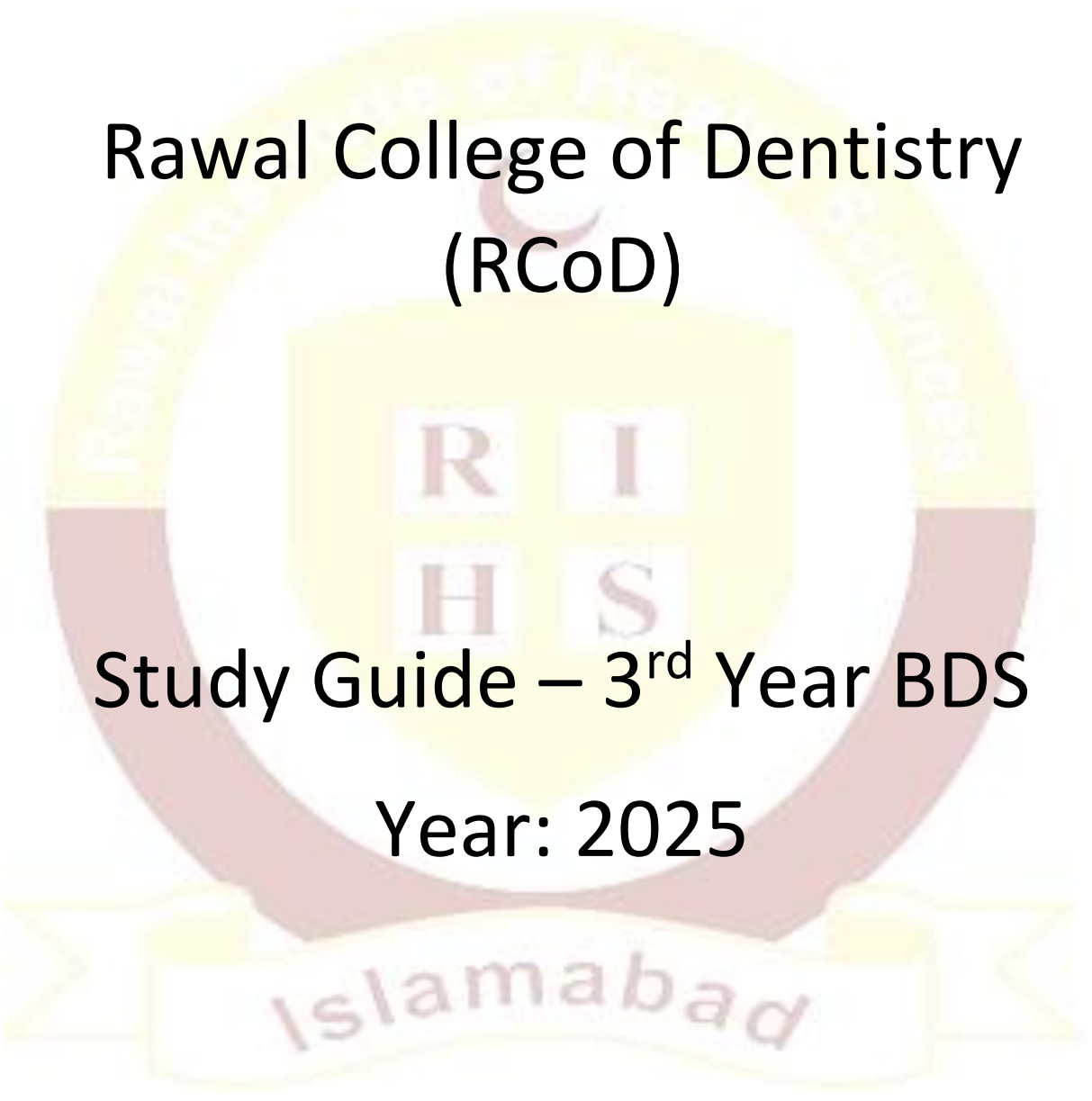


The logo of Rawal College of Dentistry (RCoD) is a circular emblem. It features a yellow outer ring with the text "Rawal College of Dentistry" at the top and "Islamabad" at the bottom. Inside the ring is a shield divided into four quadrants, each containing a letter: "R" (top-left), "I" (top-right), "H" (bottom-left), and "S" (bottom-right). A red crescent and star are positioned above the shield. Below the shield is a yellow banner with the word "Islamabad" in red script.

Rawal College of Dentistry (RCoD)

Study Guide – 3rd Year BDS

Year: 2025

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Introduction

This study guide book is designed for undergraduate dentistry students at Rawal College of Dentistry (RCoD), Rawal Institute of Health Sciences (RIHS) to provide a resource material and to highlight important aspects of curriculum. RCoD, since its inception in 2011 has been following the curriculum as being recommended by the Pakistan Medical & Dental Council (PM&DC). However, with these changing times when there is an exponential growth in knowledge in all areas of medical studies as well as due to the effects of globalization, there is a strong need to revise the curriculum.

The basic aim and objectives of this study guide is to give curriculum overview and orientation of 3rd Year of BDS to the undergraduate dental students as they enter pre-clinical and clinical wards/rotations. It aims to promote self-regulated lifelong learning among students by giving them the control over their learning, recognize deficient areas and polish their basic knowledge and clinical skills. The pervasive curriculum aspects of undergraduate's competencies, assessment policies and curriculum are mapped in this guide. Horizontal integration across the year better conceptual understanding while vertical integration promotes clinically relevant understanding. As the 3rd Year BDS introduces dental students to clinical rotations in various disciplines of dentistry, this guide aids them to correlate various areas and engage them in multidisciplinary activities to realize the importance of integration of these subjects.

RCoD aims to improve health indicators of society by improvement of students and doctors in preventive health service provision and health education provision to society through community programs. The study guide gives an overview of intended course outcomes and objectives in relation to the course content. The assessment methodology tailored to intuitional and university strategy is provided in this guide. It has been designed keeping in account PMDC criteria and curriculum.

Our aim to improve it by every passing day. In addition to being oriented to developing a sound grasp of knowledge, our undergraduate students are also given support through mentorship which encourages them to develop core competencies to help them as clinicians in the future. Student's feedback has been seeded and incorporated at all stages during study guide development which is considered an integral component of curriculum design and teaching and assessment methodologies.

Mission

“Empowering education and Health care services through Research and development cultivating future Health Professionals”

Vision

- Rawal Institute of Health Sciences (RIHS), Islamabad, envisions to become a globally recognized institution dedicated to advancing health, well-being, and medical knowledge through innovative education, trans formative research, and compassionate care.
- Our system will empower the next generation of health professionals with the skills, ethics, and leadership required to address the evolving healthcare challenges of the future.
- Through a commitment to excellence, sustainability, and human-centered care, we aim to set the standard for health sciences education and make a profound impact on global health systems for the under-privileged communities.

Core Values

- Commitment to quality in education, research and healthcare.
- Advancing medical knowledge through research
- Upholding ethics and professionalism
- Continuous faculty and student development
- Patient-centered, empathetic care
- Teamwork and leadership in healthcare education
- Community equipment

Program Outcomes

Knowledge

- Demonstrate a strong foundation in dental and medical sciences, integrating evidence-based research into clinical practice.
- Understand and apply the principles of preventive, diagnostic, and therapeutic dentistry to address oral health challenges.
- Exhibit competency in identifying and managing common and complex dental conditions using the latest advancements in dentistry.

Skills

- Perform clinical procedures with precision, ensuring patient safety and comfort while adhering to ethical and professional standards.
- Utilize modern dental technologies and treatment modalities effectively in patient care.
- Engage in research and innovation to enhance dental knowledge and contribute to community-based healthcare solutions.

Attitude

- Demonstrate professionalism, ethical integrity, and leadership in clinical and academic settings.
- Show empathy, cultural sensitivity, and effective communication when treating diverse patient populations.
- Commit to lifelong learning, teamwork, and continuous improvement in dental practice to address evolving healthcare challenges.

Aims & Objectives of Study Guide

The main aim of the core component of BDS course (identified under the knowledge, skills and attitude domains) is to provide a solid scientific foundation imbued with strong humanistic values to the students so that they are able to deliver good dental practice ethically to the community. The course learning outcomes provide a strong backbone for the overall curriculum. Outcomes for each module and specific objectives for each teaching/learning session are defined to ensure the smooth delivery of the curriculum.

The objectives of making study guides for students include:

- To give them overview of academic year.
- To help them manage and plan studies throughout the year
- To assist students so they have an idea of various learning teaching methodologies
- To guide about the modular system and learning methods
- To help students plan preparation throughout the year and improve throughout the year performance by self-reflection
- To inform on the course objectives that have to be achieved and learning outcomes
- To reinforce information on assessment regulations including internal evaluation and annual professional examinations
- To have better understanding of the modes and methods of assessment.
- To inform who to contact for academic and administrative issues.
- To assist students to prepare themselves as they enter clinical years for patient dealing and management
- To help students liaise with various academicians & clinicians to polish their grasp on theoretical knowledge and its practical implementation to improve patient care.

Curricular Framework

Rawal College of Dentistry, since its inception in 2011 has been following the curriculum as being recommended by the Pakistan Medical & Dental Council (PM&DC). However, curriculum is a living dynamic entity and with these changing times when there is an exponential growth in knowledge in all areas of medical studies as well as due to the effects of globalization, there is a strong need to re-look at the curriculum.

The curriculum becomes more relevant when the subjects are inter-linked and taught and assessed in a conceptual form. Hence, we need to create learning experiences that demonstrate the relationship of various disciplines, thus heightening their relevance.

In accordance with the vision of Shaheed Zulfiqar Ali Bhutto Medical University (SZAMBU), Rawal Dental College faculty has identified the following as the key features of its curricular approach:

- The focus of the curriculum is to be on a solid ground of medical knowledge, appropriate up-to date skills and the development of noble attitudes as well as professional ethics and behavior that is deemed essential for the continued development of the individual.
- The sequence of the curriculum needs to be focused on planned progression of cumulative learning.

BDS curriculum framework includes four years of study including two phases:

Phase I – Includes 1st & 2nd Year BDS

First and second years of BDS are the foundation years of Dental education during which students are exposed extensively to basic medical, dental and basics of clinical sciences. This is correlated to the clinical cases through the problem-based learning packages and early clinical exposures. The curriculum has system based modules with more emphasis on pathogenesis, community dentistry, dental materials and pharmacokinetics.

Phase II – Includes 3rd & Final Year BDS

It comprises of 3rd and final years of BDS. In third year clinical rotations/ clerkships in various disciplines as Oral Pathology, Periodontology, Oral Medicine/Diagnostics, General Medicine, General Surgery, Prosthodontics, Operative dentistry and OMFS will be carried out. In final year, students will rotate in Oral surgery, Operative dentistry, Prosthodontics and Orthodontics.

Teaching & Learning Methodologies

To enhance learning process, various innovative teaching/learning methods are being employed throughout the course along with lectures, practical, demonstration, tutorials etc.

Interactive Lectures (IL) are used to introduce a subject, and discuss the broad concepts.

Small Group Discussions (SGD) These interactive sessions will be conducted for each subject in small groups. During these sessions students learn, discuss and bring in their learning problems of the respective subject which are discussed in the guidance of subject experts.

Problem-based learning (PBL) is a small group-learning process of 8-12 students guided by a facilitator. For a given problem, two sessions of one to two hours are scheduled to achieve the learning objectives. Students use the 'Seven Jump' approach to discuss a problem using their existing knowledge, and conclude the first session with a list of objectives for further study. Students gather information and converge in second session to share, discuss and build new knowledge.

Team based learning (TBL) is a small group active learning instructional strategy. It provides students with opportunity to apply conceptual knowledge through a sequence of activities including, self-study, IRAT, GRAT, immediate feedback and application exercises. Students work individually as well as in teams to compare effectiveness of teamwork and collaborative learning.

Self-directed learning (SDL) is the basic requirement for the successful implementation of the PBL curriculum. Students need ample time to research for their learning needs.

Practical (P) & Demonstrations (D) sessions are conducted to reinforce concepts developed during theoretical sessions. These provide students an opportunity to make their personal observations in relation to their theoretical knowledge.

Clinical Case presentation (CP) to enhance clinical correlation, theoretical and practical knowledge is supplemented by case presentations.

Skill Lab Sessions (SL) students in groups will learn various behavioral and practical skills essential for a competent doctor. This will involve working with simulation aids, procedure demonstrations, role plays etc.

Assignments (A) create teaching and learning opportunities to think and learn about specific content in the curriculum. Research that goes into making assignment benefits student's independent learning, critical thinking and analytical ability.

Assessment Methodologies

Assessment is a continuous process which emphasizes on critical thinking skills and application of knowledge rather than mere recall of basic facts. All the basic components of the objectives of the curriculum i.e. knowledge, skills and attitudes will be assessed.

Formative Assessment

Assessment tools specifically aimed towards self-evaluation, helping students work out their own areas that need improvement. It will be carried out throughout the length of each module by variety of methods appropriate for the content of the respective module. These can be in the form of assignments, MCQ's, quick spot-tests, quizzes, spotting during the various teaching learning sessions etc.

Summative Assessment

The summative assessment is in the form of Module exams, and Send up Examination conducted by RCoD, RIHS at the end of each module/ term, and End of Year "Annual Professional Examination" conducted by SZABM University at the end of each academic year.

Assessment Methodologies

Following tools are used for evaluation of students.

- **MCQ's:** This type of item comprises of a stem clinical scenario-based which is followed by five alternatives with varying degree of truth in them. Students are supposed to select the most correct answer.
- **OSPE (Objectively Structured Practical Exam)** requires identification of the structure, its function, and analysis on the specimens, models, charts, reports and histology slides and pictures provided.
- **Long Case** to assess the candidate's ability of gathering adequate information from thorough medical history and physical examination, interpreting them to come up with a probable diagnosis and formulating a management plan.
- **Viva** stations are a type of oral examination where students verbally defend their work, allowing examiners to assess understanding and critical thinking beyond written work.

Examination

There will be theory MCQ based papers and practical assessment at the end of each module along with a Send up exam at the end of an academic year before the Annual Professional Exam which is conducted by SZABMU.

Marks Distribution

- **Theory Paper**

Total marks = 100 Marks

MCQs = 80 Marks

Internal assessment = 20 Marks

- **Practical Examination**

Total Marks = 100 Marks

OSPE & Viva voce = 80 Marks

Internal Assessment = 20 Marks

- **Internal/ Continuous Assessment**

Continuous assessment includes marks of end-of-module, presentations, class tests, assignments, practical skills, attitude, conduct, discipline, DME activities and practical copies.

- **Grand Total**

$100 + 100 = 200$

Student Mentorship

- Mentoring is a process for the informal transmission of knowledge, and the psychosocial support perceived by the recipient as relevant to work, career, or professional development.
- Mentoring entails informal communication, usually face-to-face and during a sustained period of time, between a person who is perceived to have greater relevant knowledge, wisdom, or experience (the mentor) and a person who is perceived to have less (the protégé).
- Mentoring program at the dental college incorporates a wide range of objectives. It helps in psychosocial support, career guidance, role modelling, and communication. Clinical mentoring programs help to develop student's clinical skills and can increase interest in undersubscribed specialties. Those that focus on teaching professionalism are integrated into medical school curriculums in order to overcome the hidden curriculum.
- Positive mentoring plays a part in reversing the decline of academic medicine, by sparking interest through early research experiences. It also has an important role in encouraging recruitment of under-represented groups into the profession through widening access programs.
- These counselling sessions are planned to develop a learning and partnership, to analyze current trends in medical student mentoring programs, taking into account their objectives, execution, and evaluation. We outline the challenges encountered, potential benefits, and key future implications for mentees, mentors, and institutions.
- A specific time has been allotted for mentorship and counselling for 3rd Year BDS students which is followed upon on regular basis to aid the students.

Academic Calendar



Rawal Institute of Health Sciences

Academic Calendar 2025

3rd Year BDS

Dated:23-01-2025

TERM	EVENT	DATE	WEEKS	
1 st Term	• Course Work	6 th Jan – 29 th March	12 weeks	15 weeks
	• Eid-ul-Fitr + Sports Week	31 th March – 5 th April	01 week	
	• 1 st Term Exam	7 th April – 18 th April	02 weeks	
2 nd Term	• Course Work	21 th April – 28 th June	10 weeks	15 weeks
	• Eid-ul-Azha	6 th June – 9 th June		
	• 2 nd Term Exam	30 th June – 11 th July	02 weeks	
	• Summer Break	14 th July – 2 nd Aug	03 weeks	
3 rd Term	• Course Work	4 th Aug – 3 rd October	09 weeks	11 weeks
	• Send-up Exam	6 th October – 17 th October	02 weeks	
Electives and Preparatory Leaves		18 th October – 18 th November	04 weeks	
3 rd Annual Professional Exam		November		

- Remaining clinical quota needs to be completed during summer break.


Prof. Dr. Saad Asad
Principal
RIHS


Dr. Amna Amjad
Coordinator 3rd Year
RIHS


Dr. Zarrah Wasim
Medical Education
RIHS

Timetable

Time Table						
3rd Year BDS - Year 2025						
Month - Week						
Time	08:00 - 08:50	08:55 - 09:45	09:50 - 10:40	10:45 - 02:10	02:10 - 03:00	
Day Date	Oral Medicine Topic Teacher Name Venue	Periodontology Topic Teacher Name Venue	Operative Dentistry / OMFS Topic Teacher Name Venue	Clinical Rotation General Surgery General Medicine	PBL	
Time	08:00 - 08:50	08:55 - 09:45	09:50 - 10:40	10:45 - 02:10		
Day Date	Prosthodontics / OMFS Topic Teacher Name Venue	Periodontology Topic Teacher Name Venue	General Surgery Topic Teacher Name Venue	Clinical Rotation General Surgery General Medicine		
Time	08:00 - 08:50	08:55 - 09:45	09:50 - 01:10	01:20 - 02:10	02:10 - 03:00	
Day Date	Oral Pathology Topic Teacher Name Venue	Oral Pathology Topic Teacher Name Venue	Clinical Rotation Operative Dentistry Prosthodontics Periodontology Oral & Maxillofacial Surgery	General Medicine Topic Teacher Name Venue	PBL	
Time	08:00 - 08:50	08:55 - 09:45	09:50 - 12:20	12:20 - 01:10	01:10 - 02:00	02:00 - 02:50
Day Date	Periodontology Topic Teacher Name Venue	General Surgery Topic Teacher Name Venue	Clinical Rotation Operative Dentistry Prosthodontics Periodontology Oral & Maxillofacial Surgery	Oral Pathology Topic Teacher Name Venue	Oral Pathology Practical Topic Teacher Name Venue	Oral Pathology Practical Topic Teacher Name Venue
Time	08:00 - 08:40	08:50 - 09:30	09:40 - 12:00	12:10 - 12:50	12:50 - 01:30	01:30 - 03:00
Day Date	Perio / OM / OP Topic Teacher Name Venue	Oral Medicine Topic Teacher Name Venue	Clinical Rotation Operative Dentistry Prosthodontics Periodontology Oral & Maxillofacial Surgery	General Medicine Topic Teacher Name Venue	Jummah Break	PBL
Time	08:00 to 02:00					
Day Date	Clinical Rotation Operative Dentistry Prosthodontics Periodontology Oral & Maxillofacial Surgery					
Day Date	Holiday					

Group A - Sr. No 01 - 13

Group B - Sr. No 14 - 26

Group C - Sr. No 27 - 39

Group D - Sr. No 40 - 51

DME Coordinator – Dr. Zarrah
Wasim

Class Coordinator – Dr. Amna
Amjad

Principal – Prof Saad Asad

Study Hours

3 rd Year BDS								
Periodontology	Oral Medicine	Oral Pathology	General Medicine	General Surgery	Pre-Clinical Prosthodontics	Pre-Clinical Operative Dentistry	Pre-Clinical Oral & Maxillofacial Surgery	Behavior Science, ICT & Research
187 Hours	150 Hours	180 Hours	184 Hours	182 Hours	114 Hours	114 Hours	80 Hours	101 Hours
Annual University Exam	Annual University Exam	Annual University Exam	Annual University Exam	Annual University Exam	Annual Internal Exam	Annual Internal Exam	Annual Internal Exam	

Islamabad

Task Force

Class In-charge: Dr. Amna Amjad

Department / Subject	Subject In charge
Periodontology	Col(R) Prof. Muhammad Kaleem
Oral Medicine	Dr. Mazhar Khan
Oral Pathology	Prof. Faiza Hassan
General Medicine	Dr. Nadeem Yousaf
General Surgery	Dr. Saira Mehmood
Pre-Clinical Prosthodontics	Dr. Amna Amjad
Pre-Clinical Operative	Dr. Abeera Faraz
Pre-Clinical Oral & Maxillofacial Surgery	Dr. Zaki Mehdi
Mentorship	Respective Allotted Faculty

Periodontology

Learning Outcomes

1. Apply knowledge of the anatomy, histology and physiology of the tissues of the oral cavity and related structures to clinical practice.
2. Apply knowledge of oral microbiology with emphasis on the nature, composition and physiology of plaque biofilm and calculus and its relationship to inflammatory periodontal diseases.
3. Apply knowledge of infectious, inflammatory and immunological processes in oral diseases with emphasis on the pathogenesis of periodontal diseases.
4. Apply knowledge of the principles of wound healing as well as soft and hard tissue regeneration and repair.
5. Apply knowledge of the process of osseointegration as well as the biology of the peri-implant tissues.
6. Apply knowledge of the classification and epidemiology of the periodontal diseases.
7. Apply knowledge of pathogenesis of disease to the diagnosis and management of gingival diseases, including chronic gingivitis, gingival abscess, necrotizing ulcerative gingivitis, and acute gingival conditions.
8. Apply knowledge of pathogenesis of disease to the diagnosis of autoimmune diseases effecting periodontal tissues, and subsequent referral to Oral Medicine specialist.
9. Apply knowledge of pathogenesis of disease to the diagnosis and management of periodontal diseases, including chronic periodontitis and diseases modified by local and/or systemic factors.
10. Apply knowledge of pathogenesis of disease to the diagnosis and management of acute periodontal conditions, including abscesses of the periodontium, pericoronitis etc.
11. Apply knowledge of pathogenesis of disease to the diagnosis and management of aggressive periodontal diseases, including localized and generalized aggressive periodontitis.
12. Apply knowledge of the influence of forces (trauma, parafunction, orthodontic forces etc.) on the periodontium and related structures.
13. Apply knowledge of the periodontal-systemic bi-directional relationships to the diagnosis, management and maintenance of patients.

14. Document relevant medical and dental history, including, periodontal charting and draft a comprehensive treatment plan (including alternatives).
15. Prescribe, justify, perform and assess different imaging techniques and adjunct investigations as they are related to the diagnosis of periodontal diseases.
16. Apply knowledge of behavioral risk factors for periodontal diseases and methods for their modification (including tobacco, stress, and diet).
17. Position the patient appropriately for diagnostic and operative procedures.
18. Educate patients on preventive techniques, tooth brushing techniques, inter-dental cleaning, and any other technique relevant to patient's needs.
19. Apply knowledge of the mechanisms, effects and interactions of medications used for the prevention and therapy of periodontal diseases, including host modulation agents, chemotherapeutics etc.
20. Prescribe, perform, justify and evaluate non-surgical therapy, including scaling and root planning, and be proficient in the use of routine periodontal instruments (scalars, Gracey curettes, power driven scalars etc.).
21. Have knowledge of surgical techniques used in periodontics, their indications and contraindications, advantages and disadvantages; and be familiar with specialized surgical instruments.
22. Prescribe and evaluate (in a timely manner) basic surgical procedures under direct supervision, including:
 - Gingivectomy / Local Excision
 - Periodontal Flap Surgery
23. Have knowledge and understanding of advanced periodontal surgery, including:
 - Reconstructive and regenerative periodontal surgery procedures
24. Evaluate the results of the non-surgical treatment and be able refer the patient to a periodontist for any further procedures required to maintain (supportive periodontal therapy) or improve the obtained treatment outcome.
25. Interpret the interrelationship of periodontitis to pulpal disease (Perio-endo Lesions).
26. Be able to identify the structure, different layers of epithelium, and cells in the normal oral mucosa.
27. Be able to identify the different functions of normal oral mucosa.

28. Be able to differentiate between the types of changes in abnormal oral mucosa on the basis of clinical and histological appearances.
29. List the Clinical features and disturbances in the oral mucosa and periodontium with respect to generalized diseases. (Recall)
30. Should be able to take complete history and assess the patient medically and clinically, be able to do complete examination both extra and intra oral.
31. To differentiate between the different types of investigations and its clinical importance.
32. Should be able to give provisional diagnosis based on investigations.
33. Should know the basic principles of therapy.
34. Enlist the therapeutic agents, topical therapeutic agents, covering agents, Antiseptic agents, Topical analgesics, Topical antibiotics and Topical Corticosteroids (Creams and ointments).
35. Should be able to enlist Systemic corticosteroids, immunosuppressant and other systemic drugs
36. Can identify about the limitations of therapy according to the medical condition of the patient.
37. Should enlist the etiology, describe the pathogenesis, and identify the clinical features and sequelae/complications associated with Bacterial, Fungal and Viral Infections relevant to gingival lesions.
38. Should enlist, identify and diagnose pigmentation of the oral mucosa
39. Should be able to identify oral manifestations and its management related to different systemic diseases.
40. Should be able to identify signs and symptoms and know the etiology of halitosis.

Theoretical Content

1. Anatomy of the periodontium
2. Classification and Epidemiology
3. Etiology of periodontal disease
 - Periodontal Pathogenesis
 - Role of Dental Calculus and other predisposing factors

- Biofilm and periodontal microbiology
- Molecular biology of host-microbe interactions
- Smoking and periodontal disease
- 4. Relationship between periodontal diseases and systemic health
- 5. Gingival Pathology
 - Defense mechanism of gingiva
 - Gingival inflammation
 - Features of Gingivitis
 - Acute gingival conditions
 - Diagnosis and management of Gingival Enlargement
 - Desquamative gingivitis
- 6. Periodontal Pathology
 - Periodontal pocket
 - Bone loss patterns and bone destruction
 - Periodontal response to external forces (Trauma from occlusion/ occlusal trauma)
 - Chronic Periodontitis
 - Necrotizing Ulcerative Periodontitis
 - Aggressive Periodontitis
 - Clinical Diagnosis, Prognosis, Risk Assessment
- 7. Clinical Periodontology
 - Treatment Planning
 - Periodontal Treatment of Medically compromised patients
 - Periodontal treatment of aggressive and atypical forms of periodontitis
 - Diagnosis and Management of periodontal abscess
 - Diagnosis of Endodontic-Periodontic lesions
- 8. Non-surgical Periodontal Therapy
 - Anti-infective therapy
 - Host Modulation
- 9. Surgical Periodontal Therapy
 - General principles of periodontal surgery
 - Gingival surgical techniques

- Periodontal Flaps
- Periodontal regeneration and reconstruction
- Furcation
- Restorative interrelationship
- Supportive Periodontal Treatment
- Overview of Implants

Practical Content

Practical aspects include following:

1. Infection control protocols
2. History taking
3. Intraoral/ Extraoral examination (including Basic Periodontal Examination)
4. Communication skills
5. Radiographic interpretation
6. Diagnosis
7. Treatment Planning
8. Patient Education and counselling
9. Basic Periodontal instruments (Manual/ultrasonic)
10. Manual/ultrasonic scaling on patients
11. Identification of periodontal surgical instruments
12. Basic indices for periodontal and gingival diseases
13. Prescription writing

Clinical Quota

Every student has to complete following clinical quota during periodontology clerkship

- | | |
|-----------------------|----|
| • Manual Scalings | 35 |
| • Ultrasonic Scalings | 10 |
| • Total Scalings | 45 |

Course Duration

- Lectures: 31 weeks
- Clinical rotations: 8 weeks per rotation

Lectures

- Monday (8:55 am to 09:45 am)
- Tuesday (8:55 am to 9:45 am)
- Thursday (08:00 am to 08:50 am)
- Friday (08:00 am to 08:40 am) after every 2 weeks

Clinical

- Wednesday (09:50 am to 01:10 pm)
- Thursday (09:50 am to 12:20 pm)
- Friday (09:40 am to 12:00 pm)
- Saturday (08:00 am to 02:00 pm)

Teaching Methodologies

- Lectures
- Clinical demonstrations
- Small group clinical discussions
- Clinical practice

Table of Specifications

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TABLE OF SPECIFICATION (TOS-PERIODONTOLOGY)

	Contents	Learning domain			MOT	Assessment Method	Assessment Tools	MCQs	Weightage
		C	P	A					
PART I :Biological Basis Of Periodontology									
1.	Normal Periodontium								
i.	Anatomy of periodontium	C1			IL, SGD	Form, Summ, Written	MCQ	10	12.5%
ii.	Aging and periodontium	C1			IL, SGD	Summ, written	MCQ		
2.	Classification and epidemiology of periodontal diseases								
i.	Classification of Diseases and Conditions Affecting the Periodontium	C2	✓		IL, SGD, C	Form, Summ, W, P	MCQ		
ii.	Fundamentals in the Methods of Periodontal Disease Epidemiology	C1	✓	✓	IL, SGD, C	Form, Summ, P	MCQ		
3.	Etiology of periodontal diseases								
i.	Periodontal Disease Pathogenesis	C3			IL, SGD	Form, Summ, W	MCQ	12	15%
ii.	Biofilm and Periodontal Microbiology	C2			IL, SGD	Form, Summ, W	MCQ		
iii.	Smoking and Periodontal Disease	C2	✓	✓	IL, SGD, C	Form, Summ, W, P	MCQ		

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	Contents		Learning domain			MOT	Assessment Method	Assessment Tools	MCQs	Weightage
			C	P	A					
iv.	The Role of Dental Calculus and Other Local Predisposing Factors		C2			IL, SGD	Form, Summ, W	MCQ		
4.	Relationship between periodontal disease and systemic health									
i.	Influence of Systemic Conditions	Should understand the influence of systemic conditions on periodontium and its implications	C3	✓	✓	IL, SGD, C	Summ, W, P	MCQ		
ii.	Impact of periodontal infections on systemic health	Should understand the effect of periodontitis on systemic health and its implications.	C1			IL	Summ, W	MCQ		
5.	Gingival Pathology									
i.	Defense Mechanisms of the Gingiva	Apply knowledge of pathogenesis of disease to the diagnosis and management of gingival diseases, including chronic gingivitis, gingival abscess, necrotizing ulcerative gingivitis, and acute gingival conditions.	C2			IL, SGD	Form, Summ, W	MCQ	14	17.5%
ii.	Gingival Inflammation		C3			IL, SGD	Form, Summ, W	MCQ		
iii.	Clinical Features of Gingivitis		C3	✓	✓	IL, SGD, C	Form, Summ, W, P	MCQ		
iv.	Gingival Enlargement		C3	✓	✓	IL, SGD, C	Form, Summ, W, P	MCQ		
v.	Acute Gingival Infections		C3	✓	✓	IL, SGD, C	Form, Summ, W, P	MCQ		

	Contents		Learning domain			MOT	Assessment Method	Assessment Tools	MCQs	Weightage
			C	P	A					
vi.	Gingival Disease in Childhood		C1			IL	Summ, W	MCQ		
6.	Periodontal Pathology									
i.	The Periodontal Pocket	Apply knowledge of pathogenesis of disease to the diagnosis and management of periodontal diseases, including chronic periodontitis and diseases modified by local and/or systemic factors.	C3	✓	✓	IL, SGD, C	Form, Summ, W, P	MCQ, OSPE, Viva		
ii.	Bone Loss and Patterns of Bone Destruction		C2	✓		IL	Summ, W	MCQ		
iii.	Periodontal Response to External Forces		C2			IL	Summ, W	MCQ		
iv.	Chronic Periodontitis		C3	✓	✓	IL, SGD, C	Form, Summ, W, P	MCQ, OSPE, viva		
v.	Aggressive Periodontitis		C3	✓	✓	IL, SGD, C	Form, Summ, W, P	MCQ, Viva		
vi.	Necrotizing Ulcerative Periodontitis		C3	✓	✓	IL, SGD, C	Form, Summ, W, P	MCQ, OSPE, Viva		
vii.	Pathology and management of periodontal problems in patients with human	Apply knowledge of pathogenesis of disease to the diagnosis of autoimmune diseases effecting periodontal tissues, and subsequent	C3			IL	Summ, W	MCQ		

	Contents		Learning domain			MOT	Assessment Method	Assessment Tools	MCQs	Weightage
			C	P	A					
	Immunodeficiency virus infection	referral to Oral Medicine specialist.								
Section I							Total	36	45%	
PART II: Clinical Periodontics										
7.	Diagnosis, Prognosis and Treatment Planning								14	17.5%
i.	Periodontal Examination and Diagnosis	Position the patient appropriately for diagnostic and operative procedures. Document relevant medical and dental history, including, periodontal charting and intra and extra oral examination		✓	✓	SGD, C	Form, Summ, P	OSCE, Long case, viva		
ii.	Radiographic Aids in the Diagnosis of Periodontal Disease	Should be able to prescribe and assess different imaging techniques and adjunct investigations for the diagnosis of periodontal diseases.	C2	✓	✓	SGD, C	Form, Summ, W. P	OSPE, viva		

	Contents		Learning domain			MOT	Assessment Method	Assessment Tools	MCQs	Weightage
			C	P	A					
iii.	Clinical Risk Assessment	Should be able to identify risk factors for periodontal diseases and methods for their modification	C2			SGD, C	Form, P	OSPE, Viva		
iv.	Determination of Prognosis	Should have knowledge about different types of prognosis. Should be able to identify factors for determination of prognosis	C2	✓		IL, SGD, C	Form, P	OSCE, viva		
v.	Treatment Planning	Should be able to draft a treatment plan in light of examination, diagnosis, risks involved. Clinical findings and prognosis.	C3	✓	✓	IL, SGD, TBL, C	Form, Summ, W, P	Long case		
8.	Management of Patients with special needs									
i.	Periodontal Treatment of Medically Compromised Patients	Should identify common medical conditions and treat periodontal disease according to the guidelines.	C2			IL	Summ, W	MCQ		
ii.	Treatment of Aggressive and	Should apply knowledge about current treatment	C2			IL	Form, P	MCQ		

	Contents		Learning domain			MOT	Assessment Method	Assessment Tools	MCQs	Weightage
			C	P	A					
	Atypical Forms of Periodontitis	approaches to manage Aggressive and Atypical forms of aggressive periodontitis								
9.	Diagnosis and treatment of periodontal emergencies									
i.	Treatment of Acute Gingival Disease	Should apply knowledge of pathogenesis of disease to the diagnosis and management of	C3	✓	✓	IL, SGD, C	Form, Summ, W, P	MCQ, OSPE, Viva		
ii.	Treatment of Periodontal Abscess	acute periodontal conditions, including abscesses of the periodontium, pericoronitis etc.	C3	✓	✓	IL, SGD, C	Form, Summ	MCQ, OSPE, Viva		
iii.	Endodontic-Periodontic Lesions	Should Interpret the interrelationship of periodontitis to pulpal disease and know the treatment options.	C3	✓	✓	IL, C	Form, Summ, W	MCQ, Viva		
iv.	Pathogenesis, Diagnosis, and Treatment Considerations		C3	✓	✓	IL, C	Summ, W, P	MCQ, Viva		
10.	Non-Surgical Periodontal Treatment									
i.	Phase I Periodontal Therapy	Should know all the steps of non-surgical periodontal phase	C3	✓		IL, SGD, C	Form, Summ, W, P	MCQ	16	20%

	Contents		Learning domain			MOT	Assessment Method	Assessment Tools	MCQs	Weightage
			C	P	A					
ii.	Plaque Biofilm Control for the Periodontal Patient	Should be able to educate patients on preventive techniques, tooth brushing techniques, inter-dental cleaning, and any other technique relevant to patient's needs.	C3	✓	✓	SGD, C	Form, Summ, P	Long case		
iii.	Breath Malodor		C2			IL	Summ, W	MCQ		
iv.	Scaling and Root Planing	Should prescribe, perform, justify and evaluate non-surgical therapy, including scaling and root planing, and be proficient in the use of routine periodontal instruments (scalers, Gracey curettes, power driven scalers etc)		✓	✓	SGD, D, C	Form, Summ, P	Long case, OSPE		
v.	Sonic and Ultrasonic Instrumentation and Irrigation			✓	✓	SGD, D, C	Form, Summ, P	OSPE		
vi.	Systemic Anti-infective Therapy for periodontal diseases	Apply knowledge of the mechanisms, effects and interactions of medications used for the prevention and therapy of periodontal diseases, including host	C2	✓	✓	IL, SGD, C	Form, Summ, W, P	MCQ		
vii.	Locally delivered, Controlled-release antimicrobials		C1			IL, SGD	Summ, W	MCQ		

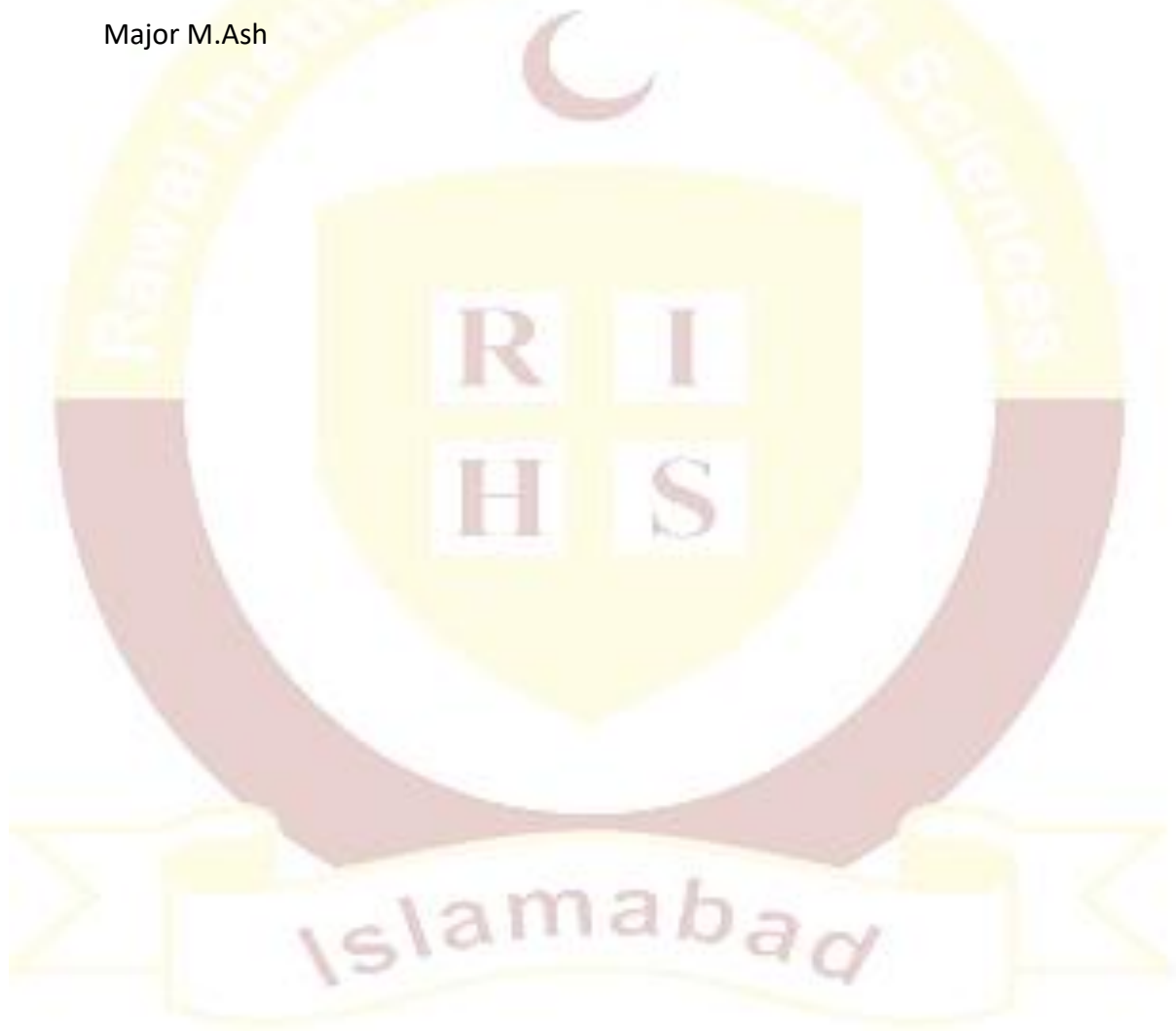
	Contents		Learning domain			MOT	Assessment Method	Assessment Tools	MCQs	Weightage
			C	P	A					
viii.	Host Modulation	modulation agents, chemotherapeutics etc.	C1			IL				
11.	Surgical Periodontal Treatment								10	12.5%
	Phase II Periodontal Therapy	1. Have knowledge of surgical techniques used in periodontics, their indications and contraindications, advantages and disadvantages; and be familiar with specialized surgical instruments. 2. Have understanding of advanced periodontal surgery, including: Reconstructive and regenerative periodontal surgery procedures.	C3			IL	Summ, W			
	General Principles of Periodontal Surgery		C2			IL, SGD	Summ, W			
	Periodontal Surgical Therapy		C3			IL, SGD	Summ, W	MCQ		
	Treatment of Gingival Enlargement		C3	✓	✓	IL, SGD, C	Form, Summ, W, P	MCQ, OSPE, Viva		
	Guided Tissue Regeneration		C3			IL, SGD	Form, Summ, W	MCQ, OSPE, Viva		
	Furcation		C3	✓	✓	IL, SGD, D, C	Form, Summ, W, P	MCQ, OSPE, Viva		
	Surgical management of gingival recession		C3			IL, SGD	Summ, W, P	MCQ, Viva		
Section II :			Total						40	50%

	Contents		Learning domain			MOT	Assessment Method	Assessment Tools	MCQs	Weightage
			C	P	A					
PART III: Oral Implantology										
12.	Periodontal Restorative Interface								2	2.5%
	Preparation of the Periodontium for Restorative Dentistry	Should know the techniques which can be performed in anticipation of esthetics or implant dentistry	C1			IL	Summ, W	MCQ		
13.	Supportive care and results of periodontal Treatment									
	Supportive periodontal care	1. Should understand the rationale of supportive periodontal care 2. Should have knowledge about specific methods of maintenance programs.	C2	✓	✓	IL, D, SGD	Form, P	OSCE, Viva		
	Results of Periodontal Treatment	1. Should have knowledge about prevention and treatment of gingivitis and periodontitis in the light of evidence.	C2	✓	✓	SGD, D	Form, P	Viva		
14.	Biology, Diagnosis and Biomechanics of Dental Implants								2	2.5%

Contents			Learning domain			MOT	Assessment Method	Assessment Tools	MCQs	Weightage
			C	P	A					
	Peri-implant Anatomy, Biology, and Function	1. Have knowledge of the process of osseointegration as well as the anatomy, biology and function of the peri-implant tissues.	C1			IL	Summ, W	MCQ		
	Basic Implant Surgical Procedures	1. Should have knowledge about basic principles of implant surgery. 2. Should have knowledge about one stage and two stage approach for implant placement	C1			IL	Summ, W	MCQ		
SECTION III							TOTAL		4	5%
GRAND TOTAL									80	100%

Learning Resources

- Carranza's Clinical Periodontology - 14th Edition
- Clinical Periodontology by Glickman
- Clinical Periodontology by Manson
- Color Atlas of Clinical Surgical Periodontology by Strahan & White
- A textbook of Clinical Periodontology by Jan Lindhe - 7th Edition
- Fundamentals of Periodontics by Thomas G Wilson, Kenneths Komman
- Periodontology and Periodontics, Modern Theory and Practice by Sigurd P. Ramford
Major M.Ash



Oral Medicine

Learning Outcomes

1. Be able to identify the structure, different layers of epithelium, and cells in the normal oral mucosa.
2. Be able to identify the different functions of normal oral mucosa (Application)
3. Be able to differentiate between the types of changes in abnormal oral mucosa on the basis of clinical and histological appearances. (Application)
4. Know the Clinical features and disturbances in the oral mucosa and periodontium with respect to generalized diseases (Recall)
5. Should be able to take complete history and assess the patient medically and clinically, be able to do complete examination both extra and intra oral.
6. To differentiate between the different types of investigations and their clinical importance (Application).
7. Should be able to give provisional diagnosis based on investigations.
8. Should know the basic principles of therapy.
9. Enlist the therapeutic agents, topical therapeutic agents, covering agents, Antiseptic agents, Topical analgesics, Topical antibiotics and Topical Corticosteroids (Creams and ointments).
10. Should be able to enlist Systemic corticosteroids, immunosuppressants and other systemic drugs
11. Should know about the limitations of therapy according to the medical condition of the patient.
12. Should know how to differentiate between different types of Bacterial Infections their clinical features
13. Should know how to differentiate between different types of Fungal Infections their clinical features
14. Should know how to differentiate between different types of Viral Infections their clinical features
15. Should enlist the etiology, describe the pathogenesis, and identify the clinical features and sequelae/complications associated with Bacterial, Fungal and Viral Infections.

16. Should be able to enlist, identify and diagnose pigmentation of the oral mucosa.
17. Should be able to diagnose and manage different kind of white lesions.
18. Should enlist the etiology, causes and different types of oral ulcers
19. Should diagnose and differentiate between acute and chronic ulcerations on the basis of clinical and radiographic features.
20. Should identify the complications/sequelae of oral ulcers
21. Should enlist and classify diseases of the lips, Investigations and provisional diagnosis
22. Should classify, diagnose and enlist different diseases and developmental anomalies of the tongue.
23. Should enlist the WHO Classification of cysts of the jaws
24. Should diagnose the odontogenic cysts on the basis of clinical, radiographic and histological features
25. Should describe the clinical and histological differences between retention and extravasation mucocele.
26. Should diagnose the non-neoplastic oral hyperplastic lesions on the basis of clinical and histological features.
27. Should enlist the Causes of salivary gland enlargement.
28. Should classify salivary gland tumors and describe the Etiopathogenesis, clinical and histological features of diseases of Salivary glands.
29. Should be able to differentiate between various inflammatory growths and developmental lesions
30. Should identify, diagnose and differentiate between benign and malignant neoplasms of the oral and facial region
31. Should be able to identify different pigmented lesions, investigate and give provisional diagnosis
32. Should enlist HPV associated benign mucosal lesions and diagnose SCC on the basis of clinical and histological features.
33. Should enumerate pre-malignant lesions and conditions

34. Should describe clinical and histological features of melanocytic nevus, malignant melanoma, Hodgkin's and non-Hodgkin's lymphomas.
35. Should describe the clinical and histological features of Fibroma, Hemangioma, Neurofibroma and Shwanoma
36. Should classify, diagnose and describe the sign symptoms and clinical features of immune mediated vesiculobullous diseases
37. Should describe the clinical features of different developmental, inflammatory and functional disorders of TMJ.
38. Should be able to enlist different types of facial pain and its etiology.
39. Should be able to identify oral manifestations and its management related to different systemic diseases.
40. Should be able to identify signs and symptoms and know the etiology of halitosis, taste abnormality and nutritional deficiencies
41. Identify the oral clinical features related to nutritional deficiency.
42. Should be able to diagnose and identify different types of allergic reactions and their management
43. Should have comprehensive knowledge about local anesthesia and its constituents
44. Should be able to give local anesthesia both infiltration and nerve block (Application)
45. Should be able to differentiate between types of medical emergencies occurring while dental procedure
46. Should know how to step wise manage a medical emergency and have knowledge about different drugs being used in medical emergencies
47. Should know about different medical conditions and significance of their management in dental clinics
48. Should be able to identify the following films/images and relevant anatomical structures
 - Periapical (Application)
 - Orthopantomogram (Application)
 - Occlusal radiographs
 - Cephalometric radiographs
 - Phosphorous plates
 - CT Scan

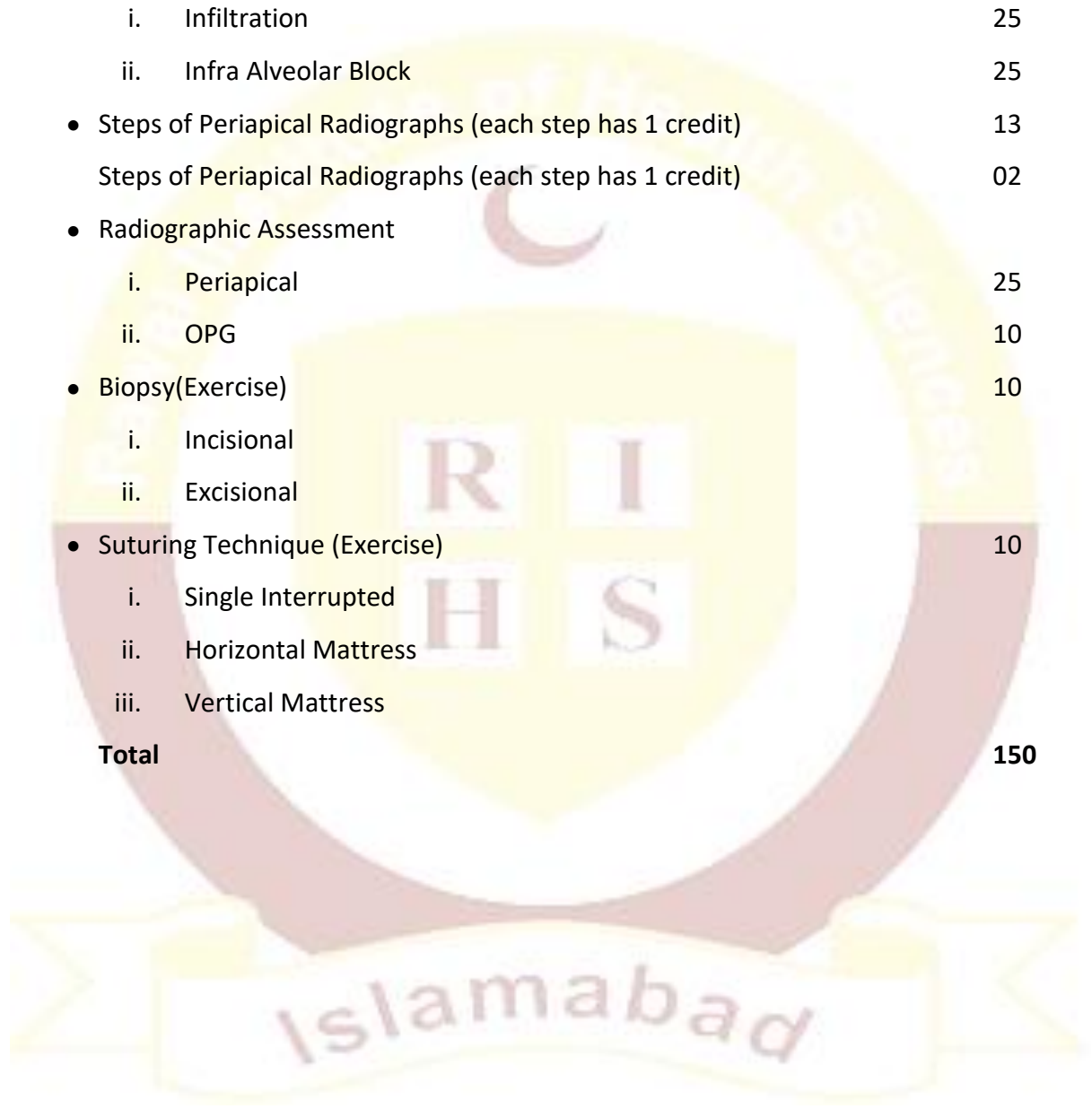
- MRI
- CBCT

Practical Content

1. Infection control protocols
2. History taking
3. Intraoral/extraoral examination (including Basic Periodontal Examination)
4. Communication skills
5. Radiographic interpretation
6. Diagnosis
7. Treatment Planning
8. Local Anesthesia application
9. Post Op instructions
10. Basic Biopsy instruments
11. Basic surgical instruments
12. Oral Radiology
 - Periapical (Application)
 - Orthopantomogram (Application)
 - Occlusal radiographs
 - Cephalometric radiographs
 - Phosphorous plates
 - CT scan
 - MRI
 - CBCT

Clinical Quota

Every student should complete following clinical quota during oral medicine clerkship



• History Taking and Clinical Examination	30
• Local Anesthesia	
i. Infiltration	25
ii. Infra Alveolar Block	25
• Steps of Periapical Radiographs (each step has 1 credit)	13
Steps of Periapical Radiographs (each step has 1 credit)	02
• Radiographic Assessment	
i. Periapical	25
ii. OPG	10
• Biopsy(Exercise)	10
i. Incisional	
ii. Excisional	
• Suturing Technique (Exercise)	10
i. Single Interrupted	
ii. Horizontal Mattress	
iii. Vertical Mattress	
Total	150

Course Duration

- Lectures: 31 weeks
- Clinical rotations: 8 weeks per rotation

Lectures:

- Monday (8:00 am to 08:50 am)
- Friday (8:50 am to 9:30 am)
- Friday (08:00 am to 08:40 am) after every 2 weeks

Clinical:

- Wednesday (09:50 am to 01:10 pm)
- Friday (09:40 am to 12:00 pm)

Teaching Methodologies

- Lectures
- Clinical demonstrations
- Small group clinical discussions
- Clinical practice



Table of Specifications

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TABLE OF SPECIFICATION (TOS- ORAL MEDICINE & RADIOLOGY)

Contents		Learning Domain			Teaching Methodology	Assessment Method	Assessment Tools	Weightage	MCQs
		C	P	A					
1.	Oral Mucosa	C1			IL, SGD	Form, Summ, W, P	MCQ, viva	10%	08
2.	Principles of oral medicine: assessment and investigation of patients	C2	✓	✓	IL, D, C	Form, Summ, W, P	MCQ, OSPE, Viva		
3.	Therapy	C2	✓	✓	IL, C	Summ, W, P	MCQ, Viva		
4.	Local Anesthesia		✓	✓				5%	04
5.	Infections of gingiva and oral mucosa (Bacterial, Viral, Fungal)	C3	✓	✓	IL, C	Form, Summ, W, P	MCQ, OSPE, Viva	2%	02
6.	Pigmentation of the oral mucosa	C3	✓	✓	IL	Summ, W, P	MCQ, Viva	25%	19
7.	White Lesion of the oral mucosa	C3	✓	✓	IL, C	Summ, Form, W, P	MCQ, OSPE, Viva		
8.	Oral ulceration	C3	✓	✓	IL, C	Form, Summ, W, P	MCQ, OSPE, Viva		
9.	Vesiculobullous lesions	C3	✓	✓	IL, C	Summ, W, P	MCQ, Viva		
10.	Diseases of the lips and tongue	C2	✓	✓	IL, C	Form, Summ, W, P	MCQ, OSPE, Viva		
11.	Swellings of the face and neck	C3	✓	✓	IL, C	Summ, W, P	MCQ, OSPE, Viva		

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12.	Salivary glands and Saliva	C3			IL	Summ, W, P	MCQ, Viva	20%	16
13.	Inflammatory overgrowths, developmental and benign lesions, and	C3	✓	✓	IL	Summ, W, P	MCQ, Viva		
14.	Oral epithelial and connective tissue tumors	C2			IL	Summ, W	MCQ		
15.	Diseases of the Temporomandibular joint	C3	✓	✓	IL, SGD, C	Form, Summ, W, P	MCQ, Viva		
16.	Facial Pain	C3	✓	✓	IL, C	Summ, W, P	MCQ, Viva		
17.	Oral manifestation of systemic disease	C3	✓	✓	IL, C	Summ, W, P	MCQ, Viva	10%	08
18.	Halitosis Nutrition and Oral Health Taste Abnormalities	C1	✓	✓	IL	Summ, W	MCQ	7%	06
19.	Patient evaluation and Medical Emergencies in dentistry Allergy and drug reactions in dental practice	C3	✓	✓	IL	Summ, W, P	MCQ, Viva	6%	05
20.	Oral Radiology		✓	✓		Summ, W, P		15%	12

Learning Resources

- Tyldesley's Oral Medicine by Anne Field & Lesley Longman – 5th Edition
- Burket's Oral Medicine by Michael Glick – 12th Edition
- Oral and Maxillofacial Medicine, the Basis of Diagnosis and Treatment by Crispian Scully – 2nd Edition



Oral Pathology

Learning Outcomes

1. Disorders of development of teeth and craniofacial anomalies

- Be able to identify the differences between the clinical manifestations due to defects associated with the secretory and maturation stage of amelogenesis.
- Be able to differentiate between the types of dentinogenesis imperfecta on the basis of clinical and radiographic appearances
- To identify the disturbances in the number and shape of teeth and craniofacial anomalies.

2. Dental Caries

- Know the histopathogenesis of enamel and dentine caries, aetiology and classification of dental caries.
- Know the clinical and radiographic features of different types of dental caries.

3. Disorders of eruption and Post-developmental loss of tooth structure

- To be able to enlist the aetiology and know the clinical features of disorders associated with early and delayed eruption and shedding of teeth.
- To be able to enlist the clinical features of systemic conditions associated with disturbances in eruption and shedding of teeth.

4. Disorders of the dental pulp

- Know the Clinical features, aetiology and histopathology of pulpitis
- To differentiate between the different types of pulpitis on the basis of clinical and radiographic features
- Know the pathogenesis of Pulp healing
- Know the Clinical and radiographic features of Pulpal calcifications
- To be able to diagnose pulpal necrosis and its related sequelae on the basis of clinical and radiographic features

5. Periapical periodontitis

- To be able to enlist the aetiology and types of periapical periodontitis.
- To diagnose and differentiate between acute and chronic periapical periodontitis on the basis of clinical and radiographic features.
- Know the complications/sequelae of periapical periodontitis
- To be able to enlist the causes of periapical periodontitis
- Know the potential routes of spread of periapical inflammation/ acute periapical abscess and severity of the condition.
- To diagnose Cellulitis and Ludwig's angina and identify the associated potential threats

6. Cysts of the jaws and oral soft tissues

- Enlist the WHO Classification of cysts of the jaws
- To diagnose the odontogenic cysts on the basis of clinical, radiographic and histological features
- To describe the clinical and histological differences between retention and extravasation mucocele.

7. Hyperplastic, neoplastic, and related disorders of oral mucosa

- To diagnose the non-neoplastic oral hyperplastic lesions on the basis of clinical and histological features.

8. Keratoses and related disorders of oral mucosa

- Know the Classification of white lesions
- Know the clinical and histological features of hereditary white lesions i.e. white sponge nevus and leukoedema
- Diagnose lesion of oral mucosa due to traumatic keratosis
- Know the aetiology, clinical and histological features and prognosis of Leukoplakia and Erythroplakia
- Know the histological features of Epithelial dysplasia
- Diagnose Lichen planus and Lupus erythematosus on the basis of clinical and histological features

9. Oral epithelial tumours, melanocytic naevi, and malignant melanoma

- Enlist HPV associated benign mucosal lesions
- Diagnose SCC on the basis of clinical and histological features
- Know the prognostic factors of SCC
- To enumerate the variants of SCC
- To enumerate pre-malignant lesions and conditions
- Know the clinical and histological features of melanocytic nevus, malignant melanoma, Hodgkin's and non-Hodgkin's lymphomas, and make a diagnosis based on these features
- Know the clinical and histological features of Fibroma, Haemangioma, Neurofibroma and Shwanoma

10. Infections of the oral mucosa

- To enlist the bacteria, viral, and fungal infections of the oral mucosa
- Make a diagnosis on the basis of the clinical features and pathogenesis of Herpetic stomatitis, Recurrent herpes labialis, chicken pox, shingles, Herpangina, Hand foot and mouth disease, Infectious mononucleosis, Measles, Hairy tongue
- To enumerate the oral manifestations of AIDS
- Know the clinical features of Cancrum oris, actinomycosis, syphilis, leprosy and gonorrhea
- Make a diagnosis on the basis of clinical and histological features of Thrush, Acute and Chronic erythematous candidiasis, chronic hyperplastic candidiasis, chronic atrophic candidiasis, angular cheilitis, and median rhomboid glossitis.

11. Oral ulceration and vesiculobullous diseases

- To enlist the aetiology of oral ulceration
- Diagnose traumatic ulceration on the basis of aetiology and clinical features
- To compare the clinical features of different types of recurrent aphthous stomatitis
- Enlist the types/classification of immune-mediated vesiculobullous diseases
- To diagnose the common immune-mediated vesiculobullous diseases on the basis of clinical and histological features.

12. Diseases of salivary glands

- Enlist the Causes of salivary gland enlargement
- Describe the Etiopathogenesis, clinical and histological features of acute and chronic bacterial sialadenitis, and recurrent parotitis.
- Describe the clinical features of sialolithiasis, necrotising sialometaplasia and sjogren syndrome
- Enlist the Classification of salivary gland tumors
- Make a diagnosis on the basis of clinical and histological features of Pleomorphic adenoma, warthin's tumor, mucoepidermoid carcinoma, adenoid cystic carcinoma, and PLGA.

13. Odontomes and odontogenic tumours

- Enlist the types of Odontomes
- Describe the clinical and radiographic features of complex, compound, invaginated, evaginated odontomes and enamel pearl
- Enlist Classification of odontogenic tumor
- Make a diagnosis on the basis of the clinical, histological and radiographic features of ameloblastoma, CEOT, AOT, Calcifying cystic odontogenic tumor, odontogenic fibroma and odontogenic myxoma.

14. Disorders of bone

- Enlist the types of inflammatory disorders of bone
- Describe the histopathogenesis of alveolar osteitis
- Diagnose alveolar osteitis on the basis of history and clinical features
- Enlist the types, and diagnose osteomyelitis on the basis of clinical, radiographic and histological features
- Enlist the fibro-osseous, metabolic and endocrine disorders of bone and describe their clinical features
- Describe the clinical features of bony exostoses of the oral cavity
- Diagnose osteoma, osteosarcoma and ossifying fibroma on the basis of clinical, radiographic and histological features.

15. Diseases of the temporomandibular joint

- Describe the clinical features of different developmental, inflammatory and functional disorders of TMJ.
- Describe the causes of trismus.
- Describe the clinical features of disc displacement and joint dislocation.

Practical Content

1. Drawing histological pictures in practical note book

- Stratified Squamous Epithelium
- Inflammatory cells/chronic
- Pyogenic granuloma
- Fibroma
- Salivary glands
- Oral mucocele
- Periapical cyst
- Odontogenic Keratocyst (OKC)
- Dentigerous cyst
- Biopsy specimen handling
- Tooth Anomalies
- Verrucous carcinoma
- Squamous cell carcinoma
- Dysplasia
- Pleomorphic adenoma
- Ameloblastoma

2. Tissue Processing Exercises

- Fixation
- Dehydration
- Clearing
- Waxing
- Dewaxing
- Casting
- Staining

3. Drawing histological pictures in practical note book

- Stratified Squamous Epithelium
- Inflammatory cells/chronic

- Pyogenic granuloma
- Fibroma
- Salivary glands
- Oral mucocele
- Periapical cyst
- Odontogenic Keratocyst (OKC)
- Dentigerous cyst
- Biopsy specimen handling
- Tooth Anomalies
- Verrucous carcinoma
- Squamous cell carcinoma
- Dysplasia
- Pleomorphic adenoma
- Ameloblastoma

4. Tissue Processing Exercises

- Fixation
- Dehydration
- Clearing
- Waxing
- Dewaxing
- Casting
- Staining



Course Duration

- Lectures: 31 weeks
- Practical rotations: 2 per week

Lectures:

- Wednesday (8:00 am to 09:45 am)
- Thursday (12:20 pm to 01:10 pm)
- Friday (08:00 am to 08:40 am) – after every 2 weeks

Practical:

- Thursday (01:10 pm to 02:50 pm)

Teaching Methodologies

- Lectures
- Demonstrations
- Small Group Clinical Discussions
- Clinical Practice
- Exercises



Table of Specifications

TABLE OF SPECIFICATION (TOS-ORAL PATHOLOGY)										
S/No	Course content	Learning outcome	Learning domain			MOT	Assessment method	Assessment tool	Weightage	MCQs
			C	P	A					
1	Disorders of development of teeth and craniofacial anomali	- Be able to identify the differences between the clinical manifestations due to defects associated with the secretory and maturation stage of amelogenesis. - Be able to differentiate between the types of dentinogenesis imperfecta on the basis of clinical and radiographic appearances - To identify the disturbances in the number and shape of teeth and craniofacial anomalies	C3				Summ	MCQS, VIVA, OSPE	10%	08
2	Dental caries	Know the histopathogenesis of enamel and dentine caries, aetiology and classification of dental caries	C1			IL, SGD, D, Lab	Summ	MCQS, VIVA	12%	09
		Know the clinical and radiographic features of different types of dental caries	C2							
3	Disorders of eruption and Post-developmental loss of tooth structure	To be able to enlist the aetiology and know the clinical features of disorders associated with early and delayed eruption and shedding of teeth.	C2			IL, SGD, D, Lab	Summ	MCQS, VIVA	5%	04
		To be able to enlist the clinical features of systemic conditions associated with disturbances in eruption and shedding of teeth	C1							

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4	Disorders of the dental pulp	Know the Clinical features, aetiology and histopathology of pulpitis	C1			IL, SGD, D, Lab	Summ	MCQS, VIVA	10%	08
		To differentiate between the different types of pulpitis on the basis of clinical and radiographic features	C3							
		Know the pathogenesis of Pulp healing	C1							
		Know the Clinical and radiographic features of Pulpal calcifications	C1							
		To be able to diagnose pulpal necrosis and its related sequelae on the basis of clinical and radiographic features	C3							
5	Periapical periodontitis	To be able to enlist the aetiology and types of periapical periodontitis.	C1			IL, SGD, D, Lab	Summ	MCQS, VIVA	10%	08
		To diagnose and differentiate between acute and chronic periapical periodontitis on the basis of clinical and radiographic features	C3							
		Know the complications/sequelae of periapical periodontitis	C3							
		To be able to enlist the causes of periapical periodontitis	C1							
		Know the potential routes of spread of periapical inflammation/acute periapical abscess and severity of the condition.	C2							
6	Cysts of the jaws and oral soft tissues	To diagnose Cellulitis and Ludwig's angina and identify the associated potential threats.	C3			IL, SGD, D, Lab	Summ	MCQS, VIVA, OSPE	5%	04
		Enlist the WHO Classification of cysts of the jaws	C1							
		To describe the clinical and histological differences between retention and extravasation mucocoele	C2							

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7	Hyperplastic, neoplastic, and related disorders of oral mucosa	To diagnose the non-neoplastic oral hyperplastic lesions on the basis of clinical and histological features.	C3		IL, SGD, D, Lab	Summ	MCQS, VIVA, OSPE	7%	06
8	Keratosis and related disorders of oral mucosa	Know the Classification of white lesions	C1		IL, SGD, D, Lab	Summ	MCQS, VIVA, OSPE	5%	04
		Know the clinical and histological features of hereditary white lesions .i.e. white sponge nevus and leukoedema	C1						
		Diagnose lesion of oral mucosa due to traumatic keratosis	C3						
		Know the aetiology, clinical and histological features and prognosis of Leukoplakia and Erythroplakia	C1						
		Know the histological features of Epithelial dysplasia	C1						
		Diagnose Lichen planus and Lupus erythematosus on the basis of clinical and histological features	C3						
9	Oral epithelial tumours, melanocytic naevi, and malignant melanoma	Enlist HPV associated benign mucosal lesions	C1		IL, SGD, D, Lab	Summ	MCQS, VIVA, OSPE	7%	05
		Diagnose SCC on the basis of clinical and histological features	C3						
		Know the prognostic factors of SCC	C1						
		To enumerate the variants of SCC	C1						
		To enumerate pre-malignant lesions and conditions	C1						
		Know the clinical and histological features of melanocytic nevus, malignant melanoma, Hodgkin's and non-Hodgkin's lymphomas, and make a diagnosis based on these features	C3						
		Know the clinical and histological features of Fibroma, Haemangioma, Neurofibroma and Shwanoma	C1						

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10	Infections of the oral mucosa	To enlist the bacteria, viral, and fungal infections of the oral mucosa	C1		IL, SGD, D, Lab	Summ	MCQS, VIVA	5%	04
		Make a diagnosis on the basis of the clinical features and pathogenesis of Herpetic stomatitis, Recurrent herpes labialis, chicken pox, shingles, Herpangina, Hand foot and mouth disease, Infectious mononucleosis, Measles, Hairy tongue	C3						
		To enumerate the oral manifestations of AIDS	C1						
		Know the clinical features of Cancrum oris, actinomycosis, syphilis, leprosy and gonorrhoea	C2						
		Make a diagnosis on the basis of clinical and histological features of Thrush, Acute and Chronic erythematous candidiasis, chronic hyperplastic candidiasis, chronic atrophic candidiasis, angular chelitis, and median rhomboid glositis.	C3						
11	Oral ulceration and vesiculobullous diseases	To enlist the aetiology of oral ulceration	C1		IL, SGD, D, Lab	Summ	MCQS, OSPE, VIVA	7%	06
		Diagnose traumatic ulceration on the basis of aetiology and clinical features	C3						
		To compare the clinical features of different types of recurrent aphthous stomatitis	C2						
		Enlist the types/classification of immune-mediated vesiculobullous diseases	C3						
		To diagnose the common immune-mediated vesiculobullous diseases on the basis of clinical and histological features.	C1						

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12	Diseases of salivary glands	Enlist the Causes of salivary gland enlargement	C1			IL, SGD, D, Lab	Summ	MCQS, OSPE, VIVA	5%	04
		Describe the Etiopathogenesis, clinical and histological features of acute and chronic bacterial sialadenitis, and recurrent parotitis.	C2							
		Describe the clinical features of sialolithiasis, necrotising sialometaplasia and sjogren syndrome	C1							
		Enlist the Classification of salivary gland tumors	C1							
		Make a diagnosis on the basis of clinical and histological features of Pleomorphic adenoma, warthin's tumor, mucoepidermoid carcinoma, adenoid cystic carcinoma, and PLGA.	C3							
13	Odontomes and odontogenic tumours	Enlist the types of Odontomes	C1			IL, SGD, D, Lab	Summ	MCQS, OSPE, VIVA	5%	04
		Describe the clinical and radiographic features of complex, compound, invaginated, evaginated odontomes and enamel pearl	C2							
		Enlist Classification of odontogenic tumors	C1							
		Make a diagnosis on the basis of the clinical, histological and radiographic features of ameloblastoma, CEOT, AOT, Calcifying cystic odontogenic tumor, odontogenic fibroma and odontogenic myxoma.	C3							

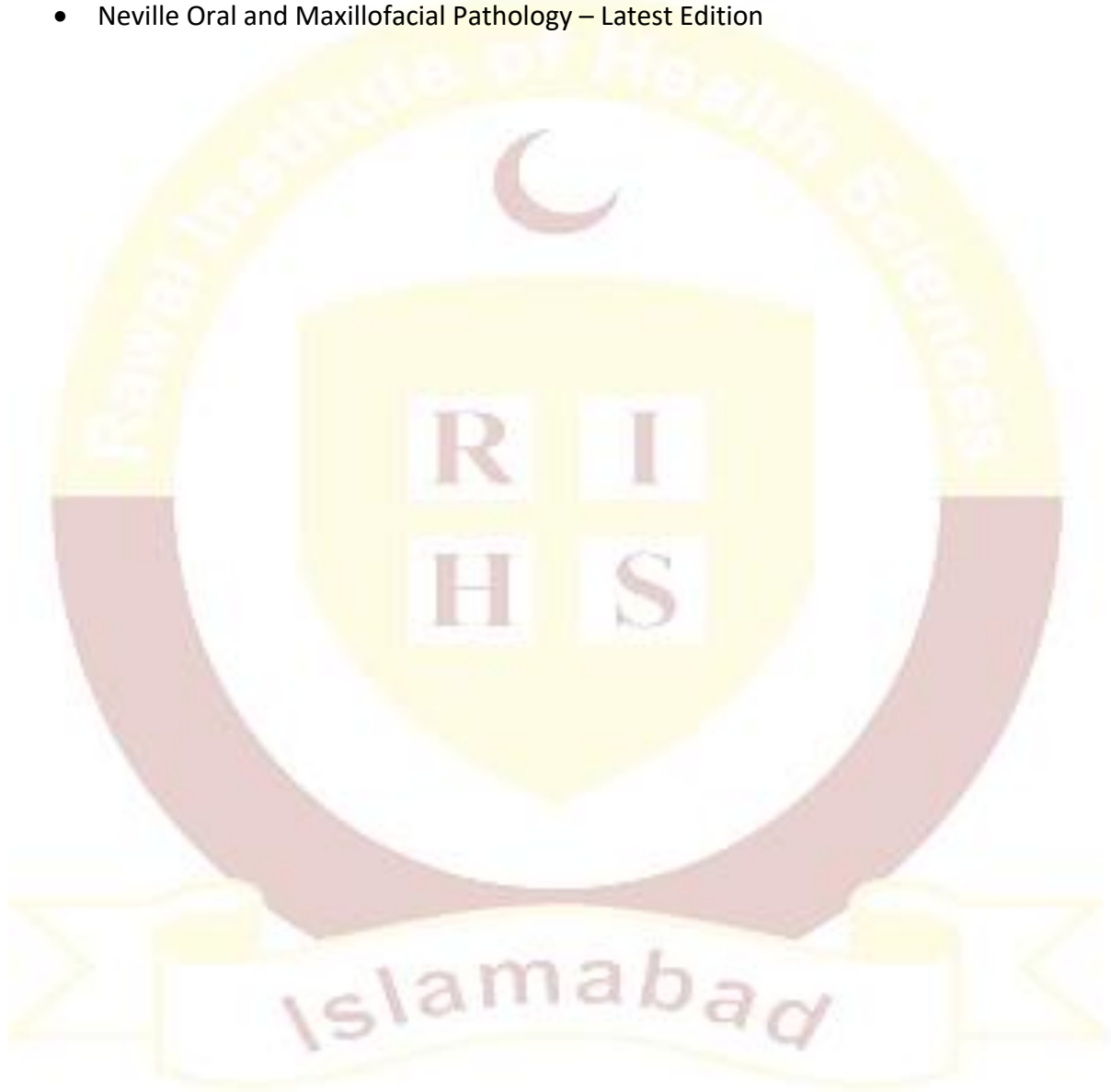
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14	Disorders of bone	Enlist the types of inflammatory disorders of bone	C1			IL, SGD, D, Lab	Summ	MCQS, OSPE, VIVA	5%	04
		Describe the histopathogenesis of alveolar osteitis	C2							
		Diagnose alveolar osteitis on the basis of history and clinical features	C3							
		Enlist the types, and diagnose osteomyelitis on the basis of clinical, radiographic and histological features	C3							
		Enlist the fibro-osseous, metabolic and endocrine disorders of bone and describe their clinical features	C2							
		Describe the clinical features of bony exostoses of the oral cavity	C1							
		Diagnose osteoma, osteosarcoma and ossifying fibroma on the basis of clinical, radiographic and histological features	C3							
15	Diseases of the temporomandibular joint	Describe the clinical features of different developmental, inflammatory and functional disorders of TMJ.	C1			IL, SGD, D, Lab	Summ	MCQS, OSPE, VIVA	2%	02
		Describe the causes of trismus.	C1							
		Describe the clinical features of disc displacement and joint dislocation.	C1							

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Learning Resources

- Contemporary Oral Pathology - Latest Edition
- Oral Pathology JV Soames – Latest Edition
- Cawson's Essentials of Oral Pathology and Oral Medicine – Latest Edition
- Neville Oral and Maxillofacial Pathology – Latest Edition



General Medicine

Learning Outcomes

i. Diseases of Cardiovascular System

1. Introduction to Cardiology

- Students should be able to take relevant history of CVS diseases.
- Students should be able to perform CVS examination Systemic & relevant general physical examination.
- Students should be able to diagnose and initiate management plan of CVS diseases.
- Understand the importance of the diseases related to heart & vessels.
- The life threatening nature of the related conditions. Importance of timely diagnosis.

2. Rheumatic Fever and Rheumatic Heart Disease

- Able to diagnose rheumatic fever, outline treatment and the prophylaxis to prevent cardiac complications.

3. Valvular Heart Diseases (Introduction and Pathophysiology S/S and Management)

- Able to identify common valvular lesions MS, MR, AR, AS, TR & outline treatment options.

4. Congenital Heart Disease (CCF)

- Able to identify CCF & its causes Relevant investigations required and the management plan Congenital Heart Disease can clinically identify common defects VSD, ASD, TOF, PDA and Echocardiography and cardiac catheterization as main diagnostic modalities.

5. Infective Endocarditis

- Knows the criteria for the diagnosis & the management

6. Introduction to Ischemic Heart Diseases (Myocardial Infarction)

- Can diagnose MI on basis of history and diagnostic modalities.
- Know the associated complications.
- Understand the urgency in management
- Knows and can initiate treatment

7. Chest Pain and Differential Diagnosis and Management

- Can differentiate different causes of chest pain

ii. Diseases of Respiratory System

1. Chronic Bronchitis

- Clinical presentations, Diagnostic Tests and Management.

2. Bronchial Asthma

- Diagnose asthma clinically
- Formulate appropriate management as per severity of disease
- Prevention of asthmatic attacks

3. Emphysema

- Clinical presentations
- Diagnostic tests
- Management

4. Bronchiectasis

- Clinical presentations
- Diagnostic tests
- Management

5. Pneumonia

- Types of Pneumonia
- Causes of Pneumonia
- Relevant Management

6. COPD, Resp distress syndrome, Pulmonary edema, Pulmonary embolism, Cystic fibrosis, Dyspnea, Clubbing, Cyanosis

- Students should be able to take relevant history of respiratory diseases
- Students should be able to perform respiratory system examination along with systemic and relevant general physical examination
- Prevention, Diagnosis and Management
- Identify it as critical care state
- Can identify the relevant modes of supplementing oxygen

7. TB

- Able to diagnose TB on clinical basis and diagnostics
- Initiate appropriate treatment
- To identify treatment related complications

8. Lung Cancer

- Know the types and clinical presentations of lung cancer
- Diagnostic modalities
- TNM classification
- Management outline

iii. Haematological Diseases

1. Anaemias

- Know the clinical differentials and presentation of Anemia
- Diagnosis
- Management of Anemia

2. Polycythemia

- Know the clinical presentation
- Know the complications
- Know the relevant diagnostics
- Know the treatment

3. Leukaemia

- Know the clinical presentation
- Know the complications
- Know the relevant diagnostics
- Know the treatment

4. Myeloproliferative disorders, Myeloblastic disorders, Thrombocytopaenia, Clotting disorders

- Students should be able to take relevant history of BLOOD diseases
- Students should be able to perform blood disease systemic examination and relevant general physical examination
- Know the clinical presentation
- Know the complications
- Know the relevant diagnostics
- Know the treatment

iv. Infectious Diseases

1. Bacterial Infections

- Etiology
- Pathogenesis
- Clinical presentation
- Investigations
- Management principles

2. Protozoal Infections

- Etiology
- Pathogenesis
- Clinical presentation
- Investigations
- Management principles

3. Fungal Infections

- Etiology
- Pathogenesis
- Clinical presentation
- Investigations
- Management principles

4. Viral Infections

- Etiology
- Pathogenesis
- Clinical presentation
- Investigations
- Management principles

v. Diseases of Nervous System

1. Meningitis

- Students should be able to take relevant history of CNS diseases
- Students should be able to perform CNS systemic and relevant general physical examination.
- Students should be able to diagnose and initiate management plan of CNS diseases.
- Knows the aetiology, clinical presentation and complications
- Diagnostic tests
- Interpretation of CSF examination findings
- Relevant treatment as per aetiology

2. Headache and Migraine

- Knows clinical presentation
- Causes
- Diagnostic test
- Management plans

3. Facial Pain and Paralysis

- Knows the clinical presentation of lesion of these cranial nerves
- Management of lesion of these cranial nerves

4. CVA

- Knows the clinical presentation
- Relevant examination
- Diagnostic tests
- Management

5. Epilepsy

- Know various types
- Can make Diagnosis on basis of clinical history
- Can list relevant investigations
- Know treatment of epilepsy and status epilepticus

6. Parkinson's Disease and Dementia

- Knows the etiology
- Can diagnose on clinical assessment
- Understands Parkinsonism & Parkinson's disease
- Knows the management

vi. Diseases of Gastrointestinal System and Liver Diseases

1. Peptic Ulcer Disease/Gastritis

- Students should be able to take relevant history of gastrointestinal diseases
- Students should be able to perform gastrointestinal systemic & relevant general physical examination.
- Students should be able to diagnose and initiate management plan of gastrointestinal diseases
- Know the etiology and complications
- Can diagnose based on clinical presentation and diagnostic tests.
- Know the treatment

2. Malabsorption/Coeliac/Tropical Sprue

- Can diagnose based on clinical presentation and diagnostic tests.
- Know the treatment
- Know the importance of diet

3. Chronic Diarrhea/Inflammatory Bowel Disease

- Can diagnose based on clinical presentation and diagnostic tests.
- Know the treatment outline

4. Liver Function Tests

- Can diagnose based on relevant diagnostic tests.
- Know the criteria's for assessing the clinical severity

5. Celiac Disease

- Can diagnose based on clinical presentation and diagnostic tests.
- Know the treatment

6. Acute Hepatitis

- Know the etiologies

vii. Kidney Diseases

1. Chronic Hepatitis (B, C, D, E)

- Clinical presentations
- Diagnostic test
- Management

2. Hereditary and acquired causes of Jaundice

- Know the types
- Clinical presentation
- Diagnostic tests
- Outline management of each type

3. Liver Cirrhosis

- Know the etiology
- Know the complications
- Know the management of each type

4. Nephrotic syndrome

- Know the causes
- Can diagnose on basis of clinical presentation and relevant investigations
- Outline management plan

5. Kidney Stones

- Students should be able to take relevant history of renal diseases.
- Know the clinical presentation, diagnostic modalities and treatment outline.
- Students should be able to perform renal system examination and systemic and relevant general physical examination.
- Know the inherited tubular disorders, their biochemical findings and how to diagnose renal tubular acidosis.

6. Renal Dialysis/Transplant

- Students should be able to take relevant history of renal diseases.
- Know the clinical presentation, diagnostic modalities and treatment outline.
- Students should be able to perform renal system examination and systemic and relevant general physical examination.

7. Acute Renal Failure

- Know causes of ARF
- Diagnostic tests required
- Management steps

8. Chronic Renal Failure

- Know causes of CRF
- Clinical presentations
- Diagnostic tests
- Management
- Role of renal replacement therapy

viii. Endocrine Disorders

1. Diabetes

- Know types of diabetes and etiology.
- Able to diagnose on basis of symptoms and signs.
- Know the relevant laboratory tests and their interpretation
- Able to outline management of type 1 and type 2 DM.
- Can identify complications of DM and outline management of acute & chronic complications.

- Students should be able to take relevant history of Diabetes Mellitus and other diseases.
- Students should be able to perform systemic and relevant general physical examination.

2. Gonadal Disorders

- Etiology
- Clinical presentation
- Investigations
- Management principles

3. Pituitary Disorders

- Etiology
- Clinical presentation
- Investigations
- Management principles

4. Parathyroid Disorders

- Etiology
- Pathogenesis
- Clinical presentation
- Investigations
- Management principles

5. Adrenal Disorders

- Etiology
- Pathogenesis
- Clinical presentation
- Investigations
- Management principles

Practical Content

Student should be trained in the clinical methods involved in

- Inspection
- Palpation
- Percussion
- Auscultation

Clinical Quota

Skill	Count	Status
CVP Placement	01	OS
ETT Placement	03	AS
ECG	05	PS
Breaking bad news	02	AS
BP Recording	50	PS
Glucometer Use	25	PS

Insulin Injection Technique	10	AS
Peak Flow Meter	05	PS
Nebulization	02	AS
Pleural Tap	02	AS
Urinary Catheter Placement	02	AS
Nasogastric Tube Placement	05	AS
Cranial Nerve Examination	05	PS
Blood Drawing for Investigations	20	PS

OS Observer Status
AS Assistant Status
PS Perform Under Supervision

Course Duration

- Lectures: 31 weeks
- Practical rotations: 1 per week

Lectures:

- Wednesday (01:20 pm to 02:10 pm)
- Friday (12:10 pm to 12:50 pm)

Practical:

- Mon (10:45 pm to 02:10 pm)
 - Tue (10:45 pm to 02:10 pm)
- One practical for one batch per week

Teaching Methodologies

- Lectures
- Demonstrations
- Small Group Clinical Discussions
- Clinical Practice
- Exercises
- Bed Side Teaching

Table of Specifications

TABLE OF SPECIFICATION (TOS-GENERAL MEDICINE)		
Topic	Topic Detail	MCQs
Diseases of Cardiovascular system	Introduction to Cardiology	10
	Rheumatic fever and Rheumatic heart disease	
	Valvular Heart Diseases (Introduction and pathophysiology S/S and management)	
	Congenital Heart Disease (CCF)	
	Infective endocarditis	
	Introduction to ischemic heart diseases (Myocardial Infarction)	
	Chest pain and differential diagnosis and management	
Diseases of Respiratory system	Chronic bronchitis	15
	Bronchial asthma	
	Emphysema	
	Bronchiectasis	
	Pneumonia	
	COPD	
	Resp distress syndrome	
	Pulmonary edema	
	Pulmonary embolism	
	Cystic fibrosis	
	Dyspnea	
	Clubbing	
	Cyanosis	
	TB	
	Lung Cancer	
Haematological diseases	Anaemias	12
	Polycythemia	
	Leukaemia	
	Myeloproliferative disorders	
	Myeloblastic disorders	
	Thrombocytopaenia	
	Clotting disorders	
Infectious diseases	Bacterial infections	06
	Protozoal infections	
	Fungal infections	
	Viral infections	

Diseases of nervous system	Meningitis	09
	Headache	
	Migraine	
	Facial pain	
	Facial paralysis	
	CVA	
	Epilepsy	
	Parkinson`s disease & Dementia	
Diseases of gastrointestinal system & Liver diseases	Peptic Ulcer Disease/Gastritis	10
	Malabsorption/Coeliac/Tropical Sprue	
	Chronic diarrhea Inflammatory Bowel Disease	
	Liver function Tests	
	Celiac Disease	
	Acute Hepatitis	
	Chronic Hepatitis(B,C,D,E)	
	Hereditary and acquired causes of jaundice	
	Liver Cirrhosis	
Kidney diseases	Nephrotic syndrome	10
	Kidney stones	
	Renal dialysis/transplant	
	Acute Renal Failure	
	Chronic Renal Failure	
Endocrine disorders	Diabetes	08
	Gonadal disorders	
	Pituitary disorders	
	Parathyroid disorders	
	Adrenal disorders	
Total MCQs		80

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Learning Resources

- Davidson`s Principles and Practice of Medicine - 23rd Edition

General Surgery

Learning Outcomes

i. Principles

1. The metabolic response to injury

- Understand the classical concepts of homeostasis and mediators of the metabolic response to injury.
- Know the physiological and biochemical changes that occur during injury and recovery.

2. Shock and Blood Transfusion

- Know the pathophysiology of shock and ischemia–reperfusion injury.
- Understand the different patterns of shock and the principles and priorities of resuscitation.
- Understand the appropriate monitoring and end points of resuscitation.
- Use of blood and blood products, the benefits and risks of blood transfusion.

3. Wounds, Tissue Repairs and Scars

- Know the normal healing and how it can be adversely affected.
- Understand the management of wounds of different types, different structures and at different sites.
- Recognize the disordered healing that lead to chronic wounds.
- Know the variety of scars and their treatment.
- Differentiate between acute and chronic wounds

4. Surgical Infection

- Understand the characteristics of the common surgical pathogens and their sensitivities.
- Recognize the different factors that determine whether a wound will become infected.
- Know the classification of sources of infection and their severity.
- Recognize the clinical presentation of surgical infections.
- Know the indications and choice of prophylactic antibiotics.
- Advise the commonly used antibiotics in surgery and understand the principles of therapy.
- Can manage the abscesses.
- Can apply the aseptic and antiseptic techniques for the management of delayed primary or secondary closure in contaminated wounds.
- Aware of the causes of reduced resistance to infection (host response) and basic precautions to avoid surgically relevant hospital acquired infections.

5. Basic Surgical Skills

- Know the principles of patient positioning and operating theatre safety.

- Understand the principles of incisions, flaps, wound closure and anastomoses as well as drain use.
- Know the principles of diathermy and advanced energy devices.
- Know the principles, advantages and disadvantages of robotic surgery.
- Describe clinically important differences between adults and children trauma management.

6. Surgical ethics and law

- Know the importance of autonomy in good surgical practice.
- Understand the moral and legal boundaries and practical difficulties of informed consent.
- Know the good practices in making decisions about the withdrawal of life-sustaining treatment.
- Understand the importance and boundaries of confidentiality in surgical practice.
- Know the importance of appropriate regulation in surgical research.
- Understand the importance of rigorous training and maintenance of good practice standards.

ii. Investigation and Diagnosis

1. Diagnostic imaging

- Understand the advantages of good working relationships and close collaboration with the imaging department in planning appropriate investigations.
- Know the basic principles of radiation protection and know the law in relation to the use of ionizing radiation.
- Understand the principles of different imaging techniques and their advantages and disadvantages in different clinical scenarios.
- Understand the role of imaging in directing treatment in various surgical scenarios.

2. Tissue and molecular diagnosis

- Know the value and limitations of tissue diagnosis.
- Understand the tissue sampling, process, and role of histology and cytology.
- Know the role of additional techniques used in clinical practice, including special stains, immunohistochemistry and molecular pathology.
- Understand the principles of microscopic diagnosis, including the features of neoplasia and importance of clinico-pathological correlation.

iii. Perioperative Care

1. Preoperative care including the high risk surgical patient
 - Understand the preoperative care and the operating list management.
 - Understand preoperative preparation regarding the surgical, medical and anesthetic aspects of assessment.
 - Know how to identify and optimize the patient at higher risk.
 - Know the importance of critical care in management.
 - Able to take informed consent for surgery.

2. Anesthesia and pain relief

- Understand the different techniques of anesthesia and airway maintenance.
- Know the methods of providing pain relief including pain from malignancy.
- Understand the local and regional anesthesia techniques.

3. Nutrition and fluid therapy

- Know the causes and consequences of malnutrition in the surgical patient.
- Understand the fluid and electrolyte requirements in the pre- and postoperative patients.
- Understand the nutritional requirements of surgical patients.
- Know the different methods of providing nutritional support and their complications.

4. Postoperative care

- Know the common postoperative problems seen in the immediate postoperative period and requirement of immediate postoperative care.
- Able to predict and prevent common postoperative complications.
- Know how to recognize and treat common postoperative complications.
- Know the principles of enhanced recovery.
- Handle the system for discharging patients.

5. Day case surgery

- Know the concept of the day surgery, importance of patient selection and preoperative assessment.
- Understand the basic principles of anesthesia for day surgery.
- Know the spectrum of surgical procedures suitable for day surgery and postoperative management and discharge arrangements.

iv. Trauma

1. Introduction to Trauma

- Become familiar with the timeline concept in trauma management.
- Understand how to assess a trauma problem and respond to a trauma problem.
- Understand how to select early total care and damage control surgical strategies.

2. Early assessment and management of severe trauma

- Identify and assess the severely injured patient.
- Know the early treatment goals for multiple injured patients.
- Understand the role of permissive hypotension, tranexamic acid and massive transfusion protocols.
- Understand the principles of damage control surgery (DCS) versus early total care (ETC).

3. Traumatic brain injury

- Know the physiology of cerebral blood flow and the pathophysiology of raised intracranial pressure.
- Know the classification and assessment of head injury.

- Understand the management and sequelae of minor and mild traumatic brain injury.
- Know the medical and surgical management of moderate and severe traumatic brain injury.

4. Maxillofacial trauma

- Identify and understand the significance of potentially life threatening injuries to the face, head and neck.
- Know the systematic methodology for examining facial injuries.
- Enlist the classification of facial fractures.
- Understand the diagnosis and management of fractures of the middle third of the facial skeleton and the mandible.
- Understand the principles of the diagnosis and management of facial soft tissue injuries.

5. Conflict surgery

- Know the fundamental differences of war surgery.
- Know the Injury patterns of modern warfare including blast and ballistic injury and principles for their surgical management

v. Specialized Surgery

1. Tumors

- Differentiate the signs and symptoms associated with benign and malignant tumor.
- Understand the timely referral of a suspected tumor to a specialist center for staging, biopsy and multidisciplinary management.
- Understand the different types of biopsies and their underlying principles.
- Describe the principles of surgical treatment of different tumors.
- List the aims of surgical treatment for metastatic tumors.
- Evaluate the risk of pathological fracture.

2. Burns

- Know how to assess the area and depth of burns.
- Know the methods for calculating the rate and quantity of fluids to be given.
- Enlist the techniques for treating burns patients.
- Differentiate the pathophysiology of electrical and chemical burns.

3. Plastic and reconstructive surgery

- Know the relevant anatomy and physiology of tissues used in reconstruction.
- Know the various skin grafts and how to use them appropriately.
- Know the principles and management of different flaps used for difficult and complex tissue loss.

4. Cleft lip and palate: developmental abnormalities of the face, mouth and jaws

- Understand the etiology and classification of developmental abnormalities of the face, mouth and jaws.
- Know perinatal and early childhood management.

- Know the principles of reconstruction of cleft lip and palate.
- Enlist the complications associated with cleft lip and palate.

5. Oral cavity malignancy

- Understand the relationship between oral (pre)malignancy and the use of alcohol and tobacco.
- Understand the cardinal features of premalignant and malignant lesions of the oral cavity.
- Know the investigations and treatment options for these patients.

6. Disorders of the salivary glands

- Know the surgical anatomy of the salivary glands.
- Understand the presentation, pathology and investigation of salivary gland disease.
- Enlist the medical and surgical treatment of stones, infections and tumors that affect salivary glands.

Practical Content

Student should be trained in the clinical methods involved in

- Inspection
- Palpation
- Percussion
- Auscultation

Clinical Quota

Skill	Objectives	Count	Status
History Taking	Carve diagnosis		
Communication with patient	Develop patient-doctor relationship		
Perform general physical examination	To identify the general signs	10	PS
Examination of cervical lymph nodes	Legal consideration		
Counselling	Ethical consideration		
Informed Consent			
Examination of Swelling	To find out physical signs of different swellings	3	PS
Examination of Wound	To differentiate between healing wound and infected wound	5	AS
Examination of Ulcer	To identify different types of ulcer specially head and neck region	3	PS
Examination of Sinus and Fistula	To know different types of sinuses and fistulae in head and neck region	2	AS
Examination of Salivary Glands	To identify physical signs of different disease of salivary glands	5	PS

Examination of Cranial Nerves	Hypoglossal Nerve		
	Facial Nerve	5	PS
	Vagus Nerve		
	Trigeminal Nerve		
Take Blood Sample	Draw sample and label	10	PS
Secure I/V Line	Passing I/V canula	3	PS
Record Vital Signs	Pulse, Temperature and Blood Pressure	10	PS
Adjust Drip Set	Able to adjust drips	3	PS
To pass NG Tube	For feeding or decompression of stomach	3	PS
To pass Foley's Catheter	Monitor output	3	PS
To pass Endotracheal Tube	To secure airway	1	AS
To pass Chest Tube	For management of Pneumothorax	1	OS
Tracheostomy	To secure airway	1	OS
	Simple interrupted		
Suturing	Horizontal mattress	3	PS
	Continuous		
Incision Making	Handling of knife	3	PS
Gloving and Gowning	Aseptic measure	3	PS
Scrubbing	Aseptic measure	3	PS
Barrel Bandage	Fracture mandible	1	AS
Incision Biopsy	Oral Cavity lesions	1	OS
Lymph Node Biopsy	For diagnostic purpose	1	OS
Wound Debridement & Dressing	Principles	1	AS
OS	Observer Status		
AS	Assistant Status		
PS	Perform under Supervision		

Course Duration

- Lectures: 31 weeks
- Practical rotations: 1 per week

Lectures:

- Tuesday (09:50 am to 10:40 am)
- Thursday (08:55 am to 09:45 am)

Practical:

- Mon (10:45 am to 02:10 pm)
 - Tue (10:45 am to 02:10 pm)
- One practical for one batch per week

Teaching Methodologies

- Lectures
- Clinical demonstrations
- Small Group Discussions
- Clinical Practice
- Exercises

Table of Specifications

TABLE OF SPECIFICATION (TOS-GENERAL SURGERY)		
Topic	Topic Detail	MCQs
Principles	The metabolic response to injury	25
	Shock & Blood Transfusion	
	Wounds, Tissue repairs and scars	
	Surgical infection	
	Basic surgical skills	
	Surgical ethics and law	
Investigation and diagnosis	Diagnostic imaging	15
	Tissue and molecular diagnosis	
Perioperative Care	Preoperative care including the high-risk surgical patient	10
	Anaesthesia and pain relief	
	Nutrition and fluid therapy	
	Postoperative care	
	Day case surgery	
Trauma	Introduction to trauma	15
	Early assessment and management of severe trauma	
	Traumatic brain injury	
	Maxillofacial trauma	
	Conflict surgery	
Specialized Surgery	Tumours	15
	Burns	
	Plastic and reconstructive surgery	
	Cleft lip and palate: developmental abnormalities of the face, mouth and jaws	
	Oral cavity malignancy	
	Disorders of the salivary glands	
		80

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Learning Resource

- Bailey & Love's Short Practice of Surgery – 27th Edition

Pre-Clinical Prosthodontics

Learning Outcomes

1. Introduction to Prosthodontics

- Define basic terminology of prosthodontics
- Define various types of prostheses for a partially dentate patient
- Identify and enlist instruments used in partial denture fabrication

2. Impressions for Partially Dentate Patients

- Describe pre-requisites of impressions for partially dentate patients
- Describe various types of impressions
- Evaluate an impression for acceptance

3. Treatment Planning for a Removable Partial Denture Case

- Diagnose a dental patient for replacement of missing teeth with removable prostheses
- Enlist suitable treatment options for a partially dentate patient
- Formulate treatment plan of removable prosthesis for a simple partially dentate case

4. Cast Partial Dentures

- Identify and describe component parts of cast partial dentures
- Have knowledge of laboratory procedures for cast partial dentures
- Describe the support problem associated with distal extension bases and enlist solutions for compensation
- Describe pre-prosthetic mouth preparation and abutment preparation
- Identify various parts of a surveyor
- Enlist uses of surveyors
- Survey a cast for cast partial denture design
- Describe trial and insertion of a cast partial dentures

5. Occlusion

- Define occlusion & describe types of occlusion used in partial dentures
- Design and fabricate acrylic partial dentures (clinical and laboratory)

6. Acrylic Partial Dentures

- Describe common problems with acrylic partial dentures
- Describe various types of acrylic partial dentures

7. Other Treatment Options for Partially Dentate Patient

- Give outline of role of fixed prosthesis in RPD
- Describe partial immediate and over dentures

Practical Content

- Infection control protocols
- Communication skills
- History taking, clinical examination
- Radiographic interpretation
- Diagnosis
- Treatment Planning for partially edentulous arches
- Fabrication and insertion of acrylic partial dentures
- Post insertion instructions

Clinical Quota

- 12 credits of removable partial dentures.

Course Duration

- Lectures: 31 weeks
- Clinical rotations: 8 weeks per rotation

Lectures:

- Tuesday (8:00 am to 8:50 am) every alternate week

Practical/ clinical visits:

- Wednesday (09:50 am to 01:10 pm)
- Thursday (09:50 am to 12:20 pm)
- Friday (09:40 am to 12:00 pm)
- Saturday (08:00 am to 02:00 pm)

Teaching Methodologies

- Lectures
- Clinical demonstrations
- Small group clinical discussions
- Clinical Practice
- Exercises

Learning Resources

- McCracken's Removable Partial prosthodontics 13th Edition
- Stewart's Clinical Removable Partial Prosthodontics 4th Edition



Pre-Clinical Operative Dentistry

Learning Outcomes

The student should be able to

1. Identify instruments and equipment used for tooth preparation
2. Apply rubber dam
3. Demonstrate understanding of the classification systems of cavity preparation
4. Demonstrate understanding of the principles of tooth preparation
5. Demonstrate understanding of different matrix systems & their uses
6. Execute steps for amalgam restorations in class I, class I compound, class II and class V cavity preparation
7. Execute steps for composite restoration in class III, class IV and class V cavity preparation
8. Execute steps for endodontic treatment of single rooted teeth

Theoretical Content

1. Instruments & Equipment for tooth preparation
2. Principles of Tooth Preparation
3. Rubber Dam Application
4. Class I cavity preparation (Maxillary & Mandibular Molars, Premolars)
5. Lining & Restoration
6. Class I compound cavity preparation (Maxillary & Mandibular Molars)
7. Matrix band application (Barton Matrix)
8. Class II cavity preparation (Maxillary & Mandibular Molars, Premolars)
9. Matrix band application & its importance, Wedges
10. Class II restorations
11. Class III cavity preparation
12. Steps of composite restorations
13. Class V cavity preparation
14. Endodontic Treatment

Practical Content

1. Instruments & Equipment for tooth preparation
2. Principles of Tooth Preparation
3. Rubber Dam Application
4. Class I cavity preparation (Maxillary & Mandibular Molars)
5. Class I cavity preparation
6. Lining & Restoration
7. Class I cavity preparation (Maxillary & Mandibular Premolars)
8. Class I restorations
9. Class I compound cavity preparation (Maxillary & Mandibular Molars)
10. Matrix band application
11. Class I compound restorations (Maxillary & Mandibular Molars)
12. Class II cavity preparation
13. Matrix band application & its importance, Wedges
14. Class II restorations
15. Class II restorations
16. Class III cavity preparation
17. Steps of composite restorations
18. Class III restorations
19. Class V cavity preparation
20. Endodontic Treatment
21. Class V restorations
22. Endodontic Treatment

Course Duration

- Lectures: 31 weeks
- Clinical rotations: 8 weeks per rotation

Lectures:

- Monday (09:50 am to 10:40 am) every alternate week

Practical/ clinical visits:

- Wednesday (09:50 am to 01:10 pm)
- Thursday (09:50 am to 12:20 pm)
- Friday (09:40 am to 12:00 pm)
- Saturday (08:00 am to 02:00 pm)

Teaching Methodologies

- Lectures
- Clinical Demonstrations
- Small Group Discussions
- Clinical Practice
- Exercises

Learning Resource

- Sturdevant's Art and Science of Operative Dentistry – 7th Edition

Pre-Clinical Oral and Maxillofacial Surgery

Learning Outcomes

1. Evaluate patient for simple dental extraction.
2. Perform history taking and fill the history sheet for patients.
3. Identify the different patients who need modifications in dental treatment due to systemic conditions.
4. Enlist and identify various causes of tooth extractions.
5. Define and describe different types of mechanical principles used in dental extraction.
6. Describe various sterilization techniques for sterilization.
7. Describe basics principles of Oral & Maxillofacial Surgery.
8. Identify the different instruments used in simple dental extraction.
9. Examine and assist in simple and complicated dental extraction procedures.
10. Enlist and identify different radiographs (Peri-apical, OPG) and their normal land marks.
11. Enlist and describe different types of cysts of the oral and maxillofacial area.

Course Duration

- Lectures: 31 weeks
- Clinical rotations: 8 weeks per rotation

Lectures:

- Monday (09:50 am to 10:40 am) every alternate week
- Tuesday (8:00 am to 8:50 am) every alternate week

Practical/ clinical visits:

- Wednesday (09:50 am to 01:10 pm)
- Thursday (09:50 am to 12:20 pm)
- Friday (09:40 am to 12:00 pm)
- Saturday (08:00 am to 02:00 pm)

Teaching Methodologies

- Lectures
- Clinical Demonstrations
- Small Group Discussions
- Clinical Practice
- Exercises

Learning Resources

- Contemporary Oral & Maxillofacial Surgery - 6th Edition 2013
- Medical Problems in Dentistry
- Peterson Principles of Oral and Maxillofacial Surgery - 4th Edition.
- Handbook of Local Anesthesia - 6th Edition, 2013
- Killeys
 - Midface fractures volume - I
 - Mandible fractures volume - II
- Internet
 - <https://www.sciencedirect.com/>
 - <https://emedicine.medscape.com/>

Assessment Grid



RAWAL INSTITUTE OF HEALTH SCIENCES ASSESSMENT GRID

80% Component from Prof Annual Exam: Theory and Practical: 80 + 80
20% Component from Internal Assessment: Theory and Practical 20 + 20
Marks Theory: 500 Marks Practical: 500 Total Marks: 1000

Subjects		Periodontology	Oral Medicine	Oral Pathology	General Medicine	General Surgery
Theory	Annual University Examination	80 Marks	80 Marks	80 Marks	80 Marks	80 Marks
		MCQs 01 Mark each	MCQs 01 Mark each	MCQs 01 Mark each	MCQs 01 Mark each	MCQs 01 Mark each
	Internal Assessment	20 Marks	20 Marks	20 Marks	20 Marks	20 Marks
	Total	100 Marks	100 Marks	100 Marks	100 Marks	100 Marks
Practical	Annual University Examination	80 Marks	80 Marks	80 Marks	80 Marks	80 Marks
	Internal Assessment	20 Marks	20 Marks	20 Marks	20 Marks	20 Marks
	Total	100 Marks	100 Marks	100 Marks	100 Marks	100 Marks
Total (Theory + Practical)		200 Marks	200 Marks	200 Marks	200 Marks	200 Marks
Grand Total		1000 Marks				