



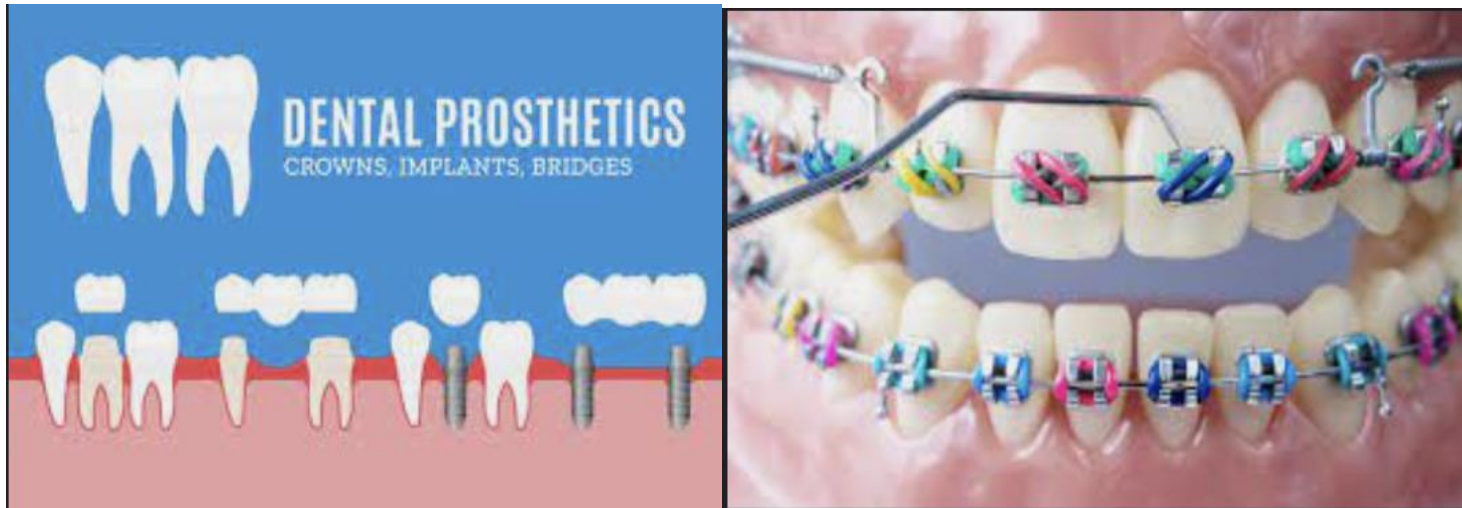
DENTAL COLLEGE HITEC-IMS

Study Guide Y4 - T1 - D24

Term I

Final Year BDS

Coordinator: Prof. Dr. Beenish Qureshi





“Medical education does not exist to provide students with a way of making a living but to ensure the health of the community.”

Rudolf Virchow



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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 professionals



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	Paediatric Dentistry	0336-5775566
4	Dr. Maimoona Siddique	Assistant Professor / HoD	OMFS	0333-2173509
5	Dr. Faizan Munir	Assistant Professor / HoD Dental Education	Dental Education	0334-0031031
6	Huda habib	Student	Final Year	0343-1713550
7	Umer Farooq	Student	Final Year	0344-6102536



Curriculum Overview/Implementation

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.

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.

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. Professionalism will be inculcated as part of the longitudinal theme.



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.

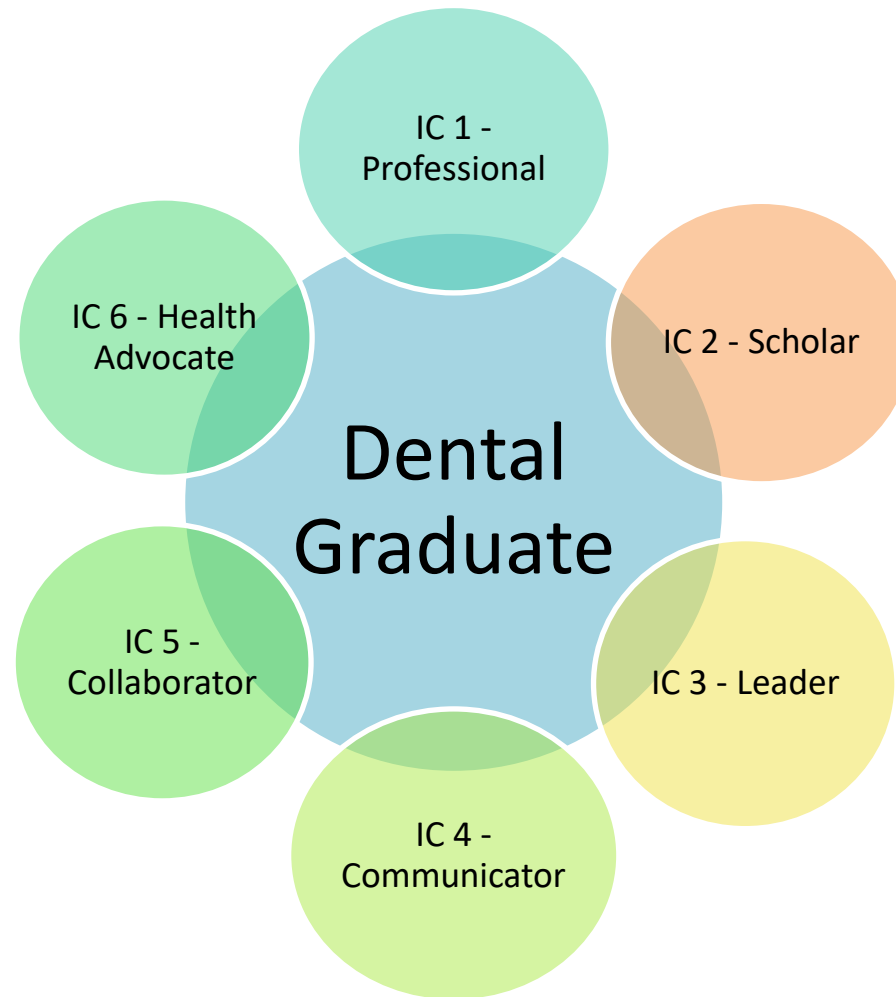
Multiple teaching strategies are used. First, LGIS are used to provoke thought and understanding among students. These help to understand topics which need effort including basic sciences review along with updated research, and best evidence medical information. Second, we are teaching clinical implications 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.

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	Institutional Competencies
1.	Implement the knowledge of sterilisation & cross-infection protocol in relevant clinical scenarios in the dental operatory	Y4-T1/O-1	IC 1, IC 6
2.	Correlate the aetiology of oral diseases with applying knowledge, interception & management in relevant clinical conditions	Y4-T1/O-2	IC 1 to IC 6
3.	Apply the concepts of occlusion in the development of dentofacial problems, orthodontic, restorative, and prosthetic management	Y4-T1/O-3	IC 1 to IC 6
4.	Correlate the clinical presentation of dentate & edentulous patients with the application of principles of surgical practice and restorative management	Y4-T1/O-4	IC 1 to IC 6
5.	Recognise a medical emergency in the dental setting and apply the knowledge of prevention & management in clinical departments	Y4-T1/O-5	IC 1 to IC 6



Yearly Clinical Rotation Schedule FINAL YEAR BDS SESSION 2024

1ST ROTATION PLAN

DURATION	18 th December – 19 th 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	Sports Week			
04-03-24 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	20 th May – 08 th September (15 weeks each) ---- 3 weeks in each Department				
DEPARTMENT	Operative Dentistry	Prosthodontics	Orthodontics	OMFS	Paedodontics
20-05-24 to 09-06-24	A	B	C	D	E
10-06-24 to 16-06-24	E	A	B	C	D
17-06-24 to 23-06-24	Summer Vacations + Eid ul Adha Holidays				
24-06-24 to 07-07-24	E	A	B	C	D
08-07-24 to 28-07-24	D	E	A	B	C
29-07-24 to 18-08-24	C	D	E	A	B
19-08-24 to 08-09-24	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




Structured Summary – Term I

Term Code	Y4-T1-D24
Term Title	Fundamentals of Clinical Sciences
Duration Of Term	12 weeks
Important Dates	18 th December 2023 – 15 th March 2024
Horizontally Integrated Themes	<ol style="list-style-type: none"> 1. Occlusion 2. Local anaesthesia 3. Management of medically compromised patients 4. Dental anomalies 5. Radiology
Vertically Integrated Themes	Communication Skills* Professionalism*
Prerequisite Blocks	All 1 st 2 nd & 3 rd year blocks

*These themes are taught via MITs of clinical rotations, SGD's, CBL's and role modelling in clinical years via practical and role playing in basic sciences.



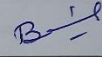
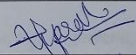



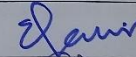

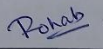

Basic Evaluation Report & Resultant Modifications (Focus Group Discussion (FGD))

 **DENTAL COLLEGE HITEC-IMS**

departments 15th February, 2024

Subject: Minutes – Focus Group discussion – Block II

1. Focus group discussion was held at 10:10am on 15th February 2024 in Final year coordinator's office
Following were in attendance

Sr. No.	Members	Signature
1.	Professor Dr. Beenish Qureshi, HoD Operative Dentistry, Coordinator Final year BDS	
2.	Sarah Irfan, House Officer	
3.	Lamia, House Officer	
4.	M Bin Tahir, House Officer	
5.	Shaheen, House Officer	
6.	Ezzah Zakir, House Officer	
7.	Manahil Sadaqat, House Officer	
8.	Rohab, House Officer	
9.	Javeria Shafique, House Officer	




DENTAL COLLEGE HITEC-IMS

10.	Fatima Faheem, House Officer	<i>Fatima</i>
11.	Sahar Saleem, House Officer	<i>Sahar Saleem</i>
12.	Usma Qammar, House Officer	<i>Usma</i>
13.	Sawaira, House Officer	<i>Sawaira</i>


Discussion & Agenda Points:

Sr. No.	Agenda point	Discussion
1	DISTRIBUTION OF THE COURSE CONTENT	<p>Students expressed that</p> <ol style="list-style-type: none"> 1. Course content continue to be well-organized, with topics distributed according to their complexity. 2. The assessment process should continue to be fair and effective
2	APPROPRIATENESS OF CHOSEN MITS AND ASSESMENTS	<ol style="list-style-type: none"> 1. Students noted that the exams effectively tested their ability to apply their knowledge. 2. However, they mentioned that they did not receive the study guides on time, which caused some inconvenience.
3	RECOMMENDATIONS BASED ON FGD	<ol style="list-style-type: none"> 1. Based on the students' feedback, it is recommended that appropriate time should be given to ensure that students understand the learning objectives properly. 2. The LGIS, SGD, and CBL sessions should be continued as students found them to be relevant to the course content and helpful in applying their knowledge. 3. The course content should continue to be well-organized, and the level of supervision and guidance provided during clinical work should be maintained. It made their learning easy. 4. The assessment process should continue to be fair and effective in



 **DENTAL COLLEGE HITEC-IMS**

		<p>testing the students's ability to apply their knowledge.</p> <p>5. Finally, the academic calendar and study guide should be distributed on time, and measures should be taken to ensure timely distribution of study guides for all terms.</p>
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Prof. Dr. Beenish Qureshi
HoD Department of Operative Dentistry
Final Year Coordinator



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, practical including MniCex and CBL 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.

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

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.





Tentative Exam Schedules

Final Year BDS - 1st term - 2024

Theory exam schedule:

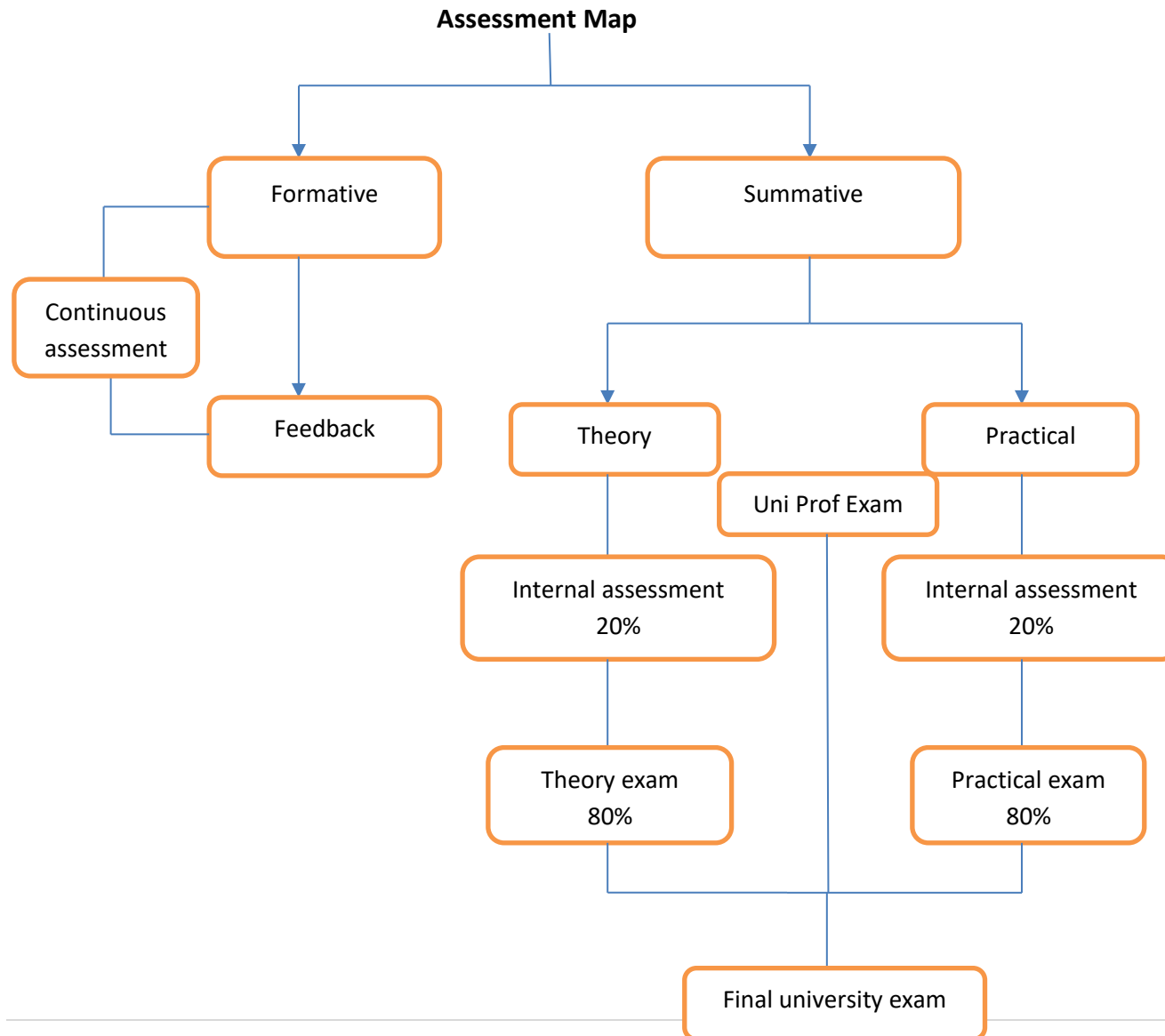
DATE/DAY	SUBJECT	TIME
15-03-2024	Operative Dentistry	8:45am to 11:45am
18-03-2024	Orthodontics	8:45am to 11:45am
19-03-2024	Prosthodontics	8:45am to 11:45am
20-03-2024	OMFS	8:45am to 11:45am
21-03-2024	Paedodontics	8:45am to 11:45am

Practical exam schedule:

The exit exam at the end of each rotation from each department will be counted as a practical exam for the first term.



Standard Assessment Map





Actual Academic Calendar
Final Year BDS Session – 2023/24

Duration : 36 weeks

Academic Event	Duration
Commencement of New Academic Year	18 th December 2023
Orientation day	20 th December 2023
FIRST TERM (12 Weeks)	
Academics 10/12 Weeks	18 th December 2023 to 25 th Feb 2024
Sports Week	26 th March 2024 to 03 rd March 2024
Academics 02/12 Weeks	04 th March 2024 to 17 th March 2024
1 st Term exam	11 th March 2024 to 15 th March 2024
SECOND TERM (12 Weeks)	
Academics 3/12 Weeks	18 th March 2024 to 07 th April 2024
Eid ul Fitr Holidays (1 Week)	08 th April 2024 to 14 th April 2024
Academics 09/12 Weeks	15 th April 2024 to 16 th June 2024
2 nd Term Exam	10 th June 2024 to 14 th June 2024
Summer Vacations + Eid ul Adha (1 Week)	17 th June 2024 to 23 rd June 2024
THIRD TERM (12 Weeks)	
Academics 12/12 Weeks	24 th June 2024 to 13 th September 2024
Send up / Pre Prof Exam (2 Weeks)	2 nd September 2024 to 13 th September 2024
Prep Leaves for Prof (23 days)	14 th September 2024 to 06 th October 2024



Sample Timetable

DENTAL COLLEGE HITEC - INSTITUTE OF MEDICAL SCIENCES
RECORD FORMAT
WEEKLY TIME TABLE

Final year BDS (2023-2024)
Weekly Time Table (12th February 2024 to 18th February 2024) (Week-09)

DAY/DATE	8:30 - 9:15	9:15 - 10:00	10:00 - 10:20	10:20 - 03:30
MONDAY 12-02-24	Prosthodontics(LGIS) Management of complications of FPD (Dr. Aamir Rafiq)	Operative Dentistry(LGIS) Adhesion to enamel & Dentine. (Dr Sharaz)	Break	CLINICS GROUP-D (Operative Dentistry) (Demonstration) Diagnostic Aids (Dr Usman) Clinical Quota (Dr Beenish + Dr Sharaz + Dr Usman) GROUP-A (Prosthodontics) (Demonstration) Maxillomandibular relationship Clinical Quota.(Dr Aamir + Dr Sameen + Dr Muqheet) GROUP-B (Orthodontics) (Demonstration) Lateral Cephalometry Clinical Quotas (Dr. Shahzonia) GROUP-C (OMFS) (Demonstration) Trauma Instruments Clinical Quotas.(Dr Maimoona + Dr Fatima + Dr Sadia & Dr Hassan)
TUESDAY 13-02-24	Orthodontics(LGIS) Radiology (Dr. Sana)	OMFS(LGIS) Basic Surgical Skills Prof.Dr.Irfan Shah		(SGD) 2:00-3:30
WEDNESDAY 14-02-24	Peadodontics(LGIS) Behavior Management (Dr.Amna)	Prosthodontics(LGIS) Introduction to patient evaluation for CD (Dr. Sameen)		(Op) Clinical & Radiographic Diagnosis (Prostho) insertion of complete and partial denture (Ortho) Indications of different radiographs (Dr Sana) (OMFS) MMF on models Closed and open reduction techniques in fracture mandible
THURSDAY 15-02-24	OMFS (LGIS) Medical Emergency Management in Dental Setting Dr.Maimoona Siddiq	Orthodontics(LGIS) Radiology (Dr. Sana)		12:00- 03:30 (SDL + Jumma Break)
FRIDAY 16-02-24	Operative Dentistry(LGIS) Adhesion to enamel & Dentine (Dr Sharaz)	Peadodontics(LGIS) Non Pharmacological Management of anxiety and pain (Dr.Amna)	10:00-10:45 (OMFS) Class Test	10:45-12:00 Clinics (Op) Radiographic interpretation of pulpal & Periapical diseases. (Prostho) factors affecting retention of CD (Ortho) Radiation dosage of different radiographs (OMFS) Radiological interpretation of impacted third molars

Group: A = Roll #100 - 112, Group: B = Roll # 113 - 126, Group: C = Roll # 127 - 140, Group: D = Roll # 141 - 143-049-064-090

Prof. Dr. Beenish Qureshi (Vice Principal), Prof. Dr. Waheed Ullah (Principal), Dr. Aamir Rafique, Dr. Maimoona Siddique, Dr. Amna Riaz

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Operative Dentistry

S. No.	Topic / Theme	Learning Outcomes	Learning Objectives	IC Codes	MITs	Assessment Tools
		At the end of term, the student will be able to:	At the end of term, the student will be able to:			
1	Introduction to Operative Dentistry	<ul style="list-style-type: none"> • Demonstrate basic knowledge of Operative Dentistry • Follow infection control protocol while working in clinical areas 	<u>Knowledge</u> <ul style="list-style-type: none"> • Define Operative Dentistry 	IC 2	LGIS	MCQs Viva
			<u>Skill</u> <ul style="list-style-type: none"> • Apply techniques of sterilization and cross infection control within clinical departments 	IC 1 to IC 6	Practical	OSCE
2	Cariology	<ul style="list-style-type: none"> • Apply knowledge of dental caries & its types and causes • Develop diagnosis & treatment planning for dental carious lesions 	<u>Knowledge</u> <ul style="list-style-type: none"> • Define aetiology, tooth habitats and types of dental caries • Define salivary functions • Describe enamel caries and dentin caries • Classify caries by ICDAS 	IC 2	LGIS / SGD / CBL	MCQs SEQs VIVA
			<u>Skill</u> <ul style="list-style-type: none"> • Detect clinically active carious lesions • Perform different diagnostic tests 	IC 1 to IC 6	Demonstration / Clinical Quota	OSCE
			<u>Attitude</u> <ul style="list-style-type: none"> • Behave respectfully with all patients 	IC 1 IC 4	Demonstration / Clinical Quota	OSCE



	Prevention of caries	<ul style="list-style-type: none"> • Apply knowledge for treatment of dental caries & preventive protocols for dental caries • Apply knowledge about caries risk assessment, Mechanism of action of fluoride for caries prevention • Apply knowledge of pits & fissure sealants & preventive resin restorations in clinical settings 	<p>Knowledge</p> <ul style="list-style-type: none"> • Enlist the preventive protocols and modalities for caries • Describe mechanism of action of fluoride to prevent dental disease • Enlist indications & contraindications of pits & fissure sealants 	IC 2	LGIS / SGD / CBL	MCQs SEQs
			<p>Skills</p> <ul style="list-style-type: none"> • Demonstrate Caries treatment by medical model • Apply clinical considerations in treatment & prevention of caries 	IC 1 to IC 6	Practical / Demonstration / Clinical Quota	OSCE / Practical exam
			<p>Attitude</p> <ul style="list-style-type: none"> • Discuss the diet management of high caries risk patient with respect 	IC 1 to IC 6	Practical / Demonstration / Clinical Quota	OSCE / Practical exam
4	Diseases of pulp and peri radicular tissues	<ul style="list-style-type: none"> • Demonstrate knowledge about causes of pulpal & periradicular diseases 	<p>Knowledge</p> <ul style="list-style-type: none"> • Identify etiologic factors causing pulp inflammation • Explain the mechanism of spread of inflammation in the pulp • Classify pulpal diseases • Classify periradicular diseases 	IC2	LGIS / SGD / CBL	MCQs SEQs VIVA



		<ul style="list-style-type: none"> Apply the basic knowledge to classify pulpal & periradicular diseases and give treatment options 	<p>Skill</p> <ul style="list-style-type: none"> Diagnose pulpal & periradicular diseases Plan treatment for pulpal and periradicular diseases 	IC 1 TO IC 6	Demonstration / Clinical Quota	OSCE / Practical exam
			<p>Attitude</p> <ul style="list-style-type: none"> Respect the confidentiality of patient 	IC 1	Demonstration / Practical	OSCE
5	Evidence based dentistry in restorative materials Restorative materials Amalgam & composites Dental cements	<ul style="list-style-type: none"> Demonstrate knowledge about Amalgam & composites applied chemistry Discuss hazards related to mercury Describe various uses of restorative materials 	<p>Knowledge</p> <ul style="list-style-type: none"> Describe properties of amalgam Define Indications and contraindications Define advantages and disadvantages of Amalgam Classify composites Describe components and setting characteristics of composites Describe important properties of composites Enumerate the steps for composite restorations Describe the applied chemistry of dental cements 	IC 2	LGIS / SGD / CBL	MCQs SEQs VIVA
			<p>Skill</p> <ul style="list-style-type: none"> Application of different cements as indicated 	IC1 to IC 6	Demonstration s/ Practical	OSCE / Practical
			<p>Attitude</p> <ul style="list-style-type: none"> Avoid wastage of material 	IC 1 IC 6	Demonstration / Practical	OSCE



	Dental anomalies Behaviour management	<ul style="list-style-type: none"> • Demonstrate the knowledge affecting child behavior • Explain the methods of achieving behavior management 	Knowledge <ul style="list-style-type: none"> • Demonstrate classification of child behaviour • Enlist factors influencing child behaviour • Enlist objectives of behaviour management • Identify the clinical condition & give treatment options 	IC 2	LGIS / SGD	MCQs SEQs VIVA
			Skill <ul style="list-style-type: none"> • Demonstrate methods of achieving behaviour management with clinical application • Perform the non-pharmacological behavior management techniques independently 	IC1 to IC 6	Demonstration / Practical	OSCE
			Attitude <ul style="list-style-type: none"> • Take consent from child & parent before doing any procedure 	IC1 to IC 6	Demonstration	OSCE
7	Occlusion	<ul style="list-style-type: none"> • Apply basic principles of normal & abnormal occlusion for restorative procedures 	Knowledge <ul style="list-style-type: none"> • Define normal and abnormal occlusion 	IC 2	LGIS	MCQs
			Skill <ul style="list-style-type: none"> • Application of basic principles of occlusion for restorative procedures 	IC1 to IC 6	Demonstration / Practical	OSCE
			Attitude <ul style="list-style-type: none"> • Show respect to patients 	IC 1 IC 4 IC 5	Demonstration / Practical	OSCE



	Adhesion to enamel & dentin	<ul style="list-style-type: none"> • Demonstrate the knowledge of Components of bonding • Apply the knowledge of Enamel & dentin bonding in clinical practice 	Knowledge <ul style="list-style-type: none"> • Describe types of Adhesion • Enumerate components of bonding • Describe Enamel Adhesion • Describe Dentin Adhesion • Enumerate the various generations of bonding agent 	IC 2	LGIS / SGD	MCQs SEQs VIVA
			Skill <ul style="list-style-type: none"> • Perform steps of enamel and dentin bonding on patients teeth 	IC1 to IC 6	Demonstration	OSCE
			Attitude <ul style="list-style-type: none"> • Explain procedure to patient 	IC 1 to IC 6	Demonstration	OSCE
9	Radiology and Radiography	<ul style="list-style-type: none"> • Demonstrate & apply the knowledge to interpret periapical & OPG radiographs & rectify the errors in radiographs 	Knowledge <ul style="list-style-type: none"> • Discuss basic principles and interpretations of dental radiography • Discuss clinical techniques for performing periapical radiographs 	IC2	LGIS / SGD	MCQs SEQs/ Viva
			Skill <ul style="list-style-type: none"> • Demonstrate the interpretation and rectify the errors in periapical radiographs • Demonstrate the interpretation of OPG radiographs for diagnosis 	IC 1 To IC 6	Demonstration	OSCE



			<p><u>Attitude</u> Show empathy with patients</p>	<p>IC 1 IC 4</p>	<p>Demonstration</p>	<p>OSCE</p>
10.	<p>Medically compromised patient</p>	<ul style="list-style-type: none"> Discuss the management of a medically compromised patient 	<p><u>Knowledge</u> <ul style="list-style-type: none"> Explain the steps taken in management of medically compromised patients </p>	<p>IC2</p>	<p>LGIS / SGD</p>	<p>MCQs SEQs VIVA</p>
11.	<p>Medical Disability in Geriatric patients Childhood impairment and disability</p>	<ul style="list-style-type: none"> Apply knowledge to evaluate, diagnose & manage geriatric patients <p>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</p>	<p><u>Knowledge</u> Discuss the procedure of preoperative patient evaluation</p>	<p>IC 2</p>	<p>LGIS</p>	<p>MCQs SEQs/Viva</p>



			Skill <ul style="list-style-type: none"> Evaluate a dental patient by: <ul style="list-style-type: none"> Medical history Physical examination Manage a dental patient with problems of the following systems: <ol style="list-style-type: none"> CVS Pulmonary Renal Hepatic Hematological 	IC 1 to IC 6	Clinical Demonstration	OSCE
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Practical

Weeks	Topic for SGD	Demonstration	Facilitator
1 st week	<ul style="list-style-type: none"> History taking Diagnostic aids Diagnosis of pulpal and periapical diseases 	<ul style="list-style-type: none"> Chair position History taking Clinical examination 	Dr Beenish Dr Usman
2 nd week	<ul style="list-style-type: none"> Sterilization and infection control Aseptic techniques PPE 	<ul style="list-style-type: none"> Pits and fissure sealents 	Dr Afshan
3 rd week	<ul style="list-style-type: none"> Preventive modalities and protocols Indications for Pits and fissure sealents Diet management for high risk patients 	<ul style="list-style-type: none"> Matrix band application 	Dr Usman Dr Amna
4 th week	Term Exam		



5 th week	<ul style="list-style-type: none"> Fundamentals of tooth preparation GV Blacks classification 	<ul style="list-style-type: none"> Instruments and equipment for tooth preparation and restoration 	Dr Usman Dr Amna
6 th week	<ul style="list-style-type: none"> Radiograph and Radiographic interpretation 	<ul style="list-style-type: none"> Principles and interpretations of OPG, Periapical and bitewing radiographs Clinical technique 	Dr Hamza Dr Sharaz
7 th week	<ul style="list-style-type: none"> Endodontic instruments 	<ul style="list-style-type: none"> Identification of instruments for diagnosis, emergency treatment Therapeutics Intracanal medicaments 	Dr Sharaz
	Term Exam		

Prosthodontics

Topic / Theme	Learning Outcomes	Learning objectives	IC Codes	M.I.Ts	Assessment Tools
	At the completion of the session, the students should be able to:	At the completion of the session, the students should be able to:			
FIXED PROSTHODONTICS					
Introduction to fixed partial denture	<ul style="list-style-type: none"> Describe fixed prosthodontics and its terminologies Describe prosthodontics diagnostic index 	<p>KNOWLEDGE</p> <ul style="list-style-type: none"> Define prosthodontics and describe its branches. Describe Prosthodontic Diagnostic Index for partially dentate and 	IC-1, IC-2, IC-4	L.G.I.S	MCQs & SEQs



		<p>completely dentate patient</p> <ul style="list-style-type: none"> Describe different terminologies used in prosthodontics. 			
Diagnosis and treatment planning of FPD	<ul style="list-style-type: none"> Plan treatment for missing tooth/teeth considering affecting factors 	<p>KNOWLEDGE</p> <ul style="list-style-type: none"> Describe treatment options for: <ul style="list-style-type: none"> ✓ A single and multiple missing teeth ✓ Missing tooth with mesially tilted abutments ✓ Pier abutments Describe Ante's Law Describe factors which affect replacement of multiple missing teeth. <p>SKILL</p> <ul style="list-style-type: none"> radiographic evaluation of abutment 	IC-1, IC-2, IC-4	L.G.I.S/ SGD	MCQs, SEQS & VIVA
Principles of Occlusion	Describe various principles of occlusion	<p>KNOWLEDGE</p> <ul style="list-style-type: none"> Describe Posselt's envelope of motion Enumerate the determinants of mandibular movement Describe various occlusal schemes for fixed prosthodontics 	IC-1, IC-2, IC-4	L.G.I.S/ SGD	MCQs, SEQS & VIVA
		<p>SKILL</p> <p>Examine the natural occlusion</p>	IC-1, IC-2, IC-3,	Clinical demonstrations	OSCE & VIVA



			IC-4, IC-5, IC-6		
Principles of Tooth Preparation	Describe various considerations of tooth preparations	<p><u>KNOWLEDGE</u></p> <ul style="list-style-type: none"> • Describe biological considerations of tooth preparation • Describe mechanical considerations of tooth preparation • Describe advantages of supragingival margins • Describe indications for subgingival margins • Compare different margin designs • Describe esthetic considerations of tooth preparation 	IC-1, IC-2, IC-4	L.G.I.S/ SGD	MCQs, SEQS & VIVA
Crown preparation	Describe and perform crown preparation	<p><u>KNOWLEDGE</u></p> <ul style="list-style-type: none"> • Enlist advantages, disadvantages, indications and contraindications of complete cast crown, metal ceramic crown and all ceramic crown • Describe steps of complete cast crown metal ceramic crown and all ceramic crown preparation 	IC-1, IC-2, IC-4	L.G.I.S SGD	MCQs, SEQS & VIVA



		SKILL Perform tooth preparation for metal ceramic crown on typodonts	IC-1, IC-2, IC-3, IC-4, IC-5, IC-6	Clinical demonstrations	OSCE & VIVA
Tissue management and impression making	Describe tissue management protocols during impression making in FPD	KNOWLEDGE <ul style="list-style-type: none"> • Describe various methods for displacement of gingival tissues • Describe various methods for isolation/saliva • Describe Recommended disinfection methods according to impression materials 	IC-1, IC-2, IC-4	L.G.I.S/SGD	MCQs, SEQS & VIVA
		SKILL Select impression materials for fixed prosthesis Perform impression making in patients requiring fix prosthesis	IC-1, IC-2, IC-3, IC-4, IC-5, IC-6	Clinical demonstrations	OSCE & VIVA



Pontic design	Describe various pontic designs	<u>KNOWLEDGE</u> Describe biologic, mechanical and esthetic considerations for successful pontic design <ul style="list-style-type: none"> • Classify pontics • Enlist indications, contraindications, advantages and disadvantages of various pontic designs 	IC-1, IC-2, IC-4	L.G.I.S/SGD	MCQs, SEQs & VIVA
		<u>SKILL</u> Select pontic design according to clinical situation	IC-1, IC-2, IC-3, IC-4, IC-5, IC-6	Clinical demonstrations	OSCE
Periodontal considerations	Understand the periodontal tissues evaluation for fixed partial denture	<u>KNOWLEDGE</u> <ul style="list-style-type: none"> • Describe the stages of periodontal disease progression • Understand the concept of biologic width • Describe the guidelines for margin placement in reference to biologic width • Describe the procedure for site preparation for ovate pontic 	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA



Crown lengthening	Understand the crown lengthening procedure	<p><u>KNOWLEDGE</u></p> <ul style="list-style-type: none"> • Describe the indications of crown lengthening • Describe the techniques for crown lengthening • Describe the factors consider prior to crown lengthening procedure 	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA
Interim restoration	Understand the concept of interim restoration	<p><u>KNOWLEDGE</u></p> <ul style="list-style-type: none"> • Discuss the need for interim restoration • Explain the biologic, esthetic and mechanical requirements of interim restoration • Describe various types of prefabricated crowns • Explain different techniques foe interim restoration fabrication 	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA
Luting agents and cementation procedure	Understand the use of various luting agents	<p><u>KNOWLEDGE</u></p> <ul style="list-style-type: none"> • Discuss the properties of cements • Enlist the indications of various luting agent • Explain the conventional cementation method • Explain the luting procedure ceramic veneers, inlays and onlays 	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA



Resin retained FPDs	Understand the conservative treatment option for the replacement of missing teeth	<p><u>KNOWLEDGE</u></p> <ul style="list-style-type: none"> • Enlist the indication and contraindications of resin bonded fixed partial denture • Describe the advantages and disadvantages of fixed partial denture • Describe the design features of resin bonded bridge • Explain the cementation steps of resin bonded bridge 	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA
Management of complications	Understand the management of postoperative complication	<p><u>KNOWLEDGE</u></p> <ul style="list-style-type: none"> • Discuss the protocol followed during the post cementation appointments • Describe the management of post insertion complications 	IC-1, IC-2, IC-4	L.G.I.S	M.C.Qs. SEQs. VIVA
COMPLETE DENTURE					
Introduction to Patient Evaluation	Describe the protocol for the evaluation of edentulous patient	<p><u>KNOWLEDGE</u></p> <ul style="list-style-type: none"> • Describe the house classification • Describe various systemic health conditions affecting complete denture 	IC-1, IC-2, IC-4	L.G.I.S	MCQs, SEQs & VIVA



Management of edentulous patients	Describe the management of edentulous patients	<p><u>KNOWLEDGE</u></p> <ul style="list-style-type: none"> • Describe management of abused oral tissues before fabrication of a new denture. • Enlist objectives of pre-prosthetic surgical prescriptions • Explain surgical correction of conditions that preclude optimal prosthetic function • Describe the methods used for the enlargement of denture bearing area 	IC-1, IC-2, IC-4	L.G.I.S SGD	MCQs &SEQS
		<p><u>SKILL</u></p> <ul style="list-style-type: none"> • Perform history taking • Perform extra oral and intraoral examination 	IC-1, IC-2, IC-3, IC-4, IC-5, IC-6	Clinical demonstrations	OSCE
Sequelae Of wearing complete dentures	Describe direct and indirect sequelae of wearing complete denture	<p><u>KNOWLEDGE</u></p> <p>Direct and indirect sequelae caused by wearing removable prosthesis,</p> <ul style="list-style-type: none"> • Traumatic ulcers • Denture irritation hyperplasia 	IC-1, IC-2, IC-4	L.G.I.S SGD	MCQs, SEQs &VIVA



		<ul style="list-style-type: none"> • Denture stomatitis • Kelly's syndrome • Residual ridge reduction • Xerostomia • Gag 			
Biomechanics of edentulous state	Describe the biomechanical support mechanism for complete dentures	<ul style="list-style-type: none"> • Describe the effect of residual ridge reduction on support of complete denture 	IC-1, IC-2, IC-4	L.G.I.S	MCQs, SEQS & VIVA

Practical

Weeks	Topic /Theme	Learning Objectives	IC Codes	M.I.Ts	Assessment Tools
Week 1	<ul style="list-style-type: none"> • Orientation to prosthodontic department • History taking & clinical examination 	<ul style="list-style-type: none"> • Have an orientation to clinical area • Get familiar with instruments & appliances • Learn the techniques of history taking & clinical examination 	IC1-IC6	Demonstration SGD	OSCE/Practical
Week 2	<ul style="list-style-type: none"> • Primary impressions of edentulous patients • Custom tray fabrication • Secondary impression 	<ul style="list-style-type: none"> • Taking primary impression using impression compound • Fabrication of custom tray using auto polymerizing resins • Recording secondary impression with zinc oxide eugenol using green stick as border moulding material • Performing beading and boxing of secondary impressions 	IC1-IC6	Demonstration SGD	OSCE/Practical/DOPS



Week 3	<ul style="list-style-type: none"> Maxillomandibular relationship Teeth setup 	<ul style="list-style-type: none"> Learn about recording maxillomandibular relation using biometric guidelines Learn about teeth arrangement using records obtained from patients and also utilizing the biometric guidelines 	IC1-IC6	Demonstration SGD	OSCE/Practical/DOPS
Week 4	<ul style="list-style-type: none"> Try-in Laboratory procedures for denture processing 	<ul style="list-style-type: none"> Learn about the verification of esthetic, phonetics, centric record & VDO at try-in of dentures Perform flasking, de waxing, packing, curing and finishing of dentures 	IC1-IC6	Demonstration SGD	OSCE/Practical/DOPS
Week 5	Insertion of dentures	Learn about the insertion protocol of dentures	IC1-IC6	Demonstration SGD	OSCE/Practical/DOPS
Week 6	Follow up & management of post insertion complains	<ul style="list-style-type: none"> Post insertion follow up management Learn about the management of complains after the insertion of dentures 	IC1-IC6	Demonstration SGD	OSCE/Practical/DOPS

Orthodontics

S. No.	Topic / Theme	Learning Outcomes	Learning Objectives	IC Codes	MITs	Assessment Tools
		At the end of the term, the students will be able to:	At the end of the lecture, the students will be able to:			



1	Introduction to Orthodontics	<ul style="list-style-type: none"> • Demonstrate the basic knowledge of fundamentals of Orthodontics and its terminologies • Discuss the need of Orthodontic treatment 	Knowledge <ul style="list-style-type: none"> • Define Orthodontics and describe its branches • Identify the aim and need of orthodontic treatment (IOTN) • Describe different terminologies used in Orthodontics 	IC 2	LGIS	MCQs SEQs VIVA
2	Growth & Development	<ul style="list-style-type: none"> • Correlate the concepts of growth and development of the craniofacial region with the development of dento-facial problems 	Knowledge <ul style="list-style-type: none"> • Discuss the concept of normal and abnormal pattern of growth and development of craniofacial complex • Define growth site and centers • Describe growth theories • Describe pre and post-natal growth of cranium, naso-maxillary complex, palate and mandible • Explain different growth assessment parameters • Describe growth of facial soft tissues • Discuss the concept of later stages of growth • Explain the growth rotations of the jaws 	IC 2	LGIS	MCQs SEQs VIVA
3	Development of Dentition	<ul style="list-style-type: none"> • Apply the knowledge of development of dentition in the 	Knowledge <ul style="list-style-type: none"> • Explain the features of primary, mixed and permanent dentition 	IC 2	LGIS / SGD	MCQs SEQs VIVA



		development of orthodontic problems	<ul style="list-style-type: none"> Describe tooth development and eruption, variation in development including size, number form and position of teeth and factors affecting development Describe the dimensional changes in dental arches during different dentition periods 			
4	Occlusion	<ul style="list-style-type: none"> Elaborate the knowledge of normal occlusion Apply the concept of development of occlusion in the development of orthodontic problems 	Knowledge <ul style="list-style-type: none"> Define normal and abnormal occlusion Describe Andrew's Six Keys of Occlusion Classify malocclusion Explain different causes of malocclusion 	IC 2	LGIS / SGD	MCQs SEQs VIVA
			Skill <ul style="list-style-type: none"> Identify different types of malocclusions on casts 	IC 1 to IC 5	Demonstrations / Practical	OSCE/Practical exam
5	Diagnostic aids in Orthodontics	<ul style="list-style-type: none"> Apply the use of different diagnostic aids in the orthodontic diagnosis, treatment planning and evaluation of treatment outcomes 	Knowledge <ul style="list-style-type: none"> Describe different radiographs used in Orthodontics Describe the indications, advantages and limitations of various radiographs Describe the radiation hazards 	IC 2	LGIS / SGD	MCQs SEQs VIVA
			Skill <ul style="list-style-type: none"> Perform interpretation of different radiographs 	IC 1 to IC 5	Demonstrations / Practical	OSCE / Practical exam



			<ul style="list-style-type: none"> • Perform cephalometric analysis and give its interpretation • Perform different cast analysis 			
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Practical

Weeks	Topic /Theme	Learning Objectives	IC Codes	MITs	Assessment Tools
Week 1	Orientation to the Orthodontic department Impression taking	<ul style="list-style-type: none"> • Develop familiarity with orthodontic instruments & appliances • Demonstrate knowledge of the techniques of history taking & clinical examination • Demonstrate the techniques of impression taking & bite registration 	IC1 to IC 6	Demonstration	OSCE/Practical exam
Week 2	Cast Analysis	<ul style="list-style-type: none"> • Practice the basic technique of performing cast analysis 	IC1 to IC 6	Demonstration	OSCE/Practical exam
Week 3	Basic wire bending exercises	<ul style="list-style-type: none"> • Demonstrate skills of basic wire bending in Orthodontics 	IC1 IC2	Demonstration	OSCE/Practical exam



Week 4	Lateral Cephalometry	<ul style="list-style-type: none"> • Demonstrate skills in lateral cephalometric tracing • Perform the lateral cephalometric analysis 	IC 1 IC 2 IC 4	Demonstration	OSCE/ Practical exam
Week 5	Lateral Cephalometry	<ul style="list-style-type: none"> • Demonstrate skills in lateral cephalometric tracing • Perform the lateral cephalometric analysis 	IC 1 IC 2 IC 4	Demonstration	OSCE/ Practical exam



Oral & Maxillofacial Surgery

S no	TOPIC	LEARNING OBJECTIVES At the end of lecture, student should be able to	IC CODE	MITIS	ASSESSMENT TOOL	LEARNING OUTCOMES At the end of term, student will be able to
01	ORIENTATION to ORAL & MAXILLOFACIAL SURGERY	<p>KNOWLEDGE</p> <ul style="list-style-type: none"> Describe role of maxillofacial surgery in health care system, domains of Oral Surgery Describe Multidisciplinary Team role/approach in a health care setting 	IC1 IC2	LGIS		Appraise the significance of Oral and maxillofacial Surgery and its application
02	EXODONTIA	<p>KNOWLEDGE</p> <ul style="list-style-type: none"> Define Exodontia Describe steps of history taking & patient examination Order and Interpret relevant laboratory and radiological investigations. Enlist indications & contraindication for closed/simple extractions 	IC1 IC2	LGIS SGD TUTORIAL PRACTICAL	SUMMATIVE MCQ,SAQ, OSPE,VIVA FORMATIVE DOPS ASSIGNMENT WARD TEST CLASS TEST	<ul style="list-style-type: none"> Diagnose & perform open extraction with profound anesthesia. Ascertain difficulty index of impacted teeth and complicated



		<ul style="list-style-type: none"> • Describe Open & Closed extraction • State the protocol to manage anxious patients before and during complicated exodontia • Describe various physical forces and their application in forceps and elevators used for exodontia • Describe radiographic interpretation in exodontia • State the justification for leaving root fragments in the socket • Enlist indications & contra-indications for open extractions • Describe the etiology and management of Dry-socket 				<p>exodontia along with appropriate referral to Oral & Maxillofacial Surgeon when required.</p> <ul style="list-style-type: none"> • Make appropriate referral and seek consultation from primary consultant in case of underlying other medical condition/disease, when required.
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		<ul style="list-style-type: none">• Define Impacted tooth• Enlist Etiology of impaction• Enlist teeth most common impacted teeth• Demonstrate mucoperiosteal flap in the oral cavity related to exodontia• Classify impacted 3rd molar• Determine the level of difficulty for extraction of Maxilla & Mandible impacted teeth• Describe the management of a patient with an impacted third molar• Discuss the need for prevention of complications• Manage the following complications				
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		<p>during and after exodontia:</p> <ul style="list-style-type: none">• Soft tissue injuries• Root fracture/ displacement• Injury to adjacent teeth• Injury to adjacent osseous-structures• Oro-antral communications• Postoperative bleeding• Delayed healing and infection• Fracture of the mandible• Classify Impacted Canine• Describe the various methods (clinical / radiological) to locate an impacted canine• list and select appropriate treatment option for				
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		<p>a patient with an impacted canine</p> <ul style="list-style-type: none"> Plan the sequence of multiple extractions <p>SKILL</p> <ul style="list-style-type: none"> Ascertain appropriate medical history and perform examination related to Exodontia patient Manage anxiety patient using anxiety reduction protocol with P.O medication Identify appropriate armamentarium of Exodontia Order appropriate investigations (laboratory & radiological) in view of patient previous history (medical & dental) and examination findings. Interpret radiologically a tooth that require extraction Interpretation and determine difficulty 	<p>IC1 IC2 IC3 IC4 IC5 IC6</p>			
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	<p>LOCAL ANESTHESIA</p>	<p>index of Impacted 3rd molar tooth by Radiological and clinical means</p> <ul style="list-style-type: none"> • Use of elevators and forceps according to general and mechanical principles • Manage a simple exodontia patient from pre-operative ,intra-operative to post-operative phase • Diagnose and manage Dry socket • perform close extraction of a patient reporting in OPD for tooth extraction <p>ATTITUDE</p> <ul style="list-style-type: none"> • Respect patients • Acquire Comprehensive History • Acquire Informed Consent <p>KNOWLEDGE</p> <ul style="list-style-type: none"> • Describe LA, its pharmacology, MOA, 	<p>IC1 IC2 IC3 IC4 IC5 IC6 IC1 IC2</p>			
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		<p>types, contents of cartridge</p> <ul style="list-style-type: none"> • Describe Local Anaesthesia dosages, toxicity and systemic manifestations • Describe Landmark of various LA BLOCK techniques of maxilla • Describe Landmark of various LA BLOCK techniques of mandible • Describe role of Vasoconstrictor in Local Anaesthesia <p>SKILL</p> <ul style="list-style-type: none"> • Identify the anatomical landmarks on patient for appropriate LA Technique • Chose and perform appropriate LA technique for relevant tooth extraction <p>ATTITUDE</p> <ul style="list-style-type: none"> • Respect patients 	<p>IC1 IC2 IC3 IC4 IC5 IC6</p> <p>IC1 IC2 IC3</p>			
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		<ul style="list-style-type: none"> Acquire Comprehensive History Acquire Informed Consent 	IC4 IC5 IC6			
03	MEDICAL EMERGENCY	<p>KNOWLEDGE</p> <ul style="list-style-type: none"> Evaluate a dental patient by Medical history & Physical examination Order appropriate investigations according to medical history Discuss the conditions when referral/consultation to primary physician is required Prevent with appropriate management for the expected medical emergency in dental patient with problems of the following systems: <ul style="list-style-type: none"> CVS Pulmonary Renal Hepatic Haematological Neurological 	IC1 IC2	LGIS, SGD, TUTORIAL, PBL, PRACTICAL	<p>SUMMATIVE MCQ,SAQ, OSPE,VIVA</p> <p>FORMATIVE DOPS ASSIGNMENT WARD TEST CLASS TEST</p>	<ul style="list-style-type: none"> Prevent a medical emergency in a dental setting by appropriate history taking and management accordingly Manage a Chair Side Medical Emergency as a team member



		<ul style="list-style-type: none">• Patients taking steroids, blood thinners• Manage pregnant and postpartum dental patient• Endocrine Disorders• Discuss the equipment and drugs of an emergency cart• Discuss role of team work in a medical emergency management• Discuss the management of following medical emergencies in a dental setting• Vasovagal Syncope• Hypoglycaemia• Chest Pain• Loss of consciousness• Hyperventilation• Angina Pectoris• Myocardial Infarction• COPD• Asthma• Foreign Body Aspiration• Anaphylaxis				
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		<ul style="list-style-type: none"> • Adrenal Crisis <p>SKILL</p> <ul style="list-style-type: none"> • Work as team member in management of a medical emergency • Identify relevant emergency drug from emergency cart • Obtain appropriate medical and drug history for prevention and management of any medical emergency <p>ATTITUDE</p> <ul style="list-style-type: none"> • Respect patients • Acquire Comprehensive History • Acquire Informed Consent 	IC1 IC2 IC3 IC4 IC5 IC6 IC1 IC2 IC3 IC4 IC5 IC6			
04	BASIC SURGICAL SKILLS	<p>Knowledge</p> <ul style="list-style-type: none"> • Develop a surgical diagnosis • Describe basic necessities and armamentarium for surgery • Describe basic principles of incisions in oral surgery 	IC1 IC2	LGIS, PRACTICAL, TUTORIAL, SGD	<p>SUMMATIVE MCQ,SAQ, OSPE,VIVA FORMATIVE DOPS ASSIGNMENT WARD TEST CLASS TEST</p>	<ul style="list-style-type: none"> • Design an appropriate surgical flap according to procedure , with application of flap principles



		<ul style="list-style-type: none"> Define these terms related to oral surgery flaps: height, base, width (apex), length, triangular, rectangular, submarginal, semi-lunar, corners, and sides Describe principle of Flap Design Describe various suturing material Techniques used in Oral Cavity Describe basic principles of suturing <p>SKILL</p> <ul style="list-style-type: none"> Draw and label the following flaps used in oral surgery <ol style="list-style-type: none"> 3 & 4 corner flaps and their variations. Envelop flap Sub marginal/semilunar flaps Y flap for tori removal Flap for impacted maxillary canines. 1st and 2nd stage implant surgery Flap for impacted wisdom teeth <ul style="list-style-type: none"> Perform following Suturing techniques 	<p>IC1 IC2 IC3 IC4 IC5 IC6</p>			<ul style="list-style-type: none"> Identify various suturing techniques and their application Apply clinically the principles of cross infection control Recognize a tissue injury, its type and management Obtain informed consent from patient related to exodontia and capable of making a referral when required
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		<p>on rubber sheet/napkin</p> <ol style="list-style-type: none"> I. Figure of eight II. Interrupted III. Continuous locking IV. Continuous Non Locking V. Vertical Matrix VI. Horizontal Matrix <p>KNOWLEDGE</p> <ul style="list-style-type: none"> • Describe the means of achieving hemostasis and management of dead space • Enlist physical and chemical causes if tissue damage • describe the physiology of wound (soft tissues & bone) repair: primary intention, secondary intention, healing of an extraction wound and osseo-integration • describe the factors that impair wound healing • Classify nerve injuries (Seddon & Sunderland). • Assess a patient with neural deficit 	<p>IC1 IC2</p>			
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		<ul style="list-style-type: none"> Describe the principles of management of a nerve injury. Describe consent, and its types. Describe components of informed consent Describe basic pillars of medical ethics Describe the requirement of referral, and how to make a referral <p>SKILL</p> <ul style="list-style-type: none"> obtain informed consent from patients Write a referral letter to a medical/dental specialist Apply the principles of Infection control & Aseptic Techniques in surgical practice <p>ATTITUDE</p> <ul style="list-style-type: none"> Takes consent from patient Greets patient Introduce himself to patient <p>KNOWLEDGE</p> <ul style="list-style-type: none"> Define sterilization and disinfection. Describe various sterilization 	<p>IC1</p> <p>IC2</p> <p>IC3</p> <p>IC4</p> <p>IC5</p> <p>IC6</p> <p>IC1</p> <p>IC2</p> <p>IC3</p> <p>IC4</p> <p>IC5</p> <p>IC6</p> <p>IC1</p>			
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		<p>techniques, tests to ensure sterilization.</p> <ul style="list-style-type: none"> • Describe various Disinfection means and methods. • Describe AUTOCLAVE, its principle and use. • Define Clean and sterile techniques and their application in oral surgery. • Describe Universal Precautions and Cross Infection Control • Describe a Needle Stick Injury, its prevention & management <p>SKILL</p> <ul style="list-style-type: none"> • Apply & Follow the principles of Cross Infection control & Aseptic Techniques in surgical practice • Management of Needle Stick Injury 	IC2			
05	TRAUMA ATLS	<p>KNOWLEDGE</p> <ul style="list-style-type: none"> • State etiology of maxillofacial trauma 	IC1 IC2	LGIS,CBL, TUTORIAL, SGD,	SUMMATIVE MCQ,SAQ, OSPE,VIVA	



	<p>MANDIBLE FRACTURE</p>	<ul style="list-style-type: none"> • Describe ATLS and BLS • Describe various airway management maneuvers (surgical & non-surgical) • classify mandibular fractures according to the type, site and favorability to reduction • Enlist complications of mandibular fractures • describe open & closed methods of fracture reduction & treatment <p><u>SKILL</u></p> <ul style="list-style-type: none"> • Examine patient with suspected mandibular fracture • diagnose mandibular fractures by eliciting signs & symptoms and • order & interpret radiographic investigations related to mandible fracture 	<p>IC1 IC2 IC3 IC4 IC5 IC6</p>	<p>PRACTICAL</p>	<p>FORMATIVE DOPS ASSIGNMENT WARD TEST CLASS TEST</p>	
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Practical

		<ul style="list-style-type: none"> formulate a treatment plan for mandibular fractures in adults and children Perform MMF via eye lets on study models <p>ATTITUDE</p> <ul style="list-style-type: none"> Respect patients Acquire Comprehensive History Acquire Informed Consent 	IC1 IC2 IC3 IC4 IC5 IC6			
Week	Topic/ Theme	Learning Objective	M.I.Ts	Assessment Tools	Instructor	
01	Orientation to OMFS	<ul style="list-style-type: none"> Orientation to OMFS Perform Chair & Operator Positioning Obtain appropriate History perform Clinical Examination Perform Prescription Writing 	*SGD/ Demo *Practical	*OSPE *VIVA *DOPS	*Dr. Maimoona	
02	Local Anesthesia	Identify & Describe LA <ul style="list-style-type: none"> Armamentarium Dosage Complications anatomical landmarks for various LA techniques Perform various techniques of Nerve Blocks & local anesthesia	*SGD/ Demo *Practical	*OSPE *VIVA *DOPS	*Dr.Fatima	
03	Exodontia	<ul style="list-style-type: none"> Identify and select appropriate Armamentarium 	*SGD/ Demo *Practical	*OSPE *VIVA *DOPS	*Dr.Fatima *Dr. Sadia	



		<ul style="list-style-type: none"> 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 			
04	<p>Medical Management of Compromised Patients</p> <p>TMJ and Pathology</p>	<ul style="list-style-type: none"> 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 	<p>*SGD/ Demo</p> <p>*Practical</p> <p>*PBL</p>	<p>*OSPE</p> <p>*VIVA</p>	<p>*Dr. Maimoona</p> <p>*Dr.Sadia</p>
05	Formative Assessment	<ul style="list-style-type: none"> DOPS followed by individual feedback 		DOPS	Dr Maimoona Dr Fatima
06	Basic Principles of Surgery	<ul style="list-style-type: none"> 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 	<p>*SGD/ Demo</p> <p>*Practical</p>	<p>*OSPE</p> <p>*VIVA</p> <p>*DOPS</p> <p>*Assign- ment</p>	*Dr. Sadia



07	Oral & Maxillofacial Trauma	<ul style="list-style-type: none"> 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 CBL 	*SGD/ Demo *Practical *CBL	*OSPE *VIVA *Assign- ment	*Prof.Dr.Irfan Shah *Dr. Maimoona *Dr.Fatima
08	ASSESMENT WEEK	<ul style="list-style-type: none"> Complete and Submit LOG BOOKS Submit Assignments End of Rotation Ward Test 		*OSPE *VIVA *Assign- ments *Attendanc e	All Faculty

Paedodontics

TOPIC	Topic / Theme	Learning Outcomes		IC Codes	MITs	Assessment method
		At the end of each module, student will be able to:				
		Knowledge	Skills			



INTRODUCTION	Philosophy of planning dental treatment in children	<ul style="list-style-type: none"> • Explain the principles and objectives of planning dental treatment specifically tailored for children. <p>Recognize the influence of child behavior on treatment planning decisions.</p>	<ul style="list-style-type: none"> • Develop individualized treatment plans for pediatric patients. <p>Provide clear instructions on post-treatment care and preventive measures to parents</p>		Lecture/Self-directed learning / Assignment	MCQ+ SEQ
RADIOLOGY	Principles of radiation safety and the specific considerations for pediatric patients	<ul style="list-style-type: none"> • Explain the potential risks and benefits of dental radiographs in children. • Differentiate between normal variations and abnormal findings in dental radiographs of children. • 	<ul style="list-style-type: none"> • Demonstrate proper positioning and exposure techniques to obtain high-quality pediatric dental radiographs. • Identify and correct common errors in radiographic positioning to improve image quality. • 		Lecture/Case-based learning/chairside learning	MCQ+ SEQ
Dental caries in children and adolescents	Caries aetiology, risk assessment, preventive strategies, restorative options	<ul style="list-style-type: none"> • Etiology and Pathogenesis of Dental Caries • Explain the microbial and dietary factors that contribute to caries initiation and progression in children • Describe evidence-based 	<ul style="list-style-type: none"> • Perform minimally invasive restorative procedures, such as dental fillings and stainless steel crowns, in children • Apply non-surgical caries management techniques, 		Lectures; Case-based learning/Chair-side learning	MCQ+ SEQ



		<p>preventive measures, such as fluoride therapy and sealants, to minimize caries incidence in children</p> <p>Apply appropriate diagnostic tools, such as visual-tactile examination and radiographic interpretation</p>	Management of ECC			
Prevention of dental diseases in children	<p>Oral hygiene measures, fluoride therapy, dietary counselling, sealants, oral health education, safety and toxicity of fluorides</p>	<ul style="list-style-type: none"> Describe the unique oral health needs and challenges specific to children at different stages of growth and development. Describe the long-term benefits of early preventive interventions on oral health throughout a child's life 	<ul style="list-style-type: none"> Fluoride application and silver diamine fluoride (SDF) treatment. Instruct children and parents on the correct usage of preventive products, such as fluoride toothpaste and mouth rinses. <p>Application of pits and fissure sealants</p>		Lectures; Case-based learning/Chair-side learning	MCQ+ SEQ
Psychological and pharmacological management of children's behaviour	<ul style="list-style-type: none"> Behaviour guidance techniques, communication skills, pharmacology 	<ul style="list-style-type: none"> Describe the typical behavioral patterns and emotional responses of children at different developmental stages Identify and apply behavior 	<ul style="list-style-type: none"> Address children's concerns and questions in a compassionate and reassuring manner 		Lectures; Case-based learning/Chair-side learning	MCQ+ SEQ



	cal and non pharmacological options for anxiety and pain management	management strategies specific to pediatric dental care, such as positive reinforcement and tell-show-do techniques.	Apply a range of behavior management techniques to help children cope with dental procedures			
Restorative dentistry for primary teeth	Anatomic differences between primary and permanent dentition, Materials and techniques for primary tooth restorations, Sealants and conservative adhesive restorations.	<ul style="list-style-type: none"> Understand the morphology and characteristics of primary teeth. <p>Learn various cavity preparation techniques suitable for primary teeth and how to place restorative materials like dental composites or glass ionomer cements to restore the teeth.</p>	<ul style="list-style-type: none"> Demonstrate proficiency in cavity preparation techniques appropriate for primary teeth, considering their size, morphology, and pulp proximity. <p>Educate parents or guardians about the importance of primary tooth restorations and sealants</p>		Lectures; Case-based learning/Chair-side learning	MCQ+ SEQ
Pulp therapy in primary and young permanent teeth	Diagnosis and treatment of pulp conditions in primary and young permanent teeth, pulpotomy, pulpectomy, apexification	<ul style="list-style-type: none"> Identify clinical and radiographic signs of pulp involvement, including pulp exposure, pulpitis, and periapical pathology. Learn the indications and contraindications for pulpotomy and pulpectomy in primary 	<ul style="list-style-type: none"> Perform a comprehensive and accurate clinical examination of primary and young permanent teeth. Apply appropriate diagnostic tests, such 		Lectures; Case-based learning/Chair-side learning	MCQ+ SEQ



	and apexogenesis. Follow up and recall.	<p>teeth with reversible pulpitis.</p> <ul style="list-style-type: none"> • Understand the different techniques and materials used for pulpotomy and pulpectomy • Learn the apexification technique, • Understand apexogenesis 	<p>as pulp vitality tests, percussion tests, and thermal sensitivity tests.</p> <p>Plan and schedule appropriate follow-up and recall appointments to monitor the healing and long-term success of pulp therapy.</p>			
Space management and space maintainers	Evaluation of space needs, space maintenance options, management of early tooth loss	<ul style="list-style-type: none"> • Define space maintainers and explain their role in pediatric dentistry. • Describe the types and classifications of space maintainers used for different clinical scenarios. • Identify the indications and contraindications for space maintainer placement. • Implement evidence-based approaches to space management in real-world clinical scenarios. 	<ul style="list-style-type: none"> • Perform a comprehensive oral examination to identify the need for space maintainers <p>Assess the space requirements and select the appropriate type of space maintainer</p>		Lecture/Case-based learning/chairside learning	MCQ+ SEQ
Anomalies of	Developmental disturbances,	<ul style="list-style-type: none"> • Define developmental 	<ul style="list-style-type: none"> • Utilize radiographic 		Lecture/Case-based	MCQ+ SEQ



<p>developing dentition</p>	<p>genetic and systemic conditions affecting tooth development, anomalies of tooth size, number and form. Enamel defects, dentin defects, anomalies of cementum</p>	<p>disturbances and dental anomalies affecting tooth development, including anomalies of tooth size, number, and form.</p> <ul style="list-style-type: none"> Identify the various genetic and systemic conditions that can impact tooth development. <p>Analyze the different treatment approaches and management options for patients with developmental disturbances</p>	<p>imaging to aid in the diagnosis and evaluation of dental anomalies.</p> <ul style="list-style-type: none"> Differentiate between dental anomalies and normal variations in tooth development. Formulate an appropriate treatment plan based on the severity and impact of dental anomalies on oral health. 		<p>learning/chairside learning</p>	
<p>Dental trauma to primary and young permanent teeth</p>	<p>Diagnosis, emergency management, and treatment of dental trauma in children. sequelae of trauma to primary and permanent dentition</p>	<ul style="list-style-type: none"> Describe the etiology, prevalence and classification of dental trauma in children and its impact on primary and permanent dentition. Perform a thorough clinical examination and radiographic assessment to accurately diagnose. Develop an appropriate treatment plan for dental 	<ul style="list-style-type: none"> Students will be able to recognize and differentiate between different types of dental trauma in clinical scenarios and radiographs. Students will be able to evaluate and apply appropriate treatment. 		<p>Lecture/Case-based learning/chairside learning</p>	<p>MCQ+ SEQ</p>



		<p>trauma.</p> <p>complications arising from dental trauma, such as pulp necrosis, root resorption, and periodontal sequelae,</p>				
Nitrous oxide-oxygen inhalation sedation	Indications, administration, monitoring, and management of nitrous oxide-oxygen sedation in children	<ul style="list-style-type: none"> Describe the indications and contraindications for nitrous oxide-oxygen sedation in pediatric patients. Demonstrate knowledge of the equipment and materials required for nitrous oxide-oxygen sedation. 	Students will be able to identify appropriate clinical situations in which nitrous oxide-oxygen sedation is indicated for managing anxiety and pain in children during dental procedures		Lecture/Case-based learning/chairside learning	MCQ+ SEQ
Dental management of special children	Treatment considerations for children with special healthcare needs, behaviour management, modifications in dental care	<ul style="list-style-type: none"> Understand the diverse medical, developmental, and psychological conditions that may classify a child as having special healthcare needs. <p>Describe the importance of multidisciplinary collaboration in the dental care of children with special healthcare needs.</p>	<ul style="list-style-type: none"> Students will be able to identify and differentiate various medical and developmental conditions in children that may require special consideration. 		Lecture/Case-based learning/chairside learning	MCQ+ SEQ
Hospital Dentistry	Introduction to hospital	<ul style="list-style-type: none"> Describe the procedures 	Students will be able to conduct a comprehensive		Lecture/Case-based	MCQ+ SEQ



	<p>dentistry. Patients requiring hospital dentistry, description of procedures for admissions, investigations, clinical notes, medications and discharge. Protocols of operation theatre.</p>	<p>and protocols for admitting patients for hospital dentistry.</p> <p>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 instructions and follow-up plan</p>	<p>assessment, order appropriate investigations, and interpret the results to ensure safe and effective dental care.</p>		<p>learning/chairside learning</p>	
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Term Syllabi

Operative Dentistry

WEEK	TOPIC	NO. OF LECTURES	DELIVERED BY
1 st Week	Introduction to Operative Dentistry Sterilization & infection control	01 01	Prof Dr Beenish
2 nd Week	Cariology /caries risk assessment	02	Prof Dr Beenish
3 rd Week	Prevention & management of caries	02	Prof Dr Beenish
4 th Week	Fundamentals of tooth preparation Dental amalgam	02	Prof Dr Beenish



5 th Week	Class test Management of medically compromised patients	01	Prof Dr Beenish
6 th Week	Dental amalgam Dental cements	02	Dr Afshan
7 th Week	Diseases of pulp & periradicular tissues	02	Prof Dr Beenish
8 th Week	Diseases of pulp & periradicular tissues	02	Prof Dr Beenish
9 th Week	Occlusion	02	Dr Sharaz
10 th Week	Dental composites Adhesion to enamel & dentin	02	Dr Sharaz
11 th Week	Adhesion to enamel & dentin	02	Dr Sharaz
12 th Week	1 st term exam		

Prosthodontics

Weeks	Topic	Instructor
WEEK 1	<ul style="list-style-type: none"> Introduction to Fixed Partial dentures History taking and clinical examination 	Dr. Aamir Rafiq
	<ul style="list-style-type: none"> Systemic health aspects in complete denture I 	Dr. Sameen Zehra
WEEK 2	<ul style="list-style-type: none"> Treatment planning for a single missing tooth Ante's Law. Treatment planning for mesially tilted abutment & pier abutment 	Dr. Aamir Rafiq
	<ul style="list-style-type: none"> Systemic health aspects in complete denture-II 	Dr. Sameen Zehra
WEEK 3	<ul style="list-style-type: none"> Treatment planning for multiple missing teeth Principles of tooth preparation 	Dr. Aamir Rafiq



	<ul style="list-style-type: none"> • Nutritional considerations 	Dr. Sameen Zehra
WEEK 4	<ul style="list-style-type: none"> • Principles of occlusion 	Dr. Aamir Rafique
	<ul style="list-style-type: none"> • Sequelae of wearing complete dentures I 	Dr. Sameen Zehra
WEEK 5	<ul style="list-style-type: none"> • Principles of occlusion • Principles of tooth preparation 	Dr. Aamir Rafique
	<ul style="list-style-type: none"> • Sequelae of wearing complete denture-II 	Dr. Sameen Zehra
WEEK 6	<ul style="list-style-type: none"> • Principles of tooth preparation • Complete cast crown preparation 	Dr. Aamir Rafique
	<ul style="list-style-type: none"> • Sequelae of wearing complete denture-III 	Dr. Sameen Zehra
WEEK 7	<ul style="list-style-type: none"> • Metal ceramic crown preparation • All ceramic crown preparation 	Dr. Aamir Rafiq
	<ul style="list-style-type: none"> • Management of abused oral tissues 	Dr. Sameen Zehra
WEEK 8	<ul style="list-style-type: none"> • All ceramic crown preparation • Pre prosthetic surgery-II 	Dr. Aamir Rafiq
		Dr. Sameen Zehra
WEEK 9	<ul style="list-style-type: none"> • Tissue management and impression making 	Dr. Aamir Rafiq
	<ul style="list-style-type: none"> • Management of abused oral tissue 	Dr. Sameen Zehra
WEEK 10	<ul style="list-style-type: none"> • Tissue management and impression making 	Dr. Aamir Rafiq
	<ul style="list-style-type: none"> • Immediate denture 	Dr. Sameen Zehra
WEEK 11	<ul style="list-style-type: none"> • Method for gingival tissue retraction • Disinfection of impression materials • Over dentures • Pontic design 	Dr. Aamir Rafiq
WEEK 12	1st Term Exam	

Orthodontics

Week	Topic	Subtopics	No. of lectures	Instructor
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1st Week	Introduction to Orthodontics		<ul style="list-style-type: none"> • Definition & its branches • Epidemiology • Basic terminologies • IOTN 	04	Prof. Dr. Waheed
2nd Week			Growth & development	<ul style="list-style-type: none"> • Basic terminologies • Methods of studying growth • Growth of cranial vault and cranial base • Growth of maxilla, mandible and facial soft tissue • Theories of growth control 	05
3rd Week	Later stages of growth <ul style="list-style-type: none"> • Adolescence and its stages • Maturational and aging changes 	02		Dr. Shahzonia	
4th Week	Later stages of growth <ul style="list-style-type: none"> • Rotation of jaws during growth 				
5th Week	Development of dentition	<ul style="list-style-type: none"> • Prenatal dental development • Predental, primary, mixed and permanent dentition periods • Eruption stages, sequence and timing • Nolla stages • Dental age • Dimensional changes in dental arches • Developmental abnormalities 	04	Dr. Shahzonia	
6th Week		1st TERM CLASS TEST			
7th Week	Occlusion	<ul style="list-style-type: none"> • Types of occlusion • CO-CR • Andrew's six keys of occlusion 	03	Prof. Dr. Waheed	
8th Week	Malocclusion		02	Dr. Shahzonia	



9 th Week			<ul style="list-style-type: none"> • Etiology of malocclusion 		
			<ul style="list-style-type: none"> • Classification of malocclusion 	02	Dr. Hasnain
10 th Week		Diagnostic aids in orthodontics	<ul style="list-style-type: none"> • Lateral cephalometry 	02	Dr. Hasnain
			<ul style="list-style-type: none"> • Radiology (OPG & PA ceph) 		
11 th Week			<ul style="list-style-type: none"> • CVM Stages 	02	Prof. Dr. Waheed
			<ul style="list-style-type: none"> • Hand and wrist Radiograph 		
12 th Week	1 ST TERM EXAM				



Oral & Maxillofacial Surgery

No of lectures=24

Total No of Weeks =12 (11+1) = Academics +Term Exam

Facilitators:

1. Prof.Dr.Irfan Shah
No of lectures: 05
2. Dr. Maimoona Siddiq
No of lectures: 15
3. Dr. Fatima Khattak
No of lectures: 03

S#	TOPIC	No of Lectures(L.G.I.S)	Facilitator
01	Medical Emergency	05	Dr. Maimoona Siddiq
02	Exodontia	10	Dr. Maimoona Siddiq
03	Basic surgical Skills	05	Prof.Dr.Irfan Shah
04	ATLS	01	Dr. Fatima khattak
05	Trauma (Mandible)	02	Dr. Fatima Khattak
06	Class Test	01	Dr. Sadia Moin

Paedodontics

WEEK	TOPIC	NO. OF LECTURES	DELIVERED BY
1 st Week	Introduction to Peadiatric Dentistry	01	Dr Amna
2 nd Week	Philosophy of planning dental Tx in children	01	Dr Amna



3 rd Week	Dental caries in children & adolescents	01	Dr Amna
4 th Week	Dental caries in adolescents	01	Dr Amna
5 th Week	Caries risk assessment	01	Dr Amna
6 th Week	Prevention of dental diseases	01	Dr Amna
7 th Week	Management of caries	01	Dr Amna
8 th Week	Class Test	01	Dr Amna
+	Behavior guidance techniques for children	01	Dr Amna
10 th Week	Non pharmacological management for anxiety & pain	01	Dr Amna
11 th Week	Pharmacological management for anxiety & pain	01	Dr Amna
12 th Week	1 st term exam		



Learning Resources

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

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/>

Orthodontics

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



Prosthodontics

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

Paedodontics :

Recommended Textbooks

- Paediatric dentistry infancy through Adolescence
By: Paul S Casamasimo Henry W.fields Dennis j. McTigue, Arthur Nowak
5th edition Sanders 2013
- Dentistry for the child and Adolescent
By Ralph E MacDonald

9th edition must be Mosby.Co 2011
- Paediatric Dentistry
By Richard Welbury ,Monty S Duggal and Marie Therese Hosey
5th edition Oxford University Press 2018

