DENTAL COLLEGE HITEC-IMS

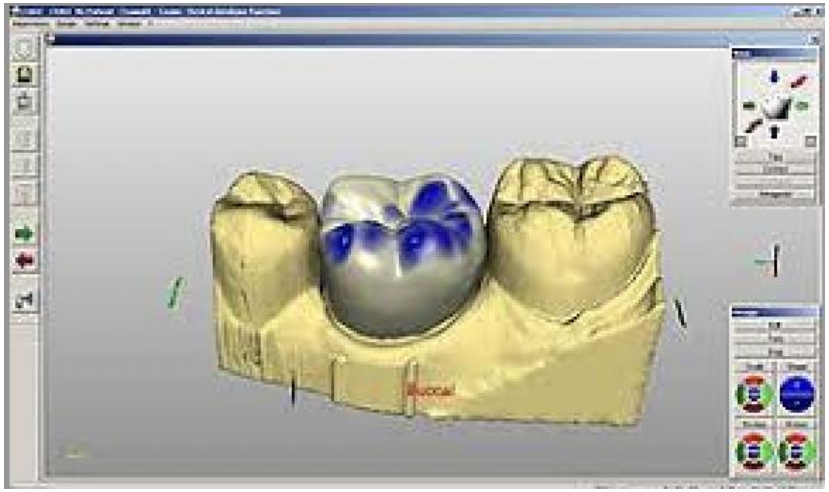
Clinical Diagnosis & Management

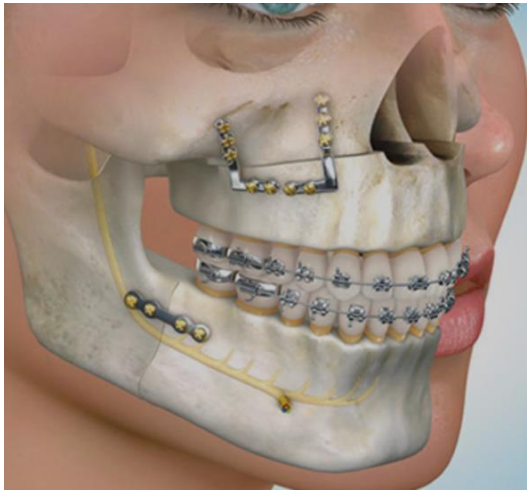
Study Guide Y4 - T3 - D24

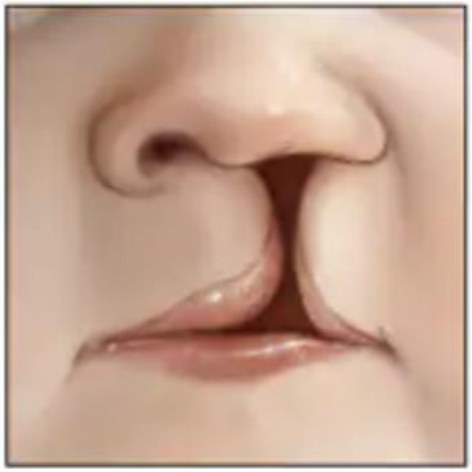
Term 3

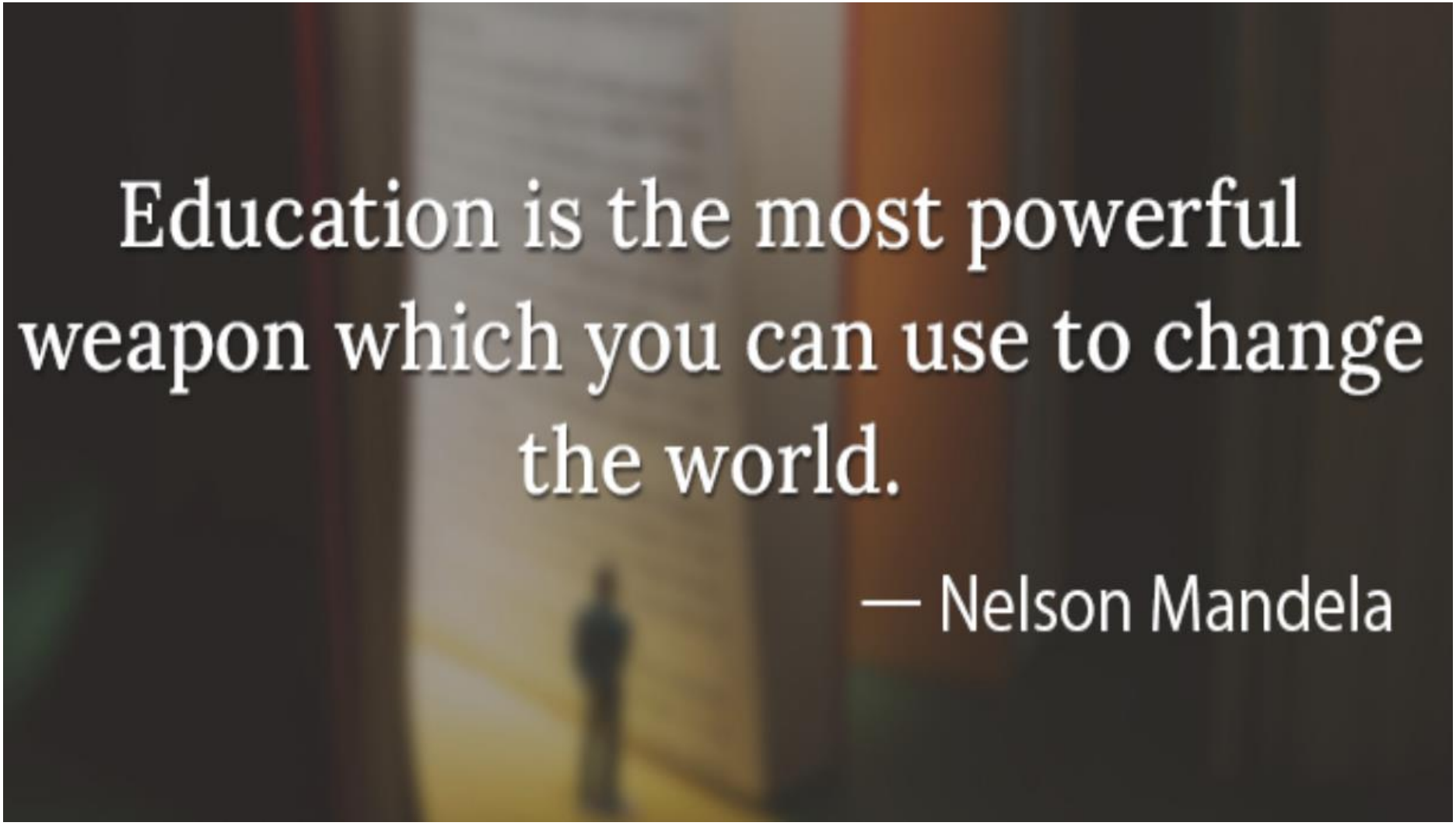
Final Year BDS

Coordinator: Prof. Dr. Beenish Qureshi








Education is the most powerful weapon which you can use to change the world.
— Nelson Mandela

Contents

List of Abbreviations

CBL	Case Base Learning
EECS	Early Exposure to Clinical Skills
EOT	End of Term Examination
FGD	Focus Group Discussion
LGIF	Large Group Instructional Format
LGIS	Large Group Interactive Session
MCQ	Multiple Choice Question
MIT	Mode of Information Transfer
NUMS	National University of Medical Sciences
OMFS	Oral & Maxillofacial Surgery
OSCE	Objectively Structured Clinical Examination
OSPE	Objectively Structured Practical Examination
PMC	Pakistan Medical Commission
SAQ	Short Answer Question
SDL	Self-Directed Learning
SEQ	Structured Essay Questions
SGD	Small Group Discussion
TOS	Table of Specification
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 professiona

Term Committee

Coordinator: Professor Dr. Beenish Qureshi

HoD Operative Dentistry, Contact No: 0333-4368332

S. No.	Name	Designation	Departments	Contact Number
1.	**Prof. Dr. Waheed Ullah Khan**	Vice Principal / Professor / Dean Clinical Sciences / HoD	Orthodontics	0333-5206136
2.	**Prof. Dr. Beenish Qureshi**	Professor / HoD	Operative Dentistry	0333-4368332
3.	**Dr. Aamir Rafique**	Associate Professor / HoD	Prosthodontics	0334-4353578
4.	**Dr Amna Riaz**	Assistant Professor / HoD	Peadiatric Dentistry	0336-5775566
5.	**Dr. Maimoona Siddique**	Assistant Professor / HoD	OMFS	0333-2173509
6.	**Dr. Faizan Munir**	Assistant Professor / HoD Dental Education	Dental Education	0334-0031031
7.	**Huda habib**	Student	Final Year	0343-1713550
8.	**Umer Farooq**	Student	Final Year	0344-6102536

Curriculum Overview/Implementation

1. Preface

The curriculum meets the standards of the Pakistan Medical Commission, the Higher Education Commission of Pakistan, and the World Federation of Medical Education, so that our students, on completion of the program, have the required competencies as defined worldwide in a graduate doctor.

2. Model

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

3. Organisation

The curriculum is organised and integrated along important vertical and horizontal dimensions. The content taught is integrated concurrently in the horizontal organisation and vertically across the years of BDS program. The course of the final year is divided into three terms. In each term, the sequencing of the content is logical and integrated. Research methodology and professionalism will be inculcated as part of the longitudinal theme.

4. Teaching Strategies

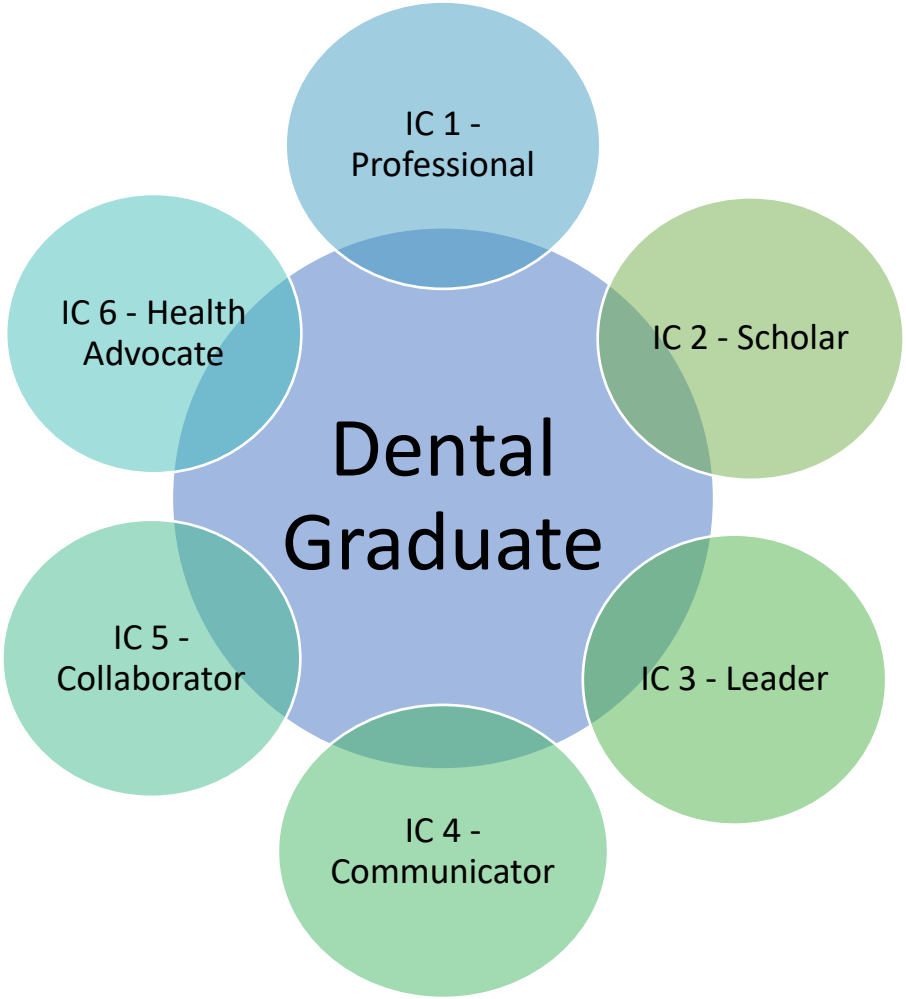
This curriculum aims to improve doctors' clinical skills, including communication, leadership, management, research skills, ethical values and professionalism. BDS final year deals with the clinical subjects of Operative Dentistry, Orthodontics, Prosthodontics and Oral & Maxillofacial Surgery to learn and develop clinical skills. In addition, clinical exposure is ensured, which helps them learn real-life clinical scenarios and implement the skills learnt during the academic session.

Multiple teaching strategies are used. First, LGIS are used to provoke thought and understanding among students. These help to understand topics which need effort including basic sciences review along with updated research, and best evidence medical information. Second, we are teaching clinical implications of each topic giving learning experience that is contextual, realistic, and relevant. Third, small group discussions encourage students to learn socially and discuss their concepts to refine their schemas.

5. Assessment

Constructive feedback is provided via formative assessments by assignments, presentation, CBL and class tests. The students are summatively assessed by term and pre annual examinations at the end of the academic year according to the standards outlined by NUMS.

Institutional Competency Framework



Alignment of Term Outcomes with Institutional Competencies

S. No.	Term Outcomes	Term Outcome Code
1.	Manage the patient with prosthodontic rehabilitation	Y4-T3/O-1
2.	Application of indirect restorations in clinical practice	Y4-T3/O-2
3.	Correlate orofacial deformities with principles of orthognathic surgery	Y4-T3/O-3
4.	Manage the patients with psychopharmacological interventions	Y4-T3/O-4

Yearly Clinical Rotation Schedule

Yearly Clinical Rotation Schedule
FINAL YEAR BDS SESSION 2024

1ST ROTATION PLAN

DURATION	18th December – 19th May (20 weeks) ---- 5 weeks in 4 major Departments			
DEPARTMENT	**Operative Dentistry**	**Prosthodontics**	**Orthodontics**	**OMFS**
18-12-23 to **21-01-23**	A	B	C	D
22-01-24 to **25-02-24**	D	A	B	C
26-02-24 to **03-03-24**	C	D	A	B
04-03-24 to **10-03-24**	**Sports Week**			
11-03-24 to **07-04-24**	C	D	A	B
08-04-24 to **14-04-24**	**Eid-ul-Fitr Holidays**			
15-04-24 to **19-05-24**	B	C	D	A

Group: A = **Roll no.** : 100 - 112
Group: B = **Roll no.** : 113 - 126
Group: C = **Roll no.** : 127 - 140
Group: D = **Roll no.** : 141 - 149, 049, 064 & 090

2ND ROTATION PLAN

DURATION	20th May – 20th October (20 weeks each) ---- 4 weeks in each Department

DEPARTMENT	Operative Dentistry	Prosthodontics	Orthodontics	OMFS	Paedodontics
20-05-24 to 16-06-24	A	B	C	D	E
17-06-24 to 30-06-24	Summer Vacations + Eid ul Adha Holidays				
01-07-24 to 28-07-24	E	A	B	C	D
29-07-24 to 25-08-24	D	E	A	B	C
26-08-24 to 22-09-24	C	D	E	A	B
23-09-24 to 20-10-24	B	C	D	E	A

Group: A = **Roll no. :** 100 - 109
Group: B = **Roll no. :** 110 - 119
Group: C = **Roll no. :** 120 - 130
Group: D = **Roll no. :** 131 - 141
Group: E = **Roll no. :** 142 - 149, 049, 064 & 090

Assessment

Types and Schedules

Assessment is continuous in the form of class tests, departmental assignments and practical tests. Continuous assessment is separate from the Term exam.

Formative assessment includes tests/written assignments, presentations and feedback to the student during the teaching time. The purpose of formative assessment is to provide feedback to the students for improvement and to teachers to identify areas where students need further guidance.

From the 4th week onwards, the class tests of Operative Dentistry, Prosthodontics, Orthodontics, and OMFS will be held on rotation basis. During the 12th week, the end-of-term exam will be taken. The EOT exam will comprise of theory and practical separately. All these will form part of summative assessment, along with pre-annual exams. This will contribute towards internal assessment.

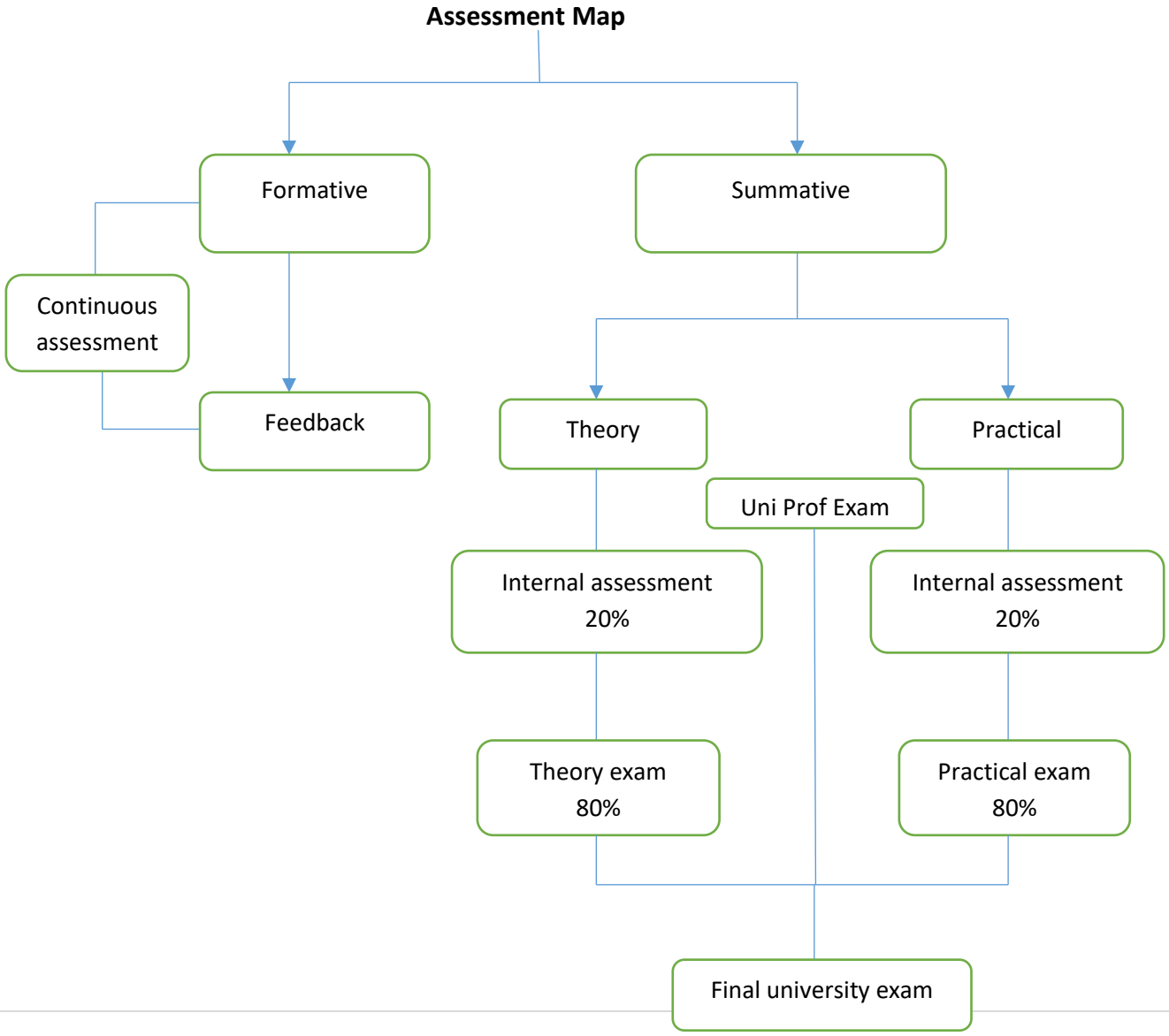
Students must secure 50% marks in theory and practical exams separately, per university criteria.

The student who fails the end-of-term exam will be allowed to attend the next term; however, his/ her internal assessment will be affected accordingly.

<u>Internal assessment criteria for submission of internal assessment marks of final Professional Examination NUMS:</u>

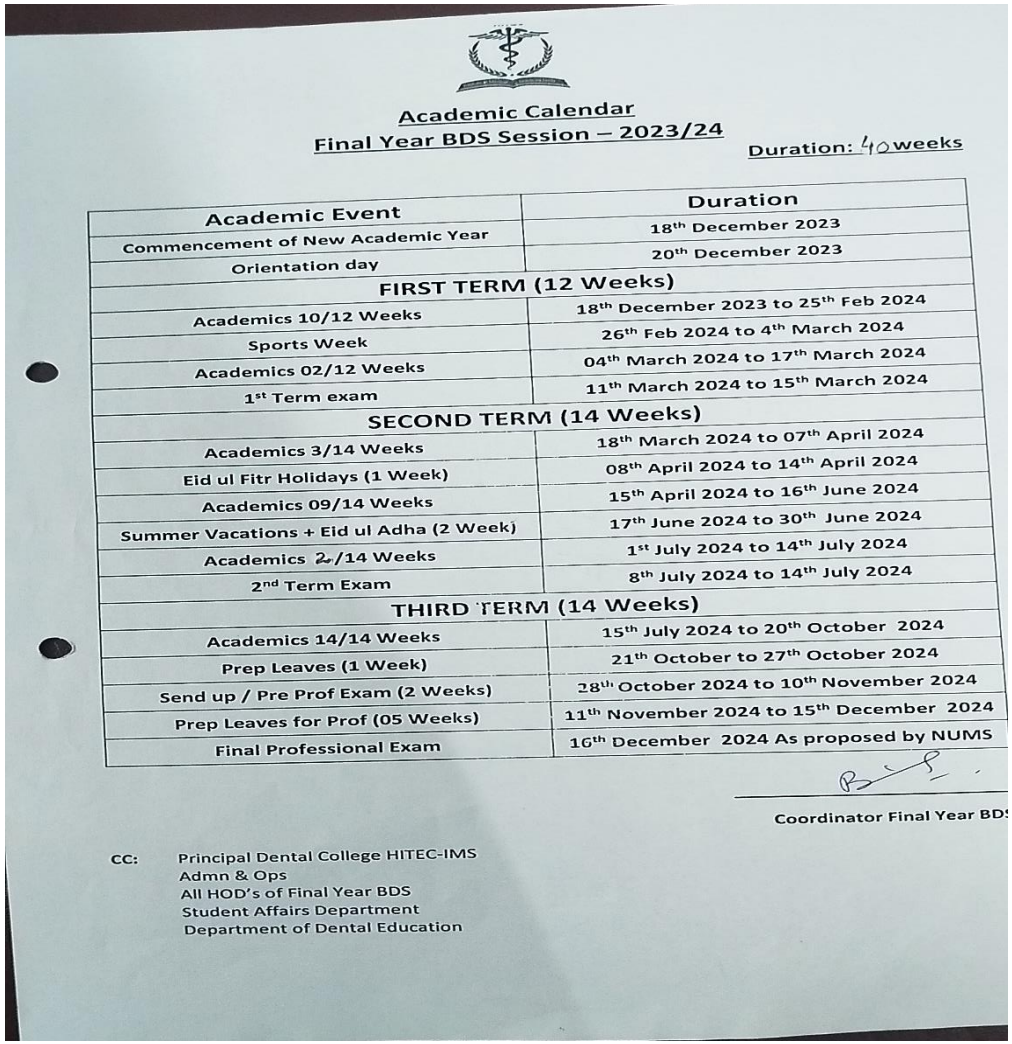
1. The weightage of internal assessment shall be 20% or twenty marks for a 100 marks Paper in the annual examination.
2. End-of-term examination / practical quota, pre-annual examination and accumulative attendance shall contribute toward internal assessment.

Standard Assessment Map



Academic Calendar

Final Year BDS CLASS-2024



Academic Calendar
Final Year BDS Session – 2023/24

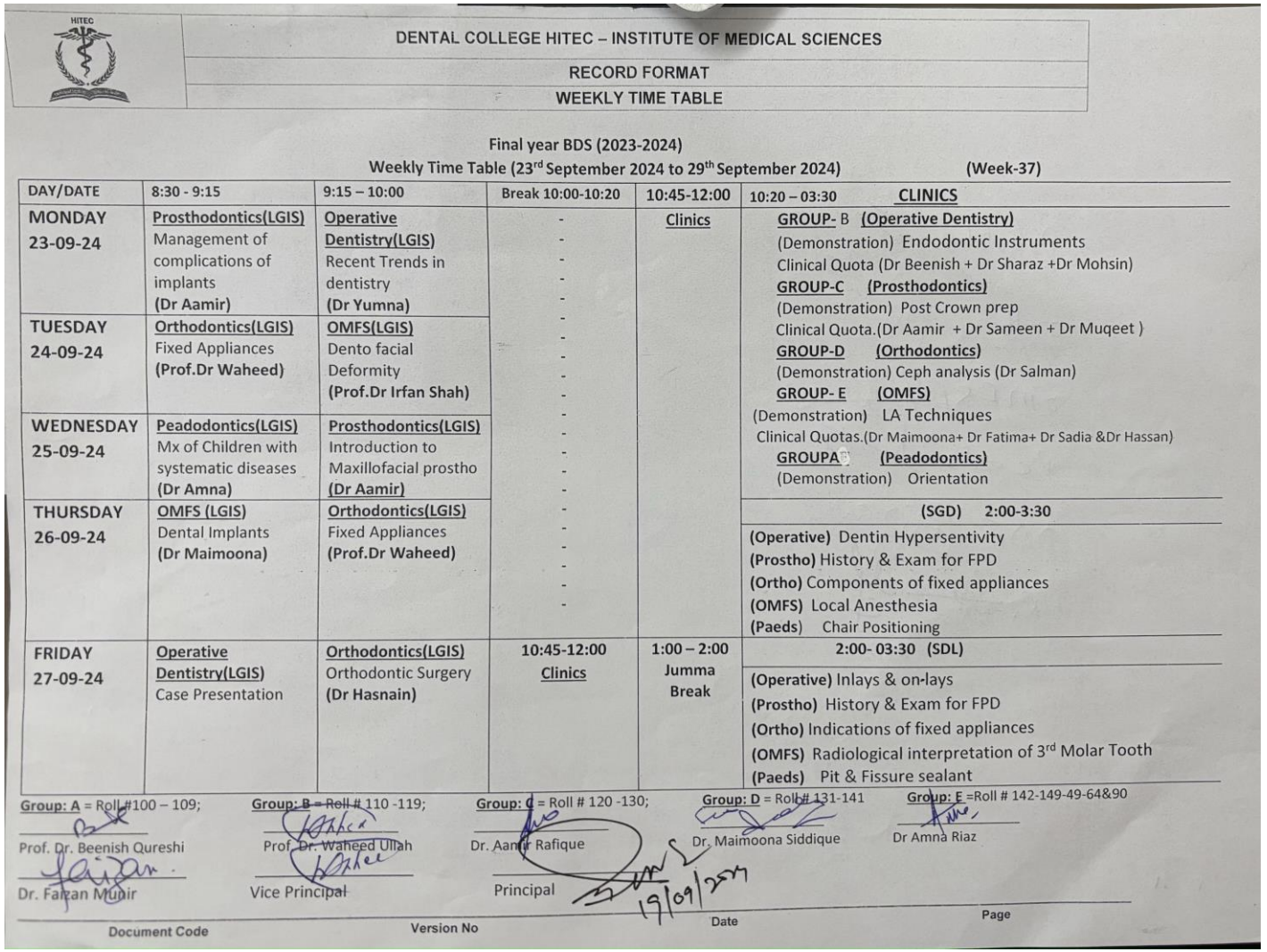
Duration: 40 weeks

Academic Event	Duration
Commencement of New Academic Year	18th December 2023
Orientation day	20th December 2023
FIRST TERM (12 Weeks)	
Academics 10/12 Weeks	18th December 2023 to 25th Feb 2024
Sports Week	26th Feb 2024 to 4th March 2024
Academics 02/12 Weeks	04th March 2024 to 17th March 2024
1st Term exam	11th March 2024 to 15th March 2024
SECOND TERM (14 Weeks)	
Academics 3/14 Weeks	18th March 2024 to 07th April 2024
Eid ul Fitr Holidays (1 Week)	08th April 2024 to 14th April 2024
Academics 09/14 Weeks	15th April 2024 to 16th June 2024
Summer Vacations + Eid ul Adha (2 Week)	17th June 2024 to 30th June 2024
Academics 2/14 Weeks	1st July 2024 to 14th July 2024
2nd Term Exam	8th July 2024 to 14th July 2024
THIRD TERM (14 Weeks)	
Academics 14/14 Weeks	15th July 2024 to 20th October 2024
Prep Leaves (1 Week)	21th October to 27th October 2024
Send up / Pre Prof Exam (2 Weeks)	28th October 2024 to 10th November 2024
Prep Leaves for Prof (05 Weeks)	11th November 2024 to 15th December 2024
Final Professional Exam	16th December 2024 As proposed by NUMS

Coordinator Final Year BDS

CC: Principal Dental College HITEC-IMS
Admn & Ops
All HOD's of Final Year BDS
Student Affairs Department
Department of Dental Education

Sample Timetable



DENTAL COLLEGE HITEC – INSTITUTE OF MEDICAL SCIENCES

RECORD FORMAT

WEEKLY TIME TABLE

Final year BDS (2023-2024)

Weekly Time Table (23rd September 2024 to 29th September 2024) (Week-37)

DAY/DATE	8:30 - 9:15	9:15 – 10:00	Break 10:00-10:20	10:45-12:00	10:20 – 03:30 CLINICS
MONDAY 23-09-24	Prosthodontics(LGIS) Management of complications of implants (Dr Aamir)	Operative Dentistry(LGIS) Recent Trends in dentistry (Dr Yumna)	-	Clinics	GROUP- B (Operative Dentistry) (Demonstration) Endodontic Instruments Clinical Quota (Dr Beenish + Dr Sharaz +Dr Mohsin) GROUP-C (Prosthodontics) (Demonstration) Post Crown prep Clinical Quota.(Dr Aamir + Dr Sameen + Dr Muqeet) GROUP-D (Orthodontics) (Demonstration) Ceph analysis (Dr Salman) GROUP- E (OMFS) (Demonstration) LA Techniques Clinical Quotas.(Dr Maimoona+ Dr Fatima+ Dr Sadia &Dr Hassan) GROUPA (Peadodontics) (Demonstration) Orientation
TUESDAY 24-09-24	Orthodontics(LGIS) Fixed Appliances (Prof.Dr Waheed)	OMFS(LGIS) Dento facial Deformity (Prof.Dr Irfan Shah)	-		
WEDNESDAY 25-09-24	Peadodontics(LGIS) Mx of Children with systematic diseases (Dr Amna)	Prosthodontics(LGIS) Introduction to Maxillofacial prostho (Dr Aamir)	-		
THURSDAY 26-09-24	OMFS (LGIS) Dental Implants (Dr Maimoona)	Orthodontics(LGIS) Fixed Appliances (Prof.Dr Waheed)	-		(SGD) 2:00-3:30 (Operative) Dentin Hypersentivity (Prostho) History & Exam for FPD (Ortho) Components of fixed appliances (OMFS) Local Anesthesia (Paeds) Chair Positioning
FRIDAY 27-09-24	Operative Dentistry(LGIS) Case Presentation	Orthodontics(LGIS) Orthodontic Surgery (Dr Hasnain)	10:45-12:00 Clinics	1:00 – 2:00 Jumma Break	2:00- 03:30 (SDL) (Operative) Inlays & on-lays (Prostho) History & Exam for FPD (Ortho) Indications of fixed appliances (OMFS) Radiological interpretation of 3rd Molar Tooth (Paeds) Pit & Fissure sealant

Group: A = Roll #100 – 109; Group: B = Roll # 110 -119; Group: C = Roll # 120 -130; Group: D = Roll # 131-141 Group: E =Roll # 142-149-49-64&90

Prof. Dr. Beenish Qureshi — Prof. Dr. Waheed Ullah — Dr. Aamir Rafique — Dr. Maimoona Siddique — Dr Amna Riaz

Dr. Farzan Mubir — Vice Principal — Principal — 19/09/2024

Document Code — Version No — Date — Page

Term – III

Clinical Diagnosis and Management

Structured Summary – Term III

Term Code	Y4-T3-D24
Term Title	Clinical diagnosis & management
Duration Of Term	14weeks
Important Dates	15th July 2023 – 20th October 2024
Horizontally Integrated Themes	1. Preprosthetic Surgical procedure 2. Cleft lip & palate 3. Orthognathic surgery 4. Implants
Vertically Integrated Themes	Research Methodology Communication Skills* Professionalism*
Prerequisite Blocks	First & Second Terms Final Year

Tentative Exam Schedule[1]

Final Year BDS –Pre prof Exam -2024

DATE SHEET Send-Up Exam

DATE/DAY	SUBJECT	TIME
28-10-24 / Monday	Operative Dentistry	8:45am to 11-45am
29-10-24 / Tuesday	Orthodontics	8:45am to 11-45am
30-10-24 / Wednesday	Prosthodontics	8:45am to 11-45am
31-10-24 / Thursday	OMFS	8:45am to 11-45am
1-11-24/ Friday	Peadodontics	8:45am to 11-45am

DATE/DAY	SUBJECT		TIME
4-11-24 / Monday	Group A	Operative Dentistry	8:30am to 03:30pm
	Group B	Prosthodontics	
	Group C	Orthodontics	
	Group D	OMFS	
	Group E	peads	

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

5-11-24 / Tuesday	Group E	Operative Dentistry	8:30am to 03:30pm
	Group A	Prosthodontics	
	Group B	Orthodontics	
	Group C	OMFS	
	Group D	peads	
6-11-24 / Wednesday	Group D	Operative Dentistry	8:30am to 03:30pm
	Group E	Prosthodontics	
	Group A	Orthodontics	
	Group B	OMFS	
	Group C	peads	
7-11-24 / Thursday	Group C	Operative Dentistry	8:30am to 03:30pm
	Group D	Prosthodontics	
	Group E	Orthodontics	
	Group A	OMFS	
	Group B	Peads	
8-11-24 / Friday	Group B	Operative Dentistry	8:30am to 03:30pm

	Group C	Prosthodontics	
	Group D	Orthodontics	
	Group E	OMFS	
	Group A	Peads	

Group: A = Roll # **Group: B** = Roll # 62-74**Group: C** = Roll # 75-87

Group: D = Roll # 88-99 & 02 **Group: E**

Venue: Lecture Hall + Clinical Departments [2]

Learning Outcomes for Term III

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

1. Operative Dentistry

S. No.	Topics	Learning outcomes	Learning Objectives	IC Codes	MITs	Assessment tools
1.	NCCL	• Classification based on Etiology • Clinical features of NCCLs • Management of NCCLs • Diagnosis and management of tooth wear	At the end of the session student should be able to: **Knowledge** Classify NCCLs and explain its etiology. ● Describe the clinical features of: -Abrasion -Attrition -Erosion – Abfraction	IC 2	LGIS SGD	MCQs SEQs VIVA
			Skill ● Enumerate set of investigations to reach the diagnosis of NCCLs. ● Highlight the restorative management of NCCLs. ● Enlist indications for mucogingival surgery with respect	IC 1 to IC 6	Demonstration	OSCE

			to NCCLs ● Highlight clinical performance of adhesives in NCCLs.			
			<u>Attitude</u> • Treat patients with empathy	IC 1 IC 4	Demonstration	OSCE
2.	Complex Amalgam Restorations	• Apply the knowledge of pins in restoring complex cavities • Explain factors affecting retention of pins and problems associated with pins placement	**<u>Knowledge</u>** • Define pin retained restorations • Enlist indications & contraindications of pin retained restorations • Enlist advantages & disadvantages of pin retainedrestorations • Explain the cavity preparation procedure for pin retained restorations • Enlist the types of pins • Enlist the factors affecting the retention of the pin in dentineand amalgam • Discuss the techniques for the placement of pins • Discuss the clinical considerations before placementof pins • Discuss the problems that arise during the placement of pins	IC 2	LGIS/ SGD	MCQs SEQs

4.	Tooth preparation for indirect restorations	• Discuss all the stages in the fabrication of indirect restorations	**Knowledge** • Explain advantages and disadvantages of indirect retainers • Enlist indications and contraindications of indirect retainers • Discuss steps of indirect tooth colored restoration • Discuss steps of cementation	IC 2	LGIS/ Demonstration/ SGD	MCQs/SEQs
5.	CAD/CAM Tooth preparation	• Demonstrate the knowledge to plan CAD/CAM to construct indirect restorations	**Knowledge** • Define CAD and CAM • Discuss the need for CAD/CAM • Discuss the applications of CAD/CAM • Enlist the advantages ofCAD/CAM • Enlist the limitations ofCAD/CAM • Discuss the steps in CAD/CAM • Enlist the types of scanner • Discuss the materials used in CAD/CAM • Discuss the milling tools in CAD/CAM	IC 2	LGIS/SGD	MCQs/SEQ's /Viva
6.	Inlay and Onlay	• Demonstrate the knowledge to plan indirect restorations according to treatment need of patients	**Knowledge** • Enlist the indications and contraindications of inlays • Enlist the advantages	IC 2	LGIS/SGD	MCQs/SEQs/Viva

			• Discuss the preparation, design and materials used • Explain the technique for cementation of indirect restorations			
7.	Veneers	• Apply the knowledge of veneers to construct an esthetic restoration	**Knowledge** • Enlist indications and contraindications of veneers • Enlist different types of veneers • Evaluate clinical techniques for different types of veneers	IC 2 IC 4	LGIS/CBL	MCQs SEQs/Viva
8.	Minimal preparation bridges	• Apply the knowledge to describe indications & clinical technique for minimal preparation bridges	**Knowledge** • Enlist indications and contraindications • Enlist different materials used • Enlist clinical techniques	IC2	LGIS/SGD	MCQs /SEQ's/Viva
9.	Revascularization	• Apply the knowledge to describe indications & clinical technique for revascularization	**Knowledge** • Enlist indications for revascularization • Enlist different materials used • Enlist clinical techniques	IC2	LGIS/SGD	MCQs /SEQ's/Viva

10.	Non Odontogenic diseases mimicking pulpal and periodontal diseases	• Apply the knowledge to diagnose non odontogenic diseases	**Knowledge** • Enlist the differentiating features that help in diagnosing the non-odontogenic diseases	IC 2	LGIS / SGD	MCQs/SEQs/viva
11.	Recent trends in Dentistry / Color and shade matching	• Explain the concept of color perception, deficiency and dimensions with regard to colour related properties of tooth and restorative materials. • Implement suitable technique for shade guide use in Dentistry •	**Knowledge** • Enumerate various color matching tools, instruments and techniques • Describe the various clinical considerations for composite resin, focusing on reaction properties of the composite **Skill** • Perform shade matching for composite restorations.	IC 2 IC 1, IC3, IC4, IC5, IC6.	LGIS/ SGD	MCQs/SEQs/viva
12.	Dental Emergencies	• Explain the causes of dental emergencies • Plan treatment for dental emergencies	**Knowledge** • Identify the problem, etiology and related factors • Discuss the management and prognosis	IC 2	LGIS/SGD	MCQs/SEQs/viva

13.	Discoloration of teeth	• Demonstrate the knowledge and skills related to tooth discoloration • Apply the knowledge to treat patients with discoloration	**Knowledge** • Identify different types of tooth discoloration • Describe different techniques used to treat discolored teeth • Describe Micro abrasion and Macro abrasion	IC 2	LGIS/SGD/ CBL	MCQs SEQs/Viva
14.	Bleaching	• Apply the knowledge of bleaching techniques to treat patients with discoloration • Demonstrate & apply the knowledge for selection of patient suitable for bleaching procedures	**Knowledge** • Explain different types of bleaching techniques (In office vital bleaching technique, Walking bleach technique, Home - applied technique) • Explain Non vital bleaching procedure • Enlist advantages & disadvantages of bleaching	IC 2	LGIS	MCQs SEQs/Viva
15.	Medical Disability in Geriatric patients	• Apply knowledge to evaluate, diagnose & manage geriatric patients	**Knowledge** • Discuss the procedure of preoperative patient evaluation	IC 2	LGIS	MCQs SEQs/Viva

	Childhood impairment and disability	• Diagnose, plan and provide safe and effective treatment for children with conditions which may make them more prone to oral diseases or which may complicate the delivery of oral care	**Skill** • Evaluate a dental patient by: Medical history Physical examination • Manage a dental patient with problems of the following systems: 1. CVS 2. Pulmonary 3. Renal 4. Hepatic 5. Hematological	IC 1 to IC 6	Clinical Demonstration	OSCE
16.	Cast post and core build up	• Apply the knowledge to describe indications & clinical technique for post and core build up	**Knowledge** • Enlist indications and contraindications • Enlist different types of post • Enlist clinical technique for post and core build up	IC 2	LGIS /SGD	MCQs SEQs/Viva
17.	Tooth Surface loss	• Explain etiology & treatment strategies for toot surface loss	**Knowledge** • Identify different types of tooth surface loss • Enlist Indices used for tooth surface loss • Describe different types of splints • Discuss management and follow up	IC 2	LGIS /SGD	MCQs SEQs/Viva

			Skill • Perform treatment strategies for tooth surface loss	IC 1 to IC 6	Demonstration/ practical	OSCE
			Attitude • Display a respectful behavior towards all the patients	IC 1 IC 4	Demonstration/ practical	OSCE
18.	Pain Control (Local anesthesia)	• Explain factors affecting endodontic anasthesia. • Highlight different techniques fir effective pain control in endodontics with specific focus on supplemental anasthesia.	**Knowledge** • Demonstrate patient management techniques for obtaining optimal anesthesia. **Skill** • Perform conventional techniques for local anesthesia.	IC 1 to IC 6	LGIS/Demonstration/ Practical	MCQs/SEQs/Viva

Practical

S. No	Topic/theme	Learning Objective	IC Codes	MITs	Assessment tools
01.	Endodontic instruments and procedures	• Identify instrument design, function and formula • Canal preparation techniques, medicaments, obturation techniques and procedures	IC 1 to IC 6	Demonstration	OSCE/Practical
02.	Therapeutics and Anesthetics	• Effectively manage post-operative pain • Diagnose and medicate and carry out procedures • Indications and contraindications and interaction of drugs • Identify intracanal medicaments, their uses and application	IC 1 to IC 6	Demonstration	OSCE/Practical
03.	Radiographs & radiographic interpretation	• Demonstrate skill to use radiography in endodontics and its limitations • Identify endodontic pathology on radiographs • Identify pathological structures in periapical radiographs • Master technique for taking different periapical radiographs • Implement safety measures in clinical area	IC 1 to IC 6	Demonstration	OSCE/Practical
04.	Emergency management	• Manage a case of trauma • Demonstrate skills to deal with interappointment emergencies • Manage a case of cracked tooth • Identify perforations in teeth • Clinically manage perforations	IC 1 to IC 6	Demonstration	OSCE/Practical

2.Paediatric Dentistry

TOPIC	Course Content	Learning Outcomes At the end of each module, student will be able to:		Instructional Strategies	Assessment method	IC Code
		Knowledge	**Skills**			
Hospital Dentistry	• Introduction to hospital dentistry. Patients requiring hospital dentistry, description of procedures for admissions, investigations, clinical notes, medications and discharge. Protocols of operation theatre.	• Describe the procedures and protocols for admitting patients for hospital dentistry. • Explain the investigations required before initiating dental treatment in a hospital setting, including medical history, laboratory tests, and radiographic examinations. Describe the process of discharging patients after hospital-based dental treatment, including post-operative care	• Students will be able to conduct a comprehensive assessment, order appropriate investigations, and interpret the results to ensure safe and effective dental care.	Lecture/Case-based learning/chairside learning	MCQ+ SEQ	IC2, IC4,IC5,IC6

		instructions and follow-up plan				
Minor Oral Surgery	• Definition and scope of minor oral surgery in pediatric dentistry. • The role of the pediatric dentist in performing surgical procedures • Familiarization with surgical instruments used in minor oral surgery. • Sutures, wound dressings, and	• Students will understand the pediatric anatomy of the head and neck, particularly relevant to minor oral surgical procedures, including common pathological conditions requiring intervention. • Identify the indications and contraindications	• Demonstrate proficiency in clinical examination, diagnosis, and treatment planning for minor oral surgery cases in pediatric patients. • Students will develop hands-on skills in performing minor oral surgery procedures such as simple extractions,	Lecture/Case-based learning/chairside learning	MCQ+ SEQ	IC1, IC2,IC5,IC6

	hemostatic agents used in pediatric patients. • Selection and use of local anesthetics for children. • Surgical Techniques in Pediatric Dentistry(extractions, biopsy,incison and drainage)	for common minor oral surgery procedures in pediatric patients. • Comprehend the principles of minor oral surgery, including infection control, sterilization, aseptic techniques, and patient management during and after surgery. • Medication and pain management	frenectomies, biopsies, and management of soft tissue lesions in children.			

Periodontal diseases in children	• Definitions and types of periodontal diseases in children. • Role of dental biofilm and plaque accumulation in periodontal disease initiation. • Influence of systemic factors such as hormonal changes, genetics, and immunodeficiencies. • Classification of Periodontal Diseases in Children • Diagnostic techniques: probing, radiographic assessment, and microbiological analysis. • Importance of early detection and routine dental visits for children.	• Demonstrate an understanding of the structure and development of the periodontium in children • Recognize Periodontal Diseases: classify different types of periodontal diseases in children, including gingivitis, localized and generalized periodontitis, and periodontitis associated with systemic diseases. • Students will demonstrate knowledge of the clinical features of periodontal diseases in children and understand how to diagnose	• Students will develop the ability to perform scaling, root planing, and provide oral hygiene instructions to manage early periodontal disease in children. • Students will be able to manage more complex cases of periodontal disease, including those requiring surgical intervention or referral to a specialist. • Students will learn to educate both children and their parents/guardians about the prevention of periodontal diseases and the importance	Lecture/Case-based learning/chairside learning	MCQ+ SEQ	IC1, IC2,IC4,IC5,IC6

		them using appropriate clinical and radiographic tools.	of good oral hygiene.			
Dental management of children with systemic disease	• Overview of systemic diseases and medical conditions that affect oral health in children. • The pediatric dentist's role in managing children with medical complexities. • Impact of systemic health on dental treatment planning. • Recognizing oral manifestations such as	• Students will demonstrate knowledge of various systemic and medical conditions that affect oral health in children, including their oral manifestations and impact on dental treatment. • Students will learn to take detailed medical histories	• Students will develop the skills to modify dental treatment plans for children with systemic diseases, focusing on preventive care and minimally invasive treatments. • Students will learn to collaborate effectively with medical	Lecture/Case-based learning/chairside learning	MCQ+ SEQ	IC1, IC2,IC4,IC5,IC6

	delayed eruption, abnormal enamel development, ulcers, and gingival overgrowth. • Drug interactions and modifications in dental pharmacology for medically compromised children. • Safe use of local anesthesia, analgesics, and antibiotics. • Adjustments in treatment based on medications children may be taking (e.g., anticoagulants, immunosuppressants). • Importance of interdisciplinary collaboration with pediatricians, cardiologists, endocrinologists, and	and conduct risk assessments for children with systemic conditions to ensure safe dental care.	professionals and refer children to specialists when necessary.			

	other healthcare professionals. • Understanding when to refer to specialists or consult medical professionals for guidance on dental care.					

Practical

week	Topic/Theme	Learning objectives	IC Codes	MIT	Assessment Tool
Week 1	Chair Position,History,examination and diagnosis	Demonstrate familiarity with instruments, appliances Perform proper techniques of history Taking clinical examination with professional attitude and ensure empathy towards patients	IC 1 to IC 6	Demonstration / Clinical Quota	OSCE/ Practical exam
Week2	Flouride Application, Benefits and Toxicity	Identify the different methods of fluoride application (topical, systemic, varnish, gel, foam, mouth rinses, tablets, etc.).	IC 1 IC 2 IC 3 IC 4 IC 6	Demonstration / Clinical Quota	OSCE/ Practical exam
Week3	Instruments and Materials used in operative Dentistry, pits and fissure sealents	Identify instruments, Materials used in pediatric patients, indications and application of sealents.	IC 1 to IC 6	Demonstration / Clinical Quota	OSCE/ Practical exam
Week4	Management of pain in pediatric patients	Comprehend the Unique Aspects of Pediatric Pain, Develop a pain	IC 1 to IC 6	Demonstration / Clinical Quota	OSCE/ Practical

		management plan based on the assessment findings			exam

3.Prosthodontics

Topic / Theme	Learning Outcome	Learning Objectives	IC Codes	M.I.Ts	Assessment Tools
Introduction to Removable Partial denture	Differentiate between cast and acrylic partial dentures	**KNOWLEDGE** •Define a partial denture • Differentiate between cast partial and acrylic partial dentures • Enumerate components of cast partial denture • Define retention, support and stability •Enumerate objectives of prosthodontic treatment • Enlist indications for removable partial dentures • Enlist steps involved in diagnosis of a patient prosthodontic treatment options • Describe factors that affect prosthesis selection • Enlist the available prosthodontic treatment options	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA
Clasp-Retained Partial Denture	Tooth-supported and tooth& tissue supported partial dentures	**KNOWLEDGE** •Differentiate between tooth supported and tooth& tissue supported partial dentures • Describe six phases of partial denture service • Enlist reasons of failure of clasp retained partial dentures	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA

Partially Edentulous Arches	Classification of partially edentulous arches	**KNOWLEDGE** • Enumerate requirements of an acceptable classification method • Describe Kennedy's classification • Enlist Applegate's rules • Describe advantages and drawbacks of Kennedy's classification	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA
Biomechanics of Removable Partial Denture	Possible movements of a partial denture	**KNOWLEDGE** • Describe possible movements of a partial denture and various components that counter these movements.	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA
Components of Removable Partial dentures	**Connectors** Identify components that serve as major and minor connectors	**KNOWLEDGE** • Describe principles for design and location of connectors • Describe indications, contraindications and characteristics of various maxillary and mandibular major connectors • Define minor connectors • Describe function, form and location of minor connectors • Define tissue stops and their functions	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA
	Rests and rest seats Recognize the role of rests in	**KNOWLEDGE** • Define rest and rest seat • Classify rests • Enlist advantages of rests	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA

	partial denture support	• Describe the outline form of an occlusal rest and rest seat • Describe various forms of rests in detail			
	Direct Retainers Recognize the role of retainers in complete denture retention	**KNOWLEDGE** • Define retainers • Classify direct retainers • Describe factors affecting amount of retention • Describe basic principles of clasp design • Enlist indications and contraindications for circumferential and bar clasps • Describe RPI and RPA systems • Describe internal attachments	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA
	Indirect Retainers Recognize the role of indirect retainers in partial denture designing	**KNOWLEDGE** • Define indirect retainers • Describe factors that influence the effectiveness of indirect retainers • Describe auxiliary functions of indirect retainers • Describe various forms of indirect retainers	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA
	Denture Base Considerations Differentiate between tooth-supported and tooth & tissue supported denture bases	**KNOWLEDGE** •Describe functions of tooth-supported and tooth & tissue supported denture bases •Compare advantages and disadvantages of metal and resin denture bases •Describe methods of attaching artificial teeth •Describe stress breakers	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA

Principles of RPD Designing	Understand the principles of Removable Partial Denture Design	**KNOWLEDGE** •Describe the difference in prosthesis support and influence on design •Differentiate between two main types of removable partial denture	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA
Surveying	Describe surveying and tripoding	**KNOWLEDGE** •Define surveying •Differentiate between various types of surveyors •Enlist objectives of surveying •Describe factors which determine the path of placement and removal •Describe tripoding and its types	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA
Diagnosis and Treatment Planning	Learn diagnosis and Treatment Planning of patients requiring removable partial dentures	**KNOWLEDGE** •Enumerate objectives of prosthodontic treatment • Enlist indications for removable partial dentures • Enlist steps involved in diagnosis of a patient prosthodontic treatment options • Describe factors that affect prosthesis selection • Enlist the available prosthodontic treatment options	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA
Management of Partially Dentate Patients	Learn the management of patients with partially dentate arches	**KNOWLEDGE** • Understand the common reasons for tooth loss and how they can impact a patient's overall oral health.	IC-1, IC-2,	L.G.I.S	M.C.Qs. SEQs.

		• Explore various restorative options available for partially dentate patients • Understand the indications, advantages, and limitations of each option.	IC-4		VIVA
Mouth preparation for RPD	Describe preparation of mouth for removable partial dentures	**KNOWLEDGE** •Describe oral surgical preparation for removable partial denture patient • Describe conditioning of abused and irritated oral tissues	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA
Impressions for RPD	Understand the impression making procedure for RPD	**KNOWLEDGE** • Describe different materials for impression making in RPD • Describe different techniques for impression making of partially edentulous arches	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA
Lab procedures for RPD	Understand lab procedures for the fabrication of cast partial denture	**KNOWLEDGE** • Describe the procedure of cast duplication • Describe the waxing procedure of cast partial denture and framework fabrication • Explain the steps for processing of denture	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA
Denture support for distal extension denture bases	Understand the support of distal extension partial denture	**KNOWLEDGE** • Name factors affecting support of a distal extension partial dentures • Describe the various methods for obtaining functional support for distal extension partial dentures	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA

Occlusal relationship for RPD	Understand the occlusal concepts of occlusion in removable partial prosthodontics	**KNOWLEDGE** • Describe the desirable occlusal contact relationship for RPD • Describe the methods for establishing occlusal relationship	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA
Insertion and follow up	Understand the initial placement and servicing of removable partial denture	**KNOWLEDGE** • Explain the protocol for denture insertion • Describe the instructions given to patient after partial denture insertion • Describe the follow up protocol after partial denture insertion	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA
Relining and rebasing the RPD	Understand the need and concept of relining and rebasing of RPD	**KNOWLEDGE** • Explain the need and procedure of relining for tooth supported denture bases • Describe the relining for distal extension denture bases • Explain the methods of reestablishing occlusion on relined RPD	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA
Repairs and addition to RPD	Understand the causes of fracture of different components of cast partial denture and procedures to repair including soldering	**KNOWLEDGE** • Explain the cause broken clasp arms, rests, major/minor connectors, loss of artificial teeth • Explain the procedures for the repair of fractures components of cast partial denture • Understand the concept of soldering	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA

Interim RPD	Understand the uses of interim prosthesis for partially edentulous arches	**KNOWLEDGE** • Describe the indications for interim RPD	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA
IMPLANT PROSTHODONTICS					
Introduction	Understand dental Implants, their components and types	**KNOWLEDGE** •Define dental implant •Define components of a dental implant assembly •Classify dental implants •Enlist differences between teeth and implants	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA
Treatment Planning	Understand the treatment planning for Edentulous patient requiring fixed Full Arch implant Supported Prostheses	**KNOWLEDGE** •Describe treatment options for edentulous maxilla •Describe treatment options for edentulous mandible	IC-1, IC-2, IC-4	L.G.I.S SGD	M.C.Qs. SEQs. VIVA
	Understand the treatment planning for patients requiring implant overdentures	**KNOWLEDGE** • Describe inclusion and exclusion criteria for implant treatment • Describe various available implant supported overdenture treatment options • Enumerate indications for ball, magnetic and bar attachments	IC-1, IC-2, IC-4	L.G.I.S SGD	M.C.Qs. SEQs. VIVA

Implant supported prosthesis	Understand the concept of implant-supported prosthesis and its role in restoring function and aesthetics for patients with missing teeth.	**KNOWLEDGE** • Describe the steps involved in treatment planning for implant-supported prosthesis, including radiographic evaluation and diagnostic casts	IC-1, IC-2, IC-4	L.G.I.S SGD	M.C.Qs. SEQs. VIVA
Impression making in implant dentistry	Understand various implant impression techniques and materials	• Describe about the different types of impression materials available for implant supported prosthesis • Describe the different techniques for impression making in implant dentistry	IC-1, IC-2, IC-4	L.G.I.S SGD	M.C.Qs. SEQs. VIVA
Types of implant abutments	Describe different types of implant abutments	**KNOWLEDGE** • Define dental implant abutments and their role in the dental implant restoration process. • Describe the indications, advantages and disadvantages of cement-retained and screw-retained abutment • Discuss the importance of selecting appropriate abutments	IC-1, IC-2, IC-4	L.G.I.S SGD	M.C.Qs. SEQs. VIVA
MAXILLOFACIAL PROSTHODONTICS					
Introduction	Understand the significance of maxillofacial prosthodontics focused on restoring function, esthetics, and quality of life for patients with	• Describe different types of maxillofacial defects • Describe prosthetic considerations for patients requiring maxillofacial prosthesis • Describe prosthodontic treatment considerations for irradiated edentulous and partially dentate patients	IC-1, IC-2, IC-4	L.G.I.S SGD	M.C.Qs. SEQs. VIVA

	congenital or acquired defects of the head and neck region.				
Classification of maxillary defects	Describe classification of maxillary defects	• Describe Aramany's classification for partially edentulous maxillectomy dental arches	IC-1, IC-2, IC-4	L.G.I.S SGD	M.C.Qs. SEQs. VIVA
Types of obturators	Describe various types of obturators	• Identify various types of maxillary obturator prosthesis	IC-1, IC-2, IC-4	L.G.I.S SGD	M.C.Qs. SEQs. VIVA
Indications and objectives	Understand indication sand objectives of different types of obturators	• Discuss indications of various types obturators and their indications	IC-1, IC-2, IC-4	L.G.I.S SGD	M.C.Qs. SEQs. VIVA
DIGITAL DENTISTRY					
Introduction	Understand the importance of digital dentistry	• Define digital dentistry and explain its significance in modern dental practices. • Identify the key components involved in digital dentistry • Describe the advantages and benefits of digital dentistry	IC-1, IC-2,	L.G.I.S SGD	M.C.Qs. SEQs.

		• Recognize the various applications of digital dentistry in prosthodontics	IC-4		VIVA
CAD/CAM	Understand the significance of CAD-CAM	• Discuss the advantages of CAD-CAM	IC-1, IC-2, IC-4	L.G.I.S SGD	M.C.Qs. SEQs. VIVA
3D printing, milling	Understand the significance of 3D printing and milling	• Discuss the advantages of 3D printing, milling	IC-1, IC-2, IC-4	L.G.I.S SGD	M.C.Qs. SEQs. VIVA
Intraoral oral scanners	Understand the significance of intraoral scanners	• Discuss the advantages of Intraoral oral scanners	IC-1, IC-2, IC-4	L.G.I.S SGD	M.C.Qs. SEQs. VIVA
Cone beam computed tomography (CBCT)	Understand the significance of CBCT	• Discuss the advantages, and disadvantages of CBCT • Interpret CBCT for treatment planning	IC-1, IC-2, IC-4	L.G.I.S SGD	M.C.Qs. SEQs. VIVA

Practical

Weeks	Topic /Theme	Learning Objectives	IC Codes	MIT	Assessment Tools
Week 1	• Orientation to prosthodontic department • History taking & clinical examination • Primary impressions of edentulous patients • Custom tray fabrication • Secondary impression	• Identify instruments & appliances • Demonstrate techniques of history taking & clinical examination • Take primary impression using impression compound • Fabricate custom tray using auto polymerizing resins • Take secondary impression with zinc oxide eugenol using green stick as border molding material	IC 1 to IC 6	Demonstration	OSCE/Practical
Week 2	• Maxillomandibular relationship • Teeth setup	• Record maxillomandibular relation using biometric guidelines • Perform teeth setup using records obtained from patients and also utilizing the biometric guidelines	IC 1 to IC 6	Demonstration	OSCE/Practical
Week 3	• Try-in • Laboratory procedures for denture processing	• Demonstrate the verification of esthetic, phonetics, centric record &VDO at try-in of dentures	IC 1 to IC 6	Demonstration/S	OSCE/Practical

		• Perform flasking, de waxing, packing, curing and finishing of dentures			
Week 4	Insertion of dentures and follow up	• Perform insertion of dentures and post insertion follow up management	IC 1 to IC 6	Demonstration	OSCE/Practical
Week 5	Cast partial denture designing (Kennedy' class I &II)	• Perform designing of partial denture designing in Kennedy's class I & II	IC 1 to IC 6	Demonstration	OSCE/Practical
Week 6	Cast partial denture designing (Kennedy' class III &IV)	• Perform designing of earn about partial denture designing in Kennedy's class III & IV	IC 1 to IC 6	Demonstration	OSCE/Practical
Week 7 &8	Anterior teeth Crown preparation	• Perform the preparation of anterior teeth for metal ceramic and all ceramic crowns	IC 1 to IC 6	Demonstration	OSCE/Practical
Week 9 &10	Posterior teeth Crown preparation	• Perform the preparation of posterior teeth for metal ceramic crowns	IC 1 to IC 6	Demonstration	OSCE/Practical

3.Orthodontics

S. No.	Topic / Theme	Learning Outcomes	Learning Objectives	IC Codes	MIT	Assessment Tools
1.	Orthodontic Appliances	At the end of the term, the students will be able to: Apply the knowledge of orthodontic appliances. Develop the understanding of functional jaw orthopedics.	At the end of the lecture, the students will be able to: **Knowledge:** Explain the design and components of removable and fixed orthodontic appliances. • Recognize the need of planning growth modification in growing patients.	IC-1 & IC-2	L.G.I.S SGD	M.C.Qs/SEQs Viva
			Skill: Design the orthodontic appliance based on the principles of biomechanics. • Perform different wire bending techniques.	IC-1 to IC-6	Demonstrations Practical	OSCE Practical
2.	Multi-disciplinary Orthodontics	Demonstrate the principles of multi-disciplinary orthodontics. Apply the knowledge of management of cleft lip & palate.	**Knowledge:** Describe the different techniques used in adjunctive orthodontics. Understand the management protocol of patients with cleft lip & palate.	IC-1 & IC-2	LGIS	M.C.Qs/SEQs Viva

			• Explain the principles of combined orthodontic-orthognathic surgical treatment.			
3.	Retention Protocols	Demonstrate the basic principles of retention and relapse in Orthodontics. Apply the knowledge of the properties of different types of orthodontic retention appliances.	At the end of the lecture, the students will be able to: **Knowledge:** Understand the basic concepts of retention and relapse in Orthodontics. Understand the different types of retention appliances. Describe the properties of orthodontic retention appliances. Understand the indications of retention appliances in different types of malocclusions. •	IC-1, IC-2,	LGIS SGD	M.C.Qs/SEQs Viva
			Skill: Design the different components of a Hawley's Retainer. • Perform different wire bending technique.	IC-1, IC-2, IC-4, IC-6	Demonstrations Practical	OSCE Practical

Practical

Weeks	Topic /Theme	Learning Objectives	IC Codes	MITs	Assessment Tools
Week 1	Orientation to the Orthodontic department	• Develop familiarity with orthodontic instruments & appliances • Demonstrate knowledge of the techniques of history taking & clinical examination	IC1 to IC 6	Demonstration	OSCE/Practical exam
Week 2	Impression taking & Radiology	• Demonstrate the techniques of impression taking & bite registration • Interpret different radiographs • Demonstrate skills in lateral cephalometric tracing	IC1 to IC 6	Demonstration	OSCE/Practical exam
Week 3	Lateral Cephalometry	• Demonstrate skills in lateral cephalometric tracing • Perform the lateral cephalometric analysis	IC1 IC 2 IC 4	Demonstration	OSCE/Practical exam
Week 4	Basic wire bending exercises	• Demonstrate skills of basic wire bending in Orthodontics	IC1 IC2	Demonstration	OSCE/Practical exam

Week 5	Cast Analysis Basic wire bending exercises	• Practice the basic technique of performing cast analysis • Demonstrate skills of basic wire bending in Orthodontics	IC 1 IC 2 IC 4	Demonstration	OSCE/ Practical exam
Week 6	Cast Analysis Basic wire bending exercises	• Practice the basic technique of performing cast analysis • Demonstrate skills of basic wire bending in Orthodontics	IC 1 IC 2 IC 4	Demonstration	OSCE/ Practical exam

2. OMFS

S. No.	Topic/ Theme	Learning Outcomes	Learning Objectives	IC Code	MITS	Assessment Tool
01	Pre-Prosthetic & Dental Implants (Pre-Prosthetic Surgery)	At the end of term, student will be able to: • Identify problem list and formulate a treatment plan for a patient acquiring dental prosthesis • Perform basic surgical pre-prosthetic procedures like	At the end of term, student will be able to: **KNOWLEDGE** • Enlist objectives of pre-prosthetic surgery • Describe ridge extension, augmentation and correction (osteotomies) procedures for mandible and maxilla • Describe the principles of following surgical procedures: alvelolоplasty-simple, intraseptal (Dean's), tuberosity reduction, exostosis and undercuts correction, tori removal, mylohyoid	IC 2	LGIS	MCQ SEQs VIVA

		Alveoloplasty, Tori removal • Order appropriate investigations and formulate treatment for a patient seeking dental implants	ridge reduction, genial tubercle reduction, retromolar pad reduction, lateral palatal soft tissue excess removal, unsupported hypermobile tissue removal, inflammatory fibrous hyperplasia removal, labial and lingual frenectomy			
02	Dental Implants		**KNOWLEDGE** • Define dental implant and identify its components • Define osseointegration, list factors influencing osseointegration • Define the following terms related to dental implants: endosseous, root- form, cover screw, healing abutment/gingival former, single/two stage, screw/cement retained biotypes	IC2	LGIS SGD	MCQs SEQs VIVA

			SKILL • Identify abnormalities of soft and hard tissues which interfere with denture • Construction and formulate a treatment plan	IC 1 to IC 6	Practical	OSCE
			ATTITUDE • Respect all patients • cquire informed consent from the patient	IC 1 IC 4	Demonstration	OSCE
03	Dental Implants		**KNOWLEDGE** • Describe the following considerations for implant placement: soft tissue, hard tissue and biomechanical • Describe the surgical procedure for one stage, two stage and immediate dental implant placement • Enlist complications of implant surgery and describe their management • Describe ridge augmentation and preservation, guided bone regeneration, onlay bone grafting, sinus lift and distraction osteogenesis for dental implant placement	IC 2	LGIS	MCQs SEQs VIVA
			SKILL	IC 1 IC 3	Clinical Demonstration	OSCE

			• Assess a patient in need of dental implant(s) with the help of history, clinical examination and imaging	IC 4 IC 5 IC 6		
			ATTITUDE • Respect all patients • Acquire informed consent from the patient	IC 1 IC 4	Clinical Demonstration	OSCE
04	Pain/TMJ/ Salivary gland disease (Orofacial Pain)	• Identify a patient with orofacial facial pain, diagnose the type and formulate a treatment plan • Make referral when required	**KNOWLEDGE** • Describe the pathophysiology of neuropathic pain • Classify oro-facial pain according to site and etiology • Diagnose trigeminal neuralgia and describe its management options. • Differentiate trigeminal neuralgia from pre-trigeminal neuralgia, odontalgia, post-herpetic neuralgia, neuroma, burning mouth syndrome, glossopharyngeal neuralgia and headache • Classify various types of headaches according to clinical features	IC2	LGIS	MCQs SEQs VIVA

05	(Tm joint)	• Acquire history, clinically examine & diagnose a patient with TMJ problem/pathology • Manage the patient conservatively • Make referral when required	**KNOWLEDGE** • Evaluate a patient with TMJ disorder • Classify TMJ disorders as: myofascial, internal derangement (Wilke's), systemic arthritis conditions, chronic recurrent dislocation, ankylosis, neoplasia and infections	IC2	LGIS SGD	MCQs SEQs VIVA
			SKILL • Examine & evaluate a patient with TMJ disorder • Select management options for TMD and ankylosis (conservative and surgical) • Reduce manually TMJ dislocation on skull model	IC 1 to IC 6	Practical	OSCE
			ATTITUDE • Respect patients acquire informed consent	IC 1 IC 4	Demonstration	OSCE
06	(Salivary Gland)	• Examine Salivary Gland, acquire appropriate history &	**KNOWLEDGE** • Describe pathophysiology and presentation of obstructive, retentive,	IC 2	LGIS	MCQ SEQS

		diagnose a patient with SG pathology • Order & interpret relevant investigations • Make referral when required	infectious and neoplastic salivary gland disease • Describe various diagnostic modalities for salivary gland disorders • Describe the principles of management of the following salivary gland disorders: sialolithiasis, mucocele, ranula, infections, traumatic injuries to salivary glands, pleomorphic adenoma, Warthin's tumor, mucoepidermoid carcinoma, adenoid cystic carcinoma, adenocarcinoma			VIVA
CLASS TEST						
07	Dento-facial deformity & orthogna-thic surgery	• Diagnose and refer to relevant specialty for a patient with dentofacial deformity	**KNOWLEDGE** • Enlist causes of dentofacial deformities • evaluate a patient with dentofacial deformity • Order and interpret relevant investigations • Describe the pre-surgical preparation for orthognathic surgery patient • Describe the surgical treatment options (osteotomies) for the following: mandibular excess, mandibular deficiency, maxillary and mid-face deficiency, combination deformity & Facial asymmetry	IC2	LGIS	MCQs SEQs VIVA

			• Define Distraction Osteogenesis, describe the role and advantages of distraction osteogenesis in OMF region			
08	Cleft lip & palate	• Describe etiology & incidence of Cleft Lip and Palate • Diagnose and formulate the problem list in a patient with CLP	**KNOWLEDGE** • Describe incidence and etiology of cleft lip & palate • Explain Cleft Lip and Palate (CLP) pathogenesis at embryological level • name the number of different types of rare facial clefts in addition to cleft lip and palate • Classify cleft lip and palate for communication and record keeping • Enlist the OMF problems faced by a cleft patient, from prenatal period till life long • Constitute a team for the treatment of a cleft patient • Describe the treatment of a cleft patient according to the sequence and surgical procedures • Enlist various syndromes associated with Cleft Lip and Palate (CLP) • Explain various surgical procedures for CLP repair	IC2	LGIS	MCQs SEQs VIVA
10	Hopitalized patients &	• Follow the protocols for Major Oral & Maxillofacial Surgical	**KNOWLEDGE** • Describe when to hospitalize a dental patient for management	IC2	LGIS SGD	MCQs SEQs

	general anesthesia	procedures in a hospital setting • Discuss preparation of a patient undergoing General Anaesthesia	• Evaluate a patient for Oral and Maxillofacial surgery under General Anaesthesia • List pre-operative management of patient for major oral surgery: investigations and consults with reference to ASA status • Describe assessment of fitness, normal, abnormal cardiac and respiratory signs, premedication, anesthetic and analgesia medication • Describe the technique of endotracheal intubation • Enlist and describe management of post GA problems			VIVA

			SKILL • Answer a referral consultation letter • Provide care for hospitalized patient • Record operative notes • Write a hospital discharge letter	IC 1 to IC6	Practical	OSCE
			ATTITUDE • Respect all patients • Acquire informed consent from patient	IC 1 IC 4	Demonstration	OSCE

PRACTICAL

Week & Date	Topic/ Theme	Learning Objective	M.I.Ts	Assessment Tools	Instructor
01	Orientation to OMFS	• Orientation to OMFS • Perform Chair & Operator Positioning • Obtain appropriate History perform Clinical Examination • Perform Prescription Writing	*SGD/ Demo *Practical	*OSPE *VIVA *DOPS	*Dr. Maimoona *Dr. Adam
02	Local Anesthesia	Identify & Describe LA • Armamentarium • Dosage • Complications	*SGD/ Demo *Practical	*OSPE *VIVA *DOPS	*Dr.Fatima *Dr.Adam

		• anatomical landmarks for various LA techniques Perform various techniques of Nerve Blocks & local anesthesia			
03	Exodontia	• Identify and select appropriate Armamentarium • Describe and apply Principles of instruments used in exodontia • Application and Handling of elevators & forceps. • Interpret Radiological findings related to exodontia: Periapical & OPG , impacted canine & 3rd molars	*SGD/ Demo *Practical	*OSPE *VIVA *DOPS	*Dr.Fatima *Dr.Adam
04	Medical Management of Compromised Patients TMJ and Pathology	• Describe Common Medical Emergencies with Prevention, Diagnosis & Management • Enlist Emergency trolley drugs • Operate & handle Oxygen Cylinder • Perform Clinical Examination of TMJ, Salivary Glands and Lymph Nodes • Perform Reduction of Dislocated TMJ on skull models	*SGD/ Demo *Practical *PBL	*OSPE *VIVA	*Dr. Maimoona *Dr.Sadia

05	Basic Principles of Surgery	• Describe various suturing material types, their application , specification of suturing needle and suture • Perform various Suturing Techniques • Draw and label various surgical flaps used in minor oral surgery • Identify and use of appropriate size/number blade according to purpose and anatomical region • Handling of Surgical Blade , placement and removal from BP Handle • Describe Principles of Surgical Incision • Describe principles of Incision & Drainage • Describe Principles of Flap Design	*SGD/ Demo *Practical	*OSPE *VIVA *DOPS *Assign-ment	*Dr. Sadia *Dr.Adam
06	Oral & Maxillofacial Trauma	• Describe various reduction & fixation techniques used in maxillofacial fracture management • Make Eye-lets with wire & wire handling • Perform Maxillo-Mandibular Fixation on Models • Placement of arch bar on models • Radiological interpretation of Trauma patient (OPG & CT Scan) • Identification of armamentarium for Major & Minor Surgical Procedures • PBL	*SGD/ Demo *Practical *PBL	*OSPE *VIVA *Assign-ment	*Prof.Dr.Irfan Shah *Dr. Maimoona *Dr.Fatima
07	ASSESMENT WEEK	• Complete and Submit LOG BOOKS • Submit Assignments • End of Rotation Ward Test		*DOPS *OSPE *VIVA	All Faculty

				*Assign- ments *Attendanc e	

Term III Syllabi

1. Operative Dentistry

WEEK	TOPIC	NO. OF LECTURES	DELIVERED BY
27th Week	Discoloration of teeth	02	Prof Dr Beenish
28th Week	Discoloration of teeth Veneers	01 01	Prof Dr Beenish
29th Week	Veneers Tooth preparation for indirect restorations	01 01	Prof Dr Beenish Dr Sharaz
30th Week	Tooth preparation for indirect restorations Inlay & Onlay	01 01	Dr Sharaz
31st Week	CAD-CAM	02	Dr Sharaz
32nd Week	Class test Radiology & radiography	01 01	Dr Sharaz

33rd Week	Radiology & radiography Non carious cervical lesions	01 01	Dr Sharaz Dr Yumna
34th Week	Non carious cervical lesions Colour & shade matching	01 01	Dr Yumna
35th Week	Colour & shade matching Recent trends in Dentistry	01 01	Dr Yumna
36thWeek	Recent trends in Dentistry	02	Dr Sharaz
37th Week	Dental Biomaterials	02	Dr Sharaz
38th Week	Pain control	02	Dr Madiha
39th Week	Complex amalgam restorations	02	Dr Beenish
40th Week	Revision	02	Dr Beenish

2. Paediatric Dentistry

3. Weeks	Topics	No of lectures	Delivered by
Week 1 to week 3	Hospital dentistry	3	Dr Amna Riaz
Week 4 to week 6	Minor oral surgery	3	Dr Amna Riaz
Week 7 to week 9	Periodontal disease in children.	3	Dr Amna Riaz
Week 10	Dental management of children with systemic disease	1	Dr Amna Riaz
Week 11	Class test		
Weeks 12 to week 13	Dental management of children with	2	Dr Amna Riaz

	systemic disease		
Week 14	Revision		

4.

3.Prosthodontics

WEEKS	TOPIC	NO. OF LECTURES	LECTURE DELIVERED BY
WEEK 27	• Direct retainers-I	02	Dr. Aamir Rafiq
	• Direct retainers-II		Dr. Aamir Rafiq
WEEK 28	• Indirect retainers	01	Dr. Aamir Rafiq
	• Denture base considerations	01	Dr. Aamir Rafiq
WEEK 29	• Principles of RPD design	01	Dr. Abdul Muqeet
	• Surveying	01	Dr. Aamir Rafiq
WEEK 30	• Diagnosis and treatment planning in RPD	01	Dr. Aamir Rafiq
	• Mouth preparation for RPD	01	Dr. Aamir Rafiq
WEEK 31	• Impression for RPD	01	Dr. Sameen Zehra
	• Lab procedures for RPD	01	Dr. Sameen Zehra
WEEK 32	• Denture support for distal extension denture bases	01	Dr. Aamir Rafiq
	• Occlusal relationship for RPD	01	Dr. Abdul Muqeet

WEEK 33	• Insertion and follow up for RPD	01	Dr. Aamir Rafiq
	• Relining and rebasing of RPD	01	Dr. Sameen Zehra
WEEK 34	• Repairs and additions to RPD	01	Dr. Sameen Zehra
	• Interim RPD	01	Dr. Sameen Zehra
WEEK 35	• Introduction to digital dentistry	01	Dr. Sameen Zehra
	• CBCT	01	Dr. Sameen Zehra
WEEK 36	• Introduction to implants	01	Dr. Sameen Zehra
	• Treatment planning for implants	01	Dr. Sameen Zehra
WEEK 37	• Abutment selection	01	Dr. Sameen Zehra
	• Impression making for implants	01	Dr. Aamir Rafiq
WEEK 38	• Management and complications of implants	01	Dr. Aamir Rafiq
	• Introduction to maxillofacial prosthodontics	01	Dr. Aamir Rafiq
WEEK 39	• Classification of maxillary defects	01	Dr. Aamir Rafiq
	• Types of obturators	01	Dr. Aamir Rafiq
WEEK 40	**REVISION**		

4.Orthodontics

WEEK	DAY/DATE	TOPIC	SUBTOPICS	TOTAL LECTURES	FACILITATOR
1st Week	Tuesday (16-07-2024)	**Orthodontic appliances and biomechanics**	Removable Appliance	02	Dr. Waheed
	Thursday (18-07-2024)				
2nd Week	Tuesday (23-07-2024)	**Multidisciplinary orthodontics**	Cleft lip & palate	02	Dr. Hasnain
	Thursday (25-07-2024)				
3rd Week	Tuesday (30-07-2024)	**Multidisciplinary orthodontics**	Adjunctive and Multi-Disciplinary orthodontic Approaches	01	Dr. Shahzonia
	Thursday (01-08-2024)	**Orthodontic appliances and biomechanics**	Fixed Appliances	01	Dr. Waheed
	Friday (02-08-2024)	**Multidisciplinary orthodontics**	Adjunctive and Multi-Disciplinary orthodontic	01	Dr. Shahzonia

			Approaches		
4th Week	Tuesday (06-08-2024)	**Multidisciplinary orthodontics**	Adjunctive and Multi-Disciplinary orthodontic Approaches	01	Dr. Shahzonia
	Thursday (08-08-2024)	**Orthodontic appliances and biomechanics**	Fixed Appliances	01	Dr. Waheed
5th Week	Tuesday (13-08-2024)	**Multidisciplinary orthodontics**	Adjunctive and Multi-Disciplinary orthodontic Approaches	01	Dr. Shahzonia
	Thursday (15-08-2024)	**Orthodontic appliances and biomechanics**	Fixed Appliances	01	Dr. Waheed
6th Week	Tuesday (20-08-2024)	**Multidisciplinary orthodontics**	Orthognathic surgery	01	Dr. Hasnain
	Thursday (22-08-2024)	**Orthodontic appliances and biomechanics**	Fixed Appliances	01	Dr. Waheed
7th Week	Tuesday (27-08-2024)	**Multidisciplinary orthodontics**	Orthognathic surgery	02	Dr. Hasnain
	Thursday				

	(29-08-2024)				
	Friday (30-08-2024)	**Orthodontic appliances and biomechanics**	Material instruments And techniques used in orthodontics	02	Dr. Shahzonia
8th Week	Tuesday (03-09-2024)				
	Thursday (05-09-2024)	**3RD TERM CLASS TEST**			
9th Week	Tuesday (10-09-2024)	**Orthodontic appliances and biomechanics**	Functional jaw orthopedics	06	Dr. Waheed
	Thursday (12-09-2024)				
10th Week	Tuesday (17-09-2024)				
	Thursday (19-09-2024)				
11th Week	Tuesday (24-09-2024)				
	Thursday				

	(26-09-2024)				
	Friday (27-09-2024)	**Retention protocols**	Retention And Relapse	01	Dr. Hasnain
12th Week	Tuesday (01-10-2024)	**Orthodontic appliances and biomechanics**	Functional jaw orthopedics	04	Dr. Waheed
	Thursday (03-10-2024)				
13th Week	Tuesday (08-10-2024)				
	Thursday (10-10-2024)				
14th Week	Tuesday (15-10-2024)	**Retention protocols**	Retention And Relapse	02	Dr. Hasnain
	Thursday (17-10-2024)				

5.OMFS

WEEK	DAY/DATE	TOPIC	SUBTOPICS	TOTAL LECTURES	FACILITATOR
1st Week	Tuesday (16-07-2024)	**Orthodontic appliances and biomechanics**	Removable Appliance	02	Dr. Waheed
	Thursday (18-07-2024)				
2nd Week	Tuesday (23-07-2024)	**Multidisciplinary orthodontics**	Cleft lip & palate	02	Dr. Hasnain
	Thursday (25-07-2024)				
3rd Week	Tuesday (30-07-2024)	**Multidisciplinary orthodontics**	Adjunctive and Multi-Disciplinary orthodontic Approaches	01	Dr. Shahzonia
	Thursday (01-08-2024)	**Orthodontic appliances and biomechanics**	Fixed Appliances	01	Dr. Waheed
	Friday (02-08-2024)	**Multidisciplinary orthodontics**	Adjunctive and Multi-Disciplinary orthodontic Approaches	01	Dr. Shahzonia

4th Week	Tuesday (06-08-2024)	**Multidisciplinary orthodontics**	Adjunctive and Multi-Disciplinary orthodontic Approaches	01	Dr. Shahzonia
	Thursday (08-08-2024)	**Orthodontic appliances and biomechanics**	Fixed Appliances	01	Dr. Waheed
5th Week	Tuesday (13-08-2024)	**Multidisciplinary orthodontics**	Adjunctive and Multi-Disciplinary orthodontic Approaches	01	Dr. Shahzonia
	Thursday (15-08-2024)	**Orthodontic appliances and biomechanics**	Fixed Appliances	01	Dr. Waheed
6th Week	Tuesday (20-08-2024)	**Multidisciplinary orthodontics**	Orthognathic surgery	01	Dr. Hasnain
	Thursday (22-08-2024)	**Orthodontic appliances and biomechanics**	Fixed Appliances	01	Dr. Waheed
7th Week	Tuesday (27-08-2024)	**Multidisciplinary orthodontics**	Orthognathic surgery	02	Dr. Hasnain
	Thursday (29-08-2024)				

	Friday (30-08-2024)	**Orthodontic appliances and biomechanics**	Material instruments And techniques used in orthodontics	02	Dr. Shahzonia
8th Week	Tuesday (03-09-2024)				
	Thursday (05-09-2024)	**3RD TERM CLASS TEST**			
9th Week	Tuesday (10-09-2024)	**Orthodontic appliances and biomechanics**	Functional jaw orthopedics	06	Dr. Waheed
	Thursday (12-09-2024)				
10th Week	Tuesday (17-09-2024)				
	Thursday (19-09-2024)				
11th Week	Tuesday (24-09-2024)				
	Thursday (26-09-2024)				

	Friday (27-09-2024)	**Retention protocols**	Retention And Relapse	01	Dr. Hasnain
12th Week	Tuesday (01-10-2024)	**Orthodontic appliances and biomechanics**	Functional jaw orthopedics	04	Dr. Waheed
	Thursday (03-10-2024)				
13th Week	Tuesday (08-10-2024)				
	Thursday (10-10-2024)				
14th Week	Tuesday (15-10-2024)	**Retention protocols**	Retention And Relapse	02	Dr. Hasnain
	Thursday (17-10-2024)				

Innovative teaching strategies

1. Case Based Learning

A 24 year old male patient presented to your clinic requesting to conclude his orthodontic treatment and remove the appliances. After the intraoral evaluation of the patient's occlusion and alignment of teeth, you felt the need to continue the treatment for an additional two appointments to ensure an ideal outcome. However, the patient was adamant on accepting the compromise of early conclusion of treatment, hence you complied with the request and removed all the appliances.

After completing post treatment scaling and polishing you noticed a carious lesion on tooth 46 however the patient did not experience any symptoms associated with that tooth at that moment and you advised him a thorough investigation to decide the appropriate plan. After two days the patient returned for his scheduled appointment, and you took a bitewing radiograph of right posterior quadrant. The patient also expressed, "I have started to experience sensitivity to cold water in just my front teeth". He inquired the reason for sensitivity since scaling was done. You reassured the patient and explained why most people experience thermal sensitivity after scaling and prescribed a desensitizing toothpaste for relief. On examination of the bitewing radiograph, you told the patient that he would need a direct restoration of his tooth 46 and also there was a crown required for tooth 16 which had received root canal therapy in the past.

A week later the patient came for his filling appointment and was feeling much better in terms of previously experienced sensitivity to cold. You started preparing the tooth 46 for a class II cavity but the patient was getting uncomfortable with the drilling so you delivered a local anesthesia to numb the site. Twenty minutes later after checking the lip numbness you again began preparing the tooth but soon after the patient started making faces suggesting his intolerance for the procedure. You were surprised at the ineffectiveness of anesthesia and repeated the anesthesia, after which it became effective and you continued with the preparation and subsequent restoration with composite. A carful assessment of the occlusion was done and once the patient was comfortable with the way the teeth were meeting you discharged him with the appointment for crown preparation. After two days the patient came back and was having trouble chewing on the side where restoration was placed. On inquiring he expressed his dissatisfaction with the restoration and said that "there is increased sensitivity to cold and packing of food on the side where filling was placed". You checked the contact which wasn't resisting floss and performed a cold test to check pulp status which appeared to be a short lived but exaggerated response to cold. After reassuring the patient that sensitivity will resolve you decided to readjust the contact of the restoration.

At the scheduled appointment for crown preparation you prepared the tooth 16 and showed it to your colleague who was impressed by the excellent preparation who suggested you use a dual phase technique with elastomeric material for recording the impression. At first you were reluctant to try the new technique as you were used to taking impressions with mono phase but you decided to give it a try. On investigation of the impression you observed significant shortcomings in the quality of impression and finally decided to retake the impression.

1. What explanations could you have given to the patient regarding his post scaling complaint?
2. What could be the possible reasons for the patient's dissatisfaction with the delivered restoration?
3. Why were you unable to achieve effective anesthesia in this patient the first time?
4. What could be the errors identified in the recorded impression?

LEARNING OUTCOMES

1. Should know the reasons for post-operative complaints after composite restorations
2. Should know the reasons for the ineffectiveness of local anesthesia
3. Should know the reasons for sensitivity after scaling
4. Should know the possible errors in impression recording for crown preparations

GUIDING QUESTIONS

1. Are there any sensitive structures of the tooth?
2. Are there any specific challenges in restoring class II cavities?
3. Is there a relationship of anatomic landmarks and local anesthesia?
4. Are there any specific things that we look for in a good impression?

LEARNING RESOURCES

1. Summit. Fundamentals of operative dentistry (5th edition)
2. Stanley F Malamed. Handbook of Local Anesthesia (5th edition)
3. Carranza. Clinical Periodontology. (12th edition)
4. Contemporary fixed prosthodontics (4th edition)

2. Presentations by Students

In alignment with the institutional outcomes which expect graduating learner to be a collaborator and communicator, in accordance with the PMC guidelines, student's presentations were planned and scheduled on the important topics of all four basics disciplines. They were assigned the tasks individually as well in groups and were assessed on checklists. This was the method of formative assessment.

Group Presentation Evaluation / Feedback

Group Member's Names:

Your presentation will be evaluated using the following scale in each of the categories below.

Needs Improvement>>>>>>>>Excellent

1. Introduction 1 2 3 4 5
   - Got our attention
2. Preparation 1 2 3 4 5
   - Preparation apparent
   - Practice apparent
   - Each member prepared equally
3. Organization 1 2 3 4 5
   - Project well organized?
   - Easy to follow?
   - Did the overall presentation have an introduction, objective, a body with supporting material, and a definite conclusion?
4. Meeting assignment objectives 1 2 3 4 5
   - Did the presenters give clear and concrete explanations and examples?
5. Presentation style 1 2 3 4 5

- Was it delivered extemporaneously? (Members knew their material, used minor notes, and did not read it to us!)
- Language used was appropriate and clear?

6. Delivery 1 2 3 4 5
   - Eye contact
   - Volume, vocal variety
   - Nonverbal body language (fidgeting, posture, gestures, etc.)
   - Verbal fillers (ah, um)
   - Did the speakers show sincerity or enthusiasm when they spoke?
7. Conclusion 1 2 3 4 5
   - Ended with a summary
   - Had finality to cap off presentation
8. Overall team cohesiveness: 1 2 3 4 5
   - Connected to each other
   - Other team members were attentive while individuals spoke
   - Met time requirements
9. Overall rating of project 1 2 3 4 5
   - Includes presentational style, content, organization, and creativity

GRADE OR ASSIGNED POINTS_____

COMMENTS:

3. Peer evaluation of a Group Presentation Presenters

Topic: _____ Group: _____

Date: _____ Peer Evaluation: _____

Rate each of the following areas as excellent, good, or needs work. Add comments to explain your rating and answer the questions below.

Area	Rating	Comments
Content (e.g., interest, appropriateness for audience and assignment, clear focus, good support, and details, identified sources adequately)		
Organization (e.g., easy to follow, clear sections [introduction, body, and conclusion], transitions, coherent)		
Delivery and Overall Communication (e.g., eye contact, appropriate volume and rate of speech, clarity of speech, comprehensibility, posture and body language, use of media and visual aids, all members well-prepared)		

1) What is one thing that you learned from this presentation?

2) What is one thing the group did well?

3) What is one suggestion to help them improve future presentations?

4) Additional Comments?

Learning Resources

3. Operative Dentistry Department

- Sturdevant's Art & Science of Operative Dentistry
- Cohan's Pathways of Pulp
- Grossman Endodontic practice
- Contemporary Fixed Prosthodontics Rosenstiel
- Paediatric Dentistry, Richard Welbury

4. Oral And Maxillofacial Surgery

1. Contemporary Oral and Maxillofacial Surgery, 7th Edition, James R. Hupp
2. Handbook of Local Anesthesia, 7th Edition, Stanley F.Malamed
3. Fractures of the Facial Skeleton, 2nd Edition, Peter Banks
4. Scully's Medical Problems in Dentistry, 7th Edition, Crispian Scully
5. Internet Sources

   https://www.sciencedirect.com/ https://emedicine.medscape.com/

5. Orthodontics

- Contemporary Orthodontics William R. Proffit
- An Introduction to Orthodontics Laura Mitchell

6. Prosthodontics

- Prosthodontic treatment for edentulous patients, Thirteen Edition by Zarb and Hobkirk
- McCracken's Removable Partial Prosthodontics, Thirteen Edition
- Contemporary Fixed Prosthodontics Rosenstiel