -Complication related to Placement &amp;loading protocols -Prosthetic/Mechanical Complications -Esthetic&amp;phonetic complications</p>	<p>-know about the biomechanical considerations&amp;treatment-planning guidelines for the use of dental implants in fully edentulous,partially edentulous&amp;single tooth cases</p> <p>-know about the occlusal design,cantilevers&amp;connecting implants to teeth</p> <p>-know about the prevalence of various types of implant related complications</p> <p>-know about implant failure,surgical complications related to site development&amp;different implant placement protocols</p>	<p>Attend lectures/Seminars</p> <p>-Audio&amp; Video methods of learning</p> <p>-Web based e-learning sources</p>	<p>Written examinations based on short answer Types questions</p> <p>-Exercises</p> <p>-Clinical demonstrations</p> <p>-Multiple choice questions(MCQ</p>

## SUPPORTIVE TREATMENTS & RESULTS (Credit Hours 0.29)

Expected outcome	Intended learning objective	Teaching learning objective	Assessment Tools
<ul style="list-style-type: none"> <li>-Rationale for SPT</li> <li>-Maintenance Program</li> <li>-Classification of Posttreatment Patients</li> <li>-Referral of Patients to the periodontist</li> <li>-Test of disease activity</li> <li>-Maintenance for dental implant patients</li> </ul> <p><u>Results of Periodontal Treatments</u></p> <ul style="list-style-type: none"> <li>-Prevention &amp; Treatment of Gingivitis</li> <li>- Prevention &amp; Treatment of loss of attachment</li> <li>-Tooth Mortality</li> </ul> <p><u>Results of Implant Treatment</u></p> <ul style="list-style-type: none"> <li>-Defining Implant Outcomes</li> <li>-Factors that influence Implant outcomes</li> <li>-Esthetic results &amp; Patient satisfactions</li> </ul>	<ul style="list-style-type: none"> <li>-know about the different methods of maintenance programs</li> <li>-achieved competency in maintenance of dental implants</li> <li>-know about the various preventive measures of periodontal diseases</li> <li>-know about the patients centered outcomes of implants</li> </ul>	<ul style="list-style-type: none"> <li>-Attend lectures/Seminars</li> <li>-Audio &amp; Video methods of learning</li> <li>-Web based e-learning sources</li> </ul>	<ul style="list-style-type: none"> <li>-Written examinations based on short answer Types questions</li> <li>-Exercises</li> <li>-Clinical demonstrations</li> <li>-Multiple choice questions (MCQ)</li> </ul>

## ETHICAL ISSUES(Credit Hours 0.29)

### EVIDENCE BASED DENTISTRY

Expected outcome	Intended learning objective	Teaching learning objective	Assessment Tools
<p>This module will provide the information regarding</p> <p><u>Legal Principles:Jurisprudence</u></p> <ul style="list-style-type: none"> <li>-Definitions</li> <li>-Common Periodontal Malpractice Issues</li> <li>-Legal elements of Malpractice</li> <li>-Practical components in litigations</li> <li>-Legal process</li> <li>-Malpractice Insurance</li> <li>-Peer review</li> <li>-Occupational safety&amp;Health Administration</li> <li>-Health insurance portability&amp;Accountability</li> </ul> <p><u>Dental Insurance&amp;Managed care in periodontal practice</u></p> <ul style="list-style-type: none"> <li>-History</li> <li>-Principles</li> <li>-Classifications of programs</li> <li>-Benefits design</li> <li>-Most common errors</li> </ul>	<ul style="list-style-type: none"> <li>-know about the different issues related with malpractices of periodontal treatments</li> <li>-know about the various policies which are related with safety and health insurance</li> <li>-</li> <li>-know about the dental insurance&amp; it's different benefits through various programs</li> </ul>	<ul style="list-style-type: none"> <li>-Attend lectures/Seminars</li> <li>-Web based e-learning sources</li> </ul>	<ul style="list-style-type: none"> <li>-Written examinations based on short answer Types questions</li> <li>-Multiple choice questions(MCQ)</li> </ul>

**(Credit Hours 0.29)**

<b>Expected outcome</b>	<b>Intended learning objectives</b>	<b>Teaching learning methods</b>	<b>Assessment tools</b>
This module will provide information regarding evidence based decision making	Know about background and definitions	Attended lectures, seminars in the department.	Written examination
Principles of evidence based decision making	Evidence based versus traditional decision making Evidence based dentistry	Independent study	Multiple choice questions
Need for Evidence based decision making	Variations in practice patterns Assimilating evidence into practice	Clinical teaching in Periodontology clinic	Asking questions Searching for and acquiring the evidence
Evidence based decision making process and skills	The PICO process, searching for evidence, appraising the evidence and evaluating the outcome		
Assessing evidence	Twelve tools for assessing evidence		
Implementing evidence based decisions in clinical practice	Variations in clinical decision Managing uncertainty Incorporating evidence into practice Linking outcomes with diagnosis and treatment Implementing evidence based decisions Change management		