



Department of Operative Dentistry



**Study Guide
Final Professional BDS**

College of Dentistry

**Sharif Medical and Dental College,
Lahore**



PREFACE

Study guides can be broad based to facilitate learning in a number of areas, or be resources that foster comprehension of literature, research topics, history, and other subjects. It includes study and testing strategies; reading, writing, and project management skills; as well as techniques for learning as an adult, with disabilities, and online. It is like a teacher available 24 hours. It also includes the teaching methodology to be followed throughout the year.

At College of Dentistry, SMDC we follow the traditional annual academic schedule in which the subject of Operative Dentistry is taught in the second, third and final academic year of a dental school. Keeping in view the mission of UHS, Lahore and vision of our institute we have designed attaining program which is intensive and at the same time interesting for the young minds. This guide includes details about various teaching activities which are to take place throughout the academic year along with the time allocation of each. A list of lectures to be conducted in this session with names of the instructors is attached. Broad learning outcomes of every section of the course accompanied by specific learning objective of every lecture is also included. A complete list of clinical work to be carried out in the simulator laboratory and clinic is part of this document. Details of various assessment and testing methodology are included and marks distribution for the subject in the final Professional examinations has-been given. Names and email contacts of faculty have also been mentioned to foster better interaction between the teacher and the taught.

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VISION & MISSION OF UHS

Qualitative and Quantitative Revolution in Medical Education and Research through Evolution and there by improve Health Care delivery to Populace.

UHS shall be innovative global center of excellence in learning and research, supporting a community of scholars and professionals committed to serving society, promoting the development of students to reach their true potential in becoming competent, ethical, caring, and inquiring health professionals for the benefit of the country and the wider world.

MISSION OF SMDC

Sharif Medical & Dental College is dedicated to best serve the nation through preservation and dissemination of advanced knowledge and educating the students by latest trends in learning and research reaching levels pars excellence.

The Institution is committed to provide standardized quality medical education to its students by inculcating professional knowledge, skills and responsibilities in them with the aim of:

- Preparing them as modern physicians having initiative to act as future leaders in their respective fields and becoming lifelong learners.
- Encouraging the spirit of critical thinking through research and publication.
- Building up an understanding of the ethical values compatible with our religion, culture and social norms.
- Developing a sense of being responsible citizens of the society possessing professional competence and instilling in them the values of hard work and dedication thus preparing them to be accountable to the stakeholders and the state.

The Institution is devoted to keep abreast its faculty with the latest trends in Medical Education encompassing teaching/learning methodologies, assessment tools, research opportunities and professionalism to facilitate their professional development, competencies and commitment towards continues learning.

Our patient-centered mission is achieved by outstanding medical care & services in professional practice with due emphasis and focus on our local health needs.

Our mission further elaborate upon establishing academic and research facilities in areas of local demand under global gold standards and leading advancement in research, education & patient care.

VISION OF SMDC

To be recognized for the provision of a safe and functional environment conducive to collaborative teaching & learning, comfortable working atmosphere, and conducting world class research through professionalism and excellence.



LIST OF CONTENTS

Sr. No.	Topic	Page Number
1	Planned teaching activities	1
2	Training program for lectures	2
3	List of lectures in the subject of operative dentistry and their learning objectives	8
4	List of clinical trainings	13
5	Assessment plan & distribution of marks for final professional BDS	14
6	Staff Contact	15
7	Reference Books	16



PLANNED TEACHING ACTIVITIES FOR FINAL PROFESSIONAL BDS DEPARTMENT OF OPERATIVE DENTISTRY

PMC has allocated 300 hours of teaching in the subject of Operative Dentistry for BDS course. In order to meet this requirement following teaching modules have been planned. These modules have been carefully designed to impart core knowledge of Operative Dentistry in a manner that an undergraduate student can grasp the subject fully and is adequately prepared for university examinations.

Lectures:

A total of 109 lectures are planned for the entire year. The lectures will be conducted by the Assistant professors and senior lecturers with very good command in subject. The lectures will be interactive and students should actively participate in them to clear their doubts. The students are required to take notes of the lectures and study the topic with the help of prescribed text books in light of the learning objectives of the topic enunciated by the teacher at the beginning of each lecture.

Clinical Training:

This is six days a week program. Students have to visit each clinical department for two months in a year. This includes restorations and root canal treatment of patients under supervision. All faculty members and demonstrators are available all the time for guidance. Mostly students treat patients but side by side they are given chance to diagnose patients. Students are required to enter their work in their log books and get them checked by the instructors regularly.



**TRAINING PROGRAM FOR LECTURES
DEPARTMENT OF OPERATIVE DENTISTRY
FINAL PROFESSIONAL BDS**

GENERAL

1. Attendance is mandatory.
2. Tests are taken at the end of each topic.
3. Regarding Students should come on time. Late comers will not be allowed to enter the class or clinic.
4. Clinical Procedures: Students should complete their assigned clinical cases/ procedures.
5. Tutorials: Group discussions on given topics will be held on regular basis
6. Students should follow the rules and regulations of the college.
7. The students are directed not to operate any equipment without supervision.
8. Students and instructors are instructed to wear protective eyewear or face shield during training.
9. Students are instructed to wear mask and gloves for their own protection.
10. The students, demonstrations and all staff members in clinic are given demonstrations on using fire extinguishers.
11. The students are directed to wear overalls throughout their time in the pre-clinical lab which should be clean.
12. Proper footwear should be observed, and hair is to be tied before entering the pre-clinical lab.
13. Students should bring their own instruments.
14. Eating and drinking is prohibited in the clinics and lecture hall.

OPERATIVE DENTISTRY

Sr. #	TOPIC	DELIVERED BY
1	Introduction & overview of Endodontics	Dr. Mubashir Rasheed
2	General & Systemic aspects of Endodontics	Dr. Mubashir Rasheed
3	General & Systemic aspects of Endodontics	Dr. Mubashir Rasheed
4	Diagnosis	Dr. Mubashir Rasheed
5	Introduction to Crown & Bridge	Dr. Irsam Haider
6	Diagnosis	Dr. Mubashir Rasheed
7	Indications & Contra indications of Crowns	Dr. Irsam Haider

8	Pulp Space Anatomy & Access	Dr. M.Moazzam
9	Pulp Space Anatomy & Access	Dr. M.Moazzam
10	Indications & Contra indications of Crowns	Dr. Irsam Haider
11	Pulp Space Anatomy & Access	Dr. M.Moazzam
12	Maintaining Dental pulp Vitality	Dr. Mubashir Rasheed
13	Types of Crowns	Dr. Irsam Haider
14	Maintaining Dental pulp Vitality	Dr. Mubashir Rasheed
15	Instruments in Endodontics	Dr. M.Moazzam
16	Types of Crowns	Dr. Irsam Haider
17	Instruments in Endodontics	Dr. M.Moazzam
18	Instrumentation in Endodontics	Dr. M.Moazzam
19	Designing Crown Preparation	Dr. Irsam Haider
20	Instrumentation in Endodontics	Dr. M.Moazzam
21	Designing Crown Preparation	Dr. Irsam Haider
22	Preparation of Root Canal System	Dr. M.Moazzam
23	Preparation of Root Canal System	Dr. M.Moazzam
24	Intra canal Medications	Dr. M.Moazzam
25	Intra canal Medications	Dr. M.Moazzam
26	Occlusal considerations Related to Crown	Dr. Irsam Haider
27	Surgical Endodontics	Dr. Mubashir Rasheed
28	Occlusal considerations Related to Crown	Dr. Irsam Haider
29	Surgical Endodontics	Dr. Mubashir Rasheed
30	Endodontics in Primary Teeth	Dr. Mubashir Rasheed

31	Planning & Making crowns	Dr. Irsam Haider
32	Endodontics in Primary Teeth	Dr. Mubashir Rasheed
33	Endodontic Aspect of Traumatic Injuries	Dr. Mubashir Rasheed
34	Planning & Making crowns	Dr. Irsam Haider
35	Endodontic Aspect of Traumatic Injuries	Dr. Mubashir Rasheed
36	Planning & Making crowns	Dr. Irsam Haider
37	Marginal Periodontitis & Dental Pulp	Dr. Mubashir Rasheed
38	Marginal Periodontitis & Dental Pulp	Dr. Mubashir Rasheed
39	Problems in Endodontic Treatment	Dr. M.Moazzam
40	Problems in Endodontic Treatment	Dr. M.Moazzam
41	Clinical Techniques for Crowns	Dr. Irsam Haider
42	Restoration of Endodontically Treated Teeth	Dr. M.Moazzam
43	Restoration of Endodontically Treated Teeth	Dr. M.Moazzam
44	Clinical Techniques for Crowns	Dr. M.Moazzam
45	Case History, Examination & Treatment Planning of a Child Patient	Dr. Fatima Aslam
46	Clinical Techniques for Crowns	Dr. Irsam Haider
47	Case History, Examination and treatment Planning of a child patient	Dr. Fatima Aslam
48	Clinical Techniques for Crowns	Dr. Irsam Haider
49	Growth & Development	Dr. Danyal Nadeem
50	Growth & Development	Dr. Daniyal Nadeem
51	Growth & Development	Dr. Danyal Nadeem
52	Development & Eruption of Teeth	Dr.Daniyal Nadeem
53	Indications of Bridges Compared with Partial Dentures & Implant Supported	Dr. Irsam Haider

	Prosthesis	
54	Development & Eruption of Teeth	Dr. Daniyal Nadeem
55	Development & Eruption of Teeth	Dr. Daniyal Nadeem
56	Indications of Bridges Compared with Partial Dentures & Implant Supported Prosthesis	Dr. Irsam Haider
57	Development & Eruption of Teeth	Dr. Daniyal Nadeem
58	Development of Occlusion	Dr. Fatima Aslam
59	Types of Bridges	Dr. Irsam Haider
60	Development of Occlusion	Dr. Fatima Aslam
61	Development of Occlusion	Dr. Fatima Aslam
62	Types of Bridges	Dr. Irsam Haider
63	Child Behavioral Management in Dental Practice	Dr. Fatima Aslam
64	Designing & Planning Bridges	Dr. Irsam Haider
65	Child Behavioral Management in Dental Practice	Dr. Fatima Aslam
66	Child Behavioral Management in Dental Practice	Dr. Fatima Aslam
67	Components of Bridges	Dr. Irsam Haider
68	Child Behavioral Management in Dental Practice	Dr. Fatima Aslam
69	Preventive & Interceptive Orthodontics	Dr. Fatima Aslam
70	Components of Bridges	Dr. Irsam Haider
71	Preventive & Interceptive Orthodontics	Dr. Fatima Aslam
72	Para functional Oral Habits	Dr. Daniyal Nadeem
73	Para functional Oral Habits	Dr. Daniyal Nadeem
74	Dental Caries	Dr. Fatima Aslam

75	Designing & Planning Bridges	Dr. Irsam Haider
76	Dental Caries	Dr. Fatima Aslam
77	Pediatric Operative Dentistry	Dr. Fatima Aslam
78	Designing & Planning Bridges	Dr. Irsam Haider
79	Pediatric Operative Dentistry	Dr. Daniyal Nadeem
80	Paediatric Operative Dentistry	Dr Daniyal Nadeem
81	Clinical Techniques for Bridge Construction	Dr. Irsam Haider
82	Stainless Steel Crowns	Dr. Fatima Aslam
83	Clinical Techniques for Bridge Construction	Dr. Irsam Haider
84	Stainless Steel Crowns	Dr. Fatima Aslam
85	Preventive Dentistry	Dr. Daniyal Nadeem
86	Clinical Techniques for Bridge Construction	Dr. Irsam Haider
87	Fluorides	Dr. Irsam Haider
88	Preventive Dentistry	Dr. Daniyal Nadeem
89	Minimum Preparation Bridges	Dr. Irsam Haider
90	Pulp Therapy in Children	Dr. Daniyal Nadeem
91	Pulp Therapy in Children	Dr. Daniyal Nadeem
92	Minimum Preparation Bridges	Dr. Irsam Haider
93	Trauma & its Management in Children	Dr. Fatima Aslam
94	Trauma & its Management in Children	Dr. Fatima Aslam
95	Trauma & its Management in Children	Dr. Fatima Aslam
96	Child Abuse & its Management	Dr Daniyal Nadeem
97	Dental Implants	Dr. Mubashir Rasheed

98	Child Abuse & its Management	Dr. Daniyal Nadeem
99	Dental Management of Handicapped Child	Dr. Daniyal Nadeem
100	Dental Implants	Dr. Mubashir Rasheed
101	Dental Management of Handicapped Child	Dr. Daniyal Nadeem
102	Fixed Splints	Dr. Mubashir Rasheed
103	Gingival & Periodontal Disease in Children	Dr. Fatima Aslam
104	Gingival & Periodontal Disease in Children	Dr. Fatima Aslam
105	Fixed Splints	Dr. Mubashir Rasheed
106	Common Oral Pathological Conditions in Children	Dr. Daniyal Nadeem
107	Common Oral Pathological Conditions in Children	Dr. Daniyal Nadeem
108	Crown & Bridge Failure & Repairs	Dr. Irsam Haider
109	Crown & Bridge Failure & Repairs	Dr. Irsam Haider



**LIST OF LECTURES IN THE SUBJECT OF OPERATIVE DENTISTRY
AND
LEARNING OBJECTIVES
DEPARTMENT OF OPERATIVE DENTISTRY
FINAL PROFESSIONAL BDS
OPERATIVE DENTISTRY**

This is clinical subject. Knowledge of this subject help student identify patient's problem. So emphasis should be laid on its knowledge. At the end of the course student must be able to identify caries, other dental problems and their management.

Sr. no.	Title of lectures with learning Objectives
1	<ul style="list-style-type: none">• Describe Modern endodontics & Scope of endodontics• Describe Role of microorganisms• Describe Tissue response to root canal infection• Describe Quality assurance
2	<ul style="list-style-type: none">• General and systemic aspects of endodontics• Describe & be able to carry out Differential diagnosis of dental pain• Describe Systemic disease and endodontics & Use of antibiotics in endodontics
3	<ul style="list-style-type: none">• Diagnosis• Describe and should be able to take History, Examination & Investigations• Describe Treatment options
4	<ul style="list-style-type: none">• Pulp space anatomy and access cavities• Describe and be able to make access cavity & locate root canals• Describe Nomenclature• Describe Accessory and lateral canals• Describe Apical closure
5	<ul style="list-style-type: none">• Maintaining dental pulp vitality• Describe Pulp-dentine complex• Describe Pulp response to irritants• Describe Pulp irritants• Describe & manage deep caries• Describe & manage of pulp exposure• Describe Regenerative developments
6	<ul style="list-style-type: none">• Basic instrumentation in endodontics• Describe & use endodontic instruments• Describe Instruments for retrieving broken instruments and posts
7	<ul style="list-style-type: none">• Preparation of the root canal system

	<ul style="list-style-type: none"> • Describe and be able to perform access opening to the root canals • Describe & be able to perform Working length determination & Root canal irrigation • Describe & be able to Instrument canal
8	<ul style="list-style-type: none"> • Intracanal medication • Describe Rationale and overview of applications • Describe Microbiology of endodontic infections • Describe Antimicrobial agents • Describe and be able to place it in root canal
9	<ul style="list-style-type: none"> • Surgical endodontics • Describe Indications for periradicular surgery • Describe Preoperative assessment • Describe Surgical technique • Describe Periradicular surgery • Describe Repair of perforation • Describe Replantation/transplantation • Describe Regenerative procedures
10	<ul style="list-style-type: none"> • Endodontic aspects of traumatic injuries • Describe History, examination and immediate management • Describe Types of injury • Describe Effects of trauma on the dental tissues • Describe Management of primary teeth • Describe Management of permanent teeth • Describe Root canal treatment of immature teeth • Describe Auto-transplantation of an immature
11	<ul style="list-style-type: none"> • Marginal periodontitis and the dental pulp • Describe Anatomical considerations • Describe Effect of inflamed pulp on the periodontium • Describe Effect of marginal periodontitis on the pulp • Classify periodontitis
12	<ul style="list-style-type: none"> • Problems with endodontic treatment • Describe Emergency treatment • Describe Failure of anaesthesia in acute inflammation • Describe Problems with preparation of the root canal system • Describe Problems with filling of the root canal system
13	<ul style="list-style-type: none"> • Restoration of endodontically treated teeth • Describe Effects of endodontic treatment on the tooth • Describe Survival of the endodontically treated tooth • Describe Timing the restorative procedure • Describe Restoration of choice • Describe Posts systems and be able to place it in canal

CROWN AND BRIDGE

It involves extracoronal restoration of tooth with or without RCT. It is used to strengthen tooth surface and protects tooth from fracturing.

Sr. no.	Title of lectures with learning Objectives
1	<ul style="list-style-type: none"> • Types of crowns • Describe Anterior complete crown for vital teeth & non vital teeth • Describe Anterior partial crowns • Describe Posterior complete crowns & partial crown
2	<ul style="list-style-type: none"> • Describe Designing crown preparations • Occlusal considerations • Describe Functional approach to occlusion • Describe Mandibular movements • Describe Occlusal interferences and occlusal harmony • Describe Mandibular dysfunction • Describe and be able to perform Occlusal examination • Describe Occlusal objectives in making crown and bridges • Describe Clinical and laboratory management of occlusion • Describe Adjustment of occlusion of restoration in mouth
3	<ul style="list-style-type: none"> • Describe Planning and making crowns • Describe History and examination
4	<ul style="list-style-type: none"> • Clinical techniques for crown construction • Describe Planning stages before preparing the tooth • Describe Building up the core • Describe & be able to perform Tooth preparation • Describe & be able to perform Post hole preparation • Describe Finishing the preparation • Describe Temporary crowns • Describe and be able to perform Impression techniques • Describe Occlusal record • Describe and be able to cement crowns • Describe Oral hygiene instructions
5	<ul style="list-style-type: none"> • Types of bridges • Describe Conventional bridges • Describe Minimal preparation bridges • Describe Variations • Describe Advantages and disadvantages
6	<ul style="list-style-type: none"> • Components of bridges • Describe Retainers: material, types, appearance • Describe Pontics: types, materials

	<ul style="list-style-type: none"> • Describe Connectors: material, types
7	<ul style="list-style-type: none"> • Designing and planning of bridges • Describe Support • Describe Cleansability • Describe Conservation of tooth
8	<ul style="list-style-type: none"> • Describe Clinical techniques for bridge construction • Fixed splints • Describe Indications • Describe Types • Describe Advantages and disadvantages • Describe Appearance of anterior splints • Clinical techniques • Cementation
9	<ul style="list-style-type: none"> • Crowns and bridges failure and repair • Describe Causes of failures • Describe Solutions of failure • Describe Techniques to repair crowns • Describe Removing crowns

PEDODONTICS

It involves dealing with young patients below 12 years of age. In this students are taught to handle children coming to dental clinics.

Sr. no.	Title of lectures with learning Objectives
1	<ul style="list-style-type: none"> • Take History and perform examination
2	<ul style="list-style-type: none"> • Management of pain and anxiety • Describe Non pharmacological management • Describe Pharmacological management
3	<ul style="list-style-type: none"> • Diagnosis and prevention of caries • Describe Development of caries • Describe Epidemiology • Describe Detection • Describe Prevention • Describe Treatment
4	<ul style="list-style-type: none"> • Treatment of caries in pre-school going children • Describe Pattern of disease
5	<ul style="list-style-type: none"> • Operative treatment of deciduous teeth and young permanent tooth • Describe Assessment of caries • Describe & Clinically place Rubber dam • Describe Caries management • Describe Alternative to convention cavity preparation

6	<ul style="list-style-type: none">• Describe Advanced restorative procedures• Dental trauma• Describe Sequelae to injury to primary dentition• Describe Injury to permanent dentition• Describe Dental anomalies• Describe Abnormal tooth structure• Describe Disturbance of eruption• Describe Disturbance of exfoliation
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LIST OF CLINICAL PROCEDURES FOR FINAL PROFESSIONAL BDS

RESTORATION

Sr.no.	Clinical Procedure	Description
1	Class 1 Amalgam Restoration	<ul style="list-style-type: none"> • Tooth with class 1 carious defect • Cavity preparation with GV Black's laws • Restoration with Amalgam Alloy
2	Class 2 Amalgam Restoration	<ul style="list-style-type: none"> • Tooth with class 2 carious defect • Cavity preparation with GV Black's laws • Restoration with Amalgam Alloy
3	Class 1 Composite Restoration	<ul style="list-style-type: none"> • Tooth with class 1 carious defect • Minimal invasive Cavity preparation • Handling of composite resin • Restoration with composite resin
4	Class 2 Composite Restoration	<ul style="list-style-type: none"> • Tooth with class 2 carious defect • Minimal invasive Cavity preparation • Handling of composite resin • Restoration with composite resin
5	Class 3 Composite Restoration	<ul style="list-style-type: none"> • Tooth with class 2 carious defect • Minimal invasive Cavity preparation • Handling of composite resin • Restoration with composite resin
6	Class 4 Composite Restoration	<ul style="list-style-type: none"> • Tooth with class 2 carious defect • Minimal invasive Cavity preparation • Handling of composite resin • Restoration with composite resin
7	Class 5 Composite Restoration	<ul style="list-style-type: none"> • Tooth with class 2 carious defect • Minimal invasive Cavity preparation • Handling of composite resin • Restoration with composite resin

POSTENDODONTIC RESTORATION

Sr. no.	Clinical Procedure	Description
1	Restoration with Endopost	<ul style="list-style-type: none"> • Endopost selection • Endopost placement

ROOT CANAL TREATMENT

Sr. no.	Clinical Procedure	Description
1	Root Canal Treatment	RCT of single rooted tooth <ul style="list-style-type: none"> • Endo access cavity • Canal preparation • Obturation



ASSESSMENT PLAN
DEPARTMENT OF OPERATIVE DENTISTRY
SHARIF MEDICAL AND DENTAL COLLEGE LAHORE

Following modes of assessment are planned for Final professional BDS class in the subject of Operative Dentistry. This plan has been designed keeping in view the university curriculum and hopefully will facilitate the students in preparing for Final professional BDS examinations in the subject.

Chapter Tests:

These will be conducted at the completion of every chapter. The test will comprise of MCQs and SEQs on the pattern of university examinations. A preparatory time of at least 10 days shall be given prior to these tests. Each test will be followed by viva voce, for which the class will be divided into smaller batches.

Clinical Tests:

In order to prepare the students for clinical examinations at least two clinical tests will be conducted on the pattern of university examinations.

Pre-annual Exam:

This will be undertaken in coordination with other departments, exactly following the format of university professional examinations. It will comprise of MCQs, SEQs, Clinical and Viva voce.

Internal Assessment:

Internal assessment will be calculated out of 20 based on all these tests that will be conducted throughout the year.



STAFF CONTACTS
DEPARTMENT OF OPERATIVE DENTISTRY
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REFERENCE BOOKS:

1. The Art & Science of Operative Dentistry by Sturdevant.
2. Pickard's Manual of Operative Dentistry by EAM Kidd.
3. Fundamentals of Operative Dentistry by Schwartz.
6. Paediatric Dentistry Infancy through Adolescence by Pinkham.
7. Essentials of Dental Radiography & Radiology by Frickwhaites.
8. Endodontics principles and practice 6th edition. M. Torabinejad
9. planning and making crown and bridge. 4th edition. Bernard GN smith