



OPERATIVE DENTISTRY

Final Year

Bachelor of Dental Surgery (BDS)

Course Content

Operative Dentistry

1. Infection Control
2. History taking & clinical examination
3. Cariology
- ✓ 4. Clinical aspects of Dental Materials (Amalgam, Composite & hybrids, GIC & hybrids, Liners & Bases)
5. Concepts of adhesion to enamel & dentin
6. Instruments & equipment for tooth preparation
7. Tooth Preparation for direct restorations
8. Complex Amalgam Restorations
9. Non Carious cervical lesion

Endodontics

1. Discoloration of teeth & Management
2. Diseases of pulp & periradicular tissues
- ✓ 3. Vital & Non vital pulp therapies
4. Traumatic Injuries to permanent teeth
5. Selection of cases for endodontic treatment
6. Endodontic Instruments
7. Morphology of pulp chamber & access cavity preparation
8. Preparation of radicular space
9. Disinfection of root canal space
10. Obluration
11. Procedural errors in endodontics
12. Surgical Endodontics
- ✓ 13. Endodontic-periodontic interrelationship
14. Restoration of endodontically treated teeth

Fixed Prosthodontics

1. Treatment planning for indirect restorations
2. Principles of tooth preparation for indirect restorations
3. Tooth preparation for indirect restorations
4. Veneers, Inlays & Onlays
5. Minimal preparation bridges
6. Shade matching
7. Tissue management & impression making

Pediatric Dentistry

1. Behavior Management
2. Early childhood caries
3. Pediatric Endodontics
4. Traumatic Injuries to primary teeth
5. Space Management
6. Dental anomalies

Learning Outcomes

Learning Outcomes (First Term)

At the end of first term, the students should be able to demonstrate an ability to

1. Identify the scope of and sub specialties of operative dentistry
2. Establish diagnosis of diseases of the pulp and periradicular tissues
3. Plan management of diseases of the pulp and periradicular tissues
4. Apply the protocol of infection control in clinical setting
5. Describe different behavior management strategies used in pediatric patients
6. Describe pathophysiology of dental caries
7. Plan management of dental caries and its consequences
8. Apply concepts of adhesion to enamel and dentin for composite restorations

Teaching Methodologies

- Lectures
- Case based discussions
- Problem based learning
- Demonstrations

Learning Outcomes (Second Term)

At the end of second term, the students should be able to demonstrate an ability to

1. Establish diagnosis of traumatic injuries to teeth and supporting structures
2. Plan management of traumatic injuries to teeth and supporting structures
3. Classify discolorations of teeth
4. Plan management for a patient with discolored teeth
5. Describe principles of access cavity preparation

6. Compare different techniques of cleaning & shaping
7. Describe irrigants and antiseptics used in root canal treatment
8. Compare properties of intracanal medicaments
9. Compare different obturation techniques
10. Identify causes of failures in root canal treatment
11. Describe various techniques used in surgical endodontic treatment
12. Distinguish between different endodontic periodontal lesions

Teaching Methodologies

- Lectures
- Problem based learning
- Demonstrations

Learning Outcomes (Third Term)

At the end of third term, the students should be able to demonstrate an ability to

1. Plan management for missing teeth
2. Describe principles of tooth preparation for indirect restorations
3. Execute steps in tooth preparation for full coverage restorations
4. Execute steps in impression making
5. Compare different pontic designs
6. Classify minimal preparation bridges
7. Describe different methods for restoration of endodontically treated tooth
8. Classify space maintainers
9. Describe different methods for achieving retention in complex amalgam restorations
10. Describe principles of tooth preparation for direct restorations

Teaching Methodologies

- Lectures
- Problem based learning
- Demonstrations

Content

Learning Outcome	Unit	Learning domain	Assessment tool	Weightage
Operative Dentistry				
1. Infection control	IL, SGD, PBL/TBL, C	C1, ✓	MCCQ, Long Case	3%
		C2, ✓ C3	OSCE	2
30%				
Theory				
No of MCQs				
2. History taking & clinical examination	SGD, C	C3 ✓	Mini-CEX, Long Case, OSCE	OSCE 1
3. Cariology	IL, SGD, CBD, PBL/TBL	C2, ✓ C3 ✓	MCCQ, OSCE	9% 8

	Plan management of a patient with dental caries according to caries risk assessment									
4.	Clinical aspects of dental Materials	Corelate mechanical properties of dental materials with their clinical application	SGD, PBL/TBL, C	C2, C3	✓	✓	MCO, Long Case	OSCE	10%	8
5.	Concepts of adhesion to enamel & dentin	Understand the mechanism of adhesion to enamel & dentin	IL, PBL/TBL, C	C2, C3	✓	✓	MCO, Long Case	OSCE	3%	2
		Apply concepts of adhesion to enamel and dentin for composite restorations								OSCE 1
6.	Instruments & equipment for tooth preparation	Understand the uses, classification, nomenclature and characteristics of hand & rotary instruments	SGD, C	C1, C2, C3	✓	✓		OSCE		
7.	Tooth Preparation for direct restorations	Apply the principles of tooth preparation for direct restorations	IL, SGD, PBL/TBL, C	C2, C3	✓	✓	DOPS, Long Case			
		Execute direct restorations								

8. Non-ferrous Cervical lesions IL, SGD, PBL C2, C3 V V MCQ

know about etiology, prevention and different treatment options of NCTL

9. Complex Amalgam Restorations IL, SGD, C2, C3 V V MCQ, OSCE 3% 2

know different methods for achieving retention in complex amalgam restorations

Plan management of complex amalgam restorations

Endodontics

35%

1. Discoloration of teeth & Management IL, CBD, C2, C3 - - MCQ 3% 2
PBL/TBL

Classify discolorations of teeth
Plan management for a patient with discolored teeth

2. Diseases of pulp & periradicular tissues IL, CBD, C3 V V MCQ, Long Case, OSCE 5% 2
OSCE

Establish diagnosis of diseases of the pulp and periradicular tissues

PBL/TBL, C

3.	Vital & Non vital pulp therapies	Plan management for vital & non vital teeth	IL, CBD, SGD, PBL/TBL, C	C3	MCCQ, Long Case	OSCE	4%	2
4.	Traumatic injuries to permanent teeth	Execute management for deep carious lesions Classify traumatic injuries to permanent teeth Establish diagnosis of traumatic injuries to teeth and supporting structures	IL, CBD, SGD, PBL/TBL	C2, C3	MCCQ	OSCE 1	5%	5
5.	Selection of cases for endodontic treatment	Plan management of traumatic injuries to teeth and supporting structures Understand the advantages & disadvantages of different treatment options for pulpally involved tooth	IL, CBD, SGD, PBL/TBL	C2, C3	MCCQ		1%	2

Evaluate prognosis & plan management for partially involved tooth

Understand the uses, classification, nomenclature and characteristics of endodontic instruments

SGD, C C1, C2, C3 ✓ ✓ OSCE

OSCE 1

Understanding of the morphology of pulp chamber & importance of proper access cavity preparation

IL, SGD, C2, C3 ✓ ✓ DOPS, MCO, OSCE 10%

OSCE 1

PBL/TBL, C

Understand different techniques of cleaning & shaping

IL, SGD, C2, C3 ✓ ✓ DOPS, MCO, OSCE

PBL/TBL, C

Compare different techniques of cleaning & shaping

IL, SGD, C2, C3 ✓ ✓ DOPS, MCO, OSCE

PBL/TBL, C

Compare properties of irrigants & antiseptics

PBL/TBL, C

Disinfection of root canal space

PBL/TBL, C

10. Obturation	Understand different techniques of obturation	IL, SGD, PBL/TBL, C	C2, C3	✓	✓	DOPS, MCA, OSCE			
	Compare different obturation techniques								
11. Procedural errors in endodontics	Know causes of procedural errors & their prevention & management	IL, SGD, PBL/TBL	C1, C2	-	-	MCA	1%	1	
12. Surgical Endodontics	Know the indications of different surgical techniques	IL, SGD, PBL/TBL	C1, C2	-	-	MCA	2%	1	
13. Endodontic-periodontic interrelationship	Distinguish between different endodontic periodontal lesions	IL, SGD, PBL/TBL	C2, C3	-	-	MCA	2%	2	
14. Restoration of endodontically treated teeth	Plan treatment for restoration of endodontically treated teeth	IL, SGD, PBL/TBL	C2, C3	✓	✓	MCA, OSCE	2%	2	
Fixed Prosthodontics									
1. Treatment planning for indirect restorations	Know different types of indirect restorations & their indications	IL, SGD, PBL/TBL	C2, C3	✓	✓	MCA, OSCE	3%	2	

2. Principles of tooth preparation for indirect restorations	Understand principles of tooth preparation for indirect restorations	IL, SGD, PBL/TBL, C	C2, C3	✓	✓	MCA, OSCE	2%	2
3. Tooth preparation for indirect restorations	Understand the steps for tooth preparation for indirect restorations Execute steps in tooth preparation for full coverage restorations	SGD, C	C2, C3	✓	✓	DOPS, MCA, OSCE	5%	4
4. Veneers, Inlays & Onlays	Know the indications for veneers, inlays & onlays	IL, SGD, PBL/TBL	C2, C3	-	-	MCA	5%	3
5. Minimal preparation bridges	Classify minimal preparation bridges Know the indications for minimal preparation bridges	IL, SGD, PBL/TBL	C2, C3	-	-	MCA	2%	2
6. Shade matching	Understand the basics of shade matching & its importance	IL, SGD, PBL/TBL, C	C1, C2	-	-	MCA	1%	1

7. Tissue management & impression making

Classify impression materials	IL, SGD,	C2, C3	✓	✓	MCA, OSCE	2%	2
Know the indications for different impression materials	PBL/TBL, C						OSCE 1

Know the different methods for tissue management during impression making

Execute steps in impression making

Pediatric Dentistry

1. Behaviour Management

Know different behaviour management strategies in pediatric patients

IL, SGD,	C1, C2, C3	✓	✓	MCA, OSCE	2%	2
PBL/TBL, C						OSCE 1

Apply different behaviour management strategies in pediatric patients

2. Early childhood caries

Know the predisposing factors

IL, SGD,	C1, C2, C3	✓	✓	MCA, OSCE	3%	2
PBL/TBL, C						

ECC

Elaborate plan & execute
treatment for ECC.

3. Pediatric Endodontics

Know the indications of pulp
therapies in primary teeth

Execute pulp therapies in
primary teeth

IL, SGD, C2, C3 ✓ ✓ MCQ, OSCE
PBL/TBL, C

4%

3

4. Traumatic Injuries to primary teeth

Classify traumatic injuries to
primary teeth

Know the sequel of injuries to
primary teeth

Know the management of
traumatic injuries to primary
teeth

IL, SGD, C1, C2, C3 - - MCQ
PBL/TBL

3%

2

5. Space Management

Classify space maintainers

Plan provision of space
maintainers in different clinical
situations

IL, SGD, C1, C2, C3 - - MCQ
PBL/TBL, C

1%

OSCE 1

1

5 Dental Anomalies (number, size, shape, structure) Identify different types or dental anomalies

ii. SGD, PBL/TBL, C1, C2, MCQ, OSCE 2%

Table of Specification

QUOTA OF WORK FOR FINAL YEAR BDS

Sr. No	Description	Quota of Work (Phantom Head)		Total
		TO BE COMPLETED IN THIRD YEAR	TO BE COMPLETED IN FINAL YEAR	
1	Class I Amalgam Restorations	06	15	21
2	Class I Compound Amalgam Restorations	04	02	06
3	Class II Amalgam Restorations	10	15	25
4	Class III Composite Restorations	08	04	12

		06	03	09
5	Class IV Composite Restorations	06	03	09
6	Class V Restorations	06	04	10
7	Endodontic Treatment (Single Rooted Tooth)	01	02	03
9	Tooth preparation for full coverage restoration	01	02 (phantom head)	02
	GRAND TOTAL			88