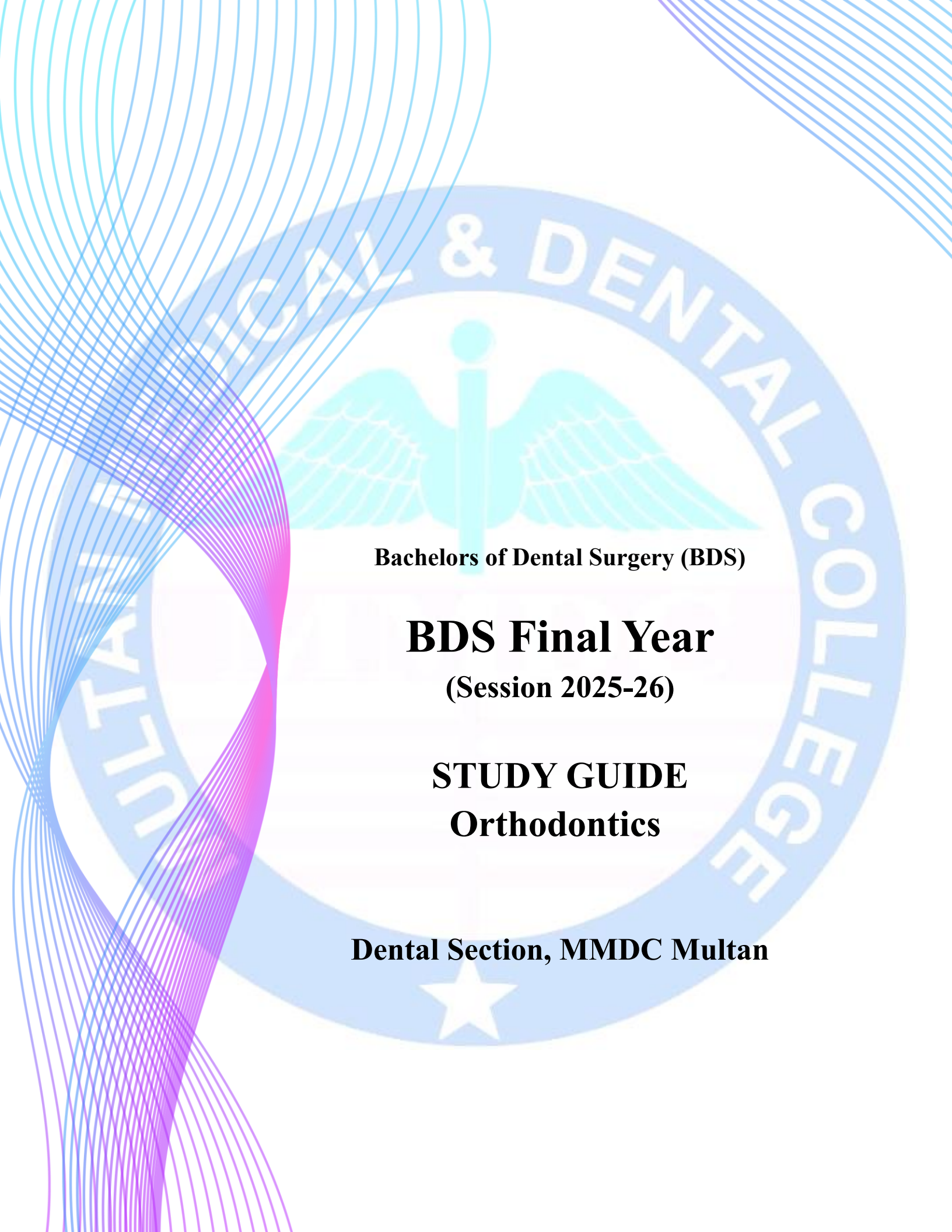




Bachelors of Dental Surgery (BDS)

BDS Final Year

(Session 2025-26)

STUDY GUIDE

Orthodontics

Dental Section, MMDC Multan

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MISSION AND VISION OF UHS

Vision Statement:

UHS is a leading university aiming to keep its graduates apt with the ever-emerging global health challenges, evolving educational methodologies and emerging technological advancements to maintain its distinguishable position as a medical university.

Mission Statement:

UHS shall continue to strive for producing a human resource par at excellence to cater for the health needs of the people of Punjab and Pakistan.

MISSION AND VISION OF MMDC

(Dental Section) MMDC Vision

To be a leading dental institution in South Punjab, recognized for excellence in education, research, and healthcare services, while developing competent and compassionate healthcare professionals and addressing health disparities through research and community-focused initiatives.

(Dental Section) MMDC Mission

To produce professionally competent and ethical dental graduates equipped with knowledge, clinical skills and technological competence to address emerging global health challenges through research, innovative educational approaches and lifelong learning.



PROGRAM OUTCOME

The students of Bachelor of Dental Surgery (BDS) of MMDC at the end of the program will be able to:

- Dental Graduates will apply the knowledge, skills and technological competencies to practice dentistry in primary care setting and provide comprehensive patient care.
- The graduates will promote dental health care within the community, utilizing the latest research, critical thinking and making evidence informed decisions and apply relevant evidence to address emerging oral and global health challenges.
- Dental graduates will uphold professional values and demonstrate emotional intelligence, social responsibility, and engage in lifelong learning, leadership, and innovation.



LIST OF ABBREVIATION

Abbreviation	Full Form
BDS	Bachelor of Dental Surgery
UHS	University of Health Sciences
MMDC	Multan Medical & Dental College
MIT	Mode of Information Transfer
AT	Assessment Tool
T&L	Teaching and Learning
RAS	Recurrent Aphthous Stomatitis
TMJ	Temporomandibular Joint
TMD	Temporomandibular Disorders
TMPDS	Temporomandibular Pain-Dysfunction Syndrome
OSCE	Objective Structured Clinical Examination
OSPE	Objective Structured Practical Examination
LGIS	Large Group Interactive Session
OMFS	Oral and Maxillofacial Surgery



RATIONALE FOR ORTHODONTICS — BDS FINAL YEAR

- Orthodontics equips final-year BDS students with the knowledge and clinical judgement to recognise, diagnose, and manage malocclusion and dentofacial deformity — conditions that affect a significant proportion of the population and are among the most common reasons patients seek dental consultation.
- Understanding normal growth and development of the craniofacial complex, from the primary dentition through adolescence and into adulthood, gives students the developmental foundation needed to distinguish normal variation from pathology requiring intervention.
- Training in orthodontic diagnosis — history-taking, clinical examination, model analysis, and cephalometric/radiographic assessment — builds the systematic diagnostic reasoning skills that carry over into all areas of dental practice, not just orthodontics.
- Exposure to treatment planning across the full range of patients (primary dentition, mixed dentition, adolescents, and adults) prepares students to recognise which cases are within the scope of general practice and which require referral to a specialist — a critical judgement for safe, ethical practice.
- Knowledge of appliance therapy (removable, functional, and fixed) and the biologic and mechanical principles behind tooth movement gives students insight into how orthodontic forces affect the periodontium and supporting bone, reinforcing the interdisciplinary links between orthodontics, periodontology, and oral surgery.
- Understanding combined surgical-orthodontic treatment and the orthodontic management of cleft lip and palate connects students to the broader multidisciplinary care of complex craniofacial anomalies.
- Since Orthodontics is taught alongside Dental Radiology in this curriculum, students also build core radiographic interpretation skills — essential not only for orthodontic diagnosis but for general diagnostic competence across all areas of dentistry.
- Clinical exposure to removable, functional, and fixed orthodontic cases in the final year consolidates theoretical knowledge into hands-on treatment planning and appliance management experience, preparing graduates to confidently handle straightforward orthodontic presentations in general practice.



ACADEMIC SCHEDULE OF BDS 3RD YEAR

Class Commencement	11 May 2026
1 st Term Examination	14 September – 21 September
2 nd Term Examination	16 November – 23 November
Sendup Examination	



TIME TABLE



DENTAL SECTION, MULTAN MEDICAL & DENTAL COLLEGE, MULTAN

Time Table For Final Year BDS (Session 2026)

Day / Time	08:30-09:30	09:30-10:20	10:20-11:10	11:10-12:00	12:00-12:50	12:50-01:20	01:20-02:10	02:10-03:00
Monday	Test	Test	Interactive Lecture Oral Surgery	Clinical	Clinical	Lunch & Namaz Break	Clinical	Interactive Lecture Orthodontics
Tuesday	Interactive Lecture Prosthodontics	Interactive Lecture Oral Surgery	Clinical	Clinical	Clinical	Lunch & Namaz Break	Clinical	Interactive Lecture Operative Dentistry
Wednesday	Interactive Lecture Operative Dentistry	Interactive Lecture Orthodontics	Clinical	Clinical	Clinical	Lunch & Namaz Break	Clinical	Interactive Lecture Prosthodontics
Thursday	Interactive Lecture Orthodontics	Interactive Lecture Pedodontics	Clinical	Clinical	Clinical	Lunch & Namaz Break	Interactive Lecture Research	Interactive Lecture Oral Surgery
Friday	Test	Interactive Lecture Prosthodontics	Interactive Lecture Operative Dentistry	Clinical	Clinical	Lunch & Jumma Namaz Break	Interactive Lecture Behavioral Sciences	Interactive Lecture ICT



COURSE SEQUENCE - ORTHODONTICS

Day	Date	Time	Subject	Topic	Facilitator Name
Monday	11-05-2026	02:10-03:00	Lecture Orthodontics	Introduction & Terminologies I	Dr. Ehsan Haider
Wednesday	13-05-2026	09:30-10:20	Lecture Orthodontics	Introduction & Terminologies II	Dr. Ehsan Haider
Thursday	14-05-2026	08:30-09:30	CBL Orthodontics	Growth and Development I	Dr. Ehsan Haider
Monday	18-05-2026	02:10-03:00	Lecture Orthodontics	Growth and Development II	Dr. Ehsan Haider
Wednesday	20-05-2026	09:30-10:20	Lecture Orthodontics	Growth and Development III	Dr. Ehsan Haider
Thursday	21-05-2026	08:30-09:30	CBL Orthodontics	Growth and Development IV	Dr. Ehsan Haider
Friday	22-05-2026	08:30-09:30	Test Orthodontics		
Monday	01-06-2026	02:10-03:00	Lecture Orthodontics	Growth and Development V	Dr. Ehsan Haider
Wednesday	03-06-2026	09:30-10:20	Lecture Orthodontics	Growth and Development VI	Dr. Ehsan Haider
Thursday	04-06-2026	08:30-09:30	Lecture Orthodontics	Growth and Development VII	Dr. Ehsan Haider
Monday	08-06-2026	08:30-09:30	Test Orthodontics		
Monday	08-06-2026	02:10-03:00	Lecture Orthodontics	Diagnosis I	Dr. Farhan Ali
Wednesday	10-06-2026	09:30-10:20	Lecture Orthodontics	Diagnosis II	Dr. Farhan Ali
Thursday	11-06-2026	08:30-09:30	Lecture Orthodontics	Diagnosis III	Dr. Farhan Ali
Monday	13-07-2026	09:30-10:20	Test Orthodontics		
Monday	13-07-2026	02:10-03:00	Lecture Orthodontics	Development of Dentition I	Dr. Ehsan Haider
Wednesday	15-07-2026	09:30-10:20	Lecture Orthodontics	Development of Dentition II	Dr. Ehsan Haider
Thursday	16-07-2026	08:30-09:30	Lecture Orthodontics	Development of Dentition III	Dr. Ehsan Haider
Monday	20-07-2026	02:10-03:00	Lecture Orthodontics	Development of Dentition I	Dr. Ehsan Haider
Wednesday	22-07-2026	09:30-10:20	Lecture Orthodontics	Development of Dentition II	Dr. Ehsan Haider



Thursday	23-07-2026	08:30-09:30	Lecture Orthodontics	Development of Dentition III	Dr. Ehsan Haider
Friday	24-07-2026	08:30-09:30	Test Orthodontics		
Monday	27-07-2026	02:10-03:00	Lecture Orthodontics	Development of Dentition I	Dr. Ehsan Haider
Wednesday	29-07-2026	09:30-10:20	Lecture Orthodontics	Development of Dentition II	Dr. Ehsan Haider
Thursday	30-07-2026	08:30-09:30	Lecture Orthodontics	Development of Dentition III	Dr. Ehsan Haider
Monday	03-08-2026	08:30-09:30	Test Orthodontics		
Monday	03-08-2026	02:10-03:00	Lecture Orthodontics	Development of Dentition IV	Dr. Ehsan Haider
Wednesday	05-08-2026	09:30-10:20	Lecture Orthodontics	Etiology of Malocclusion I	Dr. Ehsan Haider
Thursday	06-08-2026	08:30-09:30	Lecture Orthodontics	Etiology of Malocclusion II	Dr. Ehsan Haider
Monday	10-08-2026	02:10-03:00	Lecture Orthodontics	Etiology of Malocclusion III	Dr. Ehsan Haider
Wednesday	12-08-2026	09:30-10:20	Lecture Orthodontics	Classification of Malocclusion I	Dr. Ehsan Haider
Thursday	13-08-2026	08:30-09:30	Lecture Orthodontics	Classification of Malocclusion II	Dr. Ehsan Haider
Monday	17-08-2026	02:10-03:00	Lecture Orthodontics	Biology of Tooth Movement I	Dr. Farhan Ali
Wednesday	19-08-2026	09:30-10:20	Lecture Orthodontics	Biology of Tooth Movement II	Dr. Farhan Ali
Thursday	20-08-2026	08:30-09:30	Lecture Orthodontics	Biology of Tooth Movement III	Dr. Farhan Ali
Monday	24-08-2026	02:10-03:00	Lecture Orthodontics	Anchorage I	Dr. Farhan Ali
Tuesday	25-08-2026	09:30-10:20	Lecture Orthodontics	Anchorage II	Dr. Farhan Ali
Thursday	27-08-2026	08:30-09:30	Lecture Orthodontics	Open Bite I	Dr. Ehsan Haider
Monday	31-08-2026	02:10-03:00	Lecture Orthodontics	Open Bite II	Dr. Ehsan Haider
Wednesday	02-09-2026	09:30-10:20	Lecture Orthodontics	Cross Bite I	Dr. Ehsan Haider
Thursday	03-09-2026	08:30-09:30	Lecture Orthodontics	Cross Bite II	Dr. Ehsan Haider
Monday	07-09-2026	02:10-03:00	Lecture Orthodontics	Deep Bite I	Dr. Ehsan Haider
Wednesday	09-09-2026	09:30-10:20	Lecture Orthodontics	Deep Bite II	Dr. Ehsan Haider



Thursday	10-09-2026	08:30-09:30	Lecture Orthodontics	Class I Malocclusion & Its Management I	Dr. Ehsan Haider
Wednesday	16-09-2026	09:00-3:00	Orthodontics		
Wednesday	23-09-2026	09:30-10:20	Lecture Orthodontics	Class II Malocclusion & Its Management I	Dr. Ehsan Haider
Thursday	24-09-2026	08:30-09:30	CBL Orthodontics	Class II Malocclusion & Its Management II	Dr. Ehsan Haider
Friday	25-09-2026	08:30-09:30	Test Orthodontics		
Monday	28-09-2026	02:10-03:00	Lecture Orthodontics	Class I Malocclusion & Its Management II	Dr. Ehsan Haider
Wednesday	30-09-2026	09:30-10:20	Lecture Orthodontics	Class II Malocclusion & Its Management I	Dr. Ehsan Haider
Thursday	01-10-2026	08:30-09:30	CBL Orthodontics	Class II Malocclusion & Its Management II	Dr. Ehsan Haider
Monday	05-10-2026	08:30-09:30	Test Orthodontics		
Monday	05-10-2026	02:10-03:00	Lecture Orthodontics	Class III Malocclusion & Its Management I	Dr. Ehsan Haider
Wednesday	07-10-2026	09:30-10:20	Lecture Orthodontics	Class III Malocclusion & Its Management II	Dr. Ehsan Haider
Thursday	08-10-2026	08:30-09:30	Lecture Orthodontics	Cleft LIP & Palate	Dr. Farhan Ali
Monday	12-10-2026	09:30-10:20	Test Orthodontics		
Monday	12-10-2026	02:10-03:00	Lecture Orthodontics	Class III Malocclusion & Its Management I	Dr. Ehsan Haider
Wednesday	14-10-2026	09:30-10:20	Lecture Orthodontics	Class III Malocclusion & Its Management II	Dr. Ehsan Haider
Thursday	15-10-2026	08:30-09:30	Lecture Orthodontics	Cleft LIP & Palate	Dr. Farhan Ali



Monday	19-10-2026	02:10-03:00	Lecture Orthodontics	Space Management I	Dr. Ehsan Haider
Wednesday	21-10-2026	09:30-10:20	Lecture Orthodontics	Space Management II	Dr. Ehsan Haider
Thursday	22-10-2026	08:30-09:30	Lecture Orthodontics	Bio Mechanics I	Dr. Farhan Ali
Friday	23-10-2026	08:30-09:30	Test Orthodontics		
Monday	26-10-2026	02:10-03:00	Lecture Orthodontics	Bio Mechanics II	Dr. Farhan Ali
Wednesday	28-10-2026	09:30-10:20	Lecture Orthodontics	Removable Appliances I	Dr. Farhan Ali
Thursday	29-10-2026	08:30-09:30	Lecture Orthodontics	Removable Appliances II	Dr. Farhan Ali
Monday	02-11-2026	08:30-09:30	Test Orthodontics		
Monday	02-11-2026	02:10-03:00	Lecture Orthodontics	Fixed Appliances I	Dr. Farhan Ali
Wednesday	04-11-2026	09:30-10:20	Lecture Orthodontics	Fixed Appliances II	Dr. Farhan Ali
Thursday	05-11-2026	08:30-09:30	Lecture Orthodontics	Functional Appliances I	Dr. Farhan Ali
Wednesday	11-11-2026	09:30-10:20	Lecture Orthodontics	Functional Appliances II	Dr. Farhan Ali
Thursday	12-11-2026	08:30-09:30	Lecture Orthodontics	Functional Appliances III	Dr. Farhan Ali
Wednesday	18-11-2026	09:00-3:00	Orthodontics		
Wednesday	25-11-2026	09:30-10:20	Lecture Orthodontics	Retention and Relapse I	Dr. Farhan Ali
Thursday	26-11-2026	08:30-09:30	CBL Orthodontics	Retention and Relapse II	Dr. Farhan Ali
Friday	27-11-2026	08:30-09:30	Test Orthodontics		
Monday	30-11-2026	02:10-03:00	Lecture Orthodontics	Syndromes	Dr. Farhan Ali
Wednesday	02-12-2026	09:30-10:20	Lecture Orthodontics	Retention and Relapse I	Dr. Farhan Ali
Thursday	03-12-2026	08:30-09:30	CBL Orthodontics	Retention and Relapse II	Dr. Farhan Ali
Monday	07-12-2026	08:30-09:30	Test Orthodontics		
Monday	07-12-2026	02:10-03:00	Lecture Orthodontics	Ortho Gnathic Surgery	Dr. Farhan Ali
Wednesday	09-12-2026	09:30-10:20	Lecture Orthodontics	Ortho Perio Relationship	Dr. Farhan Ali
Thursday	10-12-2026	08:30-09:30	Lecture Orthodontics	Adult / Adjunctive Orthodontics	Dr. Ehsan Haider



Monday	14-12-2026	09:30-10:20	Test Orthodontics		
Monday	14-12-2026	02:10-03:00	Lecture Orthodontics	Radiology Latral Ceph.	Dr. Farhan Ali
Wednesday	16-12-2026	09:30-10:20	Lecture Orthodontics	CVM	Dr. Farhan Ali
Thursday	17-12-2026	08:30-09:30	Lecture Orthodontics	OPG	Dr. Farhan Ali
Monday	21-12-2026	02:10-03:00	Lecture Orthodontics	Hand & Wrist Radiograph	Dr. Farhan Ali
Wednesday	23-12-2026	09:30-10:20	Lecture Orthodontics	TMD	Dr. Farhan Ali
Thursday	24-12-2026	08:30-09:30	Lecture Orthodontics	1st Stage of Comprihensive (Goals of Aligment)	Dr. Ehsan Haider
Friday	25-12-2026	08:30-09:30	Test Orthodontics		
Monday	28-12-2026	02:10-03:00	Lecture Orthodontics	1st Stage of Comprihensive Problems Related to Aligment)	Dr. Farhan Ali
Wednesday	30-12-2026	09:30-10:20	Lecture Orthodontics	2nd Stage Correction of Molar Relationship	Dr. Farhan Ali
Thursday	31-12-2026	08:30-09:30	Lecture Orthodontics	2nd Stage Space Closeup	Dr. Farhan Ali
Monday	04-01-2027	08:30-09:30	Test Orthodontics		
Monday	04-01-2027	02:10-03:00	Lecture Orthodontics	3rd Stage Tooth Size Discrepencies	Dr. Farhan Ali
Wednesday	06-01-2027	09:30-10:20	Lecture Orthodontics	Midline Discripinciers	Dr. Farhan Ali
Thursday	07-01-2027	08:30-09:30	Lecture Orthodontics	Final Setling of Teeth	Dr. Farhan Ali
Monday	11-01-2027	09:30-10:20	Test Orthodontics		
Monday	11-01-2027	02:10-03:00	Lecture Orthodontics	3rd Stage Tooth Size Discrepencies	Dr. Farhan Ali
Wednesday	13-01-2027	09:30-10:20	Lecture Orthodontics	Midline Discripinciers	Dr. Farhan Ali
Thursday	14-01-2027	08:30-09:30	Lecture Orthodontics	Final Setling of Teeth	Dr. Farhan Ali



Monday	18-01-2027	02:10-03:00	Lecture Orthodontics	3rd Stage Tooth Size Discrepancies	Dr. Farhan Ali
Wednesday	20-01-2027	09:30-10:20	Lecture Orthodontics	Midline Discrepancies	Dr. Farhan Ali
Thursday	21-01-2027	08:30-09:30	Lecture Orthodontics	Final Settling of Teeth	Dr. Farhan Ali
Friday	22-01-2027	08:30-09:30	Test Orthodontics		
Monday	25-01-2027	02:10-03:00	Lecture Orthodontics	3rd Stage Tooth Size Discrepancies	Dr. Farhan Ali
Wednesday	27-01-2027	09:30-10:20	Lecture Orthodontics	Midline Discrepancies	Dr. Farhan Ali
Thursday	28-01-2027	08:30-09:30	Lecture Orthodontics	Final Settling of Teeth	Dr. Farhan Ali
Monday	01-02-2027	02:10-03:00	Lecture Orthodontics	3rd Stage Tooth Size Discrepancies	Dr. Farhan Ali
Wednesday	03-02-2027	09:30-10:20	Lecture Orthodontics	Midline Discrepancies	Dr. Farhan Ali
Thursday	04-02-2027	08:30-09:30	Lecture Orthodontics	Final Settling of Teeth	Dr. Farhan Ali
Monday	08-02-2027	02:10-03:00	Lecture Orthodontics	3rd Stage Tooth Size Discrepancies	Dr. Farhan Ali
Wednesday	10-02-2027	09:30-10:20	Lecture Orthodontics	Midline Discrepancies	Dr. Farhan Ali
Thursday	11-02-2027	08:30-09:30	Lecture Orthodontics	Final Settling of Teeth	Dr. Farhan Ali
Monday	15-02-2027	02:10-03:00	Lecture Orthodontics	3rd Stage Tooth Size Discrepancies	Dr. Farhan Ali
Wednesday	17-02-2027	09:30-10:20	Lecture Orthodontics	Midline Discrepancies	Dr. Farhan Ali
Thursday	18-02-2027	08:30-09:30	Lecture Orthodontics	Final Settling of Teeth	Dr. Farhan Ali
Friday	05-03-2027	09:00-12:00	Orthodontics	Complete Syllabus	
Saturday	06-03-2027	9:00 - 3:00	Orthodontics	Complete Syllabus	



FACILITATORS (ORTHODONTICS)

Sr. #	Name	Designation	Department
1	Dr. Ehsan Haider	Associate Professor	Orthodontics
2	Dr. Farhan Ali	Assistant Professor	Orthodontics
3	Dr. Saba Habib	Senior Registrar	Orthodontics
4	Dr. Sarah Zafar	Demonstrator	Orthodontics
5	Dr. Adil Gulzar	Demonstrator	Orthodontics
6	Dr. Qurat Ul Aine	Demonstrator	Orthodontics



ORTHODONTICS -- COURSE LEARNING OBJECTIVES

Sr. No.	Title / Topic	Learning Objective	T&L Strategy	Assessment Tool
1	Introduction to Orthodontics & Orthodontic Problems	- Describe the introduction and scope of orthodontic practice. - Describe the epidemiology of malocclusion and its impact as a dentofacial deformity in society. Describe the development of orthodontic problems.	Interactive lecture	MCQs
2	Ideal Occlusion & Concepts of Growth and Development	- Describe normal occlusion, the development of occlusion and malocclusion, and indications for orthodontic treatment. - Describe growth pattern variability and timing, theories of growth control, and methods for studying physical growth. Describe the nature of skeletal growth and growth of the craniofacial complex, cranial vault, cranial base, maxilla and mandible.	Interactive lecture	MCQs
3	Early & Later Stages of Physical and Dentofacial Development	- Describe prenatal influences on facial development, infancy, early childhood, and the primary dentition years. - Describe the later stages of development, including the mixed dentition years, eruption of permanent teeth, and space relationships in replacement of incisors, canines and primary molars.	Interactive lecture	MCQs



Sr. No.	Title / Topic	Learning Objective	T&L Strategy	Assessment Tool
		Describe assessment of skeletal and developmental age, adolescence and the timing of puberty. Describe growth patterns in the dentofacial complex, including dimensional changes, rotation of jaws, and maturational/aging changes in the dental apparatus.		
4	Etiology of Orthodontic Problems & Orthodontic Diagnosis	- Describe the possible causes of malocclusion, including developmental causes, trauma and functional influences, and classify malocclusion. - Describe the format of orthodontic assessment: history, clinical examination (extra-oral/intra-oral), and reference models. - Interpret radiographic assessment, including cephalometric analysis, tracing a lateral skull radiograph, and the role of intra-oral and OPG views in orthodontic diagnosis. Summarise and record orthodontic findings and develop a problem list.	Interactive lecture	MCQs
5	Orthodontic Treatment Planning	- Describe the process from problem list to final treatment plan, and the principles of orthodontic treatment planning. - Distinguish moderate from severe orthodontic problems (orthodontic triage).	Interactive lecture	MCQs



Sr. No.	Title / Topic	Learning Objective	T&L Strategy	Assessment Tool
		Describe treatment planning for orthodontic problems in the primary dentition, early mixed dentition, adolescence, and adulthood. Describe limitations and special problems, including arch expansion versus extraction and treatment planning for patients with skeletal discrepancies.		
6	Biologic Basis & Mechanical Principles of Orthodontic Therapy	- Describe periodontal and bone response to normal function and to sustained orthodontic forces. - Recognise the deleterious and skeletal effects of orthodontic forces. - Describe elastic materials and the production of orthodontic force, and design factors in orthodontic appliances. Describe anchorage and its control, and the development of contemporary orthodontic appliances.	Interactive lecture	MCQs
7	Removable, Fixed & Functional Appliances	- Describe the development, indications and components of removable appliances. - Describe contemporary fixed appliances, including bands for attachments, bonded attachments and characteristics of contemporary edgewise attachments. Describe the mode of action, indications and types of functional appliances.	Interactive lecture	MCQs



Sr. No.	Title / Topic	Learning Objective	T&L Strategy	Assessment Tool
8	Treatment of Non-Skeletal & Skeletal Problems in Preadolescent Children	- Describe treatment for potential alignment problems, crowding in the mixed dentition, posterior crossbites, and incisor retrusion/protrusion and vertical problems. - Describe the principles of growth modification treatment and appliances used for growth modification. Describe treatment for Class II and Class III jaw relationships, vertical and transverse problems, and facial asymmetry.	Interactive lecture	MCQs
9	Comprehensive Treatment (Stages 1-3) & Retention	- Describe the goals and procedures of the first stage of comprehensive treatment: alignment and levelling. - Describe the second stage: correction of molar relationship and space closure. - Describe the third stage: finishing, root paralleling, torque of incisors, correction of vertical relationships, midline and tooth-size discrepancies, and final setting of teeth. Describe the rationale for retention, and removable, fixed and active retainers.	Interactive lecture	MCQs
10	Adjunctive & Adult Orthodontic Treatment	Describe the goals, principles and procedures of adjunctive treatment for adults. Describe special considerations in comprehensive treatment of adults, including motivation,	Interactive lecture	MCQs



Sr. No.	Title / Topic	Learning Objective	T&L Strategy	Assessment Tool
		periodontal aspects and orthodontic appliance therapy.		
11	Combined Surgical-Orthodontic Treatment & Cleft Lip/Palate	- Describe types and timing of combined orthodontic-surgical treatment, and special considerations in surgical-orthodontic planning. - Describe the integration of orthodontics and surgery, and future directions in the field. Describe the role of the orthodontist in cleft lip and palate and other facial anomalies, and common orthodontic problems and principles of correction.	Interactive lecture	MCQs
12	Clinical Assignments Removable, functional and fixed orthodontics	- Manage clinical cases using removable orthodontic appliances. - Manage clinical cases using functional orthodontic appliances. Manage clinical cases using fixed orthodontic appliances.	Clinical rotation	MCQs
13	Dental Radiology: Principles, Radiation Biology & Protection	Describe the principles of radiation biology and the hazards of radiation. Apply radiation protection guidelines and recognise medico-legal issues relevant to dental radiography.	Interactive lecture	MCQs
14	Dental Radiology:	Describe the radiographic anatomy of the oral and maxillofacial region.	Interactive lecture	MCQs



Sr. No.	Title / Topic	Learning Objective	T&L Strategy	Assessment Tool
	Radiographic Anatomy & Views	- Describe the indications and interpretation of intra-oral views (periapical, bitewing, occlusal). - Describe the indications and interpretation of extra-oral views (lateral, postero-anterior, occipitomental, sub-mentovertex, cephalometric) and the orthopantomogram. - Interpret the radiographic diagnosis of common dental and oral pathological lesions. Describe the indications and interpretation of sialography.		
15	Dental Radiology: Advanced Imaging Modalities	- Describe the principles and applications of computerised tomography in dentistry. - Describe the principles and applications of magnetic resonance imaging in dentistry. Describe the principles and applications of nuclear imaging in dentistry.	Interactive lecture	MCQs





Instructural Strategies

Delivery of a curriculum also needs a diversity of educational vernacular for the different learning styles. Following are a few of the recommended instructional strategies. It is advised that at least **three different methods of instruction** should be adopted in the institutional planning. This will enable the diversity of learning patterns to be facilitated.

Large Group Interactive Session (LGIS)

Lecture format is the most widely used approach to teaching especially in a large class size with average attention span of 20-30 mins. Interactive lecturing involves a two-way interaction between the presenter and the participants. Interactive methods like brainstorming, buzz group, simulation, role play, and clinical cases can be used.

- **Significance of its usage**
- Relaxed environment, diverse opinions, active involvement
- Increase attention and motivation.
- Independence and group skills.
- Cost effective.
- Suitable for taking advantage of available audiovisual technologies.

Clinical Teaching

Teaching and learning that occurs with actual patient as the focus. It occurs in the dental simulation labs, Dental Clinics and for Oral Medicine in the wards.

- **Significance of its usage**
- Stimulus of clinical contact
- Psychomotor skills
- Communication skills
- Language skills
- Interpersonal skills
- Professional attitudes and empathy
- Role modelling



Case Based Learning

Case-Based Learning (CBL) is a teaching-learning strategy in which students are presented with a clinical case related to Oral Medicine. Students analyze the case, identify clinical findings, formulate differential diagnoses, and discuss appropriate management under the guidance of the teacher.

- Significance of its usage
- Correlates theoretical knowledge with clinical practice.
- Develops clinical reasoning and diagnostic skills.
- Enhances interpretation of oral signs and symptoms.
- Promotes active participation and discussion.
- Develops problem-solving and decision-making skills.





ASSESSMENT



Assessment Strategies

The assessment and evaluation of the students shall be carried out according to the following criteria:

1. INTERNAL ASSESSMENT

Internal Assessment will have a weight age 10 Percent which is **20 marks** in annual examination and the student will be evaluated internally by:

Weekly Assessment will be conducted regularly, consisting of multiple-choice questions (MCQs) and short essay questions (SEQs)

- i. Teaching assignments.
- ii. Maintenance of Logbooks of Clinical Rotation
- iii. Class participation during lectures and demonstrations
- iv. Attitude and behavior of student throughout academic year
- v. Term Examination
- vi. Participation in Research.
- vii. Sendup Examination

2. Class Tests

- a. Class Test will be conducted after completion of every chapter. Assessment tools will be MCQs, OSPE, OSVE and OSCE

3. Final Send-Up Examination

Final Send up Examination will be held at the end of completion of all three terms for complete evaluation before appearance in UHS examination and will be conducted as per Examination Paper Format comprising of Written Theory, Viva/ OSPE.

4. POLICY FOR ATTENDANCE

- According to university of health sciences **75% attendance is mandatory** for the eligibility to sit in the UHS annual examination.

NOTE:

In order to be eligible to appear in UHS Examinations it is compulsory for the student to achieve at least:

- **75% attendance in each Term**
- **50% marks in each Term and Final Send Up Examination**



Learning Resources

1. **Contemporary Orthodontics** — William R. Proffit
2. **An Introduction to Orthodontics** — Laura Mitchell
3. **A Textbook of Orthodontics** — W.J. Houston
4. **Moyer's Book of Orthodontics**

