DEPARTMENT OF ORTHODONTICS
SINDH INSTITUTE OF ORAL HEALTH SCIENCES
JINNAH SINDH MEDICAL UNIVERSITY

Date: 29.11.2017

CURRICULUM TEMPLATE

Learning Objectives

COURSE TOPIC: - Introduction to Orthodontics

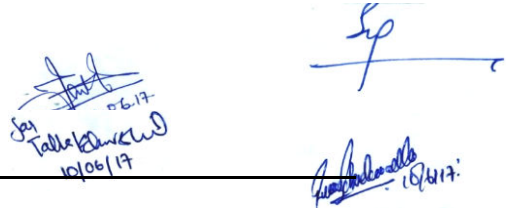
S.No.	Lecture topic	Topic objectives
1.	• Introduction, Overview and branches of Orthodontics • Indications/contraindications; Aims and need of Orthodontic Treatment	By the end of lecture the student will be able to: • Define various terminologies used in Orthodontics. • List Orthodontic Treatments Objectives • Differentiate between Types of treatment e.g. Preventive, Interceptive and Corrective Treatment

COURSE TOPIC: - Growth and Development

S.No.	Lecture Topic	Topic objectives
2.	• Terminology, basic concepts of Growth and Development • Theories of Growth • Prenatal Craniofacial growth • Postnatal Craniofacial growth • Clinical application of Growth and Development	By the end of lecture the student will be able to: • Understand the basic concept of growth and development. • Define factors affecting growth of the Craniofacial region • Define Orthodontics of TMJ Development • Describe the Theories of growth • Discuss concepts of Prenatal and Postnatal craniofacial growth • Classify different Methods of studying growth

COURSE TOPIC: - Occlusion

S.No.	Lecture Topic	Topic objectives	Mode of Teaching	Assessment Tools
3.	• Basic Concepts of Occlusion • Development of Dentition	By the end of lecture the student will be able to appreciate: • Basic concept of occlusion. • Classification of Occlusion • Difference b/w Occlusion Class I Malocclusion • Andrews Six keys of Occlusion • Clinical Features of Normal Occlusion	Lecture Tutorial Clinical Teaching	Class Participation Final Examination



COURSE TOPIC: - Diagnostic Aids in Orthodontics

S.No.	Lecture Topic	Topic objectives
4.	Diagnosis and Clinical Evaluation • Record Keeping • Cast analysis • Mixed dentition analysis and Bolton analysis • Cephalomertics I • Cephalomertics II	By the end of lecture the student will be able to: • understand various terminologies used in Orthodontics diagnosis and treatment planning namely, a) Record keeping b) History Taking c) Diagnostic and Clinical examination (Extraoral /Intraoral) d) Tracing and Template Analysis, e) Tooth size Discrepancies, Cast Analysis, Bolton Analysis, Mixed Dentition Analysis • Define the diagnostic importance of various Radiographs including CEPH (Cephalogram), OPG (Orthopantomogram), Occlusal View and Periapical view (SLOB rule). • Identify relevant anatomical structures and landmarks over the radiographs • List Indications / Contraindications of various radiographs • Identify steps of Formulating a " Problem List" Leading to Treatment plan

COURSE TOPIC: - Development of Dentition and Occlusion

S.No.	Lecture Topic	Topic objectives
5.	• Theories of Tooth Eruption • Classification of Occlusion • Development of Occlusion i) Primary ii) Mixed iii) Permanent	By the end of lecture the student will be able to: • Understand the basic concept of prenatal development of Dentition and Features of Primary dentition. • Differentiate between Mixed Dentition and Permanent Dentition period and associated dimensional changes in dental arch • Discuss Variations in Development including size, form, number and position of Teeth • Classify Factors affecting development of Dentition

COURSE TOPIC: - Malocclusion and Etiology of Malocclusion

S.No.	Lecture Topic	Topic objectives
6.	• Classification of Malocclusion • Etiology of malocclusion • Parafunctional Habits a)Thumb Sucking b)Bruxism c)Tounge Thrusting d)Lip sucking e)Mouth Breathing • Syndromes related to Orthodontics • Treacher-collins • Pirre-Robin Syndrome • Ectodermal Dysplasia • Down's Syndrome • Cleido Cranial Dysplasia • Hemifacial Microsomia • Acchondroplasia	By the end of lecture the student will be able to: • Define Various Terminologies associated with malocclusion • Classify Malocclusion into groups and subgroups • Understand the role of para-functional habits in the development of Malocclusions. • Identify associated Local and General factors leading to Malocclusion • Classify Hereditary and Environmental causes of various Genetic disorders and Syndromes related to Orthodontics.

COURSE TOPIC: - Preventive and Interceptive Orthodontics

S.No.	Lecture Topic	Topic objectives
7.	• Preventive Orthodontics • Interceptive Orthodontics • Space supervision and Gross discrepancy	By the end of lecture the student will be able to: • Diagnose different types of Oral Habits , • Identify the basic steps in the Management of Oral Habits including a)Space Supervision b)Space Maintainers c)Space Regainers d)Serial Extractions

Commented [p1]: Please provide names of atleast three most common such conditions

Commented [p2]: Diagnose is an excellent verb to use. Good. You need to complete this objective by stating on what basis student should be able to diagnose.

COURSE TOPIC: - Bone metabolism

S.No.	Lecture Topic	Topic objectives
8.	• Bone Biology • Orthodontic Tooth Movement Mechanism • Factors affecting OTM	By the end of lecture the student will be able to: • Describe normal Structure and function of Periodontal Ligament and Bone • Describe the role of bone in the physiological process of Eruption and Stabilization • Discuss the effects of Orthodontic force over Periodontium • Classify Factors affecting Tooth movement

COURSE TOPIC: - Biomechanics

S.No.	Lecture Topic	Topic objectives
9.	• Basic concepts of Biomechanics • Orthodontic Materials	By the end of lecture the student will be able to: • Describe the Structure and Function of PDL • Classify various types of Wires and Alloys used in Orthodontics • Describe Ideal properties of Orthodontic wires • Compare the properties of different Alloys • Understand Skeletal Effects of Orthodontic Forces • List deleterious effects of Orthodontics forces over the teeth and surrounding periodontium

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COURSE TOPIC: - Anchorage

S.No.	Lecture Topic	Topic objectives
10.	• Anchorage	By the end of lecture the student will be able to: • Understand the basic Concepts of Anchorage • Describe the role of Anchorage in Orthodontic Treatment Mechanics • Classify different Types of Anchorage • Describe the process of management of Anchorage

COURSE TOPIC: - Retention and Relapse and Stability

S.No.	Lecture Topic	Topic objectives
11.	• Principles of Orthodontic Retention • Types of Retainers	By the end of lecture the student will be able to: • Define basic Principles of Orthodontic Retention and Relapse • Understand the concept of Occlusal Stability and factors related to Retention • Describe various strategies of management

COURSE TOPIC: - Removable Appliances

S.No.	Lecture Topic	Topic objectives
12.	• Classification/Indication • Biomechanics of Removable appliances	By the end of lecture the student will be able to: • Define Terminologies associated with Functional Appliances • Classify various types of Appliances ***based on????*** • Describe indications / contraindications of various extra oral appliances for Orthodontic tooth movement • List steps in construction of the appliances

COURSE TOPIC: - Growth Modification

S.No.	Lecture Topic	Topic objectives
13.	• Biomechanics of Functional Appliances • Expanders	By the end of lecture the student will be able to: • Define the theoretical Concepts of Growth modification treatment • Understand the Classification system • Discuss the Biomechanics of Functional Appliances for Growth modification • Discuss Indications and drawbacks • Identify major components and accessories of the Appliances

COURSE TOPIC: - Fixed Appliances

S.No.	Lecture Topic	Topic objectives
14.	• Fixed appliances I • Fixed appliances II • Bonding and Banding	By the end of lecture the student will be able to: • Understand the basic Terminology • Classify various types of Orthodontic Bracket Systems • List Indications and Contraindication of fixed Appliances • Identify Basic Components and Accessories • Classify various Wire systems and Dental materials used for Orthodontic Bonding and Banding • Understand the basic difference between Edgewise and Straight Orthodontic Bracket systems

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COURSE TOPIC: - Treatment Planning

S.No.	Lecture Topic	Topic objectives
15.	• Management of Non-Skeletal Problems • Management of Class I malocclusion • Management of Class II Div 1 malocclusion • Management of Class II Div 2 malocclusion • Management of Class III malocclusion • Crowding, • Spacing • open bite • Deep bite • Cross bite • Impacted Canine Management	By the end of lecture the student will be able to: • Identify various Types of Non-skeletal problems including: 1) Class I malocclusion, 2) Crowding, 3) Spacing, 4) Cross -Bite, 5) Open-Bite, 6) Deep -Bite • Classify Skeletal problems into, 1) Class II Division 1 and Division 2 2) Class III • Describe various Extraction patterns in Orthodontic Treatment • Understand the Goals and Principles of Adjunctive Treatment

COURSE TOPIC: - Surgical Orthodontics

S.No.	Lecture Topic	Topic objectives
16.	• Introduction and Orthognathic Surgical Principles, Indications/ Contraindications of Surgical management	By the end of lecture the student will be able to: • Understand the Basic Principles of Orthognathic Surgery • Discuss Class II & III Surgical Treatment options • List Indication and Contraindications.

COURSE TOPIC: - Cleft Lip and Palate

S.No.	Lecture Topic	Topic objectives
17.	• Introduction Etiology & Clinical Features Nasoalveolar Molding Techniques Clinical & Orthodontic Management	By the end of lecture the student will be able to: • Define the Basic terminology and classification of CL&P • List various Genetic and Environmental Causes • Understand the concept of Multidisciplinary approach to Management of CL&P patients • Discuss the role of Orthodontist in the Management of CLP Patients

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COURSE TOPIC: - **Adult Orthodontics and Periodontal Considerations**

S.No.	Lecture Topic	Topic objectives
17.	• Anatomy of Periodontal Structures • Etiology & Clinical Features of Periodontal Diseases • Minor adjunctive Procedures in Orthodontics • Clear Aligner Therapy • Orthodontic management of Periodontal Diseases	By the end of lecture the student will be able to: • Define basic Terminology and Pathophysiology of Periodontal Diseases • Classify different types of Periodontal Diseases • Discuss the Role of Orthodontist in Multidisciplinary Management of Periodontal Diseases

COURSE TOPIC: - Practical and Clinical Orthodontics

S.No.	Lecture Topic	Topic objectives
18.	• Wire Bending exercise • Comprehensive Orthodontic case presentation of a Non-Skeletal Malocclusion.	By the end of lecture the student will be able to: • Define Basic Orthodontic Wire systems • Classify various Clasp systems in Orthodontics including, 1) Adams clasp 2) Labial Bow 3) Canine retractor 4) Cantilever and Z-Spring 5) Arch wire fabrication • List steps in Designing Removable Appliances (Hawley's Retainer) • Understand Orthodontic Case Planning Steps including, 1. History 2. Examination 3. Cast analysis 4. Mixed dentition analysis 5. CEPH Analysis 6. OPG Analysis 7. Diagnosis 8. Problem List 9. Suggested Treatment Plan 10. Fixed Appliance type 11. Retention Plan