

**LAHORE MEDICAL AND DENTAL COLLEGE**



**OPERATIVE DENTISTRY STUDY**

**GUIDE**

**2<sup>ND</sup>, 3<sup>RD</sup>, FINAL YEAR BDS**

**2024**



### **COURSE DIRECTOR:**

Prof. Dr Saima Razaq Khan	BDS, FCPS	Professor & head of the Department
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### **CONTRIBUTORS:**

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### **PAEDODONTICS**

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# **I. INTRODUCTION:**

Operative Dentistry is one of the branches of dentistry that deals with the art and science of the diagnosis, prevention, treatment, and prognosis of diseases or trauma to teeth.

Restorative dentistry is the study, diagnosis and integrated management of diseases of the teeth and their supporting structures and the rehabilitation of the dentition to functional and aesthetic requirements of the individual.

Endodontics is the branch of dentistry concerning dental pulp and tissues surrounding the root of a tooth.

Crown and Bridge is the art and science of restoring damaged teeth with cast metal, metal ceramic, all-ceramic or resin restorations and of replacing missing teeth with fixed prosthesis.

Paedodontics is the study, diagnosis and integrated management of diseases of the teeth and their supporting structures in children.

## **SCOPE AND SEQUENCE:**

Training in Operative Dentistry starts in 2<sup>nd</sup> year of BDS. Lectures will be held once a week along with rotation of each batch in the Skills lab and students will be taught pre-clinical skills. During the course of 3<sup>rd</sup> year, lectures will be held once in a week along with 8 weeks of rotation in the department where the students will perform amalgam restorations on phantom teeth in the skills lab. Principles of tooth preparation will be taught.

During the 4<sup>th</sup> year of BDS, three lectures will be delivered weekly. Students will complete approximately 10 weeks of clinical duties in the department and will accomplish their clinical requirements. On Wednesdays the students will have endodontics and crown and bridge sessions in the skills lab and perform their required quota.

## **II. STUDY GUIDE OBJECTIVES:**

To facilitate students of second, third and final year BDS in managing their studies by prompt information and guidance pertaining to the various aspects of Operative Dentistry course

### **III- COURSE DURATION, TOS,** **EXAMINATION RULES AND REGULATIONS**

#### **2<sup>ND</sup> year BDS**

According to 2019 =135hours

According to current time table

	<b>COURSE DURATION: 6 MONTHS CURRENTLY BEING FOLLOWED</b>
<b>LECTURES</b>	Total no. of lectures:26  45 min * 26 = 1170min/ 19 hours
<b>PRACTICALS</b>	Total no of practicals=51 2 hours/week per batch 6* 8= 48hours

**Total hours=67**

	<b>COURSE DURATION: 9 MONTHS CURRENTLY BEING FOLLOWED</b>
<b>LECTURES</b>	Total no. of lectures: 36  45 min * 36 = 1620 min/ 27 hours
<b>PRACTICALS</b>	2 hours/week per batch 36 * 2 = 72 hours  4 hours/week per batch 36 * 4 = 144hours

**Total hours if 2 hours = 99 hours**

**Total hours if 4 hours = 171 hours**

#### **HOURS ACCORDING TO UHS: TOTAL HOURS REQUIRED= 135 HOURS**

	<b>COURSE DURATION: 9 MONTHS</b>
<b>LECTURE</b>	Total no. of lectures: 36  60 min * 36 = 36 hours
<b>PRACTICAL</b>	2 hours/week per batch 36 * 2 = 72 hours  4 hours of teaching/week 36 * 4 = 144 hours

**Total hours if 2 hours = 108 hours**

**Total hours if 4 hours = 180 hour**

## 3<sup>rd</sup> YEAR BDS

	<b>COURSE DURATION: <u>6 MONTHS</u> CURRENTLY BEING FOLLOWED</b>
	<b>Total no. of lectures:26</b>  <b>45 min * 26 = 1170min/ 19 hours</b>

### 3<sup>rd</sup> year practicals

Monday: 5 hrs

Tuesday:3 hrs

Friday: 3.5 hrs

Per week: 11.5 hrs

Per month 46 hrs

10 months 460 hrs

$$460+19=479\text{hours}$$

**According to 2019 =100 hours required**

## FINAL YEAR BDS

36 weeks per academic year tentatively

- Three lectures per week for 36 weeks
- Division of class into four batches for clinical rotation of approx. 10 weeks per batch tentatively
- Five practical classes per week for each batch
- One and a half hour tutorials/interactive group discussion classes each day during the Clinical rotation

		<u>Credit hours/Lectures</u>
Lectures	Faculty	No.
Resto	Dr Saima	38
C&B	Dr Moeen	27
Endo	Dr Anam	26
		<b>Total 91</b>

Assessment	<u>Credit hours</u>
Class Test	08

			<u>Rotation 1</u>	<u>Rotation 2</u>	<u>Rotation 3</u>	<u>Rotation 4</u>	<u>Credit hours</u>
	Subject	Faculty	No. (days)	No. (days)	No. (days)	No. (days)	
<b>Clinical Rotation: Demonstration and clinical work</b> 10:30-12:30pm	Resto	Dr Saima	18	18	18	18	85.30
	Endo	Dr Anam	09	09	09	09	38.15
	C&B	Dr Moeen	09	09	09	09	42.45
<b>Tutorials: 12:30-3:00pm</b>							
							<b>Total 166.5</b>

<b>Operative credit hours:</b>	<b>257.5 (without assessments)</b>
<b>Assessment credit hours:</b>	<b>08</b>
<b>Grand total Credit hours:</b>	<b>257.5 + 8 Class tests = 265.5</b>

<b>Required by PMDC in Final year BDS (PMDC 2019):</b>	<b>305</b>
<b>Required by PMDC in Final year BDS Operative dentistry &amp; Endodontics (PMDC 2022)</b>	<b>200</b>
<b>Required by PMDC in Final year BDS in Paediatric dentistry (PMDC 2022):</b>	<b>150</b>



## Table Of Specifications For Operative Dentistry Theory & Practical

### BDS Final Professional Examination

Theory and Practical Examination carries 200 marks.

The examination in the subject of Operative Dentistry shall be as follows:-

- I.** One written paper of 90 marks in Operative Dentistry having two parts:
  - i. Part I shall have forty five Multiple Choice Questions (MCQs) of 45 marks and the time allotted shall be forty five minutes.
  - ii. Paper II shall have fifteen Short Essay Questions (SEQs) of 45 marks and the time allotted shall be two hours and fifteen minutes.
- II.** Oral and Practical examination shall have 90 marks.
- III.** The continuous internal assessment shall carry 20 marks i.e 10% of the total allocated marks for the subject. The score will be equally distributed to the theory and practical examinations.

Subject	Theory	Practical	Total
Operative Dentistry	Part I MCQ	45 Marks	Oral and Practical
	Part II SEQ	45 Marks	90 Marks
	Internal assessment	10 Marks	Internal assessment
			10 Marks
	<b>100</b>	<b>100</b>	<b>200 Marks</b>

**Table Of Specifications For Operative Dentistry Theory & Practical**

**Final Professional Examination BDS**

<b>Subject</b>	<b>MCQs</b>	<b>SEQs</b>
Restorative	18	8
Endodontics	12	2
Crown & bridge	11	3
Paedodontics	4	2

# I. CURRICULUM

## CURRICULUM OF OPERATIVE DENTISTRY

### **LEARNING OBJECTIVES:**

The learner should be able to:

1. Assess and formulate a treatment plan
2. Prepare amalgam restorations (class I, II, V)
3. Prepare composite restorations (class I, II, III, IV, V)
4. Usage of GIC as a restorative material
5. Diagnose and assess for repair/ replacement of restorations
6. Diagnose and manage cracks in teeth
7. Diagnose and manage dentine hypersensitivity
8. Assess and prepare aesthetic restorations
9. Prepare restoration of endodontically treated teeth
10. Perform access cavity preparation, determine the working length with a radiographic method, perform cold lateral obturation technique
11. Define and classify types of crown and bridge restorations
12. Assess the suitability of abutment teeth and formulate a treatment plan
13. Prepare different types of crown restorations
14. Evaluate the restorations before insertion
15. Demonstrate insertion of restoration
16. Diagnose and manage developmental defects in primary and permanent teeth
17. Learn to manage trauma to primary and permanent teeth

## INTRODUCTION TO RESTORATIVE DENTISTRY

Taught in 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> year BDS

Course director: Prof. Dr. Saima Razaq Khan

Sr. No.	Learning Outcomes (LO)	Facilitator
1.	Define operative dentistry, along with an overview of dental anatomy, histology, physiology and occlusion.	Dr. Saima, Dr. Aisha
2.	Assessment of patients Formulate a diagnosis Assess the prognosis Outline treatment plan for patients.	Dr. Saima, Dr. Aisha
3.	Discuss cross infection control, identify different methods of contamination. Illustrate personal barrier protection, aseptic techniques and sterilization. Amalgam waste disposal.	Dr. Saima, Dr. Aisha
4.	Illustrate patient and operator position and instrument exchange.	Dr. Saima, Dr. Aisha
5.	Discuss isolation techniques. Illustrate rubber dam isolation and other methods.	Dr. Saima, Dr. Aisha
6.	Name and explain instruments and equipment for tooth preparation-hand and rotary instruments.	Dr. Saima, Dr. Aisha
<b><u>At the end of this course, the student will be able to:</u></b>		
1.	Evaluate patients, and formulate treatment plans	
2.	Practice cross infection control	
3.	Practice rubber dam application	

## DENTAL CARIES

Taught in 3<sup>rd</sup>, 4<sup>th</sup> year BDS

Course director: Prof. Dr. Saima Razaq Khan

Sr. No.	Learning Outcomes (LO)	Facilitator
1.	Identify the etiology of dental caries.	Dr. Saima, Dr. Aisha
2.	Classify dental caries.	Dr. Saima, Dr. Aisha
3.	Identify the clinical characteristics of dental caries.	Dr. Saima, Dr. Aisha
4.	Analyze the risk assessment.	Dr. Saima, Dr. Aisha
5.	Formulate management protocols.	Dr. Saima, Dr. Aisha
<b><u>At the end of this course, the student will be able to:</u></b>		
1.	Identification of dental caries	
2.	Plan management protocols	

## AMALGAM RESTORATIONS

Taught in 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> year BDS

Course director: Prof. Dr. Saima Razaq Khan

Sr. No.	Learning Outcomes (LO)	Facilitator
1.	Apply principles of cavity preparation; initial tooth preparation steps-outline form, resistance and retention form, convenience form; amalgam use and manipulation; final tooth preparation steps-removal of remaining carious dentin, pulp protection, liners and bases and its uses, secondary resistance and retention form, finishing of enamel walls and margins and final procedures-cleaning, inspecting and sealing. Finishing and polishing of direct amalgam restorations.	Dr. Saima, Dr. Aisha
2.	Outline the steps of Class I amalgam cavity design and principles, liners and bases, and filling technique-condensation and carving.	Dr. Saima, Dr. Aisha
3.	Outline the steps of Class II amalgam cavity design and principles, matrix placement & liners and bases, and filling technique- condensation and carving.	Dr. Saima, Dr. Aisha
4.	Outline the matrix systems used in direct restorations, matrix application for Class II amalgam, matrix application for Class II, III & IV composite.	Dr. Saima, Dr. Aisha
5.	Outline the steps of Class III, V and VI amalgam cavity design and principles, liners and filling technique-condensation and carving.	Dr. Saima, Dr. Aisha
6.	Identify & enlist the reasons of failure of amalgam restorations Indications/contraindications, replacement options.	Dr. Saima, Dr. Aisha
<b><u>At the end of this course, the student will be able to:</u></b>		
1.	Prepare Amalgam Class I restoration	
2.	Prepare Amalgam Class II restoration	
3.	Prepare Amalgam Class III restoration	
4.	Prepare Amalgam Class V restoration	
5.	Prepare Amalgam Class VI restoration	

## COMPOSITE RESTORATIONS

Taught in 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> year BDS

Course director: Prof. Dr. Saima Razaq Khan

Sr. No.	Learning Outcomes (LO)	Facilitator
1.	Describe adhesion to enamel and dentin in direct and indirect restorations; classification of dentinal adhesives, related clinical factors.	Dr. Saima, Dr. Aisha
2.	Review composite resins material science; classify and discuss composites, polymerization properties, general considerations for composite restorations, clinical techniques.	Dr. Saima, Dr. Aisha
3.	Rationale of finishing and polishing of composite restorations, the use of burs, disks, interproximal strips and polishing paste.	Dr. Saima, Dr. Aisha
4.	Outline the steps of Class I composite restorations, pit and fissure sealants, preventive resins and conservative composite restorations, clinical techniques for class 1 direct composite restoration.	Dr. Saima, Dr. Aisha
5.	Outline the steps of Class II composite restorations, clinical techniques for class II direct composite restorations, extensive class II direct composite restorations and foundations.	Dr. Saima, Dr. Aisha
6.	Outline the steps of Class III, IV and V composite restorations, class III, IV and V direct composite restorations, clinical techniques for class III direct composite restorations, clinical techniques for class IV direct composite restorations, clinical techniques for class V direct composite restorations.	Dr. Saima
7.	Identify & enlist the reasons of failure of composite restorations Indications/contraindications, replacement options.	Dr. Saima
<b><u>At the end of this course, the student will be able to:</u></b>		
1.	Prepare Composite Class I restoration	
2.	Prepare Composite Class II restoration	
3.	Prepare Composite Class III restoration	
4.	Prepare Composite Class IV restoration	
5.	Prepare Composite Class V restoration	

## COMPLEX AMALGAM RESTORATIONS & RESTORATION OF ENDODONTICALLY TREATED TEETH

Taught in 4<sup>th</sup> year BDS

Course director: Prof. Dr. Saima Razaq Khan

Sr. No.	Learning Outcomes (LO)	Facilitator
1.	Enlist Indications/contraindications, advantages/disadvantages of complex amalgam restorations	Dr. Saima
2.	Illustrate pin retained amalgam restorations, slot retained, cove, proximal lock, amalgam foundation used in complex amalgam restorations	Dr. Saima
3.	Evaluate the risk analysis and assess and formulate a treatment plan for endodontically treated teeth	Dr. Saima
4.	Discuss material selection and enlist properties of ideal core for restoration of endodontically treated teeth	Dr. Saima
5.	Illustrate post design and materials	Dr. Saima
6.	Describe adhesion within root canal and the clinical principles	Dr. Saima
<b><u>At the end of this course, the student will be able to:</u></b>		
1.	Prepare a complex amalgam restoration employing the most suitable method for that preparation	

## NON-CARIOUS CERVICAL LESIONS, GIC & DENTINAL HYPERSENSITIVITY

Taught in 3<sup>rd</sup>, 4<sup>th</sup> year BDS

Course director: Prof. Dr. Saima Razaq Khan

Sr. No.	Learning Outcomes (LO)	Facilitator
1.	Define and discuss non-cariou tooth defects-abrasion, erosion, attrition, abfraction & their treatment	Dr. Saima
2.	Review composition, structure and properties of GIC. Identify their clinical use and considerations and modifications of GIC.	Dr. Saima, Dr. Aisha
3.	Define dentinal hypersensitivity; identify its etiology and clinical features, management of dentinal hypersensitivity.	Dr. Saima
<b><u>At the end of this course, the student will be able to:</u></b>		
1.	Use GIC as a restorative material	
2.	Use GIC for pulp capping	

## **BLEACHING AND ABRASION**

Taught in 4<sup>th</sup> year BDS

Course director: Prof. Dr. Saima Razaq Khan

<b>Sr. No.</b>	<b>Learning Outcomes (LO)</b>	<b>Facilitator</b>
1.	Classify bleaching treatments. Analyze the mechanism of bleaching.	Dr. Saima
2.	Identify and differentiate between non-vital and vital bleaching procedures.	Dr. Saima
3.	Outline the concept of abrasion. Identify and differentiate between micro abrasion and macro abrasion	Dr. Saima

## **COMPOSITE VENEERS AND INLAYS AND ONLAYS**

Taught in 4<sup>th</sup> year BDS

Course director: Prof. Dr. Saima Razaq Khan, Dr Moeen ud Din

<b>Sr. No.</b>	<b>Learning Outcomes (LO)</b>	<b>Facilitator</b>
1.	Outline the clinical procedure, tooth preparation and fabrication and cementation of composite veneers.	Dr. Saima
2.	Enlist the indications/contraindications of inlays and onlays, advantages/disadvantages, types and clinical procedure. Metal and tooth-coloured inlays	Dr. Saima, Dr. Moeen

## **CERAMICS**

Taught in 2<sup>nd</sup> year BDS

Course director: Dr. Aisha Arshad

<b>Sr. No.</b>	<b>Learning Outcomes (LO)</b>	<b>Facilitator</b>
1.	Introduction to ceramics, advantages and disadvantages, composition and types, types of crowns, identification of crown and its parts, failure of bonding	Dr. Aisha



## INTRODUCTION TO ENDODONTICS

Taught in 3<sup>rd</sup>, 4<sup>th</sup> year BDS

Course director: Dr. Anam Fayyaz

Sr. No.	Learning Outcomes (LO)	Facilitator
1.	Define endodontics, along with an overview of the root canal system. Explain the objectives, indications and contra-indications of Root Canal Treatment. Summarize the steps for RCT.	Dr. Anam
2.	Discuss the protection of the pulp and preservation of the apex. Define them; explain the iatrogenic effects on dental pulp, and protecting the pulp from the effects of materials.	Dr. Anam
3.	Discuss and outline the introduction of pulp and periapical pathosis, the irritants, inflammatory process, lesion progression. List and discuss the classification of pulpal diseases, classification of periapical diseases, healing of pulp and periapical tissues	Dr. Anam, Dr Aisha
4.	Discuss diagnosis and treatment planning. Outline the diagnostic process, discuss the interpretation of different types of pain; describe the clinical examination, clinical tests, interpretation of radiographic examination, formulation of treatment plan, and systemic considerations.	Dr. Anam

## ROOT CANAL PROCEDURE

Taught in 4<sup>th</sup> year BDS

Course director: Dr. Anam Fayyaz

Sr. No.	Learning Outcomes (LO)	Facilitator
1.	Discuss endodontic instruments. Discuss and appraise rubber dam isolation. Name and explain instruments for access cavity preparation, root canal preparation, and forfilling root canals	Dr. Anam
2.	Explain pulp space anatomy and access cavities. Identify the components of root canal system; outline the general principles and laws relating to the pulp chamber anatomy. Describe and illustrate the access cavity preparation for anterior teeth, posterior teeth, individual teeth, and discuss and recognize the errors in access.	Dr. Anam
3.	Discuss isolation, goals and methods of isolation. Define and explain working length determination, discuss the methods of working length determination and classification of Apex Locators	Dr. Anam
4.	Define cleaning and shaping of the root canals. Enlist the principles of cleaning, principles of shaping, describe and illustrate apical canal preparation, pretreatment evaluation. Discuss the different root canal preparation techniques and hand instrumentation.	Dr. Anam
5.	Discuss and explain endodontic irrigants, the objectives of irrigation, irrigation hydrodynamics, properties of an ideal irrigants and the types of irrigants used.	Dr. Anam

6.	Explain intra-canal medicaments, benefits of intra-canal medicaments, commonly used intra-canal medicaments, temporary restorations, objectives of temporary restorations and the materials used for temporary restorations.	Dr. Anam
7.	Define and explain obturation, objectives of obturation, materials used for obturation, ideal properties of obturation materials, obturation techniques with gutta-percha and the evaluation of obturation.	Dr. Anam
<b><u>At the end of this course, the student will be able to:</u></b>		
1.	Access Cavity Preparation	
2.	Instrument identification	
3.	Radiographic evaluation	
4.	Working Length determination with a radiographic method	
5.	Cold Lateral Obturation Technique	

## **ENDODONTIC EMERGENCIES AND FLARE-UPS, PROCEDURAL ACCIDENTS, NON-SURGICAL RE-TREATMENTS**

**Taught in 4<sup>th</sup> year BDS**

**Course director: Dr. Anam Fayyaz**

<b>Sr. No.</b>	<b>Learning Outcomes (LO)</b>	<b>Facilitator</b>
1.	Diagnosis and treatment planning of endodontic emergencies and flare-ups, incidence of exacerbations. Enlist the categories of emergencies, interappointment emergencies and the management of flare-ups.	Dr. Anam
2.	Discuss procedural accidents, explain and describe perforations during access preparation, accidents during cleaning and shaping and accidents during obturation.	Dr. Anam
3.	Indications and contra-indications for non-surgical retreatment, risks and benefits of re-treatment, endodontic retreatment procedures, and discuss the prognosis.	Dr. Anam

## ENDODONTIC SURGERY, ENDODONTIC AND PERIODONTAL INTERRELATIONSHIP

Taught in 4<sup>th</sup> year BDS

Course director: Dr. Anam Fayyaz

Sr. No.	Learning Outcomes (LO)	Facilitator
1.	Discuss endodontic surgery, incision for drainage, periapical surgery, correctivesurgery, root amputation, hemisection and bicuspidization.	Dr. Anam
2.	Explain the endodontic and periodontal interrelationship, the pathways of communication between the dental pulp and the periodontium, effects of pulpal diseases and endodontic procedures on periodontium, effect of periodontal disease and procedure on pulp and the classification and differential diagnosis of endodontic-periodontic lesions.	Dr. Anam

## The role of endodontics after dental trauma

Taught in 4<sup>th</sup> year BDS

Course director: Dr. Anam Fayyaz

Sr. No.	Learning Outcomes (LO)	Facilitator
1.	Describe the clinical and radiographic features of enamel fractures, uncomplicated crown fractures, complicated crow fractures, crown-root fractures, root fractures, concussion, subluxation, luxations (lateral, extrusive, and intrusive), avulsions,and alveolar fractures.	Dr. Anam
2.	Most common types of Dental Trauma.	Dr. Anam
3.	Traumatic emergencies: Crown fractures - Root fractures - Displacement - Avulsion Diagnose different dental traumatic injuries and to enlist different steps or guidelines for managing such injuries	Dr. Anam
4.	Vital pulp therapy.	Dr. Anam
5.	Treatment method.	Dr. Anam
6.	Follow-up after Dental trauma	Dr. Anam
7.	Sequelae of Dental traumatic injuries	Dr. Anam
8.	Follow-up after dental trauma	Dr. Anam

## INTRODUCTION TO CROWN AND BRIDGE, INDICATIONS OF CROWNS

Taught in 4<sup>th</sup> year BDS

Course director: Dr. Moeen ud Din

Sr. No.	Learning Outcomes (LO)	Facilitator
1.	Introduction to crown and bridge Define -Full veneer crown -partial veneer crown -post and core crown -Porcelain jacket crown/ All ceramic crown -Porcelain fused to metal crown/ Metal ceramic crown -Metal crown	Dr. Moeen ud Din

## GENERAL PRINCIPLES OF CROWN PREPARATION

Taught in 4<sup>th</sup> year BDS

Course director: Dr. Moeen ud Din

Sr. No.	Learning Outcomes (LO)	Facilitator
1.	Apply basic principles of crown preparation -Conservation of tooth structure - Retention and resistance form - Marginal integrity - Structural durability -Conservation of periodontium.	Dr. Moeen ud Din

## CASE ASSESSMENT FOR CROWN AND BRIDGE

Taught in 4<sup>th</sup> year BDS

Course director: Dr. Moeen ud Din

Sr. No.	Learning Outcomes (LO)	Facilitator
1.	Asses and formulate a treatment plan for Crown and Bridge - Assessment of general factors - Evaluation of abutment - Treatment planning.	Dr. Moeen ud Din

## TYPES OF CROWNS

Taught in 4<sup>th</sup> year BDS

Course director: Dr. Moeen ud Din

Sr. No.	Learning Outcomes (LO)	Facilitator
1.	Enlist indications & contraindication of crowns -Classify crowns -Identify advantages & disadvantages of different types	Dr. Moeen ud Din

## PORCELAIN JACKET CROWN

Taught in 4<sup>th</sup> year BDS

Course director: Dr. Moeen ud Din

Sr. No.	Learning Outcomes (LO)	Facilitator
1.	-Enlist indications/ Contraindications of Porcelain Jacket Crown -Outline the steps of preparation for Porcelain Jacket Crown	Dr. Moeen ud Din
<b><u>At the end of this course, the student will be able to:</u></b>		
1.	Prepare Porcelain Jacket crown	

## PORCELAIN FUSED TO METAL CROWN

Taught in 4<sup>th</sup> year BDS

Course director: Dr. Moeen ud Din

Sr. No.	Learning Outcomes (LO)	Facilitator
1.	Enlist Indications/ Contraindications of Porcelain fused to metal Crown Outline the steps of Preparation of Porcelain fused to metal Crown	Dr. Moeen ud Din
<b><u>At the end of this course, the student will be able to:</u></b>		
1.	Prepare Porcelain fused to metal crown	

## POST AND CORE CROWNS

Taught in 4<sup>th</sup> year BDS

Course director: Dr. Moeen ud Din

Sr. No.	Learning Outcomes (LO)	Facilitator
1.	Enlist Indications/ contraindication of Post and core crown Outline the steps of Preparation for post and core crowns Select technique for making Post and core crown	Dr. Moeen ud Din
<b><u>At the end of this course, the student will be able to:</u></b>		
1.	Prepare post and core crown	

## CAST METAL CROWN

Taught in 4<sup>th</sup> year BDS

Course director: Dr. Moeen ud Din

Sr. No.	Learning Outcomes (LO)	Facilitator
1.	Enlist Indications/ Contraindications of metal Crown Outline the steps of Preparation of metal crown	Dr. Moeen ud Din
<b><u>At the end of this course, the student will be able to:</u></b>		
1.	Prepare Full veneer metal crown	

## PARTIAL VENEER CROWNS

Taught in 4<sup>th</sup> year BDS

Course director: Dr. Moeen ud Din

Sr. No.	Learning Outcomes (LO)	Facilitator
1.	Enlist Indications/ Contraindications of Partial veneer Crown Outline the steps of Preparation of partial veneer Crown	Dr. Moeen ud Din

## TISSUE MANAGEMENT AND IMPRESSION TAKING

Taught in 4<sup>th</sup> year BDS

Course director: Dr. Moeen ud Din

Sr. No.	Learning Outcomes (LO)	Facilitator
1.	Manage Soft tissues before impression taking Select impression technique for crown and bridge work	Dr. Moeen ud Din
<b><u>At the end of this course, the student will be able to:</u></b>		
1.	Prepare Impression techniques	

## OCCLUSAL RECORD, TRYING IN, TEMPORARY CROWNS AND CEMENTATION

Taught in 4<sup>th</sup> year BDS

Course director: Dr. Moeen ud Din

Sr. No.	Learning Outcomes (LO)	Facilitator
1.	Register Occlusion of the patient Temporize the prepared teeth - objectives - types - techniques for chair side temporary crown	Dr. Moeen ud Din
2.	Try-in Crown and Bridge restoration - logical sequence of try-in, Select cementation technique for crowns	Dr. Moeen ud Din
<b><u>At the end of this course, the student will be able to:</u></b>		
1.	Prepare Try-in and cementation of crown	

## BRIDGE RESTORATIONS

Taught in 4<sup>th</sup> year BDS

Course director: Dr. Moeen ud Din

Sr. No.	Learning Outcomes (LO)	Facilitator
1.	Define bridge restorations Enlist Indications & Contraindications Classify bridge restoration Analyze Advantages and disadvantages of different types bridges	Dr. Moeen ud Din

## ABUTMENT SELECTION

Taught in 4<sup>th</sup> year BDS

Course director: Dr. Moeen ud Din

Sr. No.	Learning Outcomes (LO)	Facilitator
1.	Evaluate and select abutments for a bridge Select a suitable bridge design	Dr. Moeen ud Din

## PONTIC SELECTION

Taught in 4<sup>th</sup> year BDS

Course director: Dr. Moeen ud Din

Sr. No.	Learning Outcomes (LO)	Facilitator
1.	Define Pontic Apply Principles of pontic design Enlist Indications, advantages and disadvantages of different types of pontics Select suitable type of pontic	Dr. Moeen ud Din

## RETAINERS AND CONNECTOR SELECTION

Taught in 4<sup>th</sup> year BDS

Course director: Dr. Moeen ud Din

Sr. No.	Learning Outcomes (LO)	Facilitator
1.	Define Retainers Enlist types of retainers Select retainer for a bridge- factors affecting the selection of a retainer	Dr. Moeen ud Din
2.	Define connector Enlist types of connectors Select type of connector for bridge	Dr. Moeen ud Din



## RESIN BONDED BRIDGES

Taught in 4<sup>th</sup> year BDS

Course director: Dr. Moeen ud Din

Sr. No.	Learning Outcomes (LO)	Facilitator
1.	Define resin bonded bridges Enlist Indications and contraindications Select Type of resin bonded bridges Compare advantages/ disadvantages of different types	Dr. Moeen ud Din

## MAINTENANCE, FAILURE & REPAIR OF BRIDGES

Taught in 4<sup>th</sup> year BDS

Course director: Dr. Moeen ud Din

Sr. No.	Learning Outcomes (LO)	Facilitator
1.	Differentiate the success & failure of Crown & Bridge Identify the cause of failure Formulate/design its solution	Dr. Moeen ud Din

## **II. ACADEMIC CALENDERS**

- I. 2nd Year BDS**
- II. 3rd Year BDS**
- III. Final Year BDS**

## 2ND YEAR BDS LECTURES AND PRACTICALS SCHEDULE

Sr. #	Date	Day	Time	Topics
	11	Monday	12;40 to 2;00	Introduction & Orientation to preclinical Operative Dentistry (B)
1	14 <sup>th</sup> march	Thursday	10:10 to10:50	<b>Introduction to Operative Dentistry</b>
		Thursday	1:30 to 2:15PM	Introduction & Orientation to preclinical Operative Dentistry(A)
	18 <sup>th</sup>	Monday	2:15 to 3:00PM	
2	21 <sup>st</sup> march	Thursday	10:10 to10:50	<b>Instruments and Equipment for Tooth Preparation</b>
		Thursday	1:30 to 2:15PM	Class I ANDCLASS II AMALGAM RESTOR
		Monday	2:15 to 3:00PM	
3	28 <sup>th</sup> march	Thursday	10:10 to10:50	<b>Instruments and Equipment for Tooth Preparation</b>
		Thursday	12:30 to 2:30PM	
	3 <sup>rd</sup> April	Monday	12:30 to 2:30PM	
4	4 <sup>th</sup> April	Thursday	10:10to10:50	<b>Introduction to Silver</b>
	6 <sup>TH</sup>	Thursday	12:30 to 2:30PM	
	10 <sup>th</sup>	Monday	11:50 to 1:00PM	10,11,12 april eid holidays
5	11 <sup>TH</sup> April	Thursday	10:10 to10:50	<b>Introduction to Silver Amalgam</b>
		Thursday	11:00 to 1:00PM	
	17 <sup>th</sup>	Monday	11:00 to 1:00PM	
6	18 <sup>th</sup> April	Thursday	9:40 to 10:20AM	<b>Introduction to Silver Amalgam</b>
		Thursday	11:00 to 1:00PM	
		Monday	11:00 to 1:00PM	
7	25 <sup>th</sup> Aril	Thursday	9:40 to 10:20AM	<b>GIC</b>
		Thursday	12:30 to 2:30PM	
	1 <sup>st</sup> MAY	Monday	11:00 to 1:00PM	LABOUR DAY
8	2 <sup>nd</sup> MAY	Thursday	9:40 to 10:20AM	<b>GIC</b>
		Thursday	11:00 to 1:00PM	
		Monday	12:30 to 2:30PM	
9	9 <sup>TH</sup> MAY	Thursday	10:45 to 11:30AM	<b>COMPOSITE</b>
		Thursday	12:30 to 2:30PM	
	15 <sup>th</sup>	Monday	12:30 to 2:30PM	
10	16 <sup>TH</sup> MAY	Thursday	10:45 to 11:30AM	<b>COMPOSITE</b>
		Thursday	12:30 to 2:30PM	
		Monday	12:30 to 2:30PM	
11	23 <sup>TH</sup> MAY	Thursday	10:45 to 11:30AM	<b>LINERS AND BASES( CALCIUM HYDROXIDE)</b>
		Thursday	12:30 to 2:30PM	
	29 <sup>th</sup>	Monday	12:30 to 2:30PM	
12	30 MAY	Thursday	10:45 to 11:30AM	<b>LINERS AND BASES( CALCIUM HYDROXIDE)</b>
		Thursday	12:30 to 2:30PM	

		Monday	12:30 to 2:30PM	
13	<b>6 JUNE</b>	<b>Thursday</b>	<b>10:45 to 11:30AM</b>	<b>CERAMIC</b>
		Thursday	12:30 to 2:30PM	
		Monday	12:30 to 2:30PM	
14	<b>13 JUNE</b>	<b>Thursday</b>	<b>10:45 to 11:30AM</b>	<b>CERAMIC</b>
		Thursday	12:30 to 2:30PM	
		Monday	12:30 to 2:30PM	
15	<b>20 JUNE</b>	<b>Thursday</b>	<b>10:45 to 11:30AM</b>	<b>20<sup>TH</sup> JUNE TILL 19<sup>TH</sup> JULY SUMMER HOLIDAYS</b>
		Thursday	12:30 to 2:30PM	
		Monday	12:30 to 2:30PM	
16	<b>27 JUNE</b>	<b>Thursday</b>	<b>10:45 to 11:30AM</b>	
		Thursday	12:30 to 2:30PM	
		Monday	12:30 to 2:30PM	
17	<b>4 JULY</b>	<b>Thursday</b>	<b>10:45 to 11:30AM</b>	
		Thursday	12:30 to 2:30PM	
		Monday	12:30 to 2:30PM	
18	<b>11 JULY</b>	<b>Thursday</b>	<b>10:45 to 11:30AM</b>	
		Thursday	12:30 to 2:30PM	
		Monday		
19	<b>18 JULY</b>	<b>Thursday</b>	<b>10:45 to 11:30AM</b>	
		Thursday	12:30 to 2:30PM	<b>20<sup>TH</sup> JUNE TILL 19<sup>TH</sup> JULY SUMMER HOLIDAYS</b>
		Monday	12:30 to 2:30PM	
20	<b>25 JULY</b>	<b>Thursday</b>	<b>10:45 to 11:30AM</b>	<b>GUTTA PERCHA</b>
		Thursday	12:30 to 2:30PM	
		Monday	12:30 to 2:30PM	
21	<b>1<sup>ST</sup> AUGUST</b>	<b>Thursday</b>	<b>10:45 to 11:30AM</b>	<b>IRRIGATION MATERIALS</b>
		Thursday	12:30 to 2:30PM	
		Monday		
22	<b>8<sup>TH</sup> AUGUST</b>	<b>Thursday</b>		<b>IRRIGATION MATERIALS</b>
23	<b>15<sup>TH</sup> AUGUST</b>	<b>Thursday</b>		<b>INTRACANAL MEDICAMENT</b>
24	<b>22<sup>ND</sup></b>	<b>Thursday</b>		<b>INTRACANAL MEDICAMENT</b>

	AUGUST			
25	29 <sup>TH</sup> AUGUST			<b>THEORY TEST</b>
26	5 SEPT			<b>INTRACANAL MEDICAMENT</b>
				After 6 months(w.e.f 01-09-23) lec ,pract will be switched with examinable subjects.
				Session closed

### 3<sup>RD</sup> YEAR BDS

## LECTURES AND PRACTICALS SCHEDULE

Sr#	Date	Day	Time	Topic	Faculty
	11 <sup>TH</sup>	Monday	9:30 to 3:00pm	Introduction to Operative Dentistry	Dr.Aisha
	12 <sup>TH</sup>	Tuesday	11:20 to 2:00pm	Instruments (hand & rotary instruments)	Dr.Aisha
<b>1</b>	<b>14<sup>TH</sup> MARCH</b>	<b>THURSDAY</b>	<b>8:00 to 8:50am</b>	<b>INTRODUCTION TO OPERATIVE DENTISTRY</b>	<b>Dr. Anam</b>
		Friday	9:30 to 12:30pm	Tooth morphology	Dr.Aisha
		Monday	9:40 to 2:00pm	Ergonomics in dentistry	Dr.Aisha
		Tuesday	11:20 to 2:00pm	Ergonomics in dentistry / ISOLATION TECHNIQUES RUBBER Dam	Dr.Aisha
<b>2</b>	<b>21<sup>TH</sup> MARCH</b>	<b>THURSDAY</b>	<b>8:00 to 9:00am</b>	<b>PATIENT ASSESMENT, EXAMINATION</b>	<b>Dr. Anam</b>
	22 <sup>nd</sup>	Friday	9:30 to 12:30pm		Dr.Aisha
	23			Pakistan day	
	25th	Monday	9:40 to 2:00pm		Dr.Aisha
		Tuesday	11:20 to 2:00pm		Dr.Aisha
<b>3</b>	<b>28<sup>TH</sup> MARCH</b>	<b>THURSDAY</b>	<b>8:00 to 9:00am</b>	<b>PATIENT ASSESMENT, EXAMINATION</b>	<b>Dr. Anam</b>
	29 <sup>TH</sup> TEST	Friday	9:30 to 12:30pm		Dr.Aisha
	1st april	Monday	9:40 to 2:00pm		Dr.Aisha
		Tuesday	11:20 to 2:00pm		Dr.Aisha
<b>4</b>	<b>4<sup>TH</sup> APRIL</b>	<b>Thursday</b>	<b>8:00 to 9:00am</b>	<b>DENTAL CARIES</b>	<b>Dr. Anam</b>
	5 <sup>th</sup>	Friday	9:30 to 12:30pm		Dr.Aisha
		Monday			
	9	Tuesday			Dr.Aisha
	10 to 12 <sup>th</sup> april			Eid ul fitr	
<b>5</b>	<b>11<sup>TH</sup> APRIL</b>	<b>THURSDAY</b>			<b>Dr. Anam</b>
		Friday	9:40 to 1:00pm		Dr.Aisha
		Monday	9:55 to 3:00pm		Dr.Aisha
		Tuesday	11:35 to 3:00pm		Dr.Aisha
<b>6</b>	<b>18<sup>TH</sup> APRIL</b>	<b>THURSDAY</b>	<b>8:00 to 8:50am</b>	<b>DENTAL CARIES</b>	<b>Dr. Anam</b>
		Friday	9:40 to 1:00pm		Dr.Aisha
		Monday	9:55 to 3:00pm		Dr.Aisha
		Tuesday	11:35 to 3:00pm		Dr.Aisha
<b>7</b>	<b>25<sup>TH</sup> APRIL</b>	<b>Thursday</b>		<b>Infection Control</b>	<b>Dr. Anam</b>
	26 <sup>th</sup> TEST	Friday	9:40 to 1:00pm		Dr.Aisha
		Monday	9:55 to 3:00pm		Dr.Aisha
		Tuesday	11:35 to 3:00pm		Dr.Aisha
	1 <sup>st</sup>			Labour day	
<b>8</b>	<b>2<sup>ND</sup> MAY</b>	<b>Thursday</b>		<b>Infection Control</b>	<b>Dr. Anam</b>
		Friday	9:30 to 1:00pm		Dr.Aisha
		Monday	9:30 to 2:30pm		Dr.Aisha
		Tuesday	11:30 to 2:30pm		Dr.Aisha
<b>9</b>	<b>9 MAY</b>	<b>Thursday</b>		<b>Instrument and equipment</b>	<b>Dr. Anam</b>
		Friday	9:30 to 1:00pm		Dr.Aisha
		Monday	9:30 to 2:30pm		Dr.Aisha
		Tuesday	11:30 to 2:30pm		Dr.Aisha
<b>10</b>	<b>16 MAY</b>	<b>Thursday</b>		<b>Instrument and equipment</b>	<b>Dr. Anam</b>
		Friday	9:30 to 1:00pm		Dr.Aisha
		Monday	9:30 to 2:30pm		Dr.Aisha

		Tuesday	11:30 to 2:30pm		Dr.Aisha
11	23 MAY	Thursday		Fundamentals of Tooth Preparation(LECTURE	Dr. Anam
		Friday	9:30 to 1:00pm		Dr.Aisha
	27 <sup>TH</sup> TEST	Monday	9:30 to 2:30pm		Dr.Aisha
		Tuesday	11:30 to 2:30pm		Dr.Aisha
12	30 MAY	Thursday		Fundamentals of Tooth Preparation(LECTURE	Dr.Anam
		Friday	9:30 to 1:00pm		Dr.Aisha
		Monday	9:30 to 2:30pm		Dr.Aisha
		Tuesday	11:30 to 2:30pm		Dr.Aisha
13	6 JUNE	Thursday		CLASS I AMALGAM RESTORATION	Dr.Anam
		Friday	9:30 to 1:00pm		Dr.Aisha
		monday	9:30 to 2:30pm		Dr.Aisha
	11 <sup>TH</sup> test	tuesday	11:30 to 2:30pm		Dr.Aisha
13	13 JUNE	Thursday	9:30 to 2:30pm	CLASS I AMALGAM RESTORATION	Dr. Anam
		Friday			
				17 18 19EID UL AZHA 15 <sup>TH</sup> JUNE TILL 30 <sup>TH</sup> JUNE VACATIONS	
	1 <sup>ST</sup> JULY	Monday			
	2 <sup>ND</sup> JULY	Tuesday			
14	4 <sup>TH</sup> JULY	Thursday		CLASS I I AMALGAM RESTORATION	Dr. Anam
	5 <sup>th</sup> test	Friday	9:30 to 1:00pm	TEST	Dr.Aisha
		Monday	9:30 to 2:30pm		Dr.Aisha
		Tuesday	11:30 to 2:30pm		Dr.Aisha
15	11 <sup>TH</sup> JULY	Thursday		CLASS I I AMALGAM RESTORATION	Dr. Anam
		Friday			
		Monday			Dr.Aisha
		Tuesday			Dr.Aisha
				16 ,17 JULY ASHURA	Dr.Aisha
16	18 <sup>TH</sup> JULY	Thursday		THEORY TEST	Dr.Anam
		Friday	9:30 to 1:00pm		
		Monday	9:30 to 2:30pm		Dr.Aisha
		Tuesday	11:30 to 2:30pm		Dr.Aisha
17	25 <sup>TH</sup> JULY	Thursday		Introduction to ENDODONTICS PULPAL PATHOSIS	Dr. Anam
	26 <sup>TH</sup> TEST	Friday	9:30 to 1:00pm		Dr.Aisha
		Monday	9:30 to 2:30pm		Dr.Aisha
		Tuesday	11:30 to 2:30pm		Dr.Aisha
18	1 <sup>ST</sup> AUGUST	Thursday		PULPAL PATHOSIS PERIAPICAL PATHOSIS	Dr. Anam
		Friday	9:30 to 1:00pm		Dr.Aisha
		Monday	9:30 to 2:30pm		Dr.Aisha
		Tuesday	11:30 to 2:30pm		Dr.Aisha
19	8 <sup>TH</sup> AUGUST	Thursday		PERIAPICAL PATHOSIS	
		Friday	9:30 to 1:00pm		Dr.Aisha
		Monday	9:30 to 2:30pm		Dr.Aisha
		Tuesday	11:30 to 2:30pm		Dr.Aisha
20	15 <sup>TH</sup> AUGUST	Thursday		ENDODONTIC INSTRUMENTS	Dr. Aisha
		Friday	9:30 to 1:00pm		Dr.Aisha
		Monday	9:30 to 2:30pm		Dr.Aisha
		Tuesday	11:30 to 2:30pm		Dr.Aisha
	14			Independence day	
21	22 AUGUST	Thursday		ROOT CANAL PROCEDURES	Dr. Aisha

		Friday	9:30 to 1:00pm		Dr.Aisha
	26 <sup>TH</sup> TEST	Monday	9:30 to 2:30pm		Dr.Aisha
		Tuesday	11:30 to 2:30pm		Dr.Aisha
22	29 AUGUST	Thursday		INTRODUCTION TO CROWN AND BRIDGE	
		Friday	9:30 to 1:00pm		Dr.Aisha
		Monday	9:30 to 2:30pm		Dr.Aisha
		Tuesday	11:30 to 2:30pm		Dr.Aisha
23	5 <sup>TH</sup> SEPT	Thursday			Dr. Aisha
				after 6 months operative classes will be switched to periodontology lectures	
		Friday	9:30 to 1:00pm		Dr.Aisha
		Monday	9:30 to 2:30pm		Dr.Aisha
		Tuesday	11:30 to 2:30pm		Dr.Aisha
24	12 <sup>TH</sup> SEPT	Thursday		OPERATIVE LECTURES WILL BE SWITCHED WITH PERIO LECTURE	Dr. Aisha
	22	Friday	9:30 to 1:00pm		Dr.Aisha
	25	Monday	9:30 to 2:30pm		Dr.Aisha
	26	Tuesday	11:30 to 2:30pm		Dr.Aisha
25	19 <sup>th</sup> SEPT	Thursday			Dr. Aisha
		Friday			Dr.Aisha
	16			Eid mila-dun-NABI	
		Monday			Dr.Aisha
		Tuesday			Dr.Aisha
26	26 <sup>th</sup> SEPT	Thursday		OPERATIVE LECTURES WILL BE SWITCHED WITH PERIO LECTURE	
	27 <sup>th</sup> test	Friday	9:30 to 1:00pm		Dr.Aisha
		Monday	9:30 to 2:30pm		Dr.Aisha
		Tuesday	11:30 to 2:30pm		Dr.Aisha
					Dr.Aisha
	3 <sup>RD</sup> OCT	Thursday		OPERATIVE LECTURES WILL BE SWITCHED WITH PERIO LECTURE	
		Friday	9:30 to 1:00pm		Dr.Aisha
		Monday	9:30 to 2:30pm		Dr.Aisha
		Tuesday	11:30 to 2:30pm		Dr.Aisha
	10 OCT	Thursday		OPERATIVE LECTURES WILL BE SWITCHED WITH PERIO LECTURE	
		Friday	9:30 to 1:00pm		Dr.Aisha
		Monday	9:30 to 2:30pm		Dr.Aisha
		Tuesday	11:30 to 2:30pm		
	9			IQBAL DAY	
	17 OCT	Thursday		OPERATIVE LECTURES WILL BE SWITCHED WITH PERIO LECTURE	
	18 <sup>TH</sup> TEST	Friday	9:30 to 1:00pm		Dr.Aisha
		Monday	9:30 to 2:30pm		Dr.Aisha
		Tuesday	11:30 to 2:30pm		Dr.Aisha
	24 OCT	Thursday		OPERATIVE LECTURES WILL BE SWITCHED WITH PERIO LECTURE	
		Friday	9:30 to 1:00pm		Dr.Aisha
		Monday	9:30 to 2:30pm		Dr.Aisha
		Tuesday	11:30 to 2:30pm		
				Instruments	
	31 OCT	Thursday		OPERATIVE LECTURES WILL BE SWITCHED WITH PERIO LECTURE	



		Friday	9:30 to 1:00pm		Dr.Aisha
		Monday	9:30 to 2:30pm		Dr.Aisha/ Maham
		Tuesday	11:30 to 2:30pm		Dr.Aisha/H ira
	<b>7 NOV</b>	<b>Thursday</b>		<b>OPERATIVE LECTURES WILL BE SWITCHED WITH PERIO LECTURE</b>	
		Friday	9:30 to 1:00pm		Dr.Aisha/ Maham
		Monday	9:30 to 2:30pm		Dr.Aisha
		Tuesday	11:30 to 2:30pm		Dr.Aisha
	<b>14 NOV</b>	<b>Thursday</b>		<b>OPERATIVE LECTURES WILL BE SWITCHED WITH PERIO LECTURE</b>	
		Friday	9:30 to 1:00pm		Dr.Aisha
		Monday	9:30 to 2:30pm		Dr.Aisha
		Tuesday	11:30 to 2:30pm		Dr.Aisha
	<b>21 NOV</b>	<b>Thursday</b>		<b>OPERATIVE LECTURES WILL BE SWITCHED WITH PERIO LECTURE</b>	
		Friday	9:30 to 1:00pm		Dr.Aisha
	<b>25<sup>th</sup> test</b>	Monday	9:30 to 2:30pm		Dr.Aisha
		Tuesday	11:30 to 2:30pm		Dr.Aisha
	<b>28 NOV</b>	<b>Thursday</b>		<b>OPERATIVE LECTURES WILL BE SWITCHED WITH PERIO LECTURE</b>	
		Friday	9:30 to 1:00pm		Dr.Aisha
		Monday	9:30 to 2:30pm		Dr.Aisha
		Tuesday	11:30 to 2:30pm		Dr.Aisha
	<b>25</b>			<b>QUAID DAY</b>	
	<b>5 DEC</b>	<b>Thursday</b>		<b>OPERATIVE LECTURES WILL BE SWITCHED WITH PERIO LECTURE</b>	
		<b>friday</b>	9:30 to 1:00pm		Dr.Aisha
		<b>monday</b>	9:30 to 2:30pm		Dr.Aisha
		<b>tuesday</b>	11:30 to 2:30pm		Dr.Aisha
	<b>12 DEC</b>	<b>Thursday</b>		<b>OPERATIVE LECTURES WILL BE SWITCHED WITH PERIO LECTURE</b>	Dr.Aisha
	<b>13<sup>th</sup> dec</b>	<b>friday</b>			Dr.Aisha
				<b>Session end</b>	

## **FINAL YEAR BDS**

**LECTURES & TEST**  
**SCHEDULE**

Sr No.	Date	Day	Topic	Faculty
1.	15.04.24	Mon	Introduction to Operative Dentistry	Dr. Saima
2.	17.04.24	Wed	Introduction to Endodontics	Dr. Anam
3.	18.04.24	Thurs	Introduction to Crown & Bridge	Dr. Moeen
4.	22.04.24	Mon	Principles of Cavity Preparation	Dr. Saima
5.	24.04.24	Wed	Pathogenesis of Pulp and Periapical diseases	Dr. Anam
6.	25.04.24	Thurs	Indications of crown	Dr. Moeen
7.	29.04.24	Mon	Principles of Cavity Preparation	Dr. Saima
	01.05.24	Wed	<b>LABOUR DAY</b>	
8.	02.05.24	Thurs	General principles of crown preparation	Dr. Moeen
9.	06.05.24	Mon	Principles of Cavity Preparation	Dr. Saima
10	08.05.24	Wed	Pathogenesis of Pulp and Periapical diseases	Dr. Anam
11	09.05.24	Thurs	General principles of crown preparation	Dr. Moeen
12	13.05.24	Mon	<b>Class test 1</b>	Dr. Saima
13	15.05.24	Wed	Endodontic Diagnosis and Treatment Planning	Dr. Anam
14	16.05.24	Thurs	Types of crowns, Porcelain Jacket crown	Dr. Moeen
15	20.05.24	Mon	Clinical technique of Amalgam	Dr. Saima
16	22.05.24	Wed	Endodontic Diagnosis and Treatment Planning	Dr. Anam
17	23.05.24	Thurs	Porcelain fused to metal crown	Dr. Moeen
18	27.05.24	Mon	Fundamentals of Adhesion	Dr. Saima
19	29.05.24	Wed	Endodontic Instruments	Dr. Anam
20	30.05.24	Thurs	Metal crown	Dr. Moeen
21	03.06.24	Mon	Clinical technique of composite	Dr. Saima
22	05.06.24	Wed	Pulp space Anatomy	Dr. Anam
23	06.06.24	Thurs	Partial veneer crown	Dr. Moeen
24	10.06.24	Mon	<b>Class test 2</b>	Dr. Saima
25	12.06.24	Wed	Access cavities (Anterior)	Dr. Anam
26	13.06.24	Thurs	Post & core crown	Dr. Moeen
	17.6.24-19.6.24	Mon-Wed	<b>EID HOLIDAYS</b>	
	20.6.24- 30.6.24	Thurs- Sunday	<b>SUMMER BREAK</b>	
27	01.07.24	Mon	Class I Amalgam	Dr. Saima
28	03.07.24	Wed	Cleaning & shaping	Dr. Anam
29	04.07.24	Thurs	Post & core crown	Dr. Moeen
30	08.07.24	Mon	<b>Class test 3</b>	Dr. Saima
31	10.07.24	Wed	Cleaning & shaping	Dr. Anam
32	11.07.24	Thurs	Impression material & techniques	Dr. Moeen
33	15.07.24	Mon	Class I composite	Dr. Saima
	17.07.24	Wed	<b>Ashura</b>	
34	18.07.24	Thurs	Occlusal record & temporary crown	Dr. Moeen

35	22.07.24	Mon	Class II Amalgam	Dr. Saima
36	24.07.24	Wed	Endodontic irrigants	Dr. Anam
37	25.07.24	Thurs	Try in & cementation	Dr. Moeen
38	29.07.24	Mon	Class II Composite	Dr. Saima
39	31.07.24	Wed	Intracanal medicaments	Dr. Anam
40	01.08.24	Thurs	Types & indication of bridges	Dr. Moeen
41	05.08.24	Mon	Class III Amalgam	Dr. Saima
42	07.08.24	Wed	Obturation	Dr. Anam
43	08.08.24	Thurs	Abutment selection	Dr. Moeen
44	12.08.24	Mon	<b>Grand Class test</b>	Dr. Saima
	14.08.24	Wed	<b>Independence day</b>	
45	15.08.24	Thurs	Pontic design & selection	Dr. Moeen
46	19.08.24	Mon	Class III & IV Composite	Dr. Saima
47	21.08.24	Wed	Obturation	Dr. Anam
48	22.08.24	Thurs	Retainer selection	Dr. Moeen
49	26.08.24	Mon	Class V Composite	Dr. Saima
50	28.08.24	Wed	Procedural Accidents	Dr. Anam
51	29.08.24	Thurs	Connector selection	Dr. Moeen
52	02.09.24	Mon	Dental caries	Dr. Saima
53	04.09.24	Wed	Endodontic Emergencies and Flare ups	Dr. Anam
54	05.09.24	Thurs	Resin bonded bridges	Dr. Moeen
55	09.09.24	Mon	<b>Class test 4</b>	Dr. Saima
56	11.09.24	Wed	Non-surgical Retreatment	Dr. Anam
57	12.09.24	Thurs	Resin bonded bridges	Dr. Moeen
	16.09.24	Mon	<b>Eid milad un nabi</b>	
58	18.09.24	Wed	Endodontic surgery	Dr. Anam
59	19.09.24	Thurs	Post-op care and Reasons for failure of crown	Dr. Moeen
60	23.09.24	Mon	Dental caries	Dr. Saima
61	25.09.24	Wed	Endodontic surgery	Dr. Anam
62	26.09.24	Thurs	Metal Inlays and Onlays	Dr. Moeen
63	30.09.24	Mon	Dental caries	Dr. Saima
64	02.10.24	Wed	Dental trauma	Dr. Anam
65	03.10.24	Thurs	Tooth coloured Inlays and Onlays	Dr. Moeen
66	07.10.24	Mon	<b>Class test 5</b>	Dr. Saima
67	09.10.24	Wed	Dental trauma	Dr. Anam
68	10.10.24	Thurs	NCCL Restoration	Dr. Saima
69	14.10.24	Mon	Macro Vs Micro Abrasion Resin Infiltration	Dr. Saima
70	16.10.24	Wed	Differential Diagnosis of non-pulpal origin	Dr. Anam
71	17.10.24	Thurs	Vital Tooth Bleaching	Dr. Saima
72	21.10.24	Mon	Non-Vital Tooth bleaching	Dr. Saima
73	23.10.24	Wed	Direct Composite Veneers	Dr. Saima

74	24.10.24	Thurs	Indirect Veneers	Dr. Saima
75	28.10.24	Mon	Complex Amalgam Restoration	Dr. Saima
76	30.10.24	Wed	Restoration of Endodontically treated teeth	Dr. Saima
77	31.10.24	Thurs	Restorative Periodontology Interface	Dr. Saima
78	4.11.24	Mon	Dentin hypersensitivity	Dr. Saima
79	06.11.24	Wed	Revision class	Dr. Anam
80	07.11.24	Thurs	Revision class	Dr. Moeen
81	11.11.24	Mon	<b>Class test 6</b>	Dr. Saima
82	13.11.24	Wed	Revision class	Dr. Anam
83	14.11.24	Thurs	Revision class	Dr. Moeen
84	18.11.24	Mon	Revision class	Dr. Saima
85	20.11.24	Wed	Revision class	Dr. Saima
86	21.11.24	Thurs	Quiz	Dr. Saima
87	25.11.24	Mon	Quiz	Dr. Saima
88	27.11.24	Wed	Quiz	Dr. Saima
89	28.11.24	Thurs	Quiz	Dr. Saima
90	02.12.24	Mon	Quiz	Dr. Saima
91	04.12.24	Wed	Quiz	Dr. Saima
92	05.12.24	Thurs	Quiz	Dr. Saima
93	09.12.24	Mon	<b>Class test 7 (Quiz Finale)</b>	Dr. Saima
94	11.12.24	Wed	Revision class	Dr. Anam
95	12.12.24	Thurs	Revision class	Dr. Moeen
96	16.12.24	Mon	Revision class	Dr. Saima
97	18.12.24	Wed	Revision class	Dr. Anam
98	19.12.24	Thurs	Revision class	Dr. Moeen
99	23.12.24	Mon	Revision class	Dr. Saima
10	25.12.24	Wed	<b>Holiday</b>	

### **III. CLINICAL LEARNING OBJECTIVES** **FINAL YEAR BDS**

#### **CLINICAL DEMONSTRATIONS**

<b>Sr no.</b>	<b>Day</b>	<b>TOPIC/ LEARNING OBJECTIVES</b>	<b>Faculty</b>
1	01	<b>History taking and treatment planning</b>	Dr Anam
		1. History taking and informed consent	
		2. Clinical examination	
		3. Radiographic interpretation	
		4. Diagnosis and treatment planning for dental carious lesions	
2	01	<b>Cross infection Protocol</b>	Dr Moeen
		1. Hand Hygiene / Hand washing technique	
		2. Putting on and Removing PPE, Masks, Protective Eyewear, Face shields, Protective clothing, Gowns, Gloves	
		3. Transport of instruments to the processing area	
		4. Cleaning/ Washing of instruments	
		5. Packaging of instruments	
		6. Sterilization monitoring (Verification of sterility using physical, chemical, and biological indicators)	
		7. Sterilization of dental handpieces, burs, and other restorative materials	
		8. Needle stick injury prevention and immediate management	
		9. Disinfection of dental units	
3	01	<b>Instruments and Materials</b>	Dr Moeen
		1. Identification of hand instruments (cutting, non-cutting)	
		2. Identification of powered/rotary cutting equipment	
		3. Hazards with cutting instruments and their prevention	
		4. Identification and manipulation of dental materials (Amalgam, Composite, GIC, Calcium hydroxide, Etchant, Bonding agent)	
	5. Amalgam waste disposal		
4	01	<b>Rubber Dam Application</b>	Dr Moeen
		1. Patient counselling for rubber dam application	
		2. Anterior segment isolation	
		3. Premolar isolation	
		4. Fractured tooth isolation	
	5. Molar isolation		

		6. Single tooth isolation	
		7. Rubber Dam application	
5	01	<b>Matrix systems</b>	Dr Anam
		Placement of tofflemire retainer according to clinical situation	
		Placement of palodent retainer according to clinical situation	
		Placement of mylar strip matrix for Anterior Composite Restoration; identification of other matrix systems available	
6		<b>Pulp Protection</b>	Dr Anam
		Vital pulp therapy procedures	
		Application of liner/ base before restoration (according to clinical situation)	
7	01	<b>Class I Cavity Preparation for Amalgam and Composite</b>	Dr Moeen
8	01	<b>Class II Cavity Preparation for Amalgam and Composite</b>	Dr Anam
9		<b>Class III and IV Cavity Preparation</b>	Dr Anam

## Endodontic clinical schedule

Sr	Week	Topic	Teacher
1.	Week 1	<b>Identification of Endodontic Instruments</b> 1. Burs (Round diamond bur, tapered diamond bur, Endo Z bur) 2. Reamers 3. Files (K&H) 4. Barbed broaches 5. DG16 Explorer 6. Endodontic Explorer 7. Pluggers 8. Spreaders 9. Lentulospiral 10. Electric pulp tester 11. Apex locator 12. Rotary files 13. Endomotor 14. Obtura	Dr. Anam
2.	Week 2	<b>Radiographic Interpretation</b> Internal & External resorption Apical Periodontitis Pulp stone Dental Trauma/VRF	
3.	Week 3	<b>Access opening</b> Pulp space Anatomy Prepare access cavity Determination of working length	
4.	Week 4	<b>Cleaning and shaping of the root canal</b>	
5.	Week 5	<b>Cleaning and shaping of the root canal</b>	
6.	Week 6	<b>Root canal Obturation</b>	
7.	Week 7	<b>Root canal Obturation</b>	
8.	Week 8	<b>Patient Counselling &amp; Management</b> Fractured File Ledge Formation Perforations Over & Under obturated canal Instrument aspiration/Ingestion Vertical root fracture Extraction of tooth undergoing Root canal treatment	
9.	Week 9	<b>Clinical test and viva</b>	

## **Crown and Bridge Clinical Training**

- Day 1. General Principles of crown preparation  
Demonstration of Porcelain Jacket crown  
Preparation on Phantom teeth
- Day 2. Demonstration of Porcelain fused to metal crown  
Preparation on Phantom teeth
- Day 3. Demonstration of Cast Metal crown  
Preparation on Phantom teeth
- Day 4. Demonstration of Post and core build up  
Post and core build up on Phantom teeth
- Day 5. History taking, clinical examination and radiographic Assessment  
Tissue management and impression taking
- Day 6. Temporization  
Lab. Procedure for metal ceramic crown
- Day 7. Try in of crown, occlusal adjustment  
Cementation of crowns
- Day 8. Crown Preparation on Phantom teeth- test  
Viva
- Day 9. Crown Preparation on Patients  
Impression taking and temporization
- Day 10. Identification of types of Bridges  
Identification of component of a bridge













## ENDODONTIC CLINICAL LEARNING OBJECTIVES (FINAL YEAR)

Sr #	LEARNING OBJECTIVES	PERFORMED	NOT PERFORMED	DAYS	MODE OF ASSESSMENT		EVALUATION	EVALUATE		CAN PERFORM CONFIDENTLY	CANNOT PERFORM CONFIDENTLY
					Clinical test	Viva		Faculty	Teaching assistant		
	<b>Identification of Endodontic Instruments</b>						<b>Test result &amp; student feedback</b>				
1.	Burs (Round diamond bur, tapered diamond bur, Endo Z bur)			2							
2.	Reamers										
3.	Files (K&H)										
4.	Barbed broaches										
5.	DG16 Explorer										
6.	Endodontic Explorer										
7.	Pluggers										
8.	Spreaders										
9.	Lentulospiral										
10.	Electric pulp tester										
11.	Apex locator										
12.	Rotary files										
13.	Endomotor										
14.	Obtura										
	<b>Radiographic Interpretation</b>										



29.	Vertical root fracture										
30.	Extraction of tooth undergoing Root canal treatment										
31.	<b>Clinical Test and Viva</b>			<b>1</b>							







22.	Identification of temporary crown/bridge			<b>1</b>							
23.	Try-in and cementation of Crown										
	<b>Bridges</b>										
24.	Identification of components of a bridge			<b>1</b>							
25.	Identification of resin bonded bridge										
26.	Selection of bridge design										
27.	<b>Clinical Test and Viva</b>			<b>1</b>							

## **CLINICAL DUTIES AND REQUIREMENTS**

- Each student will spend a total of 09 weeks approximately in final year in the Department of Operativedentistry
- Each student will be required to:

### **Third Year BDS**

#### **Restorative Clinical**

#### **Exercises**

<b>Sr No.</b>	<b>Pre-clinical performance</b>	<b>No of Practices</b>
1	Amalgam class I (mandibular molars)	02
2	Amalgam class I (maxillary molars)	02
3	Amalgam class II (mandibular molars)	02
4	Amalgam class II maxillary molar	02
5	Composite restoration (Maxillary Anterior)	01
6	Composite restoration (Mandibular Molar)	01
7	GIC mixing	01
8	Rubber Dam Application	01

### **Final Year BDS**

<b>S. No</b>	<b>Clinical Quota</b>	<b>No. of Practices</b>
1	<b>Restorations</b>	<ul style="list-style-type: none"> <li>• 15 Amalgam</li> <li>• 15 Composite</li> </ul>
2	<b>Crown &amp; Bridge</b>	<ul style="list-style-type: none"> <li>• 1 Porcelain Jacket Crown Preparation,</li> <li>• Impression taking, chair side temporary crowns</li> <li>• 1 Porcelain fused to metal crown preparations</li> <li>• 1 metal crown preparation</li> <li>• Trail and cementation of crowns</li> </ul>
3	<b>Endodontics</b>	<ul style="list-style-type: none"> <li>• Endodontic Access instruments</li> <li>• Root canal preparation Instruments</li> <li>• Root canal Obturation Instruments</li> </ul>
	Instrument identification exercise	
	Endodontic exercise – Endoblock	<ul style="list-style-type: none"> <li>• Access cavity</li> <li>• Working length determination</li> <li>• RC preparation</li> <li>• RC obturation</li> </ul>

Record of this clinical work will be maintained in the Pre-clinical and **Clinical Quota Book**.

**PRESENTATIONS TOPICS FOR FINAL YEAR**  
**BDS**

<b>Sr.no</b>	<b>Topic</b>
1.	Liner & Bases, Pulp capping (direct & indirect)
2.	Preventive resin restoration & Fissure sealants
3.	Finishing & polishing of amalgam
4.	Types of bevel & retention of composite
5.	Types of Ca(OH) <sub>2</sub> & mechanism of action (setting reaction)
6.	Types of GICs & mechanism of action (setting reaction)
7.	Different Phases of Amalgam & Setting reaction, Delayed expansion of amalgam
8.	Finishing & polishing of composites
9.	Caries risk assessment
10.	Principles of cavity preparation
11.	Types of retainers(matrices)
12.	Class II amalgam cavity design
13.	Composition of different types of composites
14.	Micro leakage composites / amalgam
15.	Enamel adhesion
16.	Dentine adhesion & classification of dentinal adhesives
17.	Wet bonding / Dry bonding
18.	Common problems in composites restoration
19.	Dentine Hyper sensitivity
20.	Trauma

\*Topics may be changed as per need

#### **IV. DEPARTMENTAL TIME TABLE**

DAYS	OUTDOOR 8:00am-2:30 pm Supervision by on duty Post graduate trainee	INDOOR Clinical Registrar: Dr Saira Waheed , Academic Registrar: Dr Maham Anjum , Dr Hira Anjum Clinical Registrar (Endo): Dr Aiza Mahmood Supervision by Post graduate Residents as allotted to each HO			
		8:00-10:00 AM	10:15-12:30 PM	12:30-2:00 PM	2:00-4:00pm
Monday	HO/PG	- Final year BDS Lecture - Clinical Registrar meeting - Clinical procedures of appointed patients by HOs/PGs	- Demo/ Clinical Supervision Final Year BDS (Restorative) - Clinical procedures of appointed patients by HOs/PGs - HO's Break (Half hour)	- Final year Tutorial - Clinical procedures of appointed patients by HOs/PGs	- Clinical procedures of indoor in patients
Tuesday	HO/PG	- Departmental Meeting - Journal Club seminar (PGs) - Clinical procedures of appointed patients by HOs/PGs	- Demo/ Clinical Supervision Final Year BDS (Restorative) - Clinical procedures of appointed patients by HOs/PGs - HO's Break (Half hour)	- Final year Tutorial - Clinical procedures of appointed patients by HOs/PGs	- Clinical procedures of indoor patients
Wednesday	HO/PG	- Final year BDS Lecture - Clinical procedures of appointed patients by HOs/PGs	- Final Year BDS Crown & Bridge/Endo/Paed - Clinical procedures of appointed patients by HOs/PGs - HO's Break (Half hour)	- Final year Tutorial - Clinical procedures of appointed patients by HOs/PGs	- Clinical procedures of indoor patients
Thursday	HO/PG	- Final year BDS Lecture - Synopsis Discussion/ Clinical case presentations (PGs) - Endo clinic registrar meeting - Clinical procedures of appointed patients by HOs/PGs	- Final Year BDS Crown & Bridge/Endo/Paed - Clinical procedures of appointed patients by HOs/PGs - HO's Break (Half hour)	- Final year Tutorial - Clinical procedures of appointed patients by HOs/PGs	- Clinical procedures of indoor patients
Friday	HO/PG	- Operative House surgeon's Seminar - Clinical procedures of appointed patients by HOs/PGs	- Demo/ Clinical Supervision Final Year BDS (Restorative) - Clinical procedures of appointed patients by HOs/PGs - HO's Break (Half hour)	- Final year Tutorial - Clinical procedures of appointed patients by HOs/PGs	- Clinical procedures of indoor patients

## **V. TEACHING AND LEARNING METHODOLOGIES**

### **a. Large group teaching strategies:**

- Lectures
- Interactive sessions

### **b. Small group teaching strategies:**

- Employed during practicals (daily) and tutorials (daily)
- Interactive sessions
- Literature reading
- Video aids
- Small group discussions (SGDs)
- Viva voce
- Presentations by students
- Clinical demonstrations and practicals



## **VI. LEARNING RESOURCES**

1. Sturdevant's Art and Science of Operative Dentistry: Theodore M. Roberson, Herald O. Heymann, Edward J. Swift. (Latest edition)
2. Summitt's Fundamentals of Operative Dentistry- A Contemporary Approach (latest edition)
3. Endodontics: Principles and practice by Torabinjad. Richard E Walton, Mahmoud Torabinjad. (Latest edition)
4. T.R Pitt Ford, FJ. Harty: Hartysendodontics in clinical practice. (latest edition)
5. Contemporary fixed prosthodontics by Stephan R. Rosenthal, Latest edition.
6. Schilingburg et al. Fundamentals of fixed prosthodontics, Latest edition.
7. Inlays, Crowns & Bridges by George Kantorowicz, Latest edition.
8. Smith BGN. Planning and making crowns and bridges, latest edition.
9. McDonald and Avery's Dentistry for the Child and Adolescent
10. Pediatric Dentistry-Infancy to Adolescent by Pinkham, Casamassimo
11. Handbook of Pediatric Dentistry by Angus C Cameron, Richard P Widmer
12. Paediatric Dentistry by Richard R. Welbury

## **VII. ASSESSMENT FORMATS**

## **X. ASSESSMENT FORMATS**

Each week of the month is allotted to each final year subject as test week. One class test is conducted each month for Operative dentistry. Topics included in each test are notified and resources are identified.

### **a. Written tests**

Written class tests include MCQs (one best type) and SEQs. University recommendations for marks distribution are strictly followed. Summative and formative assessment will be done.

### **b. Clinical Test**

It is held for each student during rotation in the Operative Department during 4<sup>th</sup> year BDS duties. Every clinical test will be followed by formative/ feedback assessment session. Every student will perform one filling and will appear in chair side viva. Grading will be based on viva/oral examination, chair-side manners, cross infection control (aseptic technique), operator and patient positioning and clinical technique / proficiency, History, diagnosis and treatment planning.

Results with feedback will be posted immediately after the clinical test.

### **c. Oral examination**

In order to prepare the students for oral component of university examination, viva voce examinations (by senior faculty members) are also conducted during the session.

### **d. Send up examination**

Send up is a comprehensive examination including whole Operative dentistry course that is conducted at the end of academic session and final university examination pattern is followed in every respect (no. of questions, ToS, marks distribution, total time allowed etc.).

### **e. Internal Assessment**

Will be based upon written test, clinical tests, presentations, and hands on exercises & assignments and no of credits.

## **INSTRUCITIONS**

### **“ALL STUDENTS MUST FOLLOW THE STANDARD PROTOCOL REGARDING CROSS INFECTION CONTROL INTHE CLINICS”**

- Students should wear lab coats with neat dress.
- Students should follow the instructions from the teaching faculty.
- Students should report to the lab/clinics as per the scheduled time and should attend only in theirrespective groups.
- Students should keep their working table clean and do not damage any parts of the table. If anydamage occurs, the particular student is responsible for the replacement of the damaged parts.
- Student should always maintain silence in the lab/clinics.
- Student should not leave any of their belonging after their session and if anything is lost, the collegeand the staff is not responsible.
- Attendance is compulsory. If anybody has shortage of attendance, appropriate action will be takenaccording to the college rules and regulations.
- Demonstrations will not be repeated for absent student regardless of reason of absence

## **VIII. ROBUST FEEDBACK SYSTEMS**

**a. Feedback on attendance**

Attendance report is forwarded to students and parents on daily basis

**b. Feedback on academic performance**

Academic performance report is also regularly forwarded to students and parents. Moreover, individual students are given feedback on their academic performance during tutorials. MCQ and SEQ papers are also discussed with students in small groups.

**c. Parents of weak students are regularly contacted (PTM sessions)**

## **IX. REMEDIAL CLASSES**

Remedial classes will be carried out as for students who:

1. Have poor attendance less than 75%
2. Less than 50% in test performance

They will be scheduled every Wednesday from 1:30-2:30 pm.