BDS IIIrd & Final Year time table functioning as per the time table of Dean Faculty of Dental Sciences, KGMU U.P., Lucknow

Distribution of hours according to DCI (220 hours) in Orthodontics & Dentofacial Orthopaedics

50 lecturers and 170 clinical hours

BDS	Semester	Lecturer(hours)	Clinical posting(hours)	Credit hours
IIIrd Year	5	20	36	2
	6	Nil	36	1
Final Year	7	15	50	2.5
	8	15	50	2.5
				Total -8

CURRICULUM (ORTHODONTICS & DENTOFACIAL ORTHOPAEDICS)

BDS IIIrd Yr.

Under graduate in Orthodontics & Dentofacial Orthopaedics has been designed to enable the qualifying dental surgeons to diagnose analyze and treat common Orthodontics problem by various procedure. Following instructional procedures are to be adopted to achieve the above objectives:-

Sl. No.	Topic	Day & Time	How to be taught(Domains 1-4)	Assessment strategies(Do main 5-6)
1	Introduction, Definition, Historical background need for Orthodontic care and Aims & objects of Orthodontics	Monday 12 PM to 1PM (Upto 31st Dec.)	Lectures, PPT, Blackboard interactive students must be able tto recognize the contribution of various Orthodontists in subject and must have a clear concept ofneed of Orthodontics in Dental practice	MCQs. At the end of topic
2	Malocclusion:- In General (a) Concept of Normal occlusion- Deciduous and permanent dentition (b) Definition of malocclusion (c) Description different types of dental skeletal and functional malocclusion (d) Classification of malocclusion- (e) Principal, Description, advantages and disadvantages of classification of malocclusion by Angle's, Simon's, Lischer's and Ackerman	do	Lecture , Model display among students interactive Must recognize various malocclusion when come across the patients. A vigorous training on models and patients shall be given	Short answer type questions

	and Profits			
3	Normal and Abnormal Functions of Stomatognathic System	do	Lecture	Short answer + MCQs.
4	Etiology of Malocclusion (a) Definition, importance, classification, local and general etiology factors (b) Etiology of following different types of malocclusion (1) Midline diastema (2) Spacing (3) Crowding (4) Crossbite Anterior/Posterior (5) Class III malocclusion (6) Class II malocclusion (7) Deep bite (8) Open bite	do	Lecture + PPT + study models of ideal occlusion and malocclusion so as to make student aware of each abnormally	Spotting exercise oral & MCQs.
5	Diagnosis and Diagnostic Aids (1)Definition, Importance and classification of diagnostic aids. (2)Importance of case history and clinical examination in Orthodontics. (3)Study models- Importance and uses- Preparation and preservation of study models. (4)Importance of intra oral X-ray's in Orthodontics. (5)Panoramic radiographs-Principles, advantages, disadvantages and uses.	do	Lectures + interactive session with discussion on models, Cephalogram, OPG X-ray, Tracings etc. + Clinical teaching At the end of schedule the students shall be able to diagnose and recognize the malocclusion and understand the problem	Oral, Practical, MCQs., History taking clinical exam & Diagnosis in clinical teaching

	Cephalometrics - Its advantages and disadvantages - Definition - Description and use of cephalostat - Description and uses of anatomical landmarks, lines and angles used in cephalometric analysis. Analyses - Down's - Steiner's - Tweed's - Ricket's'E' Line Electro-myography and its uses in Orthodontics. Wrist X-rays and its importance in Orthodontics. Model Analysis:- - Pont's - Ashley How's - Bolton - Carey's Moyer's Mixed Dentition Analysis		whether dental/skeletal Diagnosis explained with PPT & Lecture classes. Individual model analysis to be performed in grasps over study cast & radiographs (IOPA)	Short answer type MCQs.
6	Bio-mechanical Principles of Orthodontic Tooth Movement (a) Different types of tooth movement (b) Tissue response to orthodontic force application (c) Age factor in orthodontic tooth movement	do	Demonstration on skill, models, PPT	Oral, MCQs., Long question(Theory)

BDS Final Yr.

Sl. No.	Topic	Day & Time	How to be taught (Domains 1-4)	Assessment strategies (Domain 5-6)
1	Growth & Development in general 1. Definition 2. Growth spurts & Differential growth 3. Factors influencing Growth & Development 4. Methods of measuring growth 5. Growth Theories(Genetic, Sichers, Scott's, Moss's, Petrovic, Multifactorial) 6. Genetic & epigenetic factors in growth 7. Cephalocaudal gradient in growth Morphologic development of craniofacial structures (a) Methods of bone growth (b) Prenatal growth of craniofacial structures (c) Postnatal growth & development of cranial base maxilla, mandible, dental arches, & occlusion Functional development of dental arches & occlusion (a) Factors influencing functional development of dental arches & occlusion (b) Forces of occlusion	Every Wednesday 2 PM to 3PM	Lectures, PPT, Blackboard interactive	MCQs. At the end of topic

	(c) Wolff's law of transformation of bone (d) Trajectories of forces Clinical application of growth & Development			
2	General principles of orthodontic treatment planning of dental & skeletal malocclusion: Timing of orthodontic Tt.	Every Wednesday 2 PM to 3PM	Lecture , Model display among students interactive	Short answer type questions
3	Anchorage in orthodontics- Definition, classification, Types & stability of Anchorage	Every Wednesday 2 PM to 3PM	Lecture	Short answer + MCQs.
4 5	Preventive orthodontics (a) Definition (b) Different procedures undertaken in preventive orthodontics & their limitations Interceptive orthodontics (a) Definition (b) Different procedures undertaken in interceptive orthodontics (c) Serial extractions, Definition, indication, contraindications Techniques, Advantages & disadvantages (d) Role of muscle exercise as an interceptive procedure	Every Wednesday 2 PM to 3PM	Lecture + PPT	

6	Corrective orthodontics (a) Definition, factors to be considered during Tt planning (b)Model analysis, Pont's, Ashley Howe's, Bolton, Careys, Moyer's mixed Dentition Analysis (c) Methods of gaining space in the arch:- Indication, relative merits and demerits of proximal stripping, arch expansion and extractions (d) Extractions in orthodontics- Indications selection of teeth for extraction	Every Wednesday 2 PM to 3PM	Lectures + interactive session with discussion on models, Cephalogram, OPG X-ray, Tracings etc. + Clinical teaching Various patients undergoing orthodontic treatment in clinic will be demonstrated so that basic concept of appliance and treatment philosophy is generated	Oral, Practical, MCQs., History taking clinical exam & Diagnosis in clinical teaching
7	Orthodontic appliances: General	Every	Diagnosis	Short answer

	(a) Requisites for Orthodontics appliances (b) Classification ,Indications of removable and functional appliances (c) Methods of force application (d) Materials used in construction of various orthodontic appliance, uses of stainless steel , technical consideration in curing of acrylic, principles of welding ,soldering, fluxes & antifluxes. (e) Preliminary Knowledge of acid etching and direct bonding. (f)Expansion appliances in orthodontics 1 Principles 2 Indications for arch expansion 3 Description of expansion appliances & different types of expansion devices & their uses 4 Rapid max. expansion	Wednesday 2 PM to 3PM	explained with PPT & Lecture classes	type MCQs.
8	Removable orthodontic appliances (a)Components of removable appliances (b)Different types of clasps & their uses (c)Different types of labial bows & their uses (d)Different types of springs & their uses	Every Wednesday 2 PM to 3PM	Demonstration on skill, models, PPT An demonstration of soldering welding curing an appliance and bonding of brackets to be given	Oral, MCQs., Long question(Theory)

9	Fixed orthodontic appliances I Definition, Indication & contraindications II Component parts & their uses III Basic principles of different techniques Edgewise Begg's Straightwire	Every Wednesday 2 PM to 3PM	Lectures, PPT, Blackboard interactive	MCQs. At the end of topic
10	Extraoral appliances I Head gear II Chin cups III Reverse pull headgear	Every Wednesday 2 PM to 3PM	Lecture , Model display among students interactive	Short answer type questions
11	Myofunctional appliances I Definition & principles II Muscle exercises & their uses in orthodontics III Functional appliances	Every Wednesday 2 PM to 3PM	Lecture	Short answer + MCQs.

	Activator, oral screen, Frankel's functional regulator, bionator, twin blocks, lipbumper. Inclined planes- upper & lower			
12	Orthodontic management of cleft lip & palate	Every Wednesday 2 PM to 3PM	Lecture + PPT	
13	Principles of surgical orthodontics (a) Mandibular prognathism & retrognathism (b) Max. prognathism & retrognathism (c) Anterior open bite & deep bite (d) Crossbite	Every Wednesday 2 PM to 3PM	Lectures + interactive session with discussion on models, Cephalogram, OPG X-ray, Tracings etc. + Clinical teaching A concept of indicators for surgical Orthodontics will be developed so as to make them aware of the situation that need Orthonathic surgery. A visit to oral surgery O.T. while operating study cases will also be	Oral, Practical, MCQs., History taking clinical exam & Diagnosis in clinical teaching

			planned. A detailed case report o few treated cases to be shown	
14	Principles, Differential diagnosis & methods of Tt of common orthodontics problems Midline diastema Crossbite Openbite Deepbite Spacing Crowding Class II Div. 1 & Div. 2 malocclusion Class III malocclusion True & Pseudo class III	Every Wednesday 2 PM to 3PM	Diagnosis of various malocclusion will be explained with PPT & Lecture classes and study models of treated subjects. Various bio mechanics for treatment will also be explained with photographs & PPT	Short answer type MCQs.
15	Retention & relapse Definition, Need for Retention, Causes of relapse, Methods of Retention, Different types of Retention devices, Duration of Retention, Theories of Retention	Every Wednesday 2 PM to 3PM	Demonstration on skill, models, PPT	Oral, MCQs., Long question(Theory)

Schedule of Practical Training

1 Each student is posted in BDS III yr. & BDS Final yr. for 3 hours and 4 hours respectively in clinics as per Dean's Order
2 Each student is trained in various wire bending exercises impression making patient diagnosis an ideal exercise appliance fabrication during such period.
3 A detailed description of these exercises is available in the exercise workbook.

N.B All the above mentioned syllabus and curriculum is being followed in accordance with Dental Council of India regulations 2007