Islamic University in Najaf - Faculty Of Dentistry
Quality Assurance and Academic Accreditation unit

Course Description

Department of prosthodontics

2024

Course Description Form

1. Course Name:	
Prosthodontics	
2. Course Code:	
3. Semester / Year:	
3rd year	
4. Description Preparation Date:	
16-4-2024	
5. Available Attendance Forms:	
Available	
6. Number of Credit Hours (Total) / Number of Units (Total)	
Theoretical 2 laboratory 4	
7. Course administrator's name (mention all, if more than one	
Name: Mohammed Alkhafagy Email:	
8. Course Objectives	
Course Objectives	• To know the different laboratory and clinical steps for complete denture construction • To practice each complete denture laboratory step • To understand the biomechanics of jaw movement and positions and their implementation
9. Teaching and Learning Strategies	

Strategy	Lecture-Based teaching: Blackboard illustrations Power point presentation on Data show projector Teacher-student interaction or Question-answer In-lecture Quiz Laboratory based teaching; Demonstration for each laboratory step Monitoring student (Hands-on) performance under guided supervision

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
	1	• To know the different laboratory and clinical steps for partial denture construction and the basic	Introduction to Removable Partial Dentures	Lecture	
	1	• To know the followings • Need for classification. • Requirements of an acceptable method of classification • Removable partial dentures may be classified according to the type of support • Removable partial dentures may be classified according to the type of material • Removable partial dentures may be classified according to the type of treatment • Classification based on arch configuration • Kennedy – Applegate – Fiset classification system. • Applegate's rules governing the application of the Kennedy classification method	Classification of Partially Edentulous Arches		

	1	To identify the followings • The ideal requirements for successful removable partial denture • Purposes (Objective) of Surveying the Diagnostic Cast •	Surveying		
	1	Advantages of single path of placement (insertion) • Guiding planes • Dental surveyor • Types of dental surveyors • Parts of dental surveyor (Ney type surveyor) •	Surveying		
	1	Principles of surveying • Types of undercuts established by surveying • Factors that determine and affect the path of placement (insertion) and removal of the RPD • Rules of surveying	Surveying		
	1	To identify the followings • Main components of RPD • Major connectors • Requirements of major connectors • Guidelines for design and location of major connectors • Characteristics of major	Component Parts of a Removable Partial Denture		

	1	To identify the followings • Special Structural Requirements for Maxillary Major Connectors • Types of Maxillary Major Connector • Single palatal bar • Single palatal strap • Anterior-posterior palatal bars • Combination anterior and posterior palatal strap– type connector • Palatal plate-type	Maxillary Major Connectors		
	1	To identify the followings • Special structural requirements • Types of mandibular major connectors ✓ Lingual bar ➢ Methods that may be used to determine the relative height of the floor of the mouth ✓ Lingual plate (linguoplate) ➢ The indications for the use of linguoplate ✓ Double lingual bar (lingual bar with cingulum bar) ➢ Indications for use of double lingual bar	Mandibular Major Connectors		
	1	To identify the followings • Definition • Functions • Form & location • Basic types of minor connectors • Tissue stops • Finishing lines Reaction of Tissue to Metallic	Minor Connectors		

	1	To identify the followings • The purposes of the rest in general • Occlusal Rest • Extended Occlusal Rest • Interproximal Occlusal Rest • Internal Occlusal Rests • Occlusal Rest Seat Preparation • Occlusal Rests on Amalgam Restorations • Occlusal Rest on Crowns • Lingual Rests (Cingulum Rest)	Rests and Rest Seats		
	1	To identify the followings • Direct retainers • Indirect retainers The extra coronal retainer	Retention and Removable Partial Denture Retainers		
	1	To identify the followings (Clasp type) • Component parts, Function, and position of clasp assembly parts • Factors affecting the magnitude of retention The basic principles of			

	1	To identify the followings • Clasps designed without movement accommodation. • Circumferential (Circle or Akers) clasp • Ring-type clasp • Embrasure (double Akers) clasp • Back action clasp • Multiple clasps • Half-and-half Clasp • Reverse-action clasp (Hairpin) • Disadvantages of circumferential clasps in summary • Clasps designed to accommodate distal extension functional movement • RPI clasp • Bar-type clasp assembly • RPA clasp; Akers clasp • Infra-bulge clasp Combination clasp	Extra Coronal Direct Retainers (Types of clasp assemblies)		
	1	To identify the followings • Internal attachments • Precision Attachments ✓ Some indications for precision attachments ✓ Some of the contraindications for precision attachments ✓ The main types of precision attachments • Selection of an Attachment for a Removable Partial	Intracoronal Direct Retainers (Internal Attachments, Precision Attachments		

	1	To identify the followings • Stress breakers Types of stress breakers	Stress-Breakers (Stress Equalizers)		
	1	To identify the followings • The main factors influencing the effectiveness of an indirect retainer • The auxiliary functions of indirect retainers	Indirect Retainers		
	1	To identify the followings • Auxiliary occlusal rest • Lingual rest • Incisal rest • Canine extensions from occlusal rests • Cingulum bars (continuous bars) and linguo-plates • Modification areas Rugae support	Indirect Retainers (continue)		
	1	To identify the followings • Blockout and relief • Cast preparation • Typesof blockout of master cast ✓ Parallel blockout ✓ Shaped blockout ✓ Arbitrary blockout • Relieving the master cast • Purpose of relief • Sites Tissue Stops	Laboratory procedures in RPD construction: Blockout and Relief		
	1	To identify the followings • Duplicating a stone cast • Duplicating material and flask • Impression	Laboratory procedures in RPD construction: Duplication and Refractory Cast Construction		

	1	To identify the followings • Waxing the framework • Spruing • General rules for spruing • Investing the sprued pattern • Purpose of investment Burnout	Laboratory procedures in RPD construction: Wax Pattern		
	1	To identify the followings • Casting • Casting recovery • Finishing the framework Sprue removal	Laboratory procedures in RPD construction: Casting and Finishing		
	1	To identify the followings • The primary function of denture base • Types of denture base according to support • Types of the denture base according to materials • Advantages of metal denture base • Disadvantages of metal denture base • Design consideration of denture base • Periodontal	Denture Base in RPD		

	1	To identify the followings • Record bases • Types of record bases according to materials constructed from it • Occlusion rims • Occlusion rims for static jaw relation records • Occlusion rims for recording functional or dynamic jaw relationship record • Mounting casts on the articulator • Arrangement of artificial teeth to the opposing cast • Principles that should be taken during arrangement of artificial	Record Bases, Occlusion Rims, Mounting and Arrangement of Teeth		
	1	To identify the followings • Biomechanical considerations • Possible movements of partial dentures • Tooth-tissue–supported prosthesis • Tooth-supported partial denture • Occlusal Rest Seat Preparation and Denture Movement • Impact of Implants on Movements of Partial	Biomechanics of Removable Partial Dentures		
	1	To identify the followings • Difference in Prosthesis Support and Influence on Design • Differentiation Between Two Main Types of Removable Partial Dentures • Components of Partial Denture Design • Implant Considerations in Design	Principles of Removable Partial Denture Design		

	1	• 1st Phase: Education of patient • 2nd Phase: Diagnosis, Treatment Planning, Design, Treatment Sequencing, and Mouth Preparation • 3rd Phase: Support for Distal Extension Denture Bases • 4th Phase: Establishment and Verification of Occlusal Relations and Tooth	Clinical Phases of Removable Partial Denture Construction.		
	1	To identify the followings • Acrylic removable partial dentures • Appearance • Maintenance of space • Reestablishment of occlusal relationships • Conditioning of teeth and residual ridges • Interim restoration during treatment • Conditioning the patient for wearing a prosthesis • Clinical procedure for placement	Acrylic Removable Partial Dentures		
	1	To identify the followings • Flexible removable partial dentures • Type of material used for the flexible denture • Support	Flexible Removable Partial Dentures		

	1	To identify the followings • Broken clasp arms • Several reasons for breakage of clasp arms • Fractured occlusal rests • Distortion or breakage of other components – major and minor connectors • Addition of a new	Repairs and Additions to Removable Partial Dentures		
	1	To identify the followings • Components of CAD/CAM system • Types of Digital Scanner • Digital RPD Framework Design (step by step) • Digital Fabrication Process	Digitally Designed & Fabrication Process of RPD Framework Using CAD/ CAM System		

11.Course Evaluation

First semester 20%
1.5 (attendance, participation & activities) 2.5 (in-lecture written Quiz, assessment & assignments) 4 (laboratory steps evaluation) 5 (1st semester final lab.)
Second semester 20%
1.5 (attendance, participation & activities) 2.5 (in-lecture written Quiz) 4 (laboratory steps evaluation) 5 (1st semester final lab.)
Final 60%

12.Learning and Teaching Resources

Required textbooks	▪ Essentials of Complete Denture Prosthodontics 3rd/ 2015 (Reprint 2021). Sheldon Winkler. AITBS Publishers & Distributors, 3rd Ed. 2021
Main references (sources)	▪ Preclinical Manual of Prosthodontics. S Lakshmi, Elsevier Health Sciences, India, 3rd Ed. 2018.
Recommended books and references (scientific journals, reports...)	▪ Textbook Of Prosthodontics. Rangarajan. Elsevier Health Sciences, India. 2nd Ed. 2017.

Electronic References, Websites	▪ Maestre-Ferrín, L., Romero-Millán, J., Peñarrocha-Oltra, D., & Peñarrocha-Diago, M. (2012). Virtual articulator for the analysis of dental occlusion: an update. Medicina oral, patologia oral y cirugia bucal, 17(1), e160. ▪ Tandon, R., Gupta, S., & Agarwal, S. K. (2010). Denture base materials: From past to future. Indian J Dent Sci, 2(2), 33-9.