HITEC

Institute of Medical Sciences Taxila

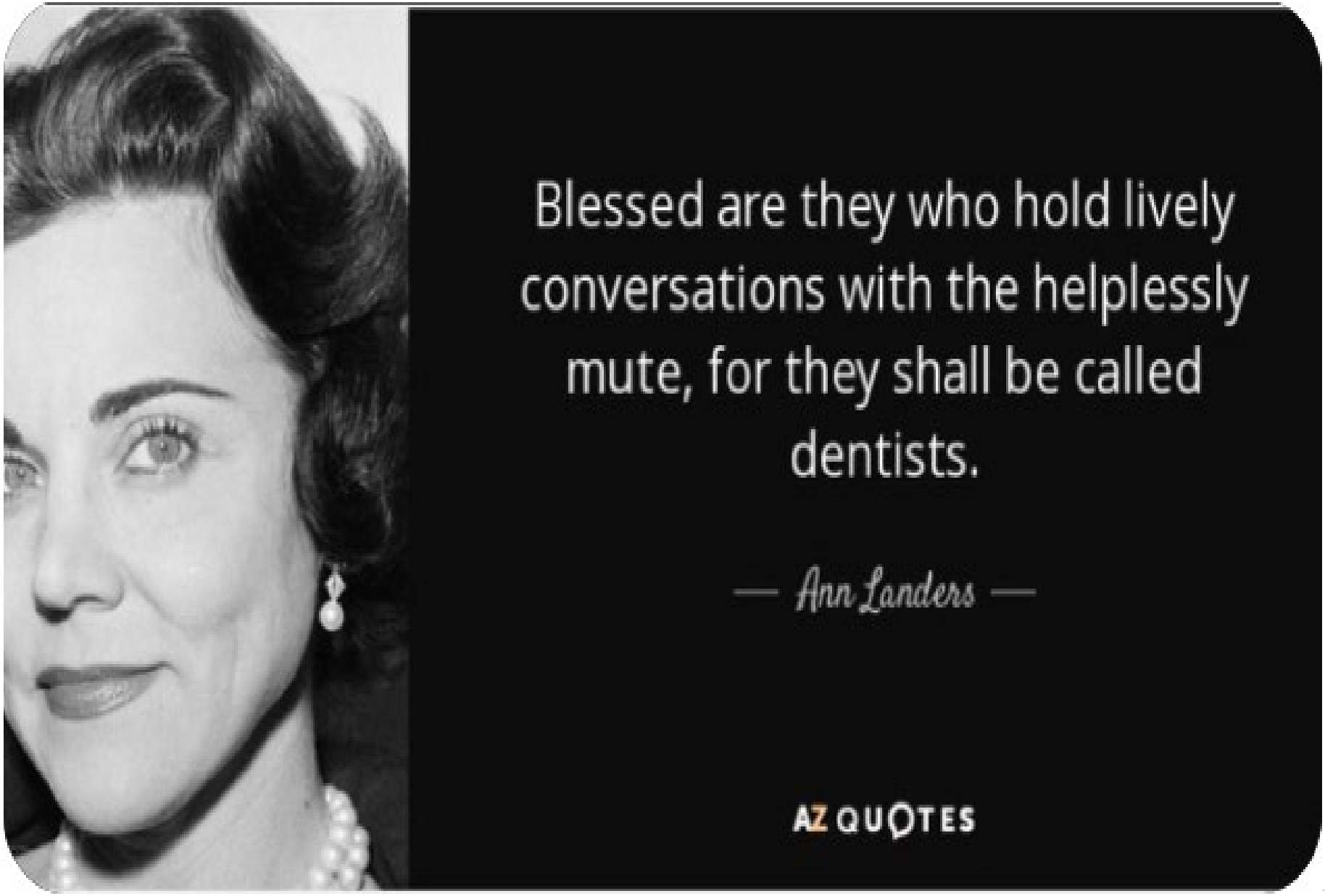
DENTAL COLLEGE HITEC-IMS

Study Guide Y2 – B3 - D24

2nd Year BDS

Block 3

Coordinator: Dr. Shahreen Zahid


Blessed are they who hold lively conversations with the helplessly mute, for they shall be called dentists.
— Ann Landers —
AZ QUOTES

CONTENTS

LIST OF ABBREVIATIONS

- PMC Pakistan Medical Commission
- NUMS National University of Medical Sciences
- LGIS Large Group Interactive Session
- SGD Small Group Discussion
- SDL Self-Directed Learning
- CBL Case Base Learning
- LGIF Large Group Instructional Format
- MIT Mode of Information Transfer
- EOB End of Block Examination
- TOS Table of Specification
- OSPE Objectively Structured Practical Examination
- OSCE Objectively Structured Clinical Examination
- SEQ Structured Essay Questions
- SAQ Short Answer Question
- MCQ Multiple Choice Question
- ANS Automatic Nervous System
- GIT Gastrointestinal Tract
- EECS Early Exposure to Clinical Skills
- FGD Focus Group Discussion
- WFME World Federation of Medical Education

NUMS VISION

The vision of the National University of Medical Sciences is to improve the quality of life through education, research, innovation, and healthcare, thereby contributing to endeavors to make Pakistan and this world a better place to live in.

Institutional Vision

Leading advancement in Oral & Dental health through excellence in Education, patient care and research

Institutional Mission

To serve the local and global communities by producing competent, ethical, socially responsible, research oriented and life long learning oral health care professionals

BLOCK COMMITTEE

Coordinator, Chair Block Curriculum Committee: **Associate Professor Dr. Shahreen Zahid Khan**

Head of Department, Dental Materials. Contact No: 0333-4341988

S. No.	Name	Designation	Departments	Contact Number
1.	**Dr Rai Tariq**	Professor	Community Dentistry	0333-5718658
3.	**Dr Shahreen Zahid**	Associate Professor	Dental Materials	0333-4341988
4.	**Dr Shazana Rana**	Associate Professor	Pharmacology	0332-5272131
5.	**Dr Sadia Israr**	Assistant Professor	General Pathology	0320-5079151
6.	**Dr Sharaz Ahmed**	Assistant Professor	Preclinical Operative	0335-5067704
7.	**Dr Sameen Zahra**	Assistant Professor	Preclinical Prosthodontics	0333-5641998
8.	**Dr Faizan Munir**	Assistant Professor	Dental Education	0334-0031031
9.	**Miss Amna Fayyaz**	Lecturer	Behavioural Sciences	0343-0701997
10.	**Muhammad Haseeb**	Student	CR, 3rd Year	0316-4840201
11.	**Maryam Zia**	Student	GR, 3rd Year	0333-5482253

Curriculum Overview/Implementation

Preface

The curriculum meets the standards of the Pakistan Medical & Dental Council, the Higher Education Commission of Pakistan, and the World Federation of Medical Education. Therefore, upon completing the program, our students have the required competencies defined worldwide in a graduate doctor.

Model

The curriculum of Dental College, HITEC-IMS is based on the traditional, discipline-based model of educational strategies. However, we have incorporated some elements of SPICES model i.e., it's student-centred, integrated, community-oriented and systematic aspects. As a result, our curriculum has evolved, considering traditional, experiential, behavioural, constructivist, and attributional perspectives of curricula.

Organization

The curriculum is organized and integrated along important vertical and horizontal dimensions. The content taught is integrated concurrently in a horizontal organization and vertically across the four years of BDS program. The course of the second year is divided into three blocks. In each block, the sequencing of the content is logical and integrated.

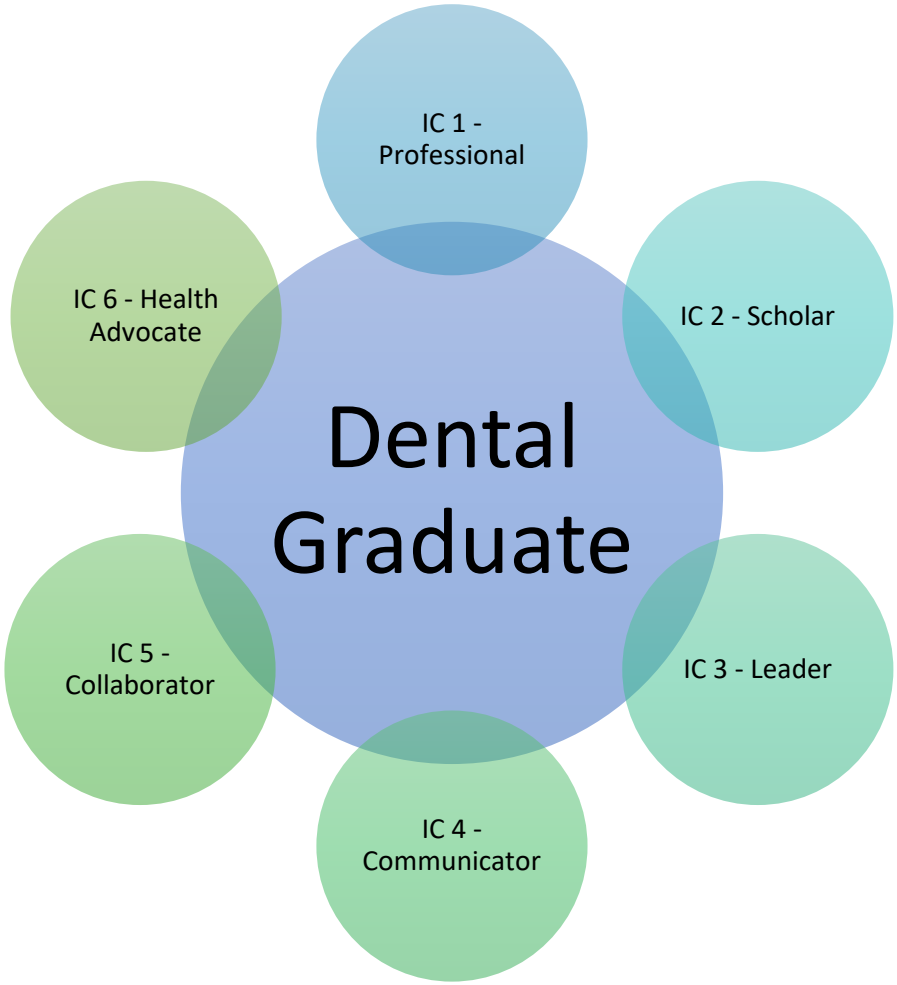
Teaching Strategies

Multiple teaching strategies are used. LGIS are used to provoke thought, understanding and to standardise the delivery of the concept. It helps them to understand the general theme or subject matter, updated research, and best evidence medical information. We are teaching clinical implications of each topic to integrate basic and clinical sciences. This encounter is based on experience that is contextual, realistic, and relevant. Small group discussions encourage students to learn socially and refine their schemas. Working in laboratories provides experiential and hands-on learning.

Assessment

The summative assessment includes end block and pre-annual examination. Formative assessment is based on assignments, presentations, flipped classroom, journal clubs, quizzes, and class tests. After the block exams and the end of the academic year, a pre-annual examination will be conducted according to the standards outlined by NUMS.

1. Institutional Competency Framework



2. Alignment of Block Outcomes with Institutional Competencies

S. No.	Block Outcomes	Institutional Competencies
1.	Correlate the management of general pathological and community based diseases in subsequent years of training and practice	IC 1 to IC 6
2.	Correlate the basic properties of auxiliary and restorative materials with their application in the laboratory and relevant clinical conditions in a spiral manner	IC 1, IC 2, IC 6
3.	Explain the use of instruments in restorative work with specific relevance to caries	IC 1 to IC 6
4.	Integrate the fundamental concepts of sociology, anthropology and psychology with ethical, medical and dental practice considerations	IC 1 to IC 6
5.	Apply a constructivist approach to developing academic writing skills along with biostatistics	IC 1, IC 2, IC 4

3. ACADEMIC CALENDAR

Commencement of Classes – 29th January 2024			
BLOCK - 1 (11+1=12 WEEKS)			
(29th Jan to 26th April)			
Activity	**Duration**	**From**	**To**
Academics	11 weeks	29th January	26th April 2024
Sports Week	01 week	26th Feb 2024	1st March 2024
Block Assessment	01 week	29th May 24	6th May 24
Eid ul fitr	01 week	8th April 24	12th April 24
Block - 2 (11+1=12Weeks)			
(7th May 2024 to 15th August 2024)			
Academics	11 weeks	7th May 2024	15th August 2024
Eid-Ul Azha+ Summer Vacations	04 weeks	15th June 2024	14th July 2024
Block Assessment	01 week	16th August 2024	23rd August 2024
Block - 3 (12+2=14 Weeks)			
(26th August to 15th November 2024)			
Academics	12	26th August 2024	15th Nov 2024
Send-Up	02 weeks	18th November 24	29th Nov 24
Pre-Prof Leave	4 weeks	29th Nov 2024	30th Dec 2024
2nd Professional Exam (Tentative)	31st of December 2024		

4. Sample Timetable

Day	8:30-9:20	9:20-10:15	10:15-11:05	11:05-11:20	11:20-12:10	12:10-1:00	1:00-1:30	1:30-2:30	2:30-3:30
Monday	**Community Dentistry-A / Dental materials-B**		**Pharmacology**	Break	**Dental Materials Integrated**	**Community Dentistry**		**Pharmacology**	
	Practical		LGIS		LGIS	LGIS		Tutorial	
	A-(Topic)								
	B-(Topic)								
Tuesday	**Community Dentistry-B / Dental materials-A**		**Pathology**		**Dental Materials**	**Community Dentistry**		**Pathology**	
	Practical		LGIS		LGIS	LGIS		Tutorial	
	B-(Topic)								
	A-(Topic)								
Wednesday	**Jr Operative B/Jr. Prosthetics B integrated DM**		**Pharmacology**		**Pathology**	**Community Dentistry integrated research**		**Community Dentistry**	
	Skill lab		LGIS		LGIS	LGIS		Tutorial	
	A								
	B								
Thursday	**Dental materials**		**Pharmacology**		**DM LGIS/ slot for mentoring session as well**	**Pathology**		**Patholgy/Pharmacology**	
	Tutorial/SGD		LGIS			LGIS		Practical/SGD	
								B	
Friday	**Jr Operative-A/ Jr Prosthodontics-B Integrated DM**		**Jr. Operatives**		**Jr. Prosthetics**	**Behavioural Sciences**		**Pathology/Pharmacology**	
	Skill Lab		LGIS		LGIS	LGIS		Practical/SGD	
	B-(Topic)							A	
	A-(Topic)							B	

Dr Shahreen Zahid Khan	Dr Shazana	Dr Amir	Dr. Sharaz	Dr. Sadia	Dr Rai Tariq	Dr Irfan Shah
Coordinator 2nd Year BDS & HoD Dental Materials	**HoD Pharmacology**	**HoD Prosthodontics**	**Pre-clinical Operative**	**HoD Pathology**	**Vice Principal & HoD Community Dent**	**Principal**

ASSESSMENT

Types and Schedules

Assessment is continuous via class tests, quizzes, and assignments by the department. Continuous assessment is separate from the block exam at the end of 13 weeks of instruction. The purpose of continuous assessment is formative and summative.

Formative assessment tests may be surprise tests/written assignments/self–reflection and presentations and feedback to the students during the teaching time. The purpose of formative assessment is to provide feedback to the students for improvement and for teachers to identify areas where students need further guidance.

From the 2nd week onwards, the class tests of Community Dentistry, Pharmacology, Dental Materials, Preclinical subjects, and General Pathology will be held on a rotation basis, respectively. Finally, the 13th week will be dedicated to end-of-block (EOB) exams. Above mentioned assessment tools will form part of continuous summative assessment and, along with pre-annual exams, will contribute to marks in internal assessment to be submitted to the university.

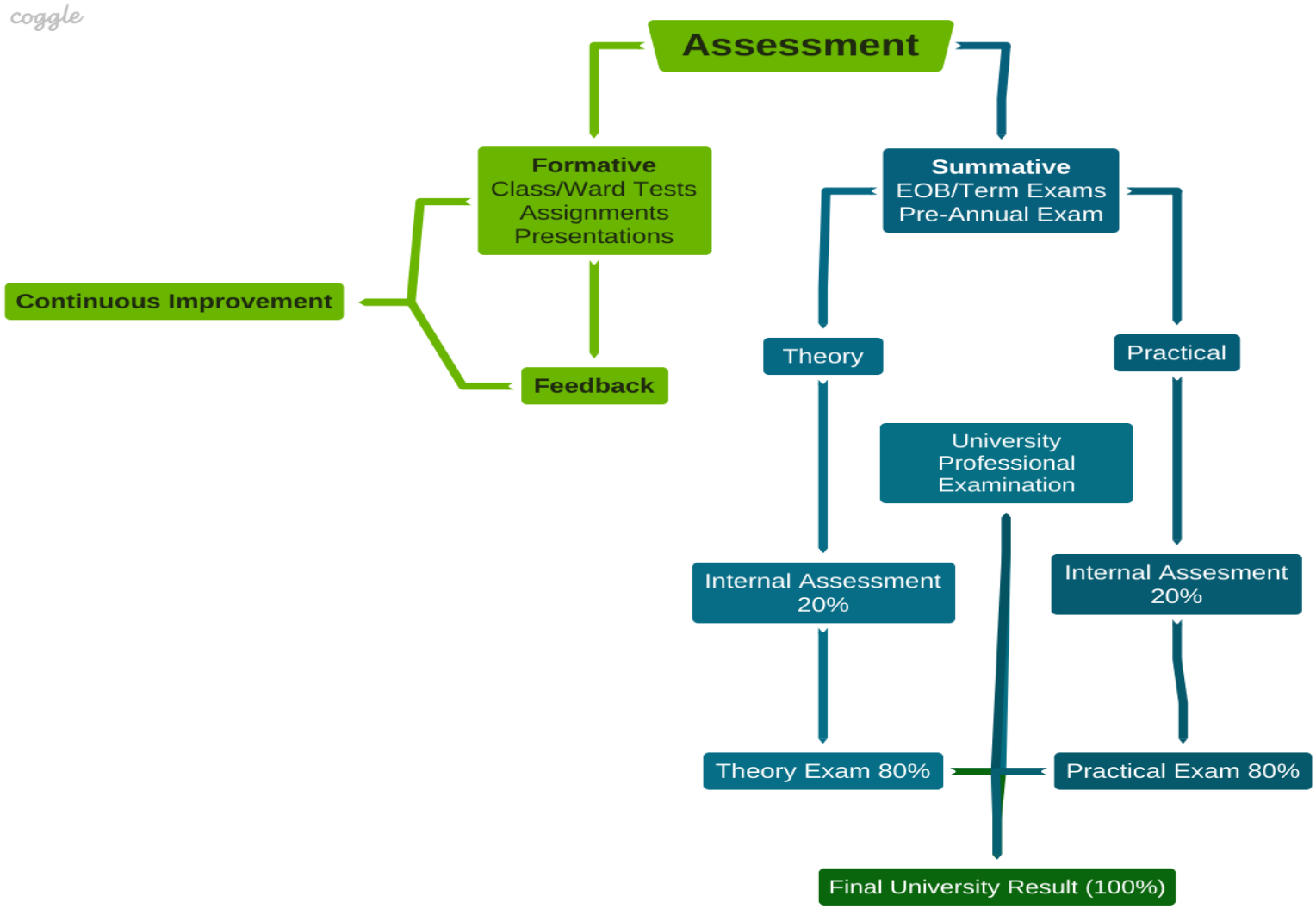
Students must secure 50% marks in exams, as per university criteria.

The students who fail in the end of the block exam will be allowed to attend the next block; however, their internal assessment will be affected accordingly.

Internal assessment criteria for submission of internal assessment marks of Second Professional Examination NUMS:

1. The weightage of internal assessment shall be 20 marks for a 100 marks paper (20%) in the annual examination.
2. Class tests, end-of-block examinations, and pre-annual examination shall contribute to internal assessment.

1. ASSESSMENT MAP



BLOCK - III

Evidence Based Dentistry and Medical Management

1. STRUCTURED SUMMARY - BLOCK III

Block Code	**Y2-B3-D23**
Block Title	Evidence Based Dentistry and Medical Management
Duration Of Block	14 weeks (12+2)
Important Dates	26th August to 29th November 2024
Horizontally Integrated Themes	General Pathologies and management III Research methodology and biostatistics Cariology and management III Evidence based Dentistry
Vertically Integrated Themes	Preclinical Operative Dentistry Preclinical Prosthodontics Research Communication Skills
Prerequisite Blocks	All 1st Year Blocks and 2nd Year Block 1 and 2

2. TENTATIVE TEST SCHEDULE[1]

Date	Subject	Day
2nd September 24	Community Dentistry	Monday
5th September 24	Dental Materials	Thursday
9th September 24	Pharmacology	Monday
12th September 24	General Pathology	Thursday
16th September 24	Preclinical Operative dentistry and prosthodontics	Monday

Date	Subject	Day
19th September 24	Community Dentistry	Thursday
23rd September 24	Dental Materials	Monday
26th September -24	Pharmacology	Thursday
30th September -24	General Pathology	Monday
3rd October 24	Preclinical operative dentistry and prosthodontics	Thursday

[1] This is a tentative schedule. Therefore, it is subject to change.

_4. Send-up Exam Tentative Schedule[2]

Dates	Subject	Timings
18th November 2024	Pharmacology Theory	Starting at 8:30
	PharmacologyOspe/viva	Starting at 12:00
20th November 24	Community dentistryTheory	Starting at 8:30
	Community dentistry Ospe/viva	Starting at 12:00
22nd November 24	Preclinical Operative and Prosthodontics Theory	Starting at 8:30
	Preclinical Operative and Prosthodontics Ospe/viva	Starting at 12:00
25th November 24	Dental Materials Theory	Starting at 8:30
	Dental materials Ospe/viva	Starting at 12:00
27th November 24	General PathologyTheory	Starting at 8:30
	General pathologyOspe/viva	Starting at 12:00pm

[2] This is a tentative schedule. Therefore, it is subject to change.

LEARNING OUTCOMES FOR BLOCK III

1. DENTAL MATERIALS

S. No.	Topics/ Themes	Learning Outcomes	Learning Objectives	IC Codes	MIT	Assessment Tools
		At the end of the block, the student will be able to:				
Theme 1: Selection of a treatment protocol in dentistry/ Evidence based Dentistry						
	(Evidence based dentistry)	• Compare restorative materials including indirect (removable and fixed) and direct restorations (Amalgam and Composite) • Compare all impression materials • Compare all auxiliary materials • Compare all preventive dental materials	**Knowledge** • Describe general classification of dental materials • Describe the process of selection of dental materials • Explain the importance of learning science behind dentistry • Correlate the harsh environment of oral cavity with requirements of dental materials • Differentiate among major types of materials • Describe the selection of materials based on properties and its impact on biology • Describe the reason behind keeping up to date with all the treatment options • Discuss the concept of characterization of dental materials	IC 2 IC 4	LGIS SGD	MCQs SEQs Viva

			• Discuss the importance of evidence-based dentistry
			  • Compare the properties
			  • Composition
			  • Indications/contra-indications
			• Discuss the clinical Relevance of materials
			• Discuss the selection of materials based on evidence-based dentistry			

			Skill • Apply prior knowledge regarding the logical method of material selection for specific clinical case from the given materials (direct, indirect, impression materials, auxiliary and preventive materials)	IC 2 IC 4 IC 5	Practical Virtual Audio Video Demonstration	OSPE

2	Implant Materials	● Discuss dental implants
		● Describe osseointegration
		● Classify implants based on:
		  • Implant designs
		  • Tissue response
		  • Material (Metal, ceramic, polymer, or composite)
		  • Implants merits and demerits
			Knowledge
			
			• Describe the history of implants in dentistry
			• Define osseointegration and the factors affecting it
			• Demonstrate understanding regarding different types of implants
			• Demonstrate understanding regarding the different implant materials used in dentistry
				IC 2	LGIS
					
					SGD
						MCQs
						
						SEQs
						
						Viva

			Skill • Identify the components of dental implants	IC 2 IC 4	Practical Demonstration	OSPE
3	Miscellaneous topics Finishing and polishing materials	• Demonstrate finishing and polishing of dental restorations and prosthesis	**Knowledge** • Discuss the objectives for finishing and polishing of dental restorations and prosthesis • Describe the classification, composition, and properties of abrasives and clinical applications for finishing and polishing materials • Describe the principles of finishing and polishing of dental materials • Identify different types of cutting and abrasive instruments • Describe the biological hazards associated with dental abrasive and polishing materials	IC 2 IC 4 IC 6	LGIS SGD	MCQs SEQs Viva
			Skill	IC 4	Practical Demonstration	OSPE

			• Demonstrate finishing and polishing of dental restorations and prosthesis	IC 5		
Theme 2 - Management of Patient with Carious Teeth						
4	Selection of material for carious teeth (Revisit of direct filling materials and synthetic polymers)	• Discuss the characterization of different dental materials used • Discuss the mechanical properties of different material • Discuss the rheological properties of restorative materials • Discuss the optical and thermal properties • Discuss principles of adhesion • Discuss Biological properties • Discuss Chemical and physical principles that make the foundation of the clinical behaviour and application of dental materials • Describe Synthetics polymers and its application in dentistry	**<u>Knowledge</u>** • Describe basic classification of different preventive and restorative materials in dentistry • Compare the mechanical properties of different materials i.e., metals, ceramics, polymers and composites • Define stress and their relevance with dental materials used in the oral cavity • Interpret various mechanical properties of a material on the stress-strain curve • Describe rheological properties of dental materials • Describe Optical and thermal properties of materials • Describe the structure of matter • Discuss the concept of adhesion with clinical relevance • Demonstrate knowledge of the fundamental biological and chemical principles that make the	IC 2	LGIS SGD	MCQs SEQs Viva

			foundation of the clinical behaviour and application of dental materials • Demonstrate knowledge of physical principles that make the foundation of the clinical behaviour and application of dental materials • Demonstrate knowledge of the range of biological consideration regarding the selection and performance of dental materials for clinical applications • Interpret the safety, biocompatibility, and biomechanics of materials • Describe requirements of direct filling materials • Interpret the polymerization reactions • Interpret the physical changes occurring during the polymerization • Describe structure and properties of synthetic polymers • Discuss methods of fabricating polymers			
5	Revisit Composites - Dentin bonding	• Define composite material • Recall composition of Dental composites • Classify dental composite based on	**<u>Knowledge</u>** • Describe the history and classification of restorative composites	IC 2 IC 4	LGIS SGD	MCQs SEQs Viva

	agents and adhesive dentistry	• Activation methods • filler particle sizes, • newer generations (flowable, Packable, Bulk-fill) • Discuss the evolution of light curing systems • Correlate the properties of resin-based composites to clinical situations • Describe the basic mechanisms of bonding • Discuss the ideal adhesive characteristics • Describe the enamel and dentine bonding systems • Discuss the evolution of Bonding systems • Classify adhesive systems	• Describe the properties of different components of restorative composites • Describe the history and classification of restorative composites • Discuss the properties of different components of restorative composites • Compare the characteristics and clinical applications for composite restorative materials • Describe different modifications in relation to restorative composites • Describe finishing and polishing procedures for restorative composites • Describe the biocompatibility issue related to restorative composites • Describe the recent advances in restorative composites • Describe the concept of bonding and adhesion in dentistry • Define enamel and dentine bonding • Describe the significance and rationale behind enamel and dentine bonding • Describe the various types and generations of dentine bonding			

			• Describe the significance of biodegradation of restorative resins • Describe and explore recent advancements in dentine bonding agents			
			Skill • Identify all the components in a dental composite kit • Identify the steps of composite manipulation	IC 2 IC 5	Practical Demonstration Virtual Audio Video Demonstration	OSPE
6	Dental Amalgam	• Classify different amalgam alloys • Discuss composition of amalgam • Describe setting reaction of amalgam • Recall the microstructure and amalgamation reaction of low copper, high copper admixed and singe composition alloys with mercury • Summarize the properties of dental amalgam and factors which effect their properties	**Knowledge** • Describe the history, composition, and classification of dental amalgams • Interpret the setting mechanisms of different types of amalgams • Describe clinical manipulation and factors effecting the properties of dental amalgams • Discuss the issues related to amalgam hygiene in clinical practice • Describe the formation of electrochemical cell in the oral cavity and its clinical relevance	IC 2 IC 4	LGIS SGD Students Presentations	MCQs SEQs Viva

		• Demonstrate manipulation technique of Dental Amalgam • Discuss the effect of mercury/Alloy ratio, Trituration, Condensation, Carving and Finishing on final restoration • Discuss mercury toxicity • Differentiate corrosion and creep phenomena of ditching	• Describe the mechanism of galvanism • Describe the biocompatibility issues related to dental amalgam • Discuss recent advancements in dental amalgams			

7	Selection of cements using concept of evidence-based dentistry and acquired knowledge	• Differentiate between liners, bases, and varnish
		• Classify dental cements
		• Recall the composition, setting reactions, properties, advantage/disadvantages of:
		  ◦ Cements based on phosphoric acid
		  ◦ Cements based on organometallic chelates,
		  ◦ Cements based on polycarboxylate
		• Demonstrate manipulation of various dental cements
			Knowledge
			• Describe the objectives and basics terminologies related to dental cements
			• Describe the general requirements, types of different dental cements
			• Compare the properties of different dental cements
			• Compare the setting mechanism of different dental cements
			• Compare the properties, advantages, and disadvantages of different dental cements
			• Identify the clinical applications of different dental cements
			• Discuss the concept of bases and liners for different clinical application
				IC 2	LGIS
					SGD
						MCQs
						SEQs
						Viva

			• Compare luting agents, types, and their properties • Discuss the use of temporary restorative materials, properties, and their uses • Discuss atraumatic restorative techniques (ART) and its uses			
			Skill • Demonstrate mixing of Zinc phosphate cement • Identify glass ionomer cement • Demonstrate manipulation and placement of glass ionomer cement • Practice proper manipulation and placement technique calcium hydroxide liner • Practice proper manipulation technique of zinc phosphate on slab/paper pad	IC 1 IC 4 IC 5	Practical Demonstration Virtual Audio Video Demonstration	OSPE
8	Selection of Endodontic Materials using concept of evidence-based dentistry and	• Discuss endodontic materials, preventive materials and materials used for finishing and polishing	**Knowledge** • Discuss the use of different endodontic materials in dentistry	IC 2	LGIS SGD	MCQs SEQ Viva
			Skill • Identify all endodontic and preventive material	IC 2	Practical Demonstration	OSPE

	acquired knowledge					
Theme 3 - Selection of materials used in the management of a patient coming to dental department with ectodermal dysplasia						
9	Selection of materials used in diagnostics and treatment planning using concept of evidence-based dentistry and acquired knowledge	• Recall the materials used for diagnostics	**Knowledge** • Recall the materials used in diagnostics and treatment planning	IC 2	LGIS SGD Student Presentations	MCQs SEQs Viva
10	Selection of Impression Materials using concept of evidence-based	• Identify ideal properties of impression materials • Classify impression materials based on: ◦ Mechanical Properties ◦ Viscosity	**Knowledge** • Discuss the significance of impression taking and impression materials in dentistry • Describe the general requirements for an ideal impression material	IC 2	LGIS	MCQs SEQs Viva

	dentistry and acquired knowledge	• Elastic properties and non-elastic behaviour • Setting Reaction ● Identify various impression materials ● Demonstrate sound knowledge of each impression material and their properties ● Classify Non-elastic Impression Materials: • Impression Compound • Impression Plaster, • Zinc-Oxide Eugenol Paste, • Impression Waxes ● Classify Elastic Impression Materials: • Reversible & Irreversible Hydrocolloids • Non-aqueous Elastomers (Polysulfide, Polyether, Addition Silicon, Condensation Silicon) ● Recall the types of impression trays ● Recall the different types of impression techniques	• Explain the clinical application of different types of impression materials and compare them			
			Skill • Demonstrate proper techniques used for mixing, handling • Demonstrate the manipulation of impression material (Zinc Oxide Eugenol) • Demonstrate proper techniques used for mixing, handling and manipulation of impression materials (Alginate) • Identify various impression materials	IC 1 IC 4 IC 5	Practical Demonstration	OSPE
			Knowledge	IC 2	LGIS	MCQs

11	Selection of Waxes using concept of evidence-based dentistry and acquired knowledge	• Describe the method of recording functional or supporting form of an edentulous ridge by using a secondary impression material • Identify the impression material for relining the finished removable partial denture to obtain support from the underlying tissues • Describe the composition of various types of waxes, their properties, and various applications in dentistry	• Discuss the classification and types of waxes used in dentistry • Describe the composition, properties of different types of dental waxes • Discuss the applications of different types of dental waxes			SEQs Viva
			Skill • Fabricate wax pattern for acrylic partial dentures • Identify the types of waxes available in dental laboratory	IC 2 IC 4 IC 5	Practical Demonstration	OSPE
			Attitude • Follow laboratory safety protocol • Identify possible laboratory hazards linked to burners	IC 1	Demonstration	OSPE
12	Selection of Denture Base Acrylic resins or metals using concept of evidence-based dentistry and	• Describe the physical, chemical, and mechanical properties of denture base materials • Describe the classification of denture base materials • Discuss the possible defects during denture processing • Enumerate the repair materials for dentures	**Knowledge** • Discuss the procedures involved in fabrication of denture base materials • Discuss clinical application, manipulation, processing, and care of dentures for laboratory processed prosthetic resins • Describe biocompatibility issues associated with denture base materials	IC 2	LGIS	MCQs SEQs Viva

	acquired knowledge		• Describe various methods of polymerization of denture base materials			
			Skill • Perform manipulation of acrylic (polymer and liquid) and identify the physical changes taking place during the mixing and setting of polymers • Demonstrate mixing of heat cure acrylic resin • Demonstrate the steps of denture fabrication	IC 1 IC 4 IC 5	Practical Demonstration	OSPE
13	Selection of Denture relining and rebasing materials, Tissue conditioners, separating media using concept of evidence-based dentistry and	• Discuss the requirements of denture lining materials • Enumerate the types of available denture relining materials • Describe the indications and requirements of separating media	**Knowledge** • Discuss relining and rebasing procedures for dentures • Describe various types of relining and rebasing dental materials • Describe manipulation and properties of relining and rebasing materials • Discuss biocompatibility issues associated with relining and rebasing materials • Illustrate the steps of clinical manipulation of tissue conditioners • Describe the rationale behind the use of separating media in dentistry	IC 2 IC 4	LGIS Student Presentations	MCQs SEQs VIva

	acquired knowledge		• Explain the rationale behind the use of separating media in dentistry • Discuss various types of separating media used in dentistry including their composition, mechanism of action and properties and techniques for application of separating media			
			Skill • Perform manipulation of acrylic (polymer and liquid) and identify the stages involved • Demonstrate the steps involved in manipulation of separating media	IC 2 IC 4 IC 5	Practical Demonstration	OSPE
14	Metals and Alloys revisit and its clinical applications	• Outline the structure and properties of metals and alloys • Differentiate between cooling curves of metals alloys • Discuss the importance of grain boundary and Grain Refining • Identify traditional gold alloys • Recall the properties of gold alloys used in dentistry	**Knowledge** • Discuss the basic concepts related to processing and solidification of dental alloys • Identify the different types of metals and alloys used in fabrication of dental prosthesis • Describe the alloy-phase diagrams • Analyse the clinical applications of high noble and noble metal alloys • Describe the types, processing, and clinical applications of base metal alloys	IC 2 IC 4	LGIS	MCQs SEQs Viva

		• Enlist gold alloys employed in various prosthesis • Discuss the composition of Co/Cr and Ni/Cr • Summarize the properties of base metal alloys • Compare base metal alloys with casting gold alloys • Explain the biocompatibility of base metal alloys • Discuss the role of base metal casting alloys in dentistry	• Discuss the types, processing, and clinical applications of wrought metal alloys • Identify the types, processing, and clinical applications of stainless steel in dentistry • Identify the types, processing and clinical applications of titanium and its alloys in dentistry • Interpret the properties and composition of various orthodontic wires • Discuss the casting procedures for metal alloys			
			Skill • Identify the metals (clasps and connectors) • Identify the differences between NiTi and SS wires	IC 2 IC 4 IC 5	Practical Demonstration	OSPE
15	Selection of Investments and Refractory materials using concept of evidence-based	• Define refractory materials • Differentiate between the types of investment materials • Describe the requirements of investment materials	**Knowledge** • Describe the investment materials used in dentistry • Different types of investment materials used in dentistry • Describe the steps and methods involved in casting procedures • Summarize the ways to compensate for shrinkage during casting process	IC 2	LGIS	MCQs SEQs Viva

	dentistry and acquired knowledge		• Discuss the defects which may occur during casting			
			Skill • Perform Wire Bending activity (Students would be able to bend Stainless Steel wire to make different alphabets) A, C, D, S, T and X	IC 1 IC 5	Practical Demonstration SGD Virtual Audio Video Demonstration PBL	OSPE

16	Ceramics and CAD/CAM dentistry using concept of evidence-based dentistry and acquired knowledge	• Classify dental ceramics
		• Compare dental porcelain based on:
		  ◦ Composition
		  ◦ Processing of Porcelain Fused to metal prosthesis
		• Interpret processing of all-ceramic prosthesis
		  ○ Sintering
		  ○ Casting and Slip Casting
		  ○ Hot Pressing
		  ○ CAD/CAM
		  ○ Properties of Dental Ceramics
		  ○ Toughening mechanism of Dental Ceramics
			Knowledge
			• Illustrate the basic chemistry and composition of ceramics and their classification
			• Discuss the general procedures involved in fabrication of dental ceramics
			• Describe the procedures of ceramic bonding
			• Discuss the methods of strengthening ceramics
				IC 2	LGIS	MCQs
						SEQs
						Viva

			Skill • Identify different materials used in ceramic laboratory	IC 4 IC 5	Practical Demonstration	OSPE

		○ Methods of strengthening ceramics	● Identify the steps in construction of a PFM crown in a ceramic workshop			
17	PFM casting and cementing crowns	● Describe the steps of investment and basic casting ● Discuss the factors which effect the final cast ● Discuss the compensation for shrinkage during casting process ● Identify the defects of casting	**Knowledge** ● Illustrate the procedure of casting ● Identify the defects which may occur during casting	IC 2	LGIS	MCQs SEQs Viva
			Skill ● Identify steps of fabrication of porcelain fused to metal (PFM) crown	IC 2 IC 4 IC 5	Practical Demonstration	OSPE

2. COMMUNITY DENTISTRY

S. No	Content/ Topic	Learning Outcomes	Learning Objectives	IC Codes	MITs	Assessment Tools
		At the end of this block students willbe able to:				
1	Healthcare Delivery System National Health Policy of Pakistan Problems In Health Care System	• Discuss primary health care and health care delivery system of Pakistan	**Knowledge** • Describe components of Health care system • Discuss Health care delivery • Describe National health policy of Pakistan system of Pakistan • Identify Problems in health care system of Pakistan	IC 2	LGIS SGD	MCQs SEQs Viva
2	Primary Health Care	• Discuss primary healthcare & healthcare delivery system of Pakistan	**Knowledge** • Define primary health care • Discuss Elements of primary health care • Discuss principles of primary health care • Describe WHO strategy for PHC	IC 2	LGIS SGD	MCQs SEQs Viva
3	Dental Instruments and Dental Materials	• Demonstrate knowledge and skills related to dental materials and instruments	**Knowledge** • Identify the parts of instruments • Describe the indications of their use	IC 2	LGIS	MCQs SEQs

						Viva
			Skill • Demonstrate the use of dental instruments	IC 1 IC 5	Practical demonstration	OSPE
4	Need Assessment	• Discuss health needs	**Knowledge** • Define concept of need & demand • Outline types of needs • Describe health need assessment	IC 2 IC 4 IC 6	LGIS SGD	MCQs SEQs Viva
5	Health Planning and Survey Health Planning Survey Evaluation	• Outline the concepts of Health Planning and Survey • Demonstrate knowledge related to evaluation	**Knowledge** • Define health planning • Describe purpose of planning • Enumerate basic steps in the planning cycle • Define survey • Outline Advantages • Describe modes of data collection &Types of investigations • Outline special characteristics of oral health surveys • Discuss Path finder surveys, Index age groups for survey • Define evaluation • List the reasons for conductionof evaluation	IC 2 IC 4 IC 6	LGIS SGD	MCQs SEQs Viva

			• Discuss the WHO criteria for evaluation of dental services • Describe the different types of evaluation • Enumerate the guidelines for evaluation • Describe the different steps involved in evaluation process			
6	Cross Infection Control Hand Washing And PPE	• Demonstrate the knowledge and skills regarding cross infection control	**<u>Knowledge</u>** ● Outline the basic concepts of cross infection control ● Describe special instructions of hand washing	IC 2 IC 6	LGIS SGD	MCQs SEQs Viva
			<u>Skill</u> ● Demonstrate the technique of hand washing ● Demonstrate method to put on mask and gloves ● Demonstrate sequence of donning PPE ● Demonstrate Sequence of donning off PPE	IC 1	Practical demonstration	OSPE

7	Dental Auxiliaries	• Demonstrate the knowledge and skills related to dental auxiliaries	**Knowledge** • Define dental auxiliaries • Describe types of auxiliaries & WHO classification of dental auxiliaries	IC 2 IC 6	LGIS SGD	MCQs SEQs Viva
8	Financing In Health Care	• Outline the basic concept of payment in healthcare	**Knowledge** • Classify payment plans • Discuss mechanism of payment for dental care • Outline reimbursement of dentist	IC 2	LGIS SGD	MCQs SEQs Viva
9	Cross Infection Control Needle Stick Injury	• Demonstrate knowledge and skills related to needle stick injury	**Skill** • Demonstrate the management protocol of needle stick injury	IC 1 IC 3 IC 4	Virtual Audio/ Video Demonstration	OSPE
10	Dental Office Management	• Outline the concept of management of dental office	**Knowledge** • Discuss the dental office establishment, location selection • Discuss financial assistance • Describe design of dental office, personnel management • Discuss how record management is done	IC 2	LGIS SGD	MCQs SEQs Viva

			• Describe the accounting and other financial aspects what factors are associated with successful dental practice • Identify factors influence the dental practice			
11	Comprehensive Health Care	• Outline the concept of comprehensive dental care	**<u>Knowledge</u>** • Define comprehensive health care • Describe levels and stages of comprehensive health care • Outline the challenges and limitations	IC 2	LGIS SGD	MCQs SEQs
12	Research Methodology and Basics Of Biostatistics General Epidemiology	• Demonstrate the basic knowledge of Research Methodology & Biostatistics	**<u>Knowledge</u>** • Define epidemiology • Outline the aims of Epidemiology • Define incidence and prevalence • Discuss the types of studies • Describe the classification of epidemiological studies	IC 2	LGIS SGD	MCQs SEQs Viva
13	Cross Infection Control Waste Disposal	• Demonstrate the knowledge and skills related to waste disposal	**<u>Skill</u>** • Perform the activity of waste characterization • Practice the colour coding system	IC 1 IC 4 IC 5	Virtual Audio/ Video Demonstration	OSPE

14.	Descriptive Epidemiology	• Discuss the descriptive epidemiology	**Knowledge** • Discuss the concept of descriptive studies & types of studies • Outline procedures in descriptive epidemiology • Describe uses of descriptive epidemiology • Discuss the designs of descriptive Epidemiology	IC 2	LGIS SGD	MCQs SEQs Viva
15.	Analytical Epidemiology	• Demonstrate the basic concepts of Analytical studies	**Knowledge** • Discuss analytical studies • Describe case-control study • Outline the indications, advantages, and disadvantages of study designs • Define bias and list its different types • Discuss cohort study • Outline general consideration while selection of cohorts • Describe types of cohort studies & elements of cohort studies • Outline Indications, advantages, and disadvantages of cohort studies and the estimation of risk	IC 2	LGIS SGD	MCQs SEQs Viva

16.	Experimental Studies	• Describe the of basic principles of epidemiology	**Knowledge** • Define experimental studies • Outline the types & aim of experimental research • Discuss the study design of randomized control trials • Define bias & types • Discuss non-randomized controlled trials	IC 2	LGIS SGD	MCQs SEQs Viva
17.	Cross Infection Control Disinfection Of Dental Unit	• Demonstrate knowledge and skill of disinfection of dental unit	**Skill** • Perform the method of cleaning clinical surfaces	IC 1 IC 4 IC 5	Virtual Audio/ Video Demonstration	OSPE
18.	Research Proposal	• Outline the concept related to research proposal	**Knowledge** • Define research proposal • Discuss the method of writing a research proposal	IC 2	LGIS SGD	MCQs SEQs Viva
19.	Biostatistics Introduction To Biostatistics Sampling	• Outline the basic concepts of Biostatistics	**Knowledge** • Define data • Outline the types and presentation of data • Define variables and its Types • Discuss the measure of central tendency	IC 2	LGIS SGD	MCQs SEQs Viva

			• Calculate these measures • Describe the measure of dispersion and its uses • Define sampling & its types • Describe sample size calculation, sampling frame & sampling error • Outline normal distribution & normal distribution curve • Define probability and its significance • Outline statistical testing • Discuss types of parametric and non-parametric test • Outline the application of these tests			
20	Cross Infection Control Disinfection And Sterilization	• Demonstrate the knowledge and skill of cross infection control	**<u>Knowledge</u>** • Outline the classification of patient care items • Define disinfection • Describe types of disinfection • Describe the concept of sterilization • Discuss the methods of sterilization	IC 2 IC 6	LGIS SGD	MCQs SEQs Viva

21	Plagiarism SPSS	• Outline the basic concepts of plagiarism • Demonstrate the basic knowledge regarding SPSS	**<u>Knowledge</u>** • Define plagiarism • Outline the basics concepts of plagiarism • Outline the features and basic operations of SPSS	IC 1 IC 2	LGIS	MCQs SEQs Viva
22	Systematic Review Endnote	• Outline the basic concept of systematic review • Outline the basic concept of endnote	• Describe the concept and basics of systematic review • Define endnote and advantages to use it	IC 2	LGIS	MCQs SEQs Viva

3. PHARMACOLOGY

S. No	Topic/ Theme	Learning Outcome	Learning Objectives	IC Codes	MITs	Assessment Tools
		By the end of this block, the students will be able to:				
Analgesics						
1.	**Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) I, II**	• Discuss the basic pharmacology of analgesics	**Knowledge** • Define pain • Recognize the role of cyclo-oxygenase and prostaglandins in the pathology of pain, inflammation, and fever • Identify the role of prostaglandins in the homeostatic regulation of gastric function, kidney function and regulation of vasomotor tone and platelet functions • Define the term NSAIDs and classify them. • Describe the general mechanism of action of NSAID and differentiating points of aspirin and paracetamol • Discuss the pharmacokinetics, therapeutic uses and adverse effects of aspirin and paracetamol • Identify the indications preferring use of COX-2 inhibitors	IC 2	LGIS	SAQ MCQ Viva

2.	**Opioids I, II**	• Discuss basic pharmacology and clinical application of opioids analgesics	**<u>Knowledge</u>** • State afferent and efferent pain pathways • Recall the distribution of opioid receptors and their naturally occurring ligands • Recall the classification of opioid analgesics • Describe the mechanism of analgesic action of opioids and differentiate it from that of NSAIDs • Discuss therapeutic uses of different opioids • Identify the major adverse effects of opioids (common, self-resolving and requiring treatment) • Enumerate the cardinal signs of opioid overdose and steps of management • Enlist opioid antagonists • Match the pharmacological effects of opioid antagonists with their uses	IC 2	LGIS	SAQs MCQs Viva
Drugs Used in GIT Disorders						
5.	**Anti-diarrheal drugs**	• Discuss the basic pharmacology of drugs used in diarrhoea	**<u>Knowledge</u>** • Recall the physiology of gastrointestinal motility • Define diarrhoea	IC 2	LGIS	SAQs MCQs Viva

			• Categorize diarrhoea on basis of cause and onset of symptoms • Classify anti-diarrheal drugs • Describe the mechanism of various drug groups used for diarrheal attacks • Outline approaches to treat diarrhoea • Recall the role and effectiveness of drugs in the treatment of various types of diarrhoea • Enumerate adverse effects of anti-diarrheal drugs			
6.	**Purgatives/ Laxatives**	• Discuss the basic pharmacology of purgatives/ Laxatives	**<u>Knowledge</u>** • Recall the physiology of gastrointestinal motility • Define constipation • Identify the underlying pathophysiological mechanism of constipation • Define and classify purgative/laxatives • Describe the site, onset, and mechanism of action of various groups of purgatives. • Analyse the clinical application of purgatives/ laxatives • Identify adverse effects and contraindications of purgatives/ laxatives	IC 2	LGIS	MCQs SAQs Viva

7.	**Drugs Used in Peptic Ulcer I, II**	• Discuss the basic pharmacology of drugs used in peptic ulcer	**<u>Knowledge</u>** • Discuss the physiology of gastric acid secretion and natural protective mechanisms against it • Identify location and role of different receptors on various gastric cells • Define peptic ulcer disease (PUD) • State etiological factors of PUD (H.pylori, stress and drug induced) • Outline nonpharmacological and pharmacological treatment options for PUD • Categorize drugs used for PUD • Describe mechanism of action, therapeutic uses, adverse effects, and drug interactions of various drug groups used for PUD • Outline the triple and quadruple drug regimens of H. pylori induced ulcers	IC 2	LGIS	SAQs MCQs Viva
8.	**Anti-emetics**	• Discuss the basic pharmacology of drugs used in emesis	**<u>Knowledge</u>** • Define nausea and emesis • Enlist aetiologies associated with occurrence of nausea and vomiting • Summarize stimuli, pathways, and key events in vomiting • Describe the role of CTZ, NTS and VC in vomiting	IC 2	LGIS	SAQs MCQs Viva

			• Enlist the therapeutic classes of anti-emetic drugs • Describe mechanism of action of various groups of anti-emetic drugs • Enumerate the adverse effects of drugs used for nausea and vomiting			
Drugs Used in Respiratory Disorders						
9.	**Expectorants & Anti-tussive**	• Discuss the basic pharmacology of drugs used in cough	**<u>Knowledge</u>** • Define cough and classify it • Outline the important components of cough reflex • Define the term antitussives, mucolytic and expectorants • Enumerate drugs used as antitussives, expectorants, and mucolytic agents • Describe the mechanism of action of respective drug groups • Identify different respiratory conditions requiring the use of antitussives, mucolytic and expectorants • Recall adverse effects associated with these drugs	IC 2	LGIS	SAQs MCQs Viva
10.	**Anti-asthmatic drugs I, II**	• Discuss basic pharmacology of drugs used in asthma	**<u>Knowledge</u>** • Recall the distribution of autonomic receptors in lungs and their role in control of bronchial smooth muscle tone	IC 2	LGIS	SAQs MCQs

			• Define asthma and identify its types and pathological basis • Classify anti-asthma drugs into bronchodilators and anti-inflammatory drugs • Enumerate drugs used for prophylaxis and treatment of asthma • Discuss the mechanism of action of different anti- asthma drugs • Describe the adverse effects and special considerations associated with these drugs • Outline appropriate drugs used in the management of acute severe asthma			Viva
Miscellaneous						
11	**Antihistamines**	• Discuss the basic pharmacology of antihistamines	**<u>Knowledge</u>** • Recall the site of action and physiological and pathophysiological role of histamine • Identify conditions causing release of histamine release • Locate the distribution of histamine receptors in body and their associated actions • Classify antihistamine drugs • Describe the mechanism of action and pharmacological effects of antihistamines	IC 2	LGIS	SAQs MCQs Viva

			• Identify the various therapeutic uses of antihistamine therapy • Discuss the adverse effects of both generations of antihistamine			
Central Nervous System						
12	**Central Neurotransmission**	• Discuss neurotransmitters and ion channels	**<u>Knowledge</u>** • Define neurotransmitters • Enlist different excitatory and inhibitory neurotransmitters • Describe the site and action of neurotransmitters in CNS	IC 2	LGIS	MCQs SAQs Viva
13	**General anaesthetics I, II**	• Discuss the basic pharmacology of general anaesthetics	**<u>Knowledge</u>** • Define anaesthesia in terms of its components • Enumerate the stages of anaesthesia and identify the stage required for surgery • Determine the role of pre-anaesthetic medications • Classification of agents used for general anaesthesia • Define MAC and its relationship with potency of anaesthetic • Identify the pharmacokinetic factors affecting action of general anaesthetics • Identify drugs used for induction and maintenance of anaesthesia depending upon their properties	IC 2	LGIS	MCQs SAQs Viva

			• Tabulate the advantages and disadvantages for clinically used inhaled and intravenously administered general anaesthetics			
14	**Local anaesthetics** **I, II**	• Discuss the rational use of local anaesthetics	**<u>Knowledge</u>** • Define local anaesthesia (LA) • Classify local anaesthetic agents • Relate the structure activity of LA with mechanism of action • Identify the differential sensitivity of nerve fibres to LA • Rationalise the use of addition of vasoconstrictor with LA • Describe uses of LA in different conditions • Discuss the factors affecting action of LA • Discuss the adverse effects of different LA	IC 2	LGIS	MCQs SAQs Viva
15	**Sedative & Hypnotics** **I, II**	• Discuss the basic pharmacology of drugs in anxiety and sleep disorder	**<u>Knowledge</u>** • Define sedation & hypnosis • Classify benzodiazepines (BDZ) and barbiturates • Draw the pentameric structure of GABA receptor and indicate the site of attachment of GABA, BDZ and barbiturates • Differentiate between the mechanism of action of BDZ and barbiturates • Describe the valid clinical uses of BDZ and barbiturates • Enumerate the side effects of BDZ and barbiturates	IC 2	LGIS	MCQs SAQs Viva

			• Identify safer of the two agents and trace the reason for better safety profile of BDZ			
16	**Antiepileptic drugs I, II**	• Discuss the basic pharmacology of drugs in seizure disorders	**<u>Knowledge</u>** • Define seizure and epilepsy • Name different types of epilepsy • Discuss the therapeutic classification of anti-epilepsy drugs • Enlist the general mechanism of anti-epilepsy drugs	IC 2	LGIS	MCQs SAQs Viva
17	**Anti-Depressants**	• Discuss the basic pharmacology of drugs used in depression	**<u>Knowledge</u>** • Define depression • Identify main neurotransmitters in the pathology of depression • Classify anti-depressant drugs • Describe the mechanism of action of different classes of anti –depressant drugs • Enlist the therapeutic uses and adverse effect of these drugs • Indicate the important drug interactions of antidepressants and precautionary measures	IC 2	LGIS	MCQs SAQs Viva
18	**Drug treatment of migraine**	• Discuss drug management of migraine	**<u>Knowledge</u>** • Define migraine • Enumerate drugs used in the prophylaxis and treatment of migraine • Describe the mechanism of action of triptans and ergotamine	IC 2	LGIS	MCQs SAQs Viva

			• List the contraindications of triptans and ergotamine			

4. GENERAL PATHOLOGY

S. No	Topics/ Theme	Learning Outcomes	Learning Objectives	I C Codes	MITs	Assessment Tools
		At the end of this block, the students will be able to:				
1	Diseases of Immune System ● Cells of immune system ● Types of immunity ● Hypersensitivity Reaction I, II, III & IV ● Immunodeficiency diseases ● AIDS	● Illustrate the immune system and process of immune response of our body ● Describe the mechanisms and differences of hypersensitivity reactions ● Discuss the mechanisms and clinical features of acquired immunodeficiency syndromes	**Knowledge** ● Define the types and functions of cells involved in immune system ● Define the types, structure, and functions of immunoglobulins ● Define the different types of immunity, cells involved & mechanism in adaptive and innate immunity ● Describe in detail the mechanism, clinical features & clinical conditions of all type of hypersensitivity ● Enlist the preventive measures ● Describe the mechanism involved in acquired immunodeficiency disorders	IC 2	LGIS	MCQs SEQs Viva

S. No	Topics/ Theme	Learning Outcomes	Learning Objectives	I C Codes	MITs	Assessment Tools
		At the end of this block, the students will be able to:				
			• Difference between HIV infection and AIDS with preventive measures			
			Skill • Illustrate the principal of Leishman stain • Demonstrate the use of Leishman staining • Perform clinical interpretation of result	IC 1 IC 4 IC 5	Practical Demonstration	OSPE
2	Haematology • Anaemias • Anaemias typing • Acute leukaemia • Bleeding disorders • Coagulation disorders	• Describe the haematological disorders including anaemias, leukaemia and bleeding disorders • Describe the aetiology, pathology, types, and diagnosis	**Knowledge** • Define anaemias • Classify anaemias • Describe the clinical features & lab diagnosis of anaemias • Define leukaemia • Classify leukaemia • Describe the lab diagnoses of leukaemia • Define haemostasis	IC 2	LGIS	MCQs SEQs Viva

S. No	Topics/ Theme	Learning Outcomes	Learning Objectives	I C Codes	MITs	Assessment Tools
		At the end of this block, the students will be able to:				
		• Interpret the complete blood counts parameters	• Define bleeding & platelet disorders • Describe Clotting factors defects			
			Skill • Perform microscopic identification of normal and abnormal red cell morphology • Describe procedure and interpretation of ESR	IC 1 IC 4 IC 5	Practical Demonstration	OSPE
3	Genetics • Terminologies • Autosomal disorders • Chromosomal disorders	• Describe the basic terms in genetic disorders, differentiate autosomal and chromosomal disorders • Discuss the congenital anomalies, infections & syndromes	**Knowledge** • Define genetics • Define the terminologies used in genetic disorders • Describe the types & aetiology of autosomal disorders & sex chromosomes • Discuss the diseases and clinical features of autosomal disorders	IC 2	LGIS	MCQs SEQs Viva
			Skill • Identify the gross and microscopic features of amyloidosis	IC 4 IC 5	Practical Demonstration	OSPE

S. No	Topics/ Theme	Learning Outcomes	Learning Objectives	I C Codes	MITs	Assessment Tools
		At the end of this block, the students will be able to:				
			● Demonstrate the procedure and interpretation of complete blood counts			
4	● Microbiology, Virology (hepatitis viruses, rabies virus, herpes virus, HIV) and Fungi (cutaneous mycosis, deep mycosis, opportunistic infections)	● Recall the basic concepts, clinical features, and laboratory diagnosis of virology ● Describe the major fungal infections, their laboratory diagnosis and prevention	**Knowledge** ● Define virology ● Describe the types, laboratory diagnosis, immunization, and prevention of hepatitis viruses ● Describe the laboratory diagnosis & prevention from HIV ● Describe the clinical feature & prevention of rabies ● Describe the types, clinical features & prevention of herpes viruses ● Define mycology ● Classify fungi ● Describe the types, causative agents, and clinical features of mycosis	IC 2	LGIS	MCQs SEQs Viva

VERTICALLY INTEGRATED MODULES

1. PRECLINICAL OPERATIVE DENTISTRY

S. No	Topic / Theme	Learning Outcomes	Learning Objectives	IC Codes	MITs	Assessment Tools
1	Composite Restorative Material	• Comprehend the use of Composite Restorative Material	**Knowledge** • Discuss the use of different restorative materials according to different clinical situations • Describe the terminology and classification of composite • Recall the composition structure and properties • Interpret the clinical considerations, indications and contraindications • Discuss the advantages and disadvantages	IC 2	LGIS	MCQs SAQs Viva
2	Class III Cavity Preparation for Composite	• Describe Class III Cavity Preparation for Composite	**Knowledge** • Describe the accurate method of cavity preparation in aesthetic zones of oral cavity • Describe the manipulation of tooth coloured restoration, finishing and polishing	IC 2	LGIS	MCQs SAQs Viva

			• Discuss the conventional class iii tooth preparation, bevelled conventional class iii tooth preparation, modified class iii tooth preparation • Describe the restorative technique, etching, bonding agent application, matrix application, placement and curing of composite • Discuss the method of finishing and polishing of restorations			
2	Class IV Cavity Preparation for Composite	• Describe Class IV Cavity Preparation for Composite	**<u>Knowledge</u>** • Describe the accurate method of cavity preparation in the aesthetic zones of oral cavity • Discuss the manipulation of tooth coloured restoration (composite) and importance of polishing of aesthetic restoration • Interpret the conventional class iv tooth preparation, bevelled conventional iv tooth preparation, modified class iv tooth preparation • Analyse the restorative technique, etching, priming, placing adhesive, matrix	IC 2	LGIS	MCQs SAQs Viva

			application, placement and curing of composite • Discuss the finishing and polishing of restoration			
3	Class V Composite Restoration	• Describe Class V Cavity Preparation for Composite	**Knowledge** • Describe the accurate method of Class V cavity preparation • Discuss the manipulation of tooth coloured restoration (composite) • Interpret the use of sandwich technique for deep class v cavities • Describe the conventional class v tooth preparation, bevelled conventional class v tooth preparation, modified class v tooth preparation • Discuss the restorative technique; sandwich technique	IC 2	LGIS	MCQs SAQs Viva
4	Class III Preparation	• Perform Class III Cavity Preparation for Composite	**Skill** • Demonstrate the hands on procedure of class III cavity preparation • Demonstrate the methods of determining different cavity dimension	IC 1 IC 3 IC 4	Practical Demonstration	OSPE

			• Demonstrate the application of matrix system • Perform the placement of composite matrix • Demonstrate the application of lining materials • Perform the placement of composite materials • Demonstrate the composite restoration finishing and polishing			
5	Class IV Preparation	• Perform Class IV Cavity Preparation for Composite	**Skill** • Illustrate the accurate method of cavity design and preparation • Illustrate the finishing and polishing of composite restoration • Perform the hands on performance of class iv cavity preparation • Demonstrate the methods of determining different cavity dimension • Perform the application of matrix system • Perform the placement of composite matrix • Demonstrate the application of lining materials	IC 1 IC 3 IC 4 IC 5	Practical Demonstration	OSPE

			• Demonstrate the placement of composite materials • Demonstrate the composite restoration finishing and polishing			
6	Class V Preparation	• Perform Class V Cavity Preparation for Composite	**Skill** • Demonstrate the accurate method of cavity design and preparation • Demonstrate the finishing and polishing of the restoration • Demonstrate the hands-on performance of class v cavity preparation • Demonstrate the methods of determining different cavity dimension • Demonstrate the application of matrix system • Demonstrate the placement of composite matrix • Demonstrate the application of lining materials • Demonstrate the placement of composite materials • Demonstrate the composite restoration finishing and polishing	IC 1 IC 3 IC 4 IC 5	Practical Demonstration	OSPE

7	Finishing & Polishing	• Perform finishing and polishing of composite restorations	**Skill** • Demonstrate the steps of finishing and polishing of composite restoration	IC 1 IC 3 IC 4 IC 5	Practical Demonstration	OSPE

2. PRECLINICAL PROSTHODONTICS

S. No	Topic/ Theme	Learning Outcomes	Learning Objectives	IC Codes	MITs	Assessment Tools
1	Major Connectors	• Describe major connectors	**Knowledge** ● Define major connectors ● Discuss the characteristics of major connectors that contribute to the well-being of patients ● Enlist maxillary and mandibular major connectors	IC 2	LGIS	MCQs SAQs Viva
2	Minor Connectors	• Explain minor Connectors	**Knowledge** ● Define minor connectors ● Describe functions and forms of minor connectors	IC 2	LGIS	MCQs SAQs Viva

3	Direct Retainers	• Describe direct retainers	**<u>Knowledge</u>** ● Define direct retainers ● Classify direct retainers ● Enlist parts of clasps ● Enumerate functions of reciprocal clasp arm ● Enumerate the principles of clasp design ● Discuss factors that affect flexibility of clasps	IC 2	LGIS	MCQs SAQs Viva
4	Indirect Retainers	• Discuss indirect retainers	**<u>Knowledge</u>** ● Define indirect retainers ● Enumerate functions of indirect retainers ● Discuss different forms of indirect retainers	IC 2	LGIS	MCQs SAQs Viva
5	Denture Base	• Explain denture Base	**<u>Knowledge</u>** ● Define a denture base ● Enlists functions of denture base ● Differentiate between tooth-supported and distal extension denture base ● Discuss factors affecting support of a distal extension denture base ● Differentiate between metal and acrylic denture bases ● Enumerate methods of attaching teeth to denture base	IC 2	LGIS	MCQs SAQs Viva
6	Surveying	• Comprehend surveying	**<u>Knowledge</u>** ● Define Surveying ● Enlist different parts of surveyor	IC 2	LGIS	MCQs SAQs

			• Differentiate between supra-bulge and infra-bulge areas • Discuss the objectives of surveying • Enlist factors effecting path of insertion and removal • Describe different types of tripoding			Viva
7	Clasp Fabrication For removable partial dentures (RPD)	• Comprehend clasp fabrication for Removable Partial Denture (RPD)	**Skill** • Demonstrate the fabrication of different types of clasps used in removable partial dentures	IC 1 IC 4 IC 5	Demonstration	OSPE
8	Record Base, Occlusal Rim and Articulation For RPD	• Perform record base, occlusal rim and articulation for Removable Partial Denture (RPD)	**Skill** • Demonstrate the use of baseplate wax for occlusal rims fabrication, auto-polymerizing resin for record bases and dental plaster for articulation of RPD • Identify the different types of articulators used for fabrication of Removable Partial Denture • Demonstrate the procedure of articulation	IC 1 IC 2 IC 5	Demonstration	OSPE
9	Teeth Arrangement For RPD	• Perform steps of teeth arrangement for RPD	**Skill** • Demonstrate the process of teeth arrangement for patients requiring removable partial dentures	IC 1 IC 2 IC 5	Demonstration	OSPE

10	Laboratory Procedures Flacking, Dewaxing, Packing, Curing, Finishing and Polishing	• Demonstrate laboratory procedures (flacking, dewaxing, packing, curing, finishing and polishing)	**<u>Skill</u>** • Demonstrate the procedures of flasking, dewaxing, packing, curing, finishing, and polishing of partial dentures • Identify the prosthesis processing errors	IC 1 IC 2 IC 4 IC 5	Demonstration	OSPE

3. RESEARCH METHODOLOGY

Sr. No	Content/ Topic	Learning Outcomes	Learning Objectives	IC Codes	MITs	Assessment Tools
		At the end of this block students will be able to:				
1	Descriptive Epidemiology	• Discuss the descriptive epidemiology	**Knowledge** • Discuss the concept of descriptive studies & types of studies • Outline procedures in descriptive epidemiology • Describe uses of descriptive epidemiology • Discuss the designs of descriptive Epidemiology	IC 2	LGIS SGD	MCQs SEQs Viva
2	Analytical Epidemiology	• Demonstrate the basic concepts of Analytical studies	**Knowledge** • Discuss analytical studies • Describe case-control study • Outline the indications, advantages, and disadvantages of study designs • Define bias and list its different types • Discuss cohort study • Outline general consideration while selection of cohorts • Describe types of cohort studies & Elements of cohort studies	IC 2 IC 4	LGIS SGD	MCQs SEQs Viva

			• Outline Indications, advantages, and disadvantages of cohort studies and the estimation of risk			

4. BEHAVIOURAL SCIENCES

Sr. No	Content/ Topic	Learning Outcomes	Learning Objectives	IC Codes	MITs	Assessment Tools
		At the end of this block students will be able to:				
Sociology						
1	Health planning and evaluation • Health economics • Health system planning • Health policies • Determinants of health	• Comprehend the procedures of health planning and evaluation • Analysis of demographics	**Knowledge** • Interpret the key concepts of health economics • Discuss equity considerations in health system • Discuss macro level policies • Discuss Economic health planning	IC 2	LGIS	MCQs

			• Discuss demographic and economic factors influencing health			

BLOCK III SYLLABI

1. DENTAL MATERIALS

S. No	Date	Topic/ Theme	MIT
1	26-8-24	Introduction to Metals	LGIS
2	27-8-24	Metals & alloys	LGIS
3	29-8-24	Metal & alloys	LGIS
Practical			
1	26-8-24	Manipulation & clinical application of Pits & fissure sealants	SGD/ Practical
	27-8-24	Manipulation & clinical application of Pits & fissure sealants	SGD/ Practical
Tutorial			
1	29-8-24	Different types of fluoride agents, their mode of action and application	SGD
Week – 02			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	2-09-24	Endodontic materials	LGIS
2	3-09-24	Metals & alloys	LGIS
3	5-09-24	Gold alloys	LGIS

Practical			
1	2-09-24	Manipulation & application of restorative materials	SGD/Practical
	3-09-24	Manipulation & application of restorative materials	SGD/Practical
Tutorial			
1	5-09-24	Endodontic materials	LGIS
Week – 03			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	9-09-24	Gold & alloys of noble metals	LGIS
2	10-09-24	Gold & alloys of noble metals	LGIS
3	12-09-24	Gold & alloys of noble metals	LGIS
Practical			
1	9-09-24	Denture lining materials	SGD/Practical
	10-09-24	Denture lining materials	SGD/Practical
Tutorial			
1.	12-09-24	Denture base polymers	Presentations
Week – 04			

S. No	Date	Topic/ Theme	MIT
1	16-09-24	Base metal alloys	LGIS
2	19-09-24	Comparison of different types of Base metals alloys & gold alloys	LGIS
3	19-09-24	Clinical application of metals in dentistry	LGIS
Practical			
1	16-09-24	Identification & use of metals	SGD/ Practical
	17-09-24	Identification & use of metals	SGD/ Practical
Tutorial			
1	19-09-24	Gold Alloys	PPT
Week – 05			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	23-09-24	Steel & wrought alloys	LGIS
2.	24-09-23	Steel & wrought alloys	LGIS
3	26-09-23	Steel & wrought alloys	LGIS
Practical			
1.	23-9-24	Uses of gold and base metal alloys	SGD/ Practical

2.	24-9-24	Uses of gold & base metal alloys	SGD/ Practical
Tutorial			
3.	26-9-24	Base metal alloys	LGIS
Week – 06			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	30-09-24	Casting	LGIS
2	1-10-24	Casting	LGIS
3	3-10-24	Introduction to Ceramics	LGIS
Practical			
1	30-9-24	Uses of steel alloys	SGD/ Practical
2	1-10-24	Uses of steel alloys	SGD/ Practical
Tutorial			
1	3-10-24	Steel and wrought alloys	LGIS
Week – 07			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	7-10-24	Ceramics	LGIS

2	8-10-24	Ceramics	LGIS
3	10-10-24	Ceramics	LGIS
Practical			
1	7-10-24	Steps of casting	SGD/ Practical
2	8-10-24	Steps of casting	SGD/ Practical
Tutorial			
1	10-10-24	Casting Defects	Presentation
Week – 08			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	14-10-24	PFM	LGIS
2	15-10-24	PFM	LGIS
3.	17-10-24	CAD/CAM	LGIS
Practical			
1	14-10-24	Methods involved in making PFM	SGD/ Practical
	15-10-24	Methods involved in making PFM	SGD/ Practical
Tutorial			

1	17-10-24	Ceramics	SGD
Week – 09			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	21-10-24	Revision of properties of dental materials	LGIS
2	22-10-24	Revision of properties of dental materials	LGIS
3	24-10-24	Revision of Auxiliary materials	LGIS
Practical			
1	21-10-24	Revision	SGD/ Practical
	22-10-24	Revision	SGD/ Practical
Tutorial			
1	24-10-24	Tests of properties & auxiliary materials	SGD
Week – 10			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	28-10-24	Revision of Restorative materials	LGIS
2	29-10-24	Revision of Restorative materials	LGIS
3	31-10-24	Revision of Restorative materials	LGIS

Practical			
1	28-10-24	OSPE practice	SGD/ Practical
	29-10-24	OSPE practice	SGD/ Practical
Tutorial			
1	31-10-24	Test on restorative materials	
Week – 11			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	4-11-24	Revision impression materials	LGIS
2	5-11-24	Revision impression materials	LGIS
3	7-11-24	Revision impression materials	LGIS
Practical			
1	4-11-24	OSPE practice	SGD/ Practical
	5-11-24	OSPE Practice	SGD/ Practical
Tutorial			
1	7-11-24	Test of impression materials	SGD
Week 12			

S.No.	Date	Topic/Theme	MIT
1	11-11-24	Revision of polymers	LGIS
2	12-11-24	Revision of polymers	LGIS
Practical			
1	11-11-24	OSPE practice	SGD/ Practical
2	12-11-24	OSPE practice	SGD/ Practical

2. COMMUNITY DENTISTRY

Week - 01			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	26-08-24	Health Care Delivery System	LGIS
2	27-08-24	National Health policy of Pakistan	LGIS
3	28-08-24	Problems in Healthcare system of Pakistan	LGIS
Practical			
1	26-08-24	Dental instruments and Dental Materials	SGD/ Practical
	27-08-24	Dental instruments and Dental Materials	SGD/ Practical
Tutorial			
1	28-08-24	Discussion	LGIS
Week – 02			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	2-09-24	Primary Health Care	LGIS
2	3-09-24	Dental Needs and resources	LGIS
3	4-09-24	Health Planning	LGIS

Practical			
1	2-09-24	Hand washing	SGD/ Practical
	3-09-24	Hand washing	SGD/ Practical
Tutorial			
1	4-09-24	Discussion	LGIS
Week – 03			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	9-09-24	Health Planning and Survey	LGIS
2	10-09-24	Evaluation	LGIS
3	11-09-24	Dental Auxiliaries	LGIS
Practical			
1	9-09-24	PPE	SGD/ Practical
	10-09-24	PPE	SGD/ Practical
Tutorial			
1	11-09-24	Discussion	LGIS
Week – 04			

S. No	Date	Topic/ Theme	MIT
1	16-09-24	Finance in Health Care	LGIS
2	17-09-24	Comprehensive dental care	LGIS
3	18-09-24	Introduction to epidemiology	LGIS
Practical			
1	16-09-24	Needle stick injury	SGD/ Practical
	17-09-24	Needle stick injury	SGD/ Practical
Tutorial			
1	18-09-24	Discussion	LGIS
Week – 05			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	23-09-24	Classification of epidemiological studies	LGIS
	24-09-24	Descriptive epidemiology	LGIS
2	25-09-24	Incidence and Prevalence	LGIS
Practical			

1	23-09-24	Waste Disposal management	SGD/ Practical
	24-09-24	Waste Disposal management	SGD/ Practical
Tutorial			
1	25-09-24	PTT/Discussion	LGIS
Week – 06			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	30-09-24	Analytical Epidemiology	LGIS
2	1-10-24	Experimental Epidemiology	LGIS
3	2-10-24	Comprehensive Dental Care	LGIS
Practical			
1	30-09-24	Disinfection of dental unit	SGD/ Practical
	1-10-24	Disinfection of dental unit	SGD/ Practical
Tutorial			
1	2-10-24	Discussion	LGIS
Week – 07			
S. No	**Date**	**Topic/ Theme**	**MIT**

1	7-10-24	Research proposal Writing	LGIS
2	8-10-24	Dental practice management	LGIS
3	9-10-24	Biostatistics	LGIS
Practical			
1	7-10-24	Disinfection	SGD/ Practical
	8-10-24	Disinfection	SGD/ Practical
Tutorial			
1	9-10-24	Discussion	LGIS
Week – 08			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	14-10-24	Biostatistics	LGIS
2	15-10-24	Types and presentation of Data	LGIS
3	16-10-24	Variables	LGIS
Practical			
1	14-10-24	Sterilization	SGD/ Practical
	15-10-24	Sterilization	SGD/ Practical

Tutorial			
1	16-10-24	PPT Presentations	LGIS
Week – 09			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	21-10-24	Measures of Central tendency	LGIS
2	22-10-24	Measures of Central tendency	LGIS
3	23-10-24	Measures of Dispersion	LGIS
Practical			
1	21-10-24	Colour coding system	SGD/ Practical
	22-10-24	Colour coding system	SGD/ Practical
Tutorial			
1	23-10-24	PPT Presentations	LGIS
Week – 10			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	28-10-24	Sampling	LGIS
2	29-10-24	Normal distribution	LGIS

3	30-10-24	Probability	LGIS
Practical			
1	28-10-24	Immunization	SGD/ Practical
	29-10-24	Immunization	SGD/ Practical
Tutorial			
1	30-10-24	Discussion	LGIS
Week – 11			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	4-11-24	Statistical Testing	LGIS
2	5-11-24	SPSS, plagiarism	LGIS
3	6-11-24	Systematic review	LGIS
Practical			
1	4-11-24	Revision	SGD
	5-11-24	Revision	SGD
Tutorial			
1	6-11-24	Discussion	SGD

Week – 12			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	11-11-24	Revision	LGIS
2	12-11-24	Revision	LGIS
3	13-11-24	Revision	LGIS
Practical			
1	11-11-24	Revision	SGD
2	12-11-24	Revision	SGD
Tutorial			
1	13-11-24	Discussion	SGD

3. PHARMACOLOGY

Week - 01			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	26-08-2024	Introduction to CNS	LGIS
2	28-08-2024	Sedative & hypnotics I	LGIS
3	29-08-2024	Sedative & hypnotics II	LGIS
Practical			
1	29-08-2024	Prescription writing	SGD/ Practical
	30-08-2024	Prescription writing	SGD/ Practical
Tutorial			
1	26-08-2024	Pakistan independance Day	
Week - 02			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	02-09-2024	General anaesthetics I	LGIS
2	04-09-2024	General anaesthetics II	LGIS
3	05-09-2024	Local anaesthetics I	LGIS
Practical			
1	05-09-2024	Prescription writing	SGD/ Practical
	06-09-2024	Prescription writing	SGD/ Practical
Tutorial			
1	02-09-2024	PTT/ Discussion	SGD
Week - 03			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	09-09-2024	Local anaesthetics II	LGIS
2	11-09-2024	Anti-epileptic drugs I	LGIS

3	12-09-2024	Anti-epileptic drugs II	LGIS
Practical			
1	12-09-2024	Prescription writing	SGD/ Practical
	13-09-2024	Prescription writing	SGD/ Practical
Tutorial			
1	09-09-2024	PTT/ Discussion	SGD
Week - 04			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	16-09-2024	Anti-depressant drugs I	LGIS
2	17-09-2024	Anti-depressant drugs II	LGIS
3	18-09-2024	Opioid analgesics I	LGIS
Practical			
1	18-09-2024	Prescription writing	SGD/ Practical
	19-09-2024	Prescription writing	SGD/ Practical
Tutorial			
1	16-09-2024	PTT/Discussion	SGD
Week – 05			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	23-09-2024	Opioid analgesics II	LGIS
2	25-09-2024	NSAIDs I	LGIS
3	26-09-2024	NSAIDs II	LGIS
Practical			
1	26-09-2024	Prescription writing	SGD/ Practical
	27-09-2024	Prescription writing	SGD/ Practical
Tutorial			

1	23-09-2024	PTT/ Discussion	SGD
Week - 06			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	30-09-2024	Drugs used in migraine	LGIS
2	02-10-2024	Emetics & anti-emetics	LGIS
3	03-10-2024	Drugs used in acid peptic disease I	LGIS
Practical			
1	03-10-2024	Prescription writing	SGD/ Practical
	04-10-2024	Prescription writing	SGD/ Practical
Tutorial			
1	30-09-2024	PTT/ Discussion	SGD
Week - 07			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	07-10-2024	Drugs used in acid peptic disease II	LGIS
2	09-10-2024	Laxatives / purgatives	LGIS
3	10-10-2024	Anti-diarrheal drugs	LGIS
Practical			
1	10-10-2024	Prescription writing	SGD/ Practical
	11-10-2024	Prescription writing	SGD/ Practical
Tutorial			
1	07-10-2024	PTT/ Discussion	SGD
Week - 08			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	14-10-2024	Mucolytics, expectorants, anti-tussives	LGIS
2	16-10-2024	Drugs used in asthma I	LGIS

3	17-10-2024	Drugs used in asthma II	LGIS
Practical			
1	17-10-2024	OSPE Revision	SGD/ Practical
	18-10-2024	OSPE Revision	SGD/ Practical
Tutorial			
1	14-10-2024	Discussion	SGD
Week - 09			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	21-10-2024	Antihistamine agents	LGIS
2	23-10-2024	Drug -drug interactions	LGIS
3	24-10-2024	Revision	LGIS
Practical			
1	24-10-2024	OSPE Revision	SGD/ Practical
	25-10-2024	OSPE Revision	SGD/ Practical
Tutorial			
1	21-10-2024	Discussion	SGD
Week-10			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	28-10-24	Revision	LGIS
2	30-10-24	Revision	LGIS
3	31-10-24	Revision	LGIS
Practical			
1	31-10-24	OSPE Revision	SGD/ Practical
	01-11-24	OSPE Revision	SGD/ Practical
Tutorial			

1	28-10-24	PTT/ Discussion	SGD
Week-11			
S. No	**Date**	**Topic / Theme**	**MIT**
1	04-11-24	Revision	LGIS
2	06-11-24	Revision	LGIS
3	07-11-24	Revision	LGIS
Practical			
1	07-11-24	OSPE Revision	SGD/ Practical
	08-11-24	OSPE Revision	SGD/ Practical
Tutorial			
1	04-11-24	PTT/Discussion	SGD
Week-12			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	11-11-2024	Revision	LGIS
2	13-11-2024	Revision	LGIS
3	14-11-2024	Revision	LGIS
Practical			
1	14-11-2024	Revision	SGD/Practical
	15-11-2024	Revision	SGD/Practical
Tutorial			
1	11-11-2024	PTT/Discussion	

4. GENERAL PATHOLOGY

S. No	Date	Topic/ Theme	MIT
Week - 01			
1	27-08-24	Cells of Immune System	LGIS
2	28-08-24	Immunoglobulins	LGIS
3	29-08-24	Hypersensitivity I	LGIS
Practical			
1	29-08-24	Amyloidosis	SGD/ Practical
	30-08-24	Amyloidosis	SGD/ Practical
Tutorial			
1	27-08-24	Tutorial	SGD
Week - 02			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	3-09-24	Hypersensitivity II & III	LGIS
2	4-09-24	Hypersensitivity IV	LGIS
3	5-09-24	Immunodeficiency disorders	LGIS
Practical			
1	5-09-24	Malarial parasite & LD bodies	SGD/ Practical
	6-09-24	Malarial Parasite & LD bodies	SGD/ Practical
Tutorial			
1	3-09-24	Tutorial	SGD
S. No	**Date**	**Topic/ Theme**	**MIT**
1	10-09-24	AIDs & HIV	LGIS
2	11-09-24	Genetic	LGIS
3	12-09-24	Genetics (Mandelian disorders)	LGIS

Practical			
1	12-09-24	Leishman stain	SGD/ Practical
	13-09-24	Leishman stain	SGD/ Practical
Tutorial			
1	10-09-24	Tutorial	SGD
Week – 04			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	17-09-24	Chromosomal disorders	LGIS
2	18-09-24	Anaemia 1	LGIS
3	19-09-24	Anaemia II	LGIS
Practical			
1	19-09-24	DLC & TLC	SGD/ Practical
	20-09-24	DLC & TLC	SGD/ Practical
Tutorial			
1	17-09-24	Tutorial	SGD
Week 5			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	24-09-24	Leukaemia	LGIS
2	25-09-24	Bleeding disorders	LGIS
3	26-09-24	Amyloidosis	
Practical			
1	25-09-24	RBC morphology & ESR	SGD/ Practical
	26-09-24	RBC morphology & ESR	SGD/ Practical
Tutorial			
1	24-09-24	Tutorial	SGD

Week – 06			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	1-10-24	Introduction to virology	LGIS
2	2-10-24	Hepatitis 1	LGIS
3	3-10-24	Hepatitis 2	LGIS
Practical			
1	3-10-24	Interpretation of reports	SGD
	4-10-24	Interpretation of reports	SGD
Tutorial			
1	1-10-24	Tutorial	SGD
Week - 07			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	8-10-24	Herpes	LGIS
2	9-10-24	Cutaneous Mycosis	LGIS
3	10-10-24	Deep Mycosis	LGIS
Practical			
1	10-10-24	Gram staining	SGD/ Practical
	11-10-24	Gram staining	SGD/ Practical
Tutorial			
1	8-10-24	Tutorial	LGIS
Week - 08			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	15-10-24	Opportunistic infection	LGIS
2	16-10-24	Miscellaneous	LGIS
3	17-10-24	Opportunistic fungi in Immunocompromised patients	LGIS

Practical			
1	17-10-24	Zn staining	SGD/ Practical
	18-10-24	Zn staining	SGD/ Practical
Tutorial			
1	15-10-24	Tutorial	SGD
Week – 09			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	22-10-24	Environmental diseases	LGIS
2	23-10-24	Occupational diseases	LGIS
3	24-10-24	Smoking	
Practical			
1	24-10-24	Revision	SGD/ Practical
	25-10-24	Revision	SGD/ Practical
Tutorial			
1	22-10-24	Tutorial	SGD
Week 10			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	29-10-24	Alcohol hazards	LGIS
2	30-10-24	Other environmental hazards	LGIS
Practical			
1	30-10-24	Revision	SGD/ Practical
	31-10-24	Revision	SGD/ Practical
Tutorial			
1	29-10-24	Tutorial	SGD
Week – 11			

S. No	Date	Topic/ Theme	MIT
1	5-11-24	CBL	LGIS
2	6-11-24	CBL	LGIS
3	7-11-24	CBL	
Practical			
1	7-11-24	Revision	SGD/ Practical
	8-11-24	Revision	SGD/ Practical
Tutorial			
1	5-11-24	Tutorial	SGD
Week – 12			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	11-11-24	Revision	LGIS
2	12-11-24	Revision	LGIS

5. PRECLINICAL OPERATIVE DENTISTRY

Week – 01			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	30-08-2024	Composite Restorative material	LGIS
Practical			
1	28-08-2024	Completion of amalgam restoration	SGD/ Practical
	30-08-2024	Completion of amalgam restoration	SGD/ Practical
Week – 02			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	6-09-24	Composite Restorative material	LGIS
Practical			
1	04-09-2024	Class III & class IV preparation	SGD/Practical
	6-09-2024	Class III & class IV preparation	SGD/Practical
Week – 03			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	13-09-24	Composite Restorative material	LGIS

Practical			
1	11-09-2024	Steps of composite placement	SGD/Practical
	13-09-2024	Steps of composite placement	SGD/Practical
Week – 04			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	20-09-24	Class III cavity preparation	LGIS
Practical			
1	18-09-2024	Restoration of class III & IV	SGD/ Practical
	20-09-2024	Restoration of class III & IV	SGD/ Practical
Week – 05			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	27-09-24	Class IV cavity preparation	LGIS
Practical			
1	25-09-2024	Finishing & polishing of composite restoration	SGD/ Practical
	27-09-2024	Finishing & polishing of composite restoration	SGD/ Practical
Week – 06			

S. No	Date	Topic/ Theme	MIT
1	4-10-24	Class V restoration	LGIS
Practical			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	2-10-2024	Diastema closure	SGD/ Practical
	4-10-2024	Diastema closure	SGD/ Practical
Week – 07			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	11-10-24	Revision lecture	LGIS
Practical			
1	09-10-2024	Completion of quota	SGD/ Practical
	11-10-2024	Completion of quota	SGD/ Practical
Week – 08			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	18-10-24	Revision lecture	LGIS
Practical			

1	16-10-2024	Completion of quota	SGD/ Practical
	18-10-2024	Completion of quota	SGD/ Practical
Week – 09			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	25-10-24	Revision	LGIS
Practical			
1	23-10-2024	Completion of quota	SGD/ Practical
	25-10-2024	Completion of quota	SGD/ Practical
Week – 10			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	1-11-24	Revision	LGIS
Practical			
1	30-10-2024	Completion of quota	SGD/ Practical
	1-11-2024	Completion of quota	SGD/ Practical
Week – 11			
S. No	**Date**	**Topic/ Theme**	**MIT**

1	8-11-24	Revision	LGIS
Practical			
1	6-11-2024	Completion of quota	SGD/ Practical
	8-11-2024	Completion of quota	SGD/ Practical
		Week 12 revision	

6. PRECLINICAL PROSTHODONTICS

Week – 01			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	30-08-2024	Major connectors I	LGIS
Practical			
1	28-08-2024	Clasp fabrication for RPD	SGD/ Practical
	30-08-2024	Clasp fabrication for RPD	SGD/ Practical
Week – 02			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	6-09-2024	Major connectors-II	LGIS
Practical			
1	4-09-2024	Record base fabrication	SGD/ Practical
	6-09-2024	Record base fabrication	SGD/ Practical
Week – 03			

S. No	Date	Topic/ Theme	MIT
1	13-09-2024	Minor connectors	LGIS
Practical			
1	11-09-2024	Occlusal rim fabrication	SGD/ Practical
	13-09-2024	Occlusal rim fabrication	SGD/ Practical
Week – 04			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	20-09-2024	Direct retainers I	LGIS
1	18-09-2024	Articulation	SGD/ Practical
	20-09-2024	Articulation	SGD/ Practical
Week – 05			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	27-09-2024	Direct retainers –II	LGIS
1	25-09-2024	Teeth arrangement for RPD	SGD/ Practical
	27-09-2024	Teeth arrangement for RPD	SGD/ Practical
Week – 06			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	4-10-2024	Indirect retainers	LGIS
Practical			
1	2-10-2024	Teeth arrangement for RPD	SGD/ Practical
	4-10-2024	Teeth arrangement for RPD	SGD/ Practical
Week – 07			
S. No	**Date**	**Topic/ Theme**	**MIT**

1	11-10-2024	Denture bases- I	LGIS
Practical			
1	9-10-2024	Teeth arrangement	SGD/ Practical
	11-10-2024	Teeth arrangement	SGD/ Practical
Week – 08			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	18-10-2024	Denture bases-II	LGIS
Practical			
1	16-10-2024	Flasking and dewaxing	SGD/ Practical
	18-10-2024	Flasking and dewaxing	SGD/ Practical
Week – 09			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	25-10-2024	Surveying-I	LGIS
Practical			
1	23-10-2024	Curing	SGD/ Practical
	25-10-2024	Curing	SGD/ Practical
Week – 10			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	1-11-2024	Surveying-II	LGIS
Practical			
1	30-10-2024	Finishing and polishing	SGD/Practical
	1-11-2024	Finishing and polishing	SGD/Practical
Week – 11			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	8-11-2024	Revision	LGIS

Practical			
1	6-11-2024	Completion of quota	
	8-11-2024	Completion of quota	
		Week 12 revision	
		BLOCK EXAM	

7. BEHAVIOURAL SCIENCES

Week – 01			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	30-08-24	Learning & Conditioning	LGIS
Week – 02			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	6-09-24	Operant Conditioning	LGIS
Week – 03			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	13-09-24	Motivation/needs/drive	LGIS
Week – 04			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	20-09-24	Dental ethics	LGIS
Week – 05			
S. No	**Date**	**Topic/ Theme**	**MIT**

1	27-09-24	Dental ethics &professionalism	LGIS
Week – 06			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	4-10-24	Doctor patient relationship	LGIS
Week – 07			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	11-10-24	Psychological reactions in patient doctor relationship	LGIS
Week – 08			
S. No	**Date**	**Topic/ Theme**	**MIT**
1	18-10-24	NPIs	LGIS
Week 09			
S.No	**Date**	**Topic/Theme**	**MIT**
1	25-10-24	NPIs	LGIS

Week 10			
S.No	**Date**	**Topic/Theme**	**MIT**
	1-11-24	NPIs	
Week 11			
S.No	**Date**	**Topic/Theme**	**MIT**
	8-11-24	NPIs	
		Week 12 Revision	

LEARNING RESOURCES

1. DENTAL MATERIALS

Books **Restorative Materials by Robert, Craig.** **Phillips Skinner's Science of Dental Materials.** **Clinical Handing of Dental Materials by B.N Smith.** **Dental Chemistry by Cunningham.** **Must have Books** **M.Cabe Dental Materials** **Preclinical Dental Sciences Work Book For Dental Students** **Restorative Materials by Robert, Craig**	**Pliers** **Round, Straight and Adams. Wire cutter**  **Plaster and alginate mixing spatula,** **Dycal applicator**	

Instruments

Glass slab

Cement Spatula

Plastic instrument

Articulator (Hinge and Hanau)

Modeling Wax 1 box

Gloves

Mask

Set of measuring Scoop

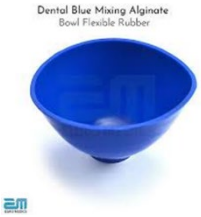
Dropper

Scale, Marker, Pencil

Mortar Pestle

Alginate mixing spatula

Rubber Bowl



Condenser

Burnishers

Carver

Amalgam Carrier

Matrix Band

Matrix band retainer

Articulating paper

Impression Trays partial denture set

Measuring cylinder 100mlX2

Measuring Beaker 100ml

Plastic sheet

1 Pack Alginate

Gypsum/plaster of Paris 4kg

Base former of model Upper and Lower arch

flask

2. COMMUNITY DENTISTRY

Books

Textbooks

Textbook of Preventive and Community Dentistry.2nd edition. S.S Hiremath

A textbook of public health dentistry

Recommended Books

Burt, B. & Eklund, S. (1999) Dentistry, Dental Practice & The Community. 5th ed. Saunders.

Daly B, Watt R, Batchelor P & Treasure E (2002) Essential Dental Public Health, Oxford University Press.

Gluck G & Morganstein WM (2002) Jong's Community Dental Health 5th edition, Mosby.

Harris, N.O. & Christen, A.C. (1987) Primary Preventive Dentistry. 2nd ed. Reston Pub. Co.

Instruments

Examination Instruments

ART

Probes

Mirror

Probe

Tweezer

ART Instruments

Toothbrushing model

Dental Floss

Kent GC, AS Blinkhorn. (1993) The Psychology of Dental Care. 2nd edition, Wright Publication, London.

Murray, J.I. (ed.) (1996) Prevention of Oral Diseases. 3rd ed. Oxford University Press.

Phoon WO & PCY Chen (Eds). (1986) Textbook of Community Medicine in South East Asia. John Wiley & Sons.

Pine CM (ed.). (1997) Community Oral Health. Oxford: Wright Publication.

Scrambler Graham. (2003) Sociology as Applied to Medicine. 5th ed. WB Saunders Company.

CPITN-E and C

Michigan probe

Periodontal probe

Mouthwash

3. PHARMACOLOGY

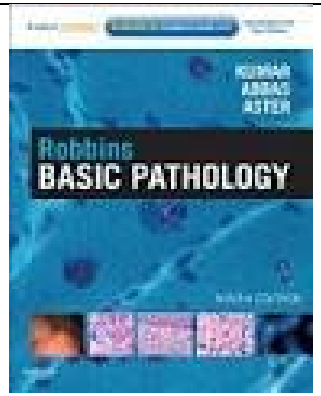
Textbook

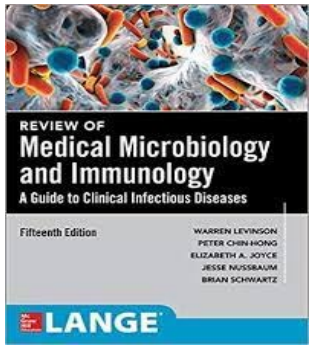
1. Lippincott Illustrated Reviews Pharmacology 6th Edition
2. Basic and clinical Pharmacology by Bertram G Katzung 14th Edition

Reference book

1. The Pharmacological Basis of Therapeutics by Goodman & Gilman 12th Edition
2. Davidson's Principles & Practice of Medicine 22nd Edition

4. GENERAL PATHOLOGY

Books For General Pathology	
Robbins Basic Pathology: with STUDENT CONSULT Online Access (Robbins Pathology)	

Review of Medical Microbiology and Immunology (Lange Medical Books)	

5. PRECLINICAL PROSTHODONTICS & OPERATIVE DENTISTRY

Recommended Books

1. Sturdevant's Art and Science, South Asian Edition.
2. Prosthodontic treatment for edentulous patients by Zarb 13th Edition.
3. McCracken's Removable Partial Prosthodontics 13th Edition.