STUDY GUIDE 2025
PROSTHODONTICS

COLLEGE OF DENTISTRY

LAHORE MEDICAL AND DENTAL COLLEGE

LAHORE

INTRODUCTION

Purpose of guide is to facilitate learning of the student by enlightening about organization of learning program, facilitate student in managing their studies through the academic year and guidance on assessments methods.

The Course of Prosthodontics is spread on a span of three Prof.
2nd Prof: - The preclinical Prosthodontics laboratory procedures
3rd Prof: - Treatment of partial dentate patients
4th Prof: - The treatment of edentulous patients

TEACHING AND TRAINING

The Prosthodontics course is spread over three years. It is organized by designating one faculty member in charge of every year with a demonstrator. This year distribution is as

NO.	YEAR	IN CHARGE	DEMONSTRATOR
1	Second year	Dr. Hammad Azeem	Dr. Mubine, Farryal
2	Third Year	Dr. Ussama Jatala	Dr. Maham Dr. Ali
3	Final year	Dr. Khezran Qamar	Dr. Marrium, Noor

Prosthodontics is examined in final year. The final year theory syllabus is further divided into three modules. Each faculty member is responsible for one module.

NO.	MODULE	IN CHARGE
1	Complete denture Prosthodontics	Dr. Khezran Qamar
2	Removable partial denture Prosthodontics	Dr. Sajid Naeem
3	Implants and Maxillofacial Prosthodontics	Dr. Hammad Azeem
4	All remaining topic not cover in above modules mentioned in course outlines	Dr. Ussama Jatala

CLINICAL TRAINING

The clinical training is spread in 5 stages of competencies is as

LEVEL	COMPETENCY	CASE NO.
1	Demonstration by faculty member	1st
2	Assisted by faculty member	2nd
3	Direct observed by supervisor	3rd
4	Indirectly observed by supervisor	4th
5	Independent	5th (assessment case)

Every student is requiring to complete at least one case with every faculty member. The supervisor i.e., faculty member will check and guide the student on every step of the case.

ASSESSMENT METHODOLOGY

In the department of Prosthodontics there is one written assessment in every month of academic year. The assessment is consisted of five SAQs and 10 MCQs. In Prosthodontic clinic the assessment is based on clinical performance. At the end of every rotation the student has to appear in assessment. Assessment is based on examination of the patient, and procedure of student's own case presentation and viva.
On the bases of these assessment every student is graded on quarterly bases. The weak student has a chance to improve her/himself by requesting reassessment of the weak component of the syllabus.
University examination of Prosthodontics held in Final Prof. It comprises of

Written Examination of 100 marks. Marks distribution is as
Internal assessment 10 Marks
15 SAQs 45 Marks
45 MCQs 45 Marks

Practical examination of 100 Marks. Marks distribution is as
Internal assessment 10 Marks
10 OSPE stations 50 Marks (25 unobserved, 25 impression recording)
Set up of teeth 20 Marks (10 each examiner)
Viva voice 20 Marks (10 each examiner)

Internal Assessment
By UHS 10% of marks are dedicated for internal assessment as
Theory paper 10 marks out of 100 marks
Practical paper 10 marks out of 100 marks

INTERNAL ASSESSMENT

THEORY ASSESSMENT

The students are regularly assessing in every month. The assessment week and day is decided every year in core committee meeting. the Prosthodontics assessments are usually held on Mondays of designated week. The assessment is based on the topics covered in lectures of the last months. At the end of session, a grand assessment is taken commonly called send-up which comprises of all the theory

syllabus. The assessments are based on MCQs and SAQs as university examination. The distribution of internal assessment marks is as

Regular monthly assessments	7 marks
Send up marks	3 marks
Total	10 marks

PRACTICAL INTERNAL ASSESSMENT

In practical the students are required to complete the clinical/laboratory requirement laid down by UHS/PMDC which are as

Second year	Complete denture & RPD Laboratory procedures exercises
Third year	12 RPDs including clinical & Laboratory procedures Final
year	6 complete dentures including clinical & laboratory procedures

The students are continuously assessing on the psychomotor skills in lab. and clinic on every patient. In clinics students are also observed on their attitudes towards patients, staff, teachers and colleagues. At the end of each clinical rotation a final assessment is made by direct observing the student on patient performing any selected procedure.

The distribution of internal assessment marks in practical is as

YEAR	MARKS
2nd year exercises	2 marks
3rd year clinical requirements	2 marks
Final year clinical requirement	3 marks
Attitudes	3 marks
Total	10

In complete course of Prosthodontics, the internal assessment is based on Bloom's taxonomy is as

Cognitive Domain			Psychomotor skills	Affective domain
C1	C2	C3	7	3
4	4	2		

Recommended Books

McCracken's
Removable Partial Prosthodontics
Alan B. Carr, David T. Brown
12th edition

Prosthodontics Treatment for Edentulous Patients
Zarb, Hobkirk, Eckept, Jacob
13th Edition

Reference Books

Stewart's Clinical
Removable Partial Prosthodontics
Rodney D. Phoenix, David R. Canga, Charles F. DeFreest.
4th Edition

Basker
Prosthodontics Treatment for Edentulous Patients
RM Basker, JC Davenport, JM Thomason
5th Edition

Working Hours Prosthodontics

2nd Year
Lectures 17 lectures of 45 minutes each = 13hours
Practical 2 hours per week for six months = 48 hours

3rd Year
Lectures 36 lectures of 50 minutes each = 30 hours
Practical 12 hours per week for 7 weeks = 84 hours

4th Year
Lectures 76 lectures of one hours each = 76 hours
Practical 27.50 hours per week for 10 weeks = 275 hours

	2nd Year	3rd Year	4th Year	Total Hours
Lectures	13	30	76	119
Practical	48	84	275	407
Total	61	114	351	526

Learning outcomes

At the end of Final Year student should be able to

1- Examine a patient require Prosthodontic treatment.
2- Make refers whenever require.
3- Prescribe investigations whenever require.
4- Outline a treatment plan for Prosthodontic patient.
5- Perform all clinical steps require for fabrication of a partial or complete dentures independently.
6- Perform all laboratory steps for a prosthesis fabrication.
7- Outline a treatment plan for patient required full mouth rehabilitation.

PLANNER OF PRE-CLINICAL PROSTHODONTICS FOR 2ND YEAR BDS 2025

TOTAL NUMBER OF LECTURES (20 WEEKS): 20

LECTURES	March	April	May	June	July	August	TOTAL
Introduction to Prosthodontics	1						01
Applied Anatomy	2						02
Impression Trays		1					01
Casts & Baseplates		1					01
Occlusal Rims		1					01
Jaw Relations		2	1				03
Articulator & Articulation			1				01
Tooth Setup			2	2	1		05
Denture Processing					1	1	02
Denture Finishing & Polishing						2	02
Class Tests						1	01
TOTAL	03	05	04	02	02	04	20

TIMELINE OF TOPICS

1	March	Introduction to Prosthodontics Applied Anatomy
2	April	Impression Trays Casts & Baseplates Occlusal Rims Jaw Relations
3	May	Jaw Relations Articulators & Articulation Tooth Setup
4	June	Tooth Setup
5	July	Tooth Setup Denture Processing
6	August	Denture Processing Denture Finishing & Polishing

PLANNER OF PROSTHODONTICS FOR 3rd YEAR BDS 2025

TOTAL NUMBER OF LECTURES (38 WEEKS): 38

LECTURES	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Total
Introduction to RPDs & Classification	3										03
Connectors		3									03
Rests & Rest Seats		1									01
Class Tests		1			1		1		1	1	05
Retainers			3								03
Precision Attachments			1								01
Guide Planes				1							01
Denture Bases				1							01
Surveying					1						01
Movements of RPD					3						03
Examination, Diagnosis & Tx Planning						2					02
Mouth Preparation						2					02
Impressions							1				01
Support							1				01
Lab Procedures							2				02
Occlusion								1			01
Insertion								1			01

Relining, Rebasing & Repair								2			02
Interim RPDs									3	1	04
TOTAL	03	05	04	02	05	04	05	04	04	02	38

TIMELINE OF TOPICS

1	March	Introduction to RPDs & Classification
2	April	Connectors Rests & Rest Seats Class Test
3	May	Retainers Precision Attachments
4	June	Guide Planes Denture Bases
5	July	Class Test Surveying Movements of RPD
6	August	Examination, Diagnosis & Tx Planning Mouth Preparation
7	September	Class Test Impressions Support Lab Procedures
8	October	Occlusion Insertion Relining, Rebasing & Repair
9	November	Class Test Interim RPDs
10	December	Class Test Interim RPDs

FINAL YEAR

LECTURE ALLOCATION 2025

Total # of lectures in 36 weeks:

LECTURES	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	TOTAL
Intro. History & examination of edentulous patients	1										5
CD retention & objectives of impression making	4										4
Maxillo- mandibular relation.	2	2									4
Implants, Maxillofacial Prosthodontics and Phonetics			4			1					5
Try-in insertion & post-op complaint		2									2
Occlusion, Relining & Rebasing.			4								4
Classification of RPD				1	1	1					3
Major connectors of RPD				3							3
Direct & Indirect Retainer, Rest				2	1						3
Surveying, Guide planes, precision attachments stress breaking					3						3
Denture Base Considerations, Every denture.					2						2
Articulators, Tooth setup of CD, Over denture, CD management						4	3		1		8
Xerostomia Management, Denture Stomatitis, Burning Mouth Syndrome, Biometric guidelines, Residual ridge resorption							4	3			7
Examination diagnosis and Treatment planning for Partially dentate patients						2				1	3
Mouth prep for old denture patient,Combination Syndrome, TP for resorbed ridge								4	3	1	8

Assessment	1		1	1	1	1	1	1			8
TOTAL	8	4	9	7	8	9	8	8	4		

TIMELINE PROSTHODONTICS TOPICS 2024

1	April	Intro. History & examination of edentulous patients
2	May	CD retention & objectives of impression making , Maxillo- mandibular relation.
3	June	Maxillo- mandibular relation, Try-in insertion & post-op complaint
4	July	Implants, Maxillofacial Prosthodontics and Phonetics Occlusion, Relining & Rebasing.
5	August	Classification of RPD, Requirements of connectors, Major connector of RPD, Direct & Indirect Retainer, Rest.
6	September	Surveying, Guide planes, precision attachments stress breaking, Denture Base Considerations, Stress Breaking, and Every denture
7	October	Articulators, Tooth setup of CD, Over denture, CD management, Examination diagnosis and Treatment planning for Partially dentate patients
8	November	Xerostomia Management, Denture Stomatitis, Burning Mouth Syndrome, Biometric guidelines, Residual ridge resorption
9	December	Mouth prep for old patients
10	January	Combination Syndrome, TP for resorbed ridge
11	Feb	Send up

PROSTHODONTICS

TABLE OF SPECIFICATIONS

Prosthodontics for 2nd. 3rd. and Final Year B.D.S.

Content	C1	C2	C3	PM	A	Total %
Pre-clinical Dentistry 2nd Year	***	–	–	***	-	8%
Treatment of Partially Edentulous Patients 3rdand Final Year	***	**	*	**	***	29%
Treatment of Edentulous Patients 3rdand Final Year	***	**	*	**	***	60%
Implant Prosthodontic Maxillofacial Prosthetics Other related Topics Final Year	**	–	–	–	–	3%
Total						100

LIST OF LEARNING OUTCOMES PRE- CLINICAL PROSTHODONTIC 2ND. YEAR B.D.S.

At the end of the academic year the student should be able to

1. Identifies the anatomical landmarks of oral cavity on model 2. Perform laboratory steps required for Complete Denture construction.
3. Describe Occlusion completely.
4. Identify the Kennedy classification of partial edentulous arches on models.
5. Differentiate between parts of a removable partial denture and their functions.
6. Describe types of Fixed partial denture and parts of FPD.

PRE-CLINICAL PROSTHODONTICS
TABLE OF SPECIFICATIONS

2nd. Year B.D.S.

Content	C1	C2	C3	PM	A	Total %
Applied Anatomy of Oral Cavity	***	-	-	***	-	5.5%
Impression and Impressions Trays	***	-	-	***	-	9.5%
Base Plates & Occlusal Rims	***	-	-	***	-	20%
Occlusion	***	-	-	-	-	4%
Set-up of Teeth and Processing of Complete Denture	***	-	-	***	-	33%
Classification of RPD	***	-	-	***	-	12%
Parts of RPD & Functions	***	-	-	***	-	12%
Crown &Bridge	***	-	-	-	-	4%
Total						100

COLLEGE OF DENTISTRY LAHORE MEDICAL AND DENTAL COLLEGE DEPARTMENT OF PROSTHODONTICS

COURSE OUTLINE

PRE-CLINICAL PROSTHODONTICS

2nd Year B.D.S

Laboratory Procedures for Complete Denture

Lecture

1. Introduction to Prosthodontics
2. Applied anatomy of oral cavity & patient examination
3. Impression for complete denture. Types of special trays & their indication.
4. Base plates, function, requirements & types
5. Occlusal rime, functions, requirements & dimensions

   ASSESSMENT
6. Articulators. Types of articulators
7. Occlusion – Definitions
8. Occlusion of complete denture
9. Teeth selection for edentulous patient
10. Occlusal adjustment, indication, rules & method

    ASSESSMENT
11. Relining & rebasing, indication & methods
12. Classification of removable partial denture
13. Parts of RPP, functions & types
14. Crown & bridge, classification & indication

    ASSESSMENT

PRACTICALS EXERCISES

1. Upper & lower special tray making
2. Wax-up of upper & lower base plates
3. Flasking , dewaxing of base plates
4. Packing curing & finishing of base plates
5. Occlusal rim making
6. Articulation of base plates caring occlusal rims
7. Set up of anterior teeth
8. Set-up of posterior teeth
9. Waxing, pooling, carving & festooning
10. Flasking & dewaxing of complete denture
11. Final packing & curing of complete denture
12. Finishing and polishing of complete denture
13. Occlusal adjustments of complete denture

SYLLABUS PRE-CLINICAL PROSTHODONTICS

1. Introduction to Prosthodontics: -

Definition of Prosthodontics. "Definition of Prosthesis,

Introduction to different prostheses i.e. partial denture, complete denture, bridges, crowns

2. Applied Anatomy of Oral Cavity Anatomical landmarks

a. Upper arch

Incisive papilla, Labial frenum, Buccal frenum

Maxillary tuberosity, Hamular notch, Rugae,

Mid palatal suture, Palatine fovea, Vibrating line

Labial sulcus, Buccal sulcus

b. Lower arch

Labial frenum, Buccal frenum, Labial sulcus,

Ridge crest, Buccal shelf, Retromolar fossa,

Retromolar pad, Lingual frenum, Mylohyoid ridge

Retro mylohyoid fossa

3. Impression & impression Trays

Definition of impression. Types of impressions

Definition and types of impression trays, stock &special trays

Types of special trays, Indication of close-fitting trays

Indication of spaced trays. Indications for selective pressure trays. Methods of fabrication of special trays.

4. Base Plates

Definition of Base Plates. Functions of Base Plates

Requirements of a good Base Plate. Types of Base Plates.

Materials and methods used for fabrication of temporary Base Plates. Materials & methods used for fabrication of permanent Base Plates.

5. Occlusal Rims: -

Definition of Occlusal Rims. Functions of Rims. Materials used for construction of Rims. Dimensions of upper& lower Rims. Method of fabrication. Relation of Rims to alveolar ridges.

6. Articulators

Definition and functions of Articulators. Types of Articulators, i.e., Plan line, Average value, semi adjustable & Full adjustable Articulators. Difference b/w these Articulators. Definition of different records taken from the patients. Definition of Jaw relation records, Vertical dimension record, Centric records, Face bow records & Face bows.

7. Occlusion

Definitions: - Occlusion, Articulation, Centric relation, Centric occlusion, slide in centric, Occlusal plane, Curve of Spee, Curve of Wilson, Curve of Monsoon, over jet, Over bite, Cusp angle, supporting cusps, guiding cups, guiding inclines, working side, balancing side, Working side cusp relation, Balancing side cusp relation, Incisal guidance angle, Condyle guidance angle. Bennett angle, Bennett shift, Angle's class I relation, Angle's class II relation, Angle's class III relation.

8. Principles of Tooth Selection:

Selection of shape size & form of anterior teeth, Selection of size i.e., length & width, includes photographs, models, extracted tooth, old x-rays.
Determination of length by the lip line, determination of width by different measurements of face i.e., canine eminence, incisive papilla, bizygomatic width, cranial circumference, corner of mouth, width of nose, lateral surface of nose.
Form determination by William's theory.

9. Setup of Teeth

Set up of teeth according to five relations i.e., mesiodistal, labiolingual, occlusal plane, ridge relation & arch relation, occlusion of tooth to opposing tooth.

10. Occlusal Adjustment

Adjustment of occlusion after final curing of dentures, Advantages of occlusal adjustment. Rules of occlusal adjustment. Method of occlusal adjustment.

11. Relining & Rebasing

Definitions of Relining and Rebasing. Difference in Relining and Rebasing. Indications of Relining & Rebasing. Common methods of Relining & Rebasing. Materials used for Relining & Rebasing.

12. Removable Partial Dentures

Definition of RPD. Advantages of RPD. Classification of RPD i.e., Kennedy & Support classification. Rules of Kennedy classification, Practice of classifying different arches on models.

13. Parts of RPD

Definition & functions of different parts of RPD.

1 - Major connectors, types location in arch - Function

2- Minor connectors, functions and location

3- Rest, function of rest, rest seat, types of rest and their location

4- Direct retainers. Definition of Retention & Stability

5- Types of Clasps, parts of a Clasp, functions of different parts of Clasp and their location on tooth. Definition of abutment.

6- Indirect retainers. Definitions of Indirect retention, definition of indirect retainers

7-Saddles. Definition of Saddle, functions of Saddles and types of Saddles

14. Crown & Bridge

Definitions of different types of Fixed restorations i.e., Inlay, Only, Crown, Bridge, Veneers. Types of Crowns and their definitions

Types of Bridges and their definitions, parts of Bridges and their functions.

MODE OF INFORMATION TRANSFER

PRE-CLINICAL
PROSTHODONTIC

Lectures

Practical Demonstrations in Laboratory

Group Discussions

Exercises on Models

ASSESSMENT TOOLS

Written Assessment: -

SAQs, MCQs

Oral Examination

Continuous Assessment of Laboratory Exercises

LIST OF LEARNING OUTCOMES TREATMENT OF PARTIAL EDENTULOUS PATIENT

3RD. & FINAL YEAR B.D.S.

At the end of the course the student should be able to

1. Examine a Partially Edentulous patient.
2. Make refers whenever require
3. Prescribe investigations whenever require
4. Outline a treatment plan for a Partially Edentulous Patient.
5. Design a removable partial denture according to the oral conditions of patient.
6. Perform clinical and laboratory procedures required for RPD fabrication.
7. Outline a treatment plan for a partially edentulous patient required multiple treatments including Fixed Partial Denture.

TABLE OF SPECIFICATIONS TREATMENT OF PARTIALLY EDENTULOUS PATIENTS

3rd. and Final Year B.D.S

Content	C1	C2	C3	PM	A	Total %
Introduction, Classification, Parts of RPD.	***	-	-	***	-	4%
Major Connectors Minor Connectors	***	**	*	**	-	8%
Direct Retainers	***	**	*	**	-	9.5%
Indirect Retainers, Rest & Rest Seats	***	**	*	**	-	9%
Guide Plans Proximal Plats Denture Bases	***	**	*	**	-	9%
Surveyors & Surveying	***	*	-	**	-	10.5%
Moments of RPD	***	*	_	**	-	4%
Principles of RPD. Design	***	**	*	**	-	5.5%
Patient Examination, Diagnosis Treatment Planning	***	**	*	**	***	15%
Abutment Analysis & Preparation	***	**	-	**	***	6.5%
Impression Materials & Methods Jaw Relation, Trial, Insertion	***	**	*	**	***	13.7%
Relining & Rebasing of RPD	***	*	_	*	***	4%
R.P Over denture, Immediate RPD	***	*	_	*	-	0.72%
Role of FPD in RPD Treatment	***	*	_	-	-	0.72%
Precision Attachment, Stress Breakers, Sectional RPD	**	-	-	-	-	0.24%
Total						100

COURSE OUTLINE

CLINICAL REMOVABLE PROSTHODONTICS

Treatment of Partially Edentulous Patient:

1. Introduction to partial denture and terminology used.
2. Classification of partially edentulous arches.
3. Parts of partial denture and their function.
4. Major & minor connectors, Definitions, functions & requirements.
5. Types of Mandibular major connectors and their indications.
6. Type of maxillary major connectors and their indications.

ASSESSMENT

7. Rest. Definition, types and functions, Rest Seat Preparation.
8. Direct retainers. Definition, types, functions, indications.
9. Principles of circumferential clasps.
10. Principles of bar clasps.
11. Indirect retainers.

ASSESSMENT

12. Guide planes and proximal plates.
13. Denture Base: Purpose, type and indications. 14. Surveying: Surveyors, Purpose & Principles
15. Use of surveyor.

ASSESSMENT

16. Movements of partial Dentures.
17. Principles of Partial Dentures Design in Class I cases.
18. Principles of Partial Dentures Design in Class II, III, IV cases.

ASSESSMENT

CLINICAL PROSTHODONTICS.

19. Patient examination & Diagnosis.
20. Treatment Planning.
21. Mouth preparations for RPD.
22. Abutment's analysis.
23. Preparation of Abutments.
24. Impression materials & Techniques for RPD.
25. Altered cast impression Technique.
26. Occlusion in RPD.
27. Insertion and adjustment of RPD.
28. Relining & Rebasing of RPD

ASSESSMENT

29. Immediate RPD.
30. Partial Denture Opposing Complete Denture

31. Role of fixed Prosthodontics in RPD treatment
32. R.P over denture
33. Precision attachment
34. Stress Breakers
35. Sectional RPD ASSESSMENT

SYLLABUS OF TREATMENT OF PARTIAL EDENTULOUS PATIENT

1. Introduction:

Aims & Objectives for treatment of Partially Edentulous Patient. Different treatment options for partially edentulous patients.

Definition of RPD, Objectives of RPD treatment. Indication to RPD, Disadvantages of RPD. Alternative to RPDs, different types of RPDs.

2. Classification

Classification of partially edentulous arches i.e., Kennedy's classification. Rules of Kennedy classification, Clinical application of Kennedy's classification. General discussion on other classification systems.

3. Parts of Removable Partial Denture

General introduction to parts of a RPD and their functions. Biological & Mechanical requirements of RPD.

4. Major Connectors.

Biological & Mechanical requirements of major connectors. Relation of gingival tissue with major connectors. Periodontal consideration in selection of major connectors. Types of Maxillary and Mandibular major connectors. Clinical application of different major connectors.

5. Minor Connectors

Biological & Mechanical requirements of Minor connectors. Relation of Minor connectors with gingival tissues. Form & Location of Minor connectors.

6. Rest

Definition of Rest, Functions of Rest. Form of the Rest Seat, preparation of the Rest Seat. Types of Rest and their clinical indications.

7. Direct Retainers

Definition and functions of Direct Retainers. Types of Direct Retainer i.e., Extra coronal Intra coronal, Precision attachments. Extra coronal Direct Retainers and their types.

8. Principals of Clasp design

Mechanical & Biological requirements of Clasp design. Factors of Clasp retention, flexibility of Clasp arm. Biological & Mechanical requirements of retentive arm. Biological & Mechanical requirements of reciprocating arm. Uniformity of retention.

9. Circumferential Clasp

Types of Circumferential Clasps and their clinical indications.

10. Gingivally Approaching Clasp

Types of Gingivally Approaching Clasps and their clinical indications.

11. Indirect Retainers

Movements of a RPD. Definition of Indirect Retention. Definition of Indirect Retainers Functions of Indirect Retainers. Factors affecting the effectiveness of Indirect Retainers. Forms of Indirect Retainers and their clinical indications.

12. Path of Insertion & Removal

Definition of Path of Insertion. Guide Plans, definition and functions. Requirements of Guide Plans. Preparation of Guide Plan. Proximal Plates, definition and functions.

13. Denture Base

Functions of Denture Bases. Types of Denture Bases. Advantages & Disadvantages of Resin bases. Advantages and disadvantages of Metallic bases

14. Surveyor & Surveying

Description of Surveyor. Function of Surveyor. Principles of Surveying. Method of surveying.

Tripoding.

CLINICAL STEPS OF RPD TREATMENT

Six phases of Partial dentate patient

15. Patient Examination

Infection Control. Objections of Prosthodontic treatment. Extra oral examination. Intra-oral examination. Visual & Digital examination. Periodontal examination. Occlusal examination.

Radiographic examination. Impression making for Diagnostic casts. Examination of Articulated diagnostic casts. Interpretation of examination data & treatment planning.

16. Mouth Preparation for RPD

Oral surgical preparation includes removal of residual roots, impacted teeth, extraction of unwanted teeth and surgical removal of other pathologies. Pre prosthetic surgery for freni, bony spicules, knife edge ridges, ridge augmentation, restoration of abused oral tissues.

Other periodontal and restorative procedures required.

17. Abutment Analysis

Crown root ratio, numbers of roots, form and curvature of roots, alveolar bone support, mobility, inclination, occlusal relationship, previous stress response, future stress evaluation, crown contours, restorability of tooth.

18. Preparation of Abutment:

Abutment restorations i.e., fillings, inlay, on lays & crowns. Axial recon touring, preparation of guide planes, rest seat preparation.

19. Impressions for RPD

Objectives of impressions, requirements of impression, clinical application of impression materials. Selection of impression trays for partially edentulous arches. Methods of impressions making.

20. Impression Techniques:

Different impression techniques and their clinical application. Difference b/w anatomical and functional impressions. Different methods of making functional impressions. Details of altered cast impression technique.

21. Occlusion in RPD

Requirements of Occlusion in RPD treatment. Different occlusal schemes in different Kennedy classes.

22. Insertion of RPD

Adjustment of RPD in patient's oral cavity. Adjustment of occlusion.

23. Relining and Rebasing:

Difference b/w Relining & Rebasing. Objectives of Relining and Rebasing. Clinical evaluation of dentures for Relining & Rebasing. Different methods of Relining & Rebasing.

24. Immediate RPD

Definition of Immediate RPD. Advantages of Immediate RPDs. Indications of Immediate RPD. Disadvantages of Immediate RPDs. Different types of Immediate RPDs and their clinical application. Clinical procedures for Immediate RPDs.

25. RPD Opposing Complete Dentures:

Problems arising with the use of RPD with complete denture. Treatment planning for control and prevention of these problems.

26. Role of Fixed PD in RPD Treatment

Discussion of different clinical situations required combined RPD and FPD treatment. Advantages of Abutment coverage for RPD. Treatment planning for partially edentulous patient with both Removable and Fixed partial denture.

27. Removable Partial Over Dentures

Definition of Over dentures. Advantages of Over dentures. Disadvantages of Over dentures. Indications & contraindication of Over dentures. Root preparation for Over dentures. Root coverage for over dentures.

28. Precision Attachments

Definition of Precision Attachments. Advantages of Precision Attachments. Disadvantages of attachments, indication & contraindication of Precision Attachments; Limitations of Precision Attachment. General classification of PA.

29. Stress Breakers:

Problems of Kennedy class-I RPD. Distribution of stress in class -I cases. Objectives of stress breaking in class- I cases. Methods of stress breaking. Different types of stress breakers.

30. Sectional RPDs:

Definition of sectional RPDs. Objective of sectional RPDs. General Knowledge of sectional RPDs. Other types of RPDs such as Spoon shaped and Every denture and their advantages and clinical application.

CLINICAL REQUIRMENTS

Every student has to attained the required demonstration and complete the 10 cases of partial dentate patient.

Demonstrations

CLINICAL DEMONSTRATION	LAB. DEMONSTRATION
Patient Examination	Model pouring
Treatment Planning	RPD designing
Impression recording	Clasp making, Wax-up
Jaw relation record	articulation
Trial	Set up of Teeth
Insertion of denture	Processing of denture

LIST OF LEARNING OUT COMES
TREATMENT OF EDENTULOUS PATIENT
FINAL YEAR B.D.S.

At the end of the course the student should be able to

1. Examine an Edentulous Patient.
2. Identify the conditions required medical and surgical intervention.
3. Make refers whenever require
4. Prescribe investigations whenever require
5. Outline a treatment plan for edentulous patient according to systemic and Oral conditions.
6. Perform all clinical and laboratory procedures required for fabrication of Complete Denture.
7. Outline treatment plan for patients required, over denture, Immediate Denture, Implant supported Denture and Maxillofacial Prosthesis

TABLE OF SPECIFICATIONS
TREATMENT OF EDENTULOUS PATIENT

FINAL YEAR B.D.S

Content	C1	C2	C3	PM	A	Total %
Applied Anatomy of Oral Cavity Denture Retention, RRR, Patient Adaptation	***	**	*	–	–	0.8%
History Taking & Patient Examination	***	**	*	***	***	10%
Mouth Preparations & Management of Abused Oral Tissues	**	*	*	**	**	7%
Primary & Secondary Impressions Theories, Materials & Methods	***	**	*	***	***	17%
Jaw Relation Records	***	**	–	**	***	11.6%
Occlusion of C.D. Factors, Theories, Clinical Application	***	*	–	**	–	9%
Selection of Teeth, Set-up of Teeth, Phonetics	***	**	–	**	***	8.5%
Trial, Processing, Occlusal Adjustment, Insertion of C.D.	***	**	–	**	***	21%
Complains, Complications of C.D. Relining & Rebasing	***	*	–	**	**	11%
Concepts & Theories of C.D. Design	***	*	–	*	*	2.5%
Immediate C.D, Over denture Coping denture	***	*	–	–	–	0.8%
Implant Prosthodontics	**	–	–	–	–	0.35%
Maxillofacial Prosthetics	*	–	–	–	–	0.46%
Total						100

COURSE OUTLINE

CLINICAL REMOVABLE PROSTHODONTICS

Treatment of Edentulous Patient:

1. Introduction to Complete Denture Prosthodontics.
2. Applied Anatomy of upper and lower arch.
3. Consequences of edentulism.
4. Mechanism of denture retention.
5. Problems of Reduced Residual Ridges.
6. Patients Adaptation to complete dentures 7. History taking and patient examination.

ASSESSMENT

8. Mouth preparations for C.D. patient.
9. Management of abused Oral tissues.
10. Primary impressions for C.D. requirements & materials.
11. Theories of Secondary impression.
12. Method & material for Secondary impression.
13. Upper arch impression. 14. Lower arch impression.
15. Special impression technique & their clinical indications.

ASSESSMENT

16. Jaw relation records. Types and objectives.
17. Adjustment of occlusal rims.
18. Face Bow record and Face- Bow.
19. Vertical Dimension record.
20. Center relation records.
21. Eccentric records.
22. Articulators, Classification, Indication and uses.

ASSESSMENT

23. Occlusion of complete denture. Requirement & theories.
24. Factors of occlusion
25. Monoplane occlusion.
26. Bilateral Balanced Occlusion
27. Lingualized Occlusion.
28. Functionally generated Occlusion.
29. Phonetics

ASSESSMENT

30. Guidelines for selection of anterior teeth. Size, shape & color.
31. Setup of anterior teeth.
32. Set up of Posterior teeth.
33. Trial stage of C.D.
34. Occlusal adjustment.
35. Insertion of complete denture.
36. Complaints of C.D.
37. Complication of C.D. uses.
38. Relining and rebasing. Indications & methods.

ASSESSMENT

Special Topic

1. Concepts of complete denture design.
2. Bone support concept.
3. Biometric guideline concept.
4. Neutral zone concept.
5. Immediate complete denture. Indications, advantages & disadvantages.
6. Tooth supported C.D. i.e. over dentures. Indications, advantages & disadvantages.
7. Clinical and laboratory procedures for over dentures.
8. Coping Dentures. ASSESSMENT
9. Implants. Definitions, Classification.
10. Advantages of implants. Indications & contraindications.
11. Prosthetic option for implants supported C.D.
12. Maxillofacial Prosthetics.
13. Obturators.
14. Mandibulectomy Prosthetics
15. Extra Oral Prostheses ASSESSMENT
16. Problems of Angle's Class II & III Edentulous patients
17. Managements of resorb residual ridges
18. Envelope of Motion
19. Denture adhesives & cleaners
20. Mouth preparations for old denture wearer 21. Combination syndrome
22. Management of diabetic edentulous patient
23. Xerostomia management
24. Denture stomatitis
25. Burning mouth syndrome
26. Residual ridge resorption Assessment

SYLLABUS

TREATMENT OF EDENTULOUS PATIENTS

Introduction & Consequences of Edentulism: –

Aims & Objectives for treatment of Edentulous Patients. Different treatment options for edentulous patient. Introduction to complete denture treatment. Objective of complete denture treatment. Different types of C.D.

Effects on esthetic, effects on mastication, effects on speech. Psychological effects. Effects on TMJ.

Applied Anatomy

Description, Identification and Clinical significances of anatomical landmarks

Upper arch: – Incisive papilla, Labial frenum, Buccal frenum, Maxillary tuberosity, Zygomatic process of maxilla, Hamular notches, Fovea palatinea, Mid-palatal raphe, Rugae. Peripheral structures of the denture bearing area. Types of oral mucosa, consistency of mucosa on maxillary denture bearing area.

Lower arch: – Labial frenum, Crest of ridge, Buccal frenum, Buccal shelf, Masseter muscle notch, Retromolar pad, Retromolar fossa, Retro mylohyoid fossa, Mylohyoid ridge, Post mylohyoid fossa, Pre mylohyoid fossa, Lingual gland, Lingual frenum. Peripheral structures of the denture bearing area. Consistency of mucosa on denture bearing area.

History & Examination:

Importance of history taking & examination. Sequence of history taking. Patient doctor relationship. Role of charts in history & examination. Complete explanation of the history & examination chart used in department. Oral manifestations of systemic diseases.

History, Chief Complaint, Medical History, systemic disorders, Dental History, Causes of Tooth

Loss, Previous Dental Treatment, Oral Hygiene, Previous Dental Treatment, Social Behavior Status, Social Behavior Status

Extra Oral Examination, Complexion, Face Forms, Facial Profile, tone of facial muscles, Muscles of Mastication, Oral Aperture, Lip Thickness, Lip Length. Intra Oral Examination

Mucosa, Color, Thickness on Ridges, Unhealthy Mucosa Mucosal Pathologies (problems of

old denture wearers), Bulging Labial Segment, Flabby Premaxilla, Bony Undercuts, Unemployed Lower Ridge, Bony Undercuts Unemployed Lower Ridge, Sharp Mylohyoid Ridge Border

Tissues Attachments, Residual Ridges Form, Arch Shape, pseudo prognathism, soft palate Relation, Retro mylohyoid Fossa, Tongue, Saliva

Denture Retention

Definition of Retention, Stability & Support. Types of denture retention.

Factors of Physical retention: - Cohesion & adhesion, mechanism & factors of adhesion (surface tension, wet ability, contact angle), atmospheric pressure & peripheral seal

Physiological factors of retention: - Acquired muscular control, muscle balance, tongue position, peripheral relation with muscles, shape of the flanges, direction of flanges.

Mechanical factors of retention: - Undercut areas, mechanical devices.

Psychological factors of retention: - Patient attitude, patient co-operation, patient doctor relation, patient motivation.

Impressions

Objective of primary impression. Materials used for primary impressions, their indications and limitations. Method of primary impression.

Theories of Secondary Impression: -

Muco static theory: - Description of the theory (role of PASCAL's law & physical forces), objectives of the theory, criticism on the theory. Materials used for the mucostatic impressions. Method & requirements of impression.

Muco-compressive theory: - Description of the theory, objectives of the theory, (role of atmospheric pressure and area coverage) criticism. Materials used for compressive impression. Methods and requirements for compressive impressions

Selective pressure theory: - Concept of stress bearing and non stress bearing areas. Description of the theory, objectives of the theory. Materials used for selective pressure impressions. Methods and requirement of selective pressure impressions.

Clinical application of three impressions in different oral conditions.

Method of upper arch impression

Adjustment of special tray, peripheral seal development with low fusing compo, shape of the periphery according to the anatomy of the sulcus. Wash impression taking, marking of the post-dam area.

Method of lower arch impression: -Adjustment of special tray, role of floor of the mouth on the shape and director of lingual flanges. Shape of the periphery according to the anatomy of the lower sulcus, wash impression method.

Jaw Relation Record: -

Types of jaw relations records which can be transferred on articulators. Significance of jaw relation records. Effects of incorrect vertical dimension record. Effects of incorrect centric relation record.

Adjustment of Occlusal rims: -

Check of base plates for comfort, retention and stability. Adjustments of upper occlusal rim for lip support and contour of the lip. Adjustments of the occlusal plane i.e. height of the upper rim. Adjustments of anterior and posterior occlusal plane with the help of Foxes plane.

Vertical Dimension Record: -

Significance of vertical dimension of lower face. Brief discussion about different methods to record vertical dimension. Detailed discussion of few methods commonly used in clinics as Willis's method, Niswanger method, Esthetics, Comfort and Functions.

Centric Relation Record: -

Significance of centric relation record. Detailed discussion of different method to record centric relation included both physiological and mechanical methods.

Eccentric Record: -

Types of eccentric records which are significant and can be transferred to articulators, method of recording eccentric records.

Orientation Records: -

Description of face-bows, function of face -bow. Types of face- bow, their significance and uses. Methods to take face- bow record. Method to transfer face bow record to articulator.

Occlusion of C.D.: -

Concept of occlusion in natural dentition and artificial dentition. Requirements of artificial occlusion in CD. Different theories of occlusion in natural and artificial occlusion.

Factors of Occlusion: -

Definition of factors of occlusion. Detailed discussion of individual factor. Effects and role of different factors in occlusion.

Monoplane Occlusion: - Theory of monoplane occlusion. Its advantages and disadvantages. Application of monoplane occlusion in different clinical situations. Methods to develop monoplane occlusion in complete dentures.

Bilateral Balanced Occlusion: -

Theory of bilateral balance occlusion in complete dentures. Advantages of balance occlusion. Objections of balance occlusion. Clinical application of balance occlusion. Method & requirements to develop balanced occlusion in C.D.

Lingualized Occlusion:

Theory of lingualized occlusion in C.D. Advantages & disadvantages of lingualized occlusion. Clinical application of lingualized occlusion. Method & requirements to produce lingualized occlusion in complete dentures.

Functionally generated occlusion: -

Theory of functionally generated occlusion in complete & partial dentures. Advantages & disadvantages of functional occlusion. Clinical application of functional occlusion. Methods & requirements for development of functionally generated occlusion in complete dentures.

Phonetics: -

Factors of speech. Mechanism of speech production. Types of speech sounds. Role of dentures in phonetics.

Trial of C.D.: -

Checking of comfort, retention & stability of both dentures. Check of lip line, lip contour, smile line, check of peripheral ex tensions; check of occlusal plane of lower denture, check of vertical dimension, check of centric relation, check of phonetics and approval of esthetics by the patient.

Insertion & complaints of C.D.: -

Checking of finished dentures before insertion, verification of all steps of construction. General complaints of patient immediately after insertion and after few days of wearing and their management. Instructions to patients.

Occlusal Adjustment: -

Remounting of finished dentures, adjustment of occlusion by spot grinding. Adjustment of dentures occlusion on lateral and protrusive movements. Rules & method of occlusal adjustments.

Complications of C.D. use: -

Complications arise after prolong use of C.D. and their managements, denture stomatitis, midline fractures.

Relining & Rebasing: -

Difference b/w relining & rebasing of C.D Indications of relining & rebasing. Different methods and materials for relining & rebasing.

Special Topics

Reduced Residual Ridges: -

Bone resorption: - Factors of bone resorption, (Anatomical, mechanical, systemic). Effects of bone resorption on functions and esthetics. Methods to minimize bone resorption. Sequence of bone resorption. Management of reduced residual ridges.

Patients' adaptation: -

Parts of adaptation

Habituation: - Definition and methods of habituation, response of receptors, factor that effects the habituation

Learning: -Definition, effects of age on learning, effects of other factors as health, motivation & denture experience.

Coping Dentures: -

Definition of Coping dentures. Indications and advantage of Coping dentures, disadvantages of Coping dentures. Different methods to Coping dentures.

Mouth Preparations for old C.D. wearer patients

Minor surgical procedures required for new prosthetic patients. Alveoloplasty, torus removal, enlarged tuberosities, bony undercuts, frenectomies, minor soft tissue corrective procedures.

Sequalae of C.D. wearing:

Mechanism of tissue changes. Denture stomatitis, soft tissue hyperplasia as papillary hyperplasia, epulis fissuratum, atrophy of oral mucosa, bony resorption, pressure on mental foramen.

Management of abused oral tissue

Mucosal conditioning (i.e,. rest & massage) by physiotherapy and tissue conditioners. Muscle conditioning. Secondary surgical procedures required for soft tissue removal and extension of denture bearing area as vestibulopathy, ridge augmentation, implants.

Complete Denture Design: -

Neutral Zone Design

Detail discussion of complete denture design based on different concepts, especially bone support concept, biometric guidelines concept and neutral zone concept. Detail discussion of indications and limitations of each design. Clinical application of these concepts. Material and methods required to record neutral zone in complete denture patients.

Biometric Impression design

Detail discussion of indications and limitations of each design. Clinical application of these concepts. Material and methods required to record neutral zone in complete denture patients.

Immediate Dentures: -Definition of Immediate dentures. Advantages, indications, disadvantages & contraindications of Immediate dentures. Steps and procedures required for Immediate dentures. Follow up of Immediate dentures.

Tooth support dentures: -

Definition of Over dentures. Different types of Over dentures. Indications & contra indications of Over dentures. Advantages and disadvantages of Over dentures. Means of retention for Over dentures, clinical steps and laboratory procedures for Over dentures.

Implant Prosthodontics

Definition of Implants. Advantages and disadvantages of Implants. Indications & contraindications of Implants. Types of Implants. Definition and difference of fibro integration, ossiointegration & bio integration.

Different types of prostheses for implant patients. Role of bone in selection of prosthesis

Maxillofacial prosthetics: -

Definition of Maxillofacial prosthetics. Types of Maxillofacial prostheses. Management of maxillofacial patients by different prostheses in different clinical situations.

Splints & Stents: -

Definition and difference of splints and stents. Discussion on commonly used splints and stents in TMJ and oral surgery.

Combination Syndrome

Problem of upper complete denture opposing natural anterior teeth. Etiology, sequence of changes, developing pathologies, treatment planning, prevention of pathologies.

Problems and Management of Angle's II & III patients

Examination, findings, and management of patients.

Management of RRR

Problems and management of residual ridge height.

Envelope of motion

Mandible movements in frontal plane and its drawing.

Denture cleaners & Adhesives

Composition indication and limitations.

CLINICAL REQUIRMENTS

Every student has to attained the required demonstration and complete the 5 cases of complete denture patient.

Demonstrations

CLINICAL DEMONSTRATION	LAB. DEMONSTRATION
Patient Examination	Model pouring
Treatment Planning	Special tray fabrication
Primary Impression recording	Wax-up of base plate
Secondary impression recording	Occlusal rim fabrication
Jaw relation record	articulation
Trial	Set up of Teeth
Insertion of denture	Processing of denture

Mode of Information Transfer

Lectures

Chair side Demonstrations

Small Group Discussion

Self Study

Clinical and Lab. Work Supervision

Assessment Tools

Written assessment: - SAQ, MCQs.

Oral Examination

Case Presentations

Continuous assessment in clinics and laboratory, OSPE