

SYLLABUS / COURSE DETAILS FOR:

ORTHODONTICS:

Introduction:

It is the dental specialty and practice of preventing and correcting irregularities of the teeth with or without the use of orthodontic appliances (braces).

Course Description & Objectives	Suggested Lecture Hours
Introduction a. Definitions and Terminologies b. Types ii) Preventive iii) Interceptive iv) Corrective c. Aims and needs for Orthodontic Treatment	5
Growth and Development a. Basic concepts and definitions b. Variables affecting growth c. Prenatal and postnatal craniofacial growth b. Methods of studying growth c. Theories of growth d. Clinical application of growth and development in orthodontics e. TMJ Development Development of dentition and occlusion a. Prenatal development of dentition c. Features of Primary dentition d. Mixed dentition period e. Permanent dentition period f. Dimensional Changes in dental arch g. Variations in development including size, form, number and position of teeth h. Factors affecting development.	12
Occlusion a. Normal Occlusion b. Andrews Six Keys of Occlusion Malocclusion a. Definitions b. Classification Etiology of Malocclusion a. Local factors c. Heredity d. Environmental Factors	15

<p>Diagnostic Aids in Orthodontics</p> <ul style="list-style-type: none"> a. History b. Clinical Evaluation <ul style="list-style-type: none"> ii) Extraoral examination iii) Intraoral examination' c. Radiographs <ul style="list-style-type: none"> iv) Periapical Xrays v) Orthopantomogram vi) Occlusal Xrays vii) Cephalometric Xray <ul style="list-style-type: none"> (1) Identifying relevant anatomical structures and landmarks (2) Tracing (3) Analyses d. Tooth mass and size analyses <ul style="list-style-type: none"> viii)Cast analysis ix) Bolton Analysis x) Mixed Dentition analysis f. Formulation of problem list <p>Radiographic Interpretations</p> <ul style="list-style-type: none"> a. Roontgen Anatomy of teeth, jaws and T.M.Joints b. Variations within normal limits, and abnormalities c. Different types of X-Rays machines d. Varieties of X-Ray Films: Extra Oral Intra Films bite wing and occlusal films e. Film taking and exposure procedures f. Film development techniques g. Indications and uses of dental radiology h. Interpretation of films i. Radiation Hazards 	<p>12</p>
<p>Preventive and Interceptive Orthodontics</p> <ul style="list-style-type: none"> a. Diagnosis and Management of Habits b. Space supervision c. Space maintainers d. Space regainers e. Serial Extractions 	<p>4</p>
<p>Bone metabolism</p> <ul style="list-style-type: none"> a. Normal Structure of Periodontal Ligament and Bone b. The role of bone in eruption and stabilization c. Effects of Orthodontic force e. Factors affecting tooth movement 	<p>4</p>
<p>Biomechanics</p>	<p>6</p>

<ul style="list-style-type: none"> a. Concepts, Types and Control of Anchorage b. Types of Wires and Alloys used in orthodontics c. Ideal properties of Orthodontic wires and comparison of different alloys 	
<p>Retention and relapse</p> <ul style="list-style-type: none"> a. Concepts of retention and relapse b. Occlusal Stability and factors related to retention c. Strategies of management 	4
<p>Removable appliances</p> <ul style="list-style-type: none"> a. Functional appliance <ul style="list-style-type: none"> i) Types ii) Indications iii) Construction b. Introduction to various extraoral appliances for tooth movement c. Expansion appliances 	8
<p>Fixed appliances</p> <ul style="list-style-type: none"> a. Introduction and background of different systems b. Indications and Drawbacks c. Components and its accessories d. Edgewise and Straight Wire systems (Brief) e. Bonding and Banding materials 	12
<p>Treatment Planning</p> <ul style="list-style-type: none"> a. Non-skeletal problems including Class I malocclusion, crowding, spacing, crossbite, open bite, deepbite b. Skeletal problems c. Class II <ul style="list-style-type: none"> i) Division 1 ii) Division 2 d. Class III f. Extractions in Orthodontics a. Adjunctive treatment goals and principles 	10
<p>Surgical Orthodontics</p> <ul style="list-style-type: none"> a. Indications 	4
<p>Cleft Lip and Palate</p> <ul style="list-style-type: none"> a. Etiology & Clinical Features 	4

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Practical and Clinical Orthodontics

1. Wire beding exercise including
 - a) Adams Clasp
 - b) Labial Bow
 - c) Canine Retractor
 - d) Cantilever and Z spring
 - e) Arch wire fabrication
2. Making of removable applicances
3. Cephalometric tracing
4. A comprehensive orthodontic case presentation of a non-skelatal malocclusion.
 - a) History
 - b) Examination
 - c) Cast analysis
 - d) Ceph Analysis
 - e) Diagnosis
 - f) Suggested Treatment Plan
 - g) Mixed dentition analysis
 - h) Fixed Appliance

Recommended Books

- *Contemporary Orthodontics*, Profit
- *Introduction to Orthodontics*, Luar Mittehels
- *Hand Book of Orthodontics*, Robert-E-Moyers

Adams, C.P. Kerr, W.J. (1995) *The Design and Construction and Use of Removable Orthodontic Appliances*. 6th ed. Wright, Oxford.

Cozzani G *Garden Of Orthodontics* Quintessence Publishing Co Inc

Heintze SD, Finke C, Jost-Brinkman PG & Miethke RR *Oral Health for the Orthodontic Patient* Quintessence Publishing Co Inc

Hosey MT & Chadwick BL. *QuintEssentials 9—Child Taming: How to Manage Children in Dental Practice* Quintessence Publishing Co Inc

Ireland AJ & McDonald F (2003) *The Orthodontic Patient : Treatment and Biomechanics* Oxford University Press.

Korbendau JM & Patti A *Clinical Success in Surgical and Orthodontic Treatment of Impacted Teeth* Quintessence Publishing Co Inc

Millet, D, Welbury, R. (2000) *Orthodontic and Paediatric Dentistry. Colour Guide*. Churchill Livingstone. Edinburgh

Nanda R (2005) *Biomechanics and Esthetic Strategies in*

Clinical Orthodontics Saunders

Orton HS Functional Appliances in Orthodontic Treatment:
An Atlas of Clinical Prescription and Laboratory Construction
Quintessence Publishing Co Inc

Patti A & D'Arc GP Clinical Success in Early Orthodontic
Treatment Quintessence Publishing Co Inc

Romano R (ed) The Art of the Smile: Integrating
Prosthodontics, Orthodontics, Periodontics, Dental
Technology, and Plastic Surgery in Esthetic Dental
Treatment Quintessence Publishing Co Inc

Tuncay OC The Invisalign System Quintessence Publishing Co Inc

Wray APM & Rodd HD. Treatment Planning for the
Developing Dentition Quintessence Publishing Co Inc