



# **Prosthodontics**

**Residency Training Program  
Leading to the degree of  
Master of Dental Surgery (MDS)**

**SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY  
ISLAMABAD**



**SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY**

# **CURRICULUM**

**Master of Dental Surgery (MDS)**

**Prosthodontics**

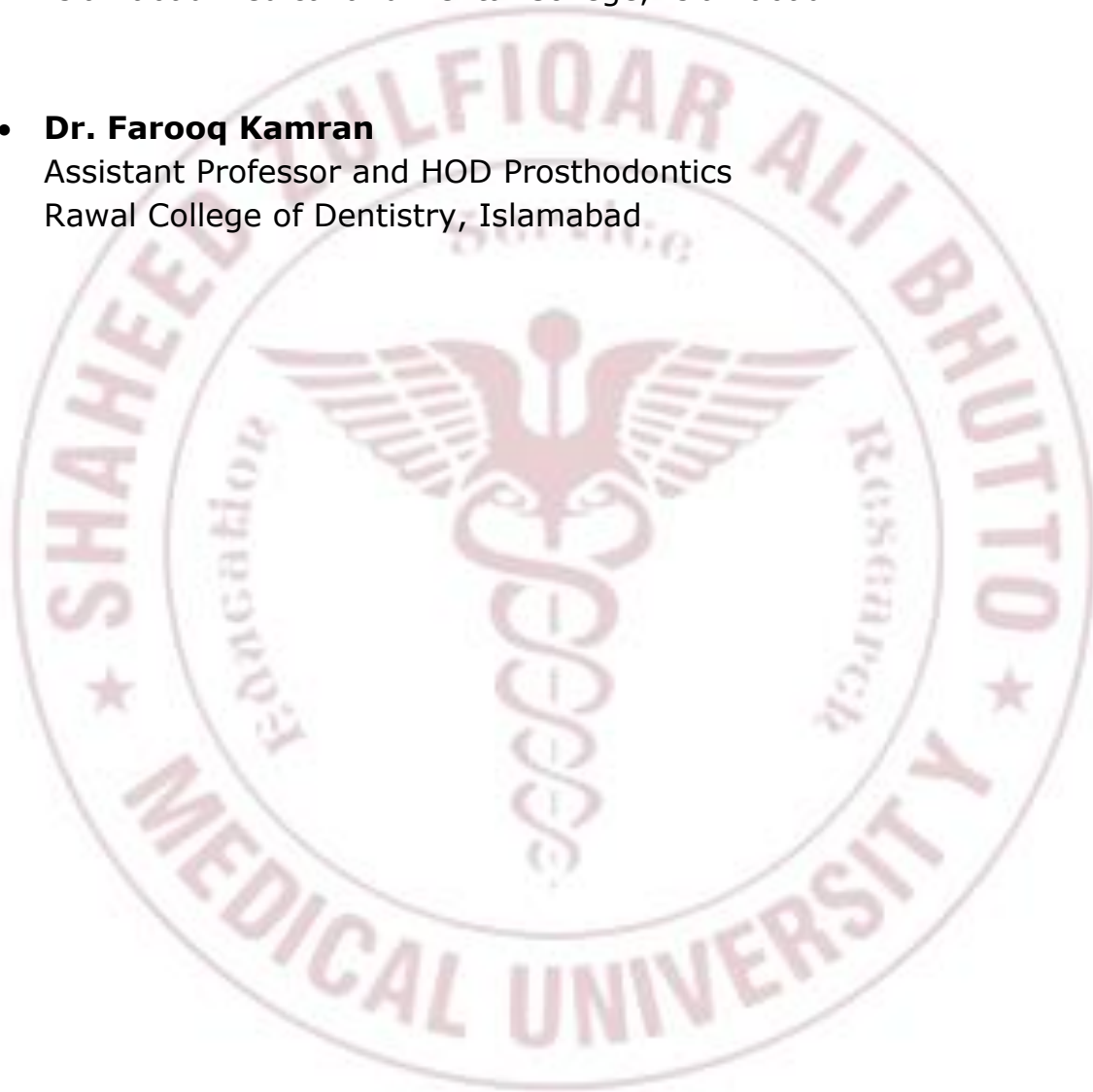


# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

## CURRICULUM DEVELOPMENT COMMITTEE

This Curriculum is developed by the following committee

- **Prof. Tayyaba Saleem**  
Professor and HOD Prosthodontics  
Islamabad Medical and Dental College, Islamabad
- **Dr. Farooq Kamran**  
Assistant Professor and HOD Prosthodontics  
Rawal College of Dentistry, Islamabad





# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

## TABLE OF CONTENTS

<b>CURRICULUM DEVELOPMENT COMMITTEE</b>	<b>3</b>
<b>ROAD MAP OF MDS PROSTHODONTICS (A Brief Summary)</b>	<b>Error! Bookmark not defined.</b>
<b>GENERAL INFORMATION AND PROGRAM GOALS:</b>	<b>Error! Bookmark not defined.</b>
<b>INTRODUCTION</b>	<b>5</b>
<b>RATIONALE:</b>	<b>10</b>
Need of program	10
Purpose of training	10
Context of Training	10
Duration of training	10
<b>AIMS &amp; OBJECTIVES</b>	<b>12</b>
Aims of Training	12
Learning Objectives	12
<b>ENTRY CRITERIA:</b>	<b>15</b>
Eligibility to apply for MDS Oral and Maxillofacial Surgery	15
<b>CONTENT OF LEARNING:</b>	<b>17</b>
Basic sciences courses	18
Prosthodontics Specialty Courses Modules (PM)	18
Allied specialties	45
Research	46
<b>MODELS OF LEARNING</b>	<b>48</b>
<b>ASSESSMENT</b>	<b>52</b>
Formative Assessment	52
Summative Assessment	52
Record of Clinical Cases	52
<b>TOS FOR EXIT FINAL EXAM</b>	<b>57</b>
<b>PROGRAM EVALUATION</b>	<b>64</b>
<b>ANNEXURE "A"</b>	<b>65</b>
<b>ANNEXURE B</b>	<b>66</b>
Supervisor Evaluation Form	66
Program Evaluation Form	70



# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

## ROAD MAP OF MDS ORAL & Maxillofacial Surgery (A Brief Summary)

### GENERAL INFORMATION AND PROGRAM GOALS:

MDS Prosthodontics will offer a 48 month training program. The program intends to model a training atmosphere with both academic and clinics. The curriculum is centered on daily clinical seminars and instruction with each individual class.

The goal of this program is to teach a variety of treatments that are scientifically valid, and let the residents make evidence based treatment plans on a case by case basis. The curriculum focuses on didactic, clinical skills and research abilities so as to prepare graduates at par with international standards.

### COURSE DESCRIPTION:

A total of one hundred and twenty eight (128) credit hours of instruction and supervised activities are distributed over four years academic period. This comprises approximately 1152 contact hours of direct instruction and approximately 6672 scheduled hours including formal didactic, clinical, research and laboratory experience.

(1 credit hour will be equal to 9 hours of direct contact)

S/No	Course title	Credit hours
1.	Applied anatomy	1
2.	Advanced Oral Pathology	2
3.	Introduction to statistical inference	1
4.	Introduction to research	1
5.	Multidisciplinary differential diagnosis	1.5
6.	Dental therapeutics	0.5
7.	Principles of practice management	0.5
8.	Occlusion	1
9.	Advanced Oral medicine	0.5
10.	Sterilization	0.5
11.	Radiology	1
12.	Basics of Microsoft office	1
13.	CPC Presentation	0.5
14.	Literature review 1	1
15.	Communication skills	1
16.	<b>Total</b>	<b>14</b>





# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

<b>Speciality courses</b>		
17.	Prosthodontic Diagnostics 1	5
	Counselling skills	0.5
	Applied Dental materials	1
	Pre-prosthetic mouth preparations	1
	Infection control in prosthodontics	0.5
18.	Conventional complete denture therapy	1
	Removable partial denture therapy	1
	Case presentation	4
19.	Journal club	3
20.	General topics presentations	2
21.	Preclinical-work up, Clinics and laboratory work	5
	<b>Total</b>	<b>24</b>
<b>SECOND YEAR MDS</b>		
22.	Prosthodontics Diagnostics 2	2
	Removable Prosthodontics	1
23.	Preclinical workup (Fixed) Clinics and laboratory work	5
	Journal club	3
24.	Research	6
25.	Case presentations	5
26.	Replacement dentures	0.5
27.	Basic Principles of Occlusion for CD, FDP & RDP	2
28.	Denture Maintenance procedures	1
29.	Basics of Fixed Prosthodontics	2.5
	Basics of Gerontology	2
	<b>Total</b>	<b>30</b>
<b>Mid Term Assessment (MTA) Examination By University</b>		
<b>THIRD YEAR MDS (Graduate assistantship)</b>		
31.	Prosthodontics diagnostics 3	2
32.	Clinics	5
33.	Journal club	3
34.	Prosthodontic teaching	4
35.	Fixed Prosthodontics 2	2
36.	Diagnostics 3	2
37.	Maxillofacial prosthodontics 1	1
38.	Advanced Gerontology	1
39.	Implant supported prosthesis 1	2



## SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

	TMJ management 1	1
40.	Removable Protheses	0.5
41.	Replacement Dentures	0.5
42.	Research	6
	<b>Total</b>	<b>30</b>
<b>FOURTHS YEAR MDS (Graduate assistantship)</b>		
43.	Clinics	5
44.	Journal club	3
45.	Combination Protheses	1
46.	Prosthodontics Teaching	2
	Advanced Fixed Prosthodontics (CAD CAM)	1
47.	Occlusion & TMD management	0.5
48.	Implant supported protheses 2	2
49.	Maxillofacial prosthodontics	0.5
50.	Research	15
51.	<b>Total</b>	<b>30</b>
52.	<b>GRAND Total</b>	<b>128</b>
<b>Exit/Final Examination By University</b>		

### **Requirements of MDS Degree for Graduate students Enrolled in the Prosthodontic Program**

- Fulfillment of University requirements for postgraduate study.
- Four (4) years of consecutive full time advanced study and clinical training at recognized training center.
- Complete and approved master's thesis based on original research during the course of study in an area related to Prosthodontics, suitable for publication in a reputable dental journal.
- Must complete all didactic & clinical work in the required curriculum and satisfactorily pass all the University examinations.
- Completion of all allotted Prosthodontic cases in mandatory (Log book should reflect all clinical work carried out).
- A minimum grade of "B (60%)" must be earned in all work/examinations attempted in the master's program. A grade below "B" will require re-examination.
- 

A complete road map for postgraduate MS/MD/MDS can be seen on University website at <http://www.szabmu.edu.pk/content/downloads/road-map-for-postgraduate-residents.pdf>



## INTRODUCTION

The residency program in Prosthodontics is a four-year course covering all aspects of contemporary & conventional Prosthodontics leading to the degree of Masters of Dental Surgery in Prosthodontics. Residents enrolled in this program will be trained at the Islamabad Medical & Dental College and Allied hospitals, an affiliated college of Bahria University, Islamabad.

This curriculum has been developed on the basis of SPICES model which is indicative of the competencies required at the varying levels of training within the specialty together with the knowledge, skills and attitudes achieved by the trainee in acquiring those competencies. The training has been based on the current thinking and the requirements for

- Greater protection of the public interest by providing clear information as to the level of training achieved.
- Improved access to specialty training to general practitioners.
- Greater flexibility of training through the availability of multiple instructors.
- Producing a competent workforce with the appropriate skills and knowledge necessary to meet the varying levels of treatment complexity, as well as considering the relative need and demand of potential patients.
- Acquire the experience to carry out research projects, critically evaluate scientific publications and communicate clinical and research papers in journals and conferences.
- Inculcating self-awareness and self-directed learning abilities in the candidates/future consultants





# RATIONALE



## **RATIONALE:**

### **Need of program**

This training program is structured keeping in view the need of the society. Following needs are identified through formal and informal discussion with the stakeholders.

- Deficiency of the quality health care providers to public in the field of Prosthodontics.
- Deficiency of competent faculty in the field.
- Deficiency of state of the art Prosthodontics training center.

### **Purpose of training**

The purpose of this curriculum is to guide the training of a Prosthodontist to the core level of competence required for a specialist and consultant. This training will produce Prosthodontists who are experts in their field.

### **Context of Training**

To provide an organized educational program with guidance and supervision, a structured training program will be followed so that each trainee is exposed to different aspects of the subject and acquires special knowledge and skill as expected in this program. The training will provide a basis for the candidate to develop into a lifelong learner who is capable of self-reflection and self-directed learning. It will provide a basis for further ongoing development in the field.

### **Duration of training**

The program leading to MDS in Prosthodontics will be of 4 years full time.



# AIMS & OBJECTIVES



## AIMS & OBJECTIVES

### Aims of Training

The candidate should acquire and become proficient in the skills required for Prosthodontics practice with an emphasis on multidisciplinary treatment planning, disease prevention, diagnosis and provision of advanced Prosthodontics treatment techniques for those clinical cases meriting specialist care. The candidate should demonstrate attitudes necessary for the achievement of high standards of Prosthodontics practice both in relation to the oral health needs of the population and to his/her own personal development. He should exhibit the competence and motivation to train juniors.

### Learning Objectives

On completion of training, the trainee will be able to achieve following aptitudes.

#### Knowledge

- Demonstrate knowledge of clinical aspects of basic sciences as applied to Prosthodontics.
- Demonstrate knowledge of the etiology, pathobiology and clinical presentations of diseases of oral and perioral tissues.
- Demonstrate knowledge of the impact of systemic diseases on oral tissues and of oral diseases on systemic health.
- Acquire knowledge and comprehend the principles of theory and practice of all the domains of Prosthodontics.

#### Skill

- Take history and conduct clinical examination and investigations that allow collection of information needed to evaluate the oral and related medical conditions for all patients.



## SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

- Determine the differential, provisional and definitive diagnosis by interpreting and correlating findings from the history, clinical & radiographic examination together with other diagnostic tests.
- Devise treatment plans specific to the needs and expectations of individual patients.
- Execute conventional and contemporary techniques of all the domains of Prosthodontics.
- Demonstrate competency in teaching & learning methods, use of information technology, appraisal and assessment techniques and development of appropriate learning approaches for lifelong learning.
- Show evidence of ability to undertake research.

### Attitude

- Demonstrate a professional and ethical approach to patient care.
- Demonstrate a professional attitude to all the members of the team.
- Demonstrate full and clear understanding of equality and diversity legislation as it applies to the workplace and to professional practice.





**ENTRY CRITERIA**



## ENTRY CRITERIA:

### Eligibility to apply for MDS Oral and Maxillofacial Surgery

1. Candidate must possess BDS or equivalent degree and one year house job from PMDC recognized Institutions.
2. Permanent valid registration with PM&DC.
3. Declared successful in MDS Part-I for Shaheed Zulfiqar Ali Bhutto Medical University, Islamabad.
4. In case of foreign candidate, valid registration with Medical Council of their country of origin must be produced.

### Required Documents

Attested photo copies of the following documents must be attached with application form:

- Computerized National Identity Card (CNIC)
  - Domicile certificate
  - Matric/O Level, FSc/A Level, Certificates or equivalent
  - BDS degree with detail marks certificates of all professional
  - BDS Attempts certificates of all professional
  - NEB pass certificate (for foreign graduates)
  - House Job certificates
  - PMDC valid permanent registration certificate
  - MDS Part-I passing certificate
  - Experience Certificates (if any)
5. Migration Certificate (To be produced at the time of admission)

### Admission Procedure

Details of admission procedure is available on university website at

<http://www.szabmu.edu.pk/admission/postgraduate-admission>



**CONTENT OF LEARNING:**



## CONTENT OF LEARNING:

The program outline addresses both the knowledge needed in Prosthodontics and allied specialties in its scope. A minimum of four years of formal training through a graded system of education as specified will equip the trainee with knowledge, skill and attitude at its completion to be able to practice basic and advanced Prosthodontics competently.

The topics considered are divided into core courses and specialty courses. The core courses are mandatory for all the MDS students, whereas the specialty courses are designated for a Prosthodontics trainee.

### Core Courses

- Anatomy, Physiology, Psychology, Pain
- Advanced Oral Pathology
- Introduction to statistical inference
- Introduction to research
- Multidisciplinary differential diagnosis
- Dental therapeutics
- Principles of practice management
- Occlusion
- Advanced Oral medicine
- Infection control
- Radiology
- Basics of Microsoft office
- CPC Presentation
- Literature review
- Communication skills

### Specialty Courses \* Essential reading list is provided as annexure 'A'

- Removable prosthodontics
  - Partial & complete dentures
  - Replacement dentures,
  - relining rebasing and repairs
- Fixed prosthodontics
- Implant supported prosthesis
- Occlusion and temporomandibular pain dysfunction
- Maxillofacial Prosthodontics



# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

- Occlusion
- Gerontology
- Replacement dentures, interim prosthesis, appliances (splints, stents) relining rebasing and repairs

## Basic sciences courses

Core Courses ID	Course title
C-1	Anatomy, Physiology, Psychology, Pain
C-2	Advanced Oral Pathology
C-3	Advanced Oral medicine
C-4	Infection control
C-5	Radiology
C-6	Occlusion
C-7	Multidisciplinary differential diagnosis
C-8	Dental therapeutics
C-9	Introduction to statistical inference
C-10	Introduction to research
C-11	Principles of practice management
C-12	Basics of Microsoft office
C-13	CPC Presentation
C-14	Literature review
C-15	Communication skills

## Prosthodontics Specialty Courses Modules (PM)

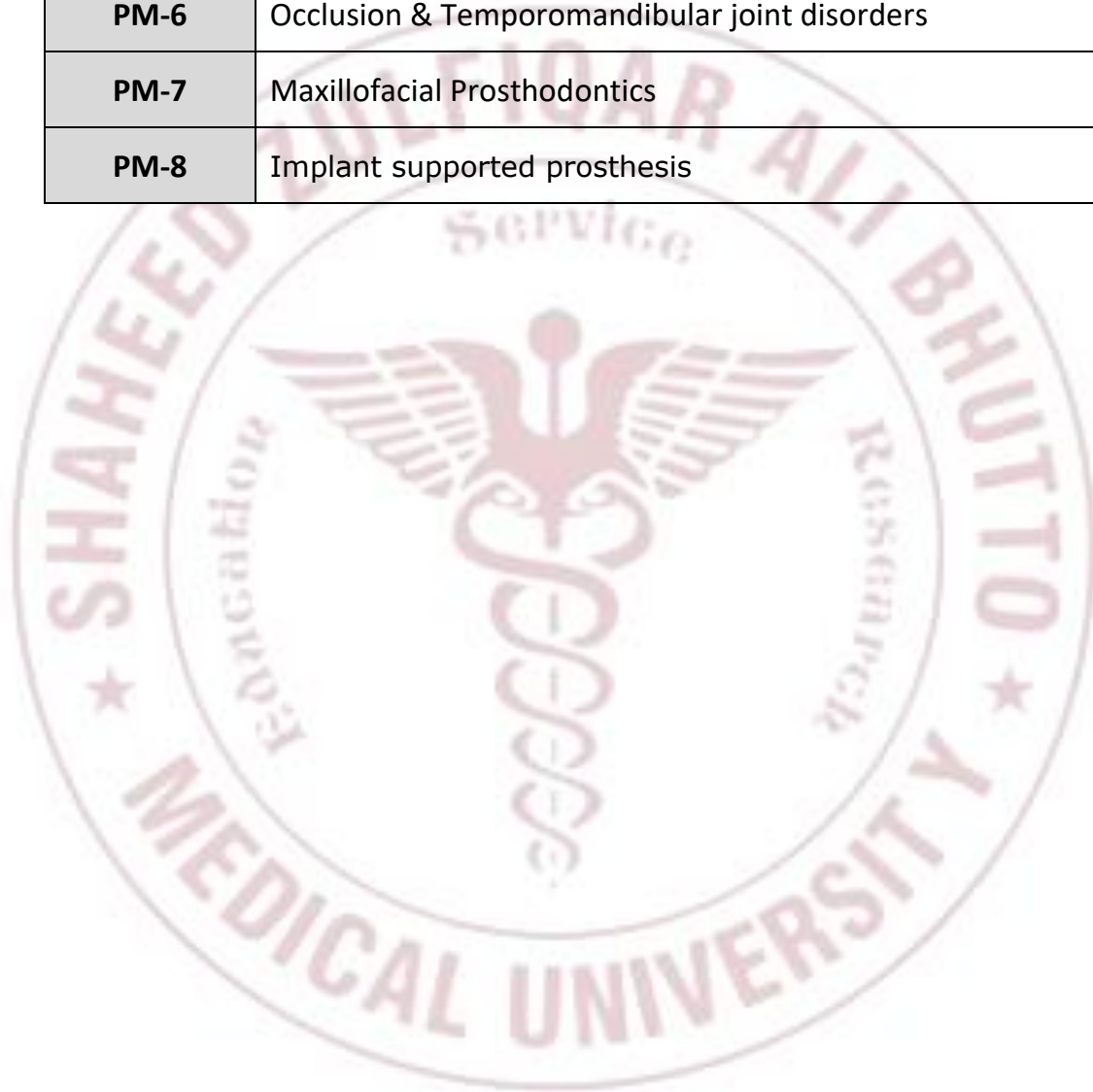
Specialty Courses Modules	Course title
PM-1	Principles of Prosthodontics
PM-2	Removable prosthodontics <ul style="list-style-type: none"><li>○ Partial dentures</li></ul>





## SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

	<ul style="list-style-type: none"><li>○ Conventional complete dentures</li><li>○ Prosthesis maintenance (Relining, rebasing &amp; repairs)</li></ul>
<b>PM-3</b>	Replacement Dentures interim prosthesis, appliances
<b>PM-4</b>	Fixed prosthodontics
<b>PM-5</b>	Gerontology
<b>PM-6</b>	Occlusion & Temporomandibular joint disorders
<b>PM-7</b>	Maxillofacial Prosthodontics
<b>PM-8</b>	Implant supported prosthesis





**Prosthodontics  
Specialty Courses**



# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

## PRINCIPLES OF PROSTHODONTICS

### Patient assessment, examination, diagnosis & treatment planning

Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
<p>To provide information about and experience in:</p> <ul style="list-style-type: none"> <li>• History taking</li> <li>• Examination of orofacial soft tissues</li> <li>• Examination of Teeth &amp; hard tissues</li> <li>• Review of periodontium</li> <li>• Examination of occlusion</li> <li>• Various diagnostic tests &amp; investigations</li> <li>• Treatment plan sequencing</li> <li>• Interdisciplinary considerations in treatment planning</li> </ul>	<p>The trainee should be able to:</p> <ul style="list-style-type: none"> <li>• Examine the patient thoroughly</li> <li>• Make a differential diagnosis</li> <li>• Perform relevant diagnostic tests &amp; carry out investigations to establish definitive diagnosis</li> <li>• Devise strategies and plans based on the likely prognosis and outcomes of the various treatment options, relating this to prognosis without treatment and establishing a resultant priority and sequence of treatment</li> </ul>	<ul style="list-style-type: none"> <li>• Workplace (clinical) experience</li> <li>• Attend trainee seminars within department</li> <li>• Attendance at suitable courses</li> <li>• Attendance at suitable meetings</li> <li>• Independent study</li> </ul>	<ul style="list-style-type: none"> <li>• Workplace based assessments (CBD, DOPS)</li> <li>• Written Examination/ VIVA</li> </ul>



# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

## PRINCIPLES OF PROSTHODONTICS

### **Esthetic considerations in diagnosis & treatment planning**

<b>Objectives</b>	<b>Learning Outcomes</b>	<b>Teaching &amp; Learning Methods</b>	<b>Assessments</b>
<p>To provide in depth knowledge and skill in:</p> <ul style="list-style-type: none"><li>Principles of micro-esthetics and macro-esthetics</li></ul>	<p>The trainee should be able to:</p> <ul style="list-style-type: none"><li>Examine the patient thoroughly keeping in view esthetic considerations</li><li>Design a treatment plan which not only fulfils patients need but is also esthetically acceptable.</li><li>Design a treatment plan keeping in view latest innovations in the field of esthetic dentistry.</li></ul>	<ul style="list-style-type: none"><li>Workplace (clinical) experience</li><li>Clinical cases for observational and personal treatment</li><li>Attend trainee seminars within department</li><li>Attendance at suitable courses</li><li>Attendance at suitable meetings</li><li>Self-directed &amp; Independent study</li></ul>	<ul style="list-style-type: none"><li>Workplace based assessments (CBD, DOPS)</li><li>Written Examination/ VIVA</li></ul>



# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

## PRINCIPLES OF PROSTHODONTICS

### Management of Patients including the medically at-risk patient

Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
<p>To provide in depth knowledge and skill in:</p> <ul style="list-style-type: none"> <li>• Ability to explain to a patient the treatment process.</li> <li>• Describe differential diagnosis when appropriate, and treatment options.</li> <li>• Know when to refer to or confer with other specialists.</li> <li>• Ability to undertake therapy in a safe manner.</li> <li>• Ability to recognize and deal with complications that may arise.</li> <li>• Describe the spectrum of general illness behavior and relate this to diseases relevant to Prosthodontics practice and patient management.</li> </ul>	<p>The trainee should be able to:</p> <ul style="list-style-type: none"> <li>• Take record and interpret an accurate history from patients of any age and communicate effectively.</li> <li>• Know where to refer. Seek advice if unsure. Recognize when input from another specialty is required for individual patients.</li> <li>• Work effectively with other health care professionals.</li> <li>• Describe the nature, benefits and risks of planned procedure.</li> <li>• Assess the likelihood of a significant underlying diagnosis and differentiate patients with urgent and non-urgent care needs.</li> </ul>	<ul style="list-style-type: none"> <li>• Workplace (clinical) experience</li> <li>• Clinical cases for observational and personal treatment</li> <li>• Attend trainee seminars within department</li> <li>• Attendance at suitable courses</li> <li>• Attendance at suitable combined clinic-pathological meetings</li> <li>• Self-directed &amp; Independent study</li> </ul>	<ul style="list-style-type: none"> <li>• Workplace based assessments (CBD, DOPS, MSF)</li> <li>• Written Examination/ VIVA</li> </ul>





## SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

<ul style="list-style-type: none"><li>• Know and interpret the appropriate investigations needed for management of patients with complex medical histories and/or how to obtain relevant advice.</li><li>• Know the process for patient appointments, appropriate instructions and arrangements for follow-up visits.</li></ul>	<ul style="list-style-type: none"><li>• Respect patient confidentiality. Maintain cultural awareness and identity. Value patient comprehension and views.</li><li>• Demonstrate willingness and ability to teach students and healthcare colleagues where appropriate.</li><li>• Show respect for others' opinions. Be conscientious and work cooperatively. Respect colleagues, including nonmedical professionals and recognize good advice.</li><li>• An appreciation of when to discuss patient management with colleagues from other hospital clinical specialties.</li></ul>		
---	--	--	--



# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

## INTERDISCIPLINARY INTERFACES AND MOUTH PREPARATION

Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
<p>To provide in depth knowledge and skill in:</p> <ul style="list-style-type: none"> <li>• Implications of the inter-relationship between prosthodontics and other clinical disciplines like periodontics and endodontics.</li> <li>• Assess the endodontic, periodontic and orthodontic status of teeth relevant to their potential use in support of prosthesis</li> </ul>	<p>The trainee should be able to:</p> <ul style="list-style-type: none"> <li>• Coordinate management of patient requiring endodontic and/or periodontal treatment before, during and after prosthodontics treatment</li> <li>• Evaluate endodontic, periodontic and orthodontic status of teeth before proceeding with fixed prosthodontic treatment</li> <li>• The relevance of inter-relationship between fixed prosthodontics treatment and overall restorative care along with long term maintenance and function</li> </ul>	<ul style="list-style-type: none"> <li>• Workplace (clinical) experience</li> <li>• Attend trainee seminars within department</li> <li>• Attendance at suitable courses</li> <li>• Attendance at suitable meetings</li> <li>• Independent study</li> </ul>	<ul style="list-style-type: none"> <li>• Workplace based assessments (CBD, DOPS)</li> <li>• Written Examination/ VIVA</li> </ul>



# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

## FIXED PROSTHODONTICS

### FULL COVERAGE RESTORATIONS

Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
<p>To provide in depth knowledge and skill in :</p> <ul style="list-style-type: none"> <li>• Indications &amp; limitations of full coverage restorations</li> <li>• Different types of full coverage restorations</li> <li>• Principles of tooth preparation</li> <li>• Atraumatic management of soft tissues</li> <li>• Impression materials and impression techniques</li> <li>• Execution of all the stages in the fabrication of full coverage restorations (from tooth preparation to insertion)</li> <li>• Delivery of interim restorations</li> <li>• Luting agents</li> </ul>	<p>The trainee should be able to:</p> <ul style="list-style-type: none"> <li>• Thoroughly plan a case for full coverage restorations</li> <li>• Select appropriate material based on the functional and esthetic demand</li> <li>• Demonstrate an understanding of the principles of tooth preparation</li> <li>• Execute all the stages in the fabrication of full coverage restorations</li> <li>• Deliver provisional restorations</li> <li>• Demonstrate an understanding of clinical aspects of luting agents</li> <li>• Communicate effectively with laboratory</li> </ul>	<ul style="list-style-type: none"> <li>• Systematic simulation laboratory exercises</li> <li>• Appropriate range of clinical cases for observational and personal treatment</li> <li>• Attend trainee seminars within department</li> <li>• Attendance at suitable courses</li> <li>• Attendance at suitable meetings</li> <li>• Independent study</li> </ul>	<ul style="list-style-type: none"> <li>• Workplace based assessments (CBD, DOPS, Mini-CEX, MSF)</li> <li>• Written Examination/ VIVA</li> <li>• OSCE</li> </ul>



# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

## PARTIAL COVERAGE RESTORATIONS

Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
<p>To provide in depth knowledge and skill in :</p> <ul style="list-style-type: none"> <li>• Indications &amp; limitations</li> <li>• Different types of partial coverage restorations</li> <li>• Principles of tooth preparation</li> <li>• Atraumatic management of soft tissues</li> <li>• Impression materials and impression techniques</li> <li>• Execution of all the stages in the fabrication of partial coverage restorations (from tooth preparation to insertion)</li> <li>• Delivery of interim restorations</li> <li>• Luting agents</li> </ul>	<p>The trainee should be able to:</p> <ul style="list-style-type: none"> <li>• Thoroughly plan a case for partial coverage restorations</li> <li>• Select appropriate material based on the functional and esthetic demand</li> <li>• Demonstrate an understanding of the principles of tooth preparation</li> <li>• Execute all the stages in the fabrication</li> <li>• Deliver provisional restorations</li> <li>• Demonstrate an understanding of clinical aspects of luting agents</li> <li>• Communicate effectively with laboratory</li> </ul>	<ul style="list-style-type: none"> <li>• Systematic simulation laboratory exercises</li> <li>• Appropriate range of clinical cases for observational and personal treatment</li> <li>• Attend trainee seminars within department</li> <li>• Attendance at suitable courses</li> <li>• Attendance at suitable meetings</li> <li>• Independent study</li> </ul>	<ul style="list-style-type: none"> <li>• Workplace based assessments (CBD, DOPS, Mini-CEX, MSF)</li> <li>• Written Examination/ VIVA</li> <li>• OSCE</li> </ul>





# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

## RESIN BONDED RESTORATIONS

Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
<p>To provide in depth knowledge and skill in :</p> <ul style="list-style-type: none"> <li>• Indications &amp; limitations of resin bonded restorations</li> <li>• Different types of resin bonded restorations</li> <li>• Principles of tooth preparation</li> <li>• Atraumatic management of soft tissues</li> <li>• Impression materials and impression techniques</li> <li>• Execution of all the stages in the fabrication of resin bonded restorations (from tooth preparation to insertion)</li> <li>• Luting agents</li> </ul>	<p>The trainee should be able to:</p> <ul style="list-style-type: none"> <li>• Thoroughly plan a case for resin bonded restorations</li> <li>• Select appropriate restoration based on the functional and esthetic demand</li> <li>• Demonstrate an understanding of the principles of tooth preparation</li> <li>• Execute all the stages in the fabrication (from tooth preparation to insertion)</li> <li>• Demonstrate an understanding of all the clinical aspects of adhesive agents</li> <li>• Communicate effectively with lab</li> </ul>	<ul style="list-style-type: none"> <li>• Systematic simulation laboratory exercises</li> <li>• Appropriate range of clinical cases for observational and personal treatment</li> <li>• Attend trainee seminars within department</li> <li>• Attendance at suitable courses</li> <li>• Attendance at suitable meetings</li> <li>• Independent study</li> </ul>	<ul style="list-style-type: none"> <li>• Workplace based assessments (CBD, DOPS, Mini-CEX, MSF)</li> <li>• Written Examination/ VIVA</li> <li>• OSCE</li> </ul>





# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

## INTERIM FIXED RESTORATIONS

Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
<p>To provide in depth knowledge and skill in:</p> <ul style="list-style-type: none"><li>• Biological, mechanical and aesthetic requirement of interim restorations</li><li>• Types of interim restorations</li><li>• Materials and procedures</li><li>• Cementation</li></ul>	<p>The trainee should be able to:</p> <ul style="list-style-type: none"><li>• Plan interim restorations</li><li>• Demonstrate understanding for preparation of teeth and selection of material</li><li>• Fit restorations using appropriate luting agent</li></ul>	<ul style="list-style-type: none"><li>• Systematic simulation laboratory exercises</li><li>• Appropriate range of clinical cases for observational and personal treatment</li><li>• Attend trainee seminars within department</li><li>• Attendance at suitable courses</li><li>• Attendance at suitable meetings</li><li>• Independent study</li></ul>	<ul style="list-style-type: none"><li>• Workplace based assessments (CBD, DOPS, Mini-CEX, MSF)</li><li>• Written Examination/ Viva</li><li>• OSCE</li></ul>



# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

## PONTIC DESIGN

Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
<p>To provide in depth knowledge and skill in:</p> <ul style="list-style-type: none"><li>• Pontic classification</li><li>• Selection of pontic design appropriate for the case</li><li>• Biological, mechanical and aesthetics considerations for successful pontic design.</li></ul>	<p>The trainee should be able to:</p> <ul style="list-style-type: none"><li>• Assess pontic space, arch contour and gingival architecture</li><li>• Provide appropriate pontic design based on the assessment of pontic space &amp; architecture</li></ul>	<ul style="list-style-type: none"><li>• Workplace (clinical) experience</li><li>• Appropriate range of clinical cases for observational and personal treatment</li><li>• Attend trainee seminars within department</li><li>• Attendance at suitable courses</li><li>• Attendance at suitable meetings</li><li>• Independent study</li></ul>	<ul style="list-style-type: none"><li>• Workplace based assessments (CBD, DOPS)</li><li>• Written Examination/ Viva</li><li>• OSCE</li></ul>



## SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

### AESTHETICS, DESCRIPTION OF COLOUR AND COLOUR APPLICATION

Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
<p>To provide knowledge and skill in:</p> <ul style="list-style-type: none"><li>• Description of color</li><li>• Shade matching</li><li>• Aesthetic parameters</li></ul>	<p>The trainee should be able to:</p> <ul style="list-style-type: none"><li>• Apply knowledge of color application in fixed prosthesis</li><li>• Understand the need for proper shade matching for fixed prosthesis</li><li>• Design the prosthesis keeping in view the acceptable aesthetics of the patient.</li></ul>	<ul style="list-style-type: none"><li>• Workplace (clinical) experience</li><li>• Attend trainee seminars within department</li><li>• Attendance at suitable courses</li><li>• Attendance at suitable meetings</li><li>• Independent study</li></ul>	<ul style="list-style-type: none"><li>• Workplace based assessments (CBD, DOPS)</li><li>• Written Examination/ Viva</li></ul>



# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

## REMOVABLE PROSTHESES:

### CONVENTIONAL COMPLETE DENTURES

Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
<p>To provide in depth knowledge and skill in:</p> <ul style="list-style-type: none"> <li>• Applied anatomy and physiology of edentulous arches</li> <li>• Dental materials and their manipulation in practice</li> <li>• Ability to assess the denture bearing area and potential denture space.</li> <li>• Diagnosis and treatment planning of a complete denture patient</li> <li>• Occlusal schemes for complete dentures</li> <li>• Phonetics and its significance in complete denture therapy</li> </ul>	<p>The trainee should be able to:</p> <ul style="list-style-type: none"> <li>• Demonstrate an understanding of various aspects of complete dentures</li> <li>• Apply knowledge to diagnose &amp; plan a conventional complete denture therapy</li> <li>• Consult the patient skillfully for the treatment plan and procedures with the patient</li> <li>• Carry out clinical and laboratory steps in construction of complete dentures safely and properly</li> <li>• Use semi-adjustable articulators appropriately.</li> <li>• Demonstrate the ability to set teeth in various occlusal schemes</li> <li>• Deliver a satisfactory prostheses</li> <li>• Communicate effectively with the patient during all procedures</li> <li>• Give proper guidance and instructions to the patient on what to expect and how to use prosthesis</li> <li>• Listen carefully to the patient's post insertion complaints</li> <li>• Carry out the post insertion adjustments</li> </ul>	<ul style="list-style-type: none"> <li>• Workplace (clinical and Laboratory) experience</li> <li>• Clinical cases for observational and personal treatment</li> <li>• Extra mural training</li> <li>• Attend trainee seminars within department</li> <li>• Attendance at suitable courses</li> <li>• Attendance at suitable meetings</li> <li>• Independent study</li> </ul>	<ul style="list-style-type: none"> <li>• Workplace based assessments (CBD, DOPS, Mini-CEX, MSF)</li> <li>• Written Examination/ VIVA</li> <li>• OSCE</li> </ul>



## SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

<ul style="list-style-type: none"><li>• Ability to proficiently fabricate and deliver a complete denture prostheses</li><li>• Dealing with post insertion complaints and complications</li><li>• Managing sequel of complete dentures</li></ul>	<ul style="list-style-type: none"><li>• Carry out the speech analysis for a patient with complaint of speech problems with new dentures.</li><li>• Resist pressure from patient or attendants to provide inappropriate treatment e.g. provision of suction disc for retention</li><li>• Be willing to offer care. Behave appropriately when dealing with a demanding patient.</li><li>• Diagnose and manage sequel of complete dentures in light of history and examination finding</li><li>• Demonstrate the ability to utilize latest evidence based recommendation in conventional complete dentures treatment</li></ul>		
---	---	--	--





# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

## REMOVABLE PROSTHESES:

### CAST PARTIAL DENTURES

Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
<p>To provide in depth knowledge and skill in:</p> <ul style="list-style-type: none"> <li>• Applied anatomy and physiology of Partially edentulous arches</li> <li>• Dental materials and their manipulation used in partial denture practice</li> <li>• Ability to assess the denture bearing area, abutment health and potential denture space.</li> <li>• Diagnosis and treatment planning of a removable partial denture patient</li> <li>• Surveying and its application in partial denture design</li> </ul>	<p>The trainee should be able to:</p> <ul style="list-style-type: none"> <li>• Demonstrate an understanding of various aspects of partial dentures</li> <li>• Apply knowledge to diagnose &amp; plan an RPD</li> <li>• Consult the patient skillfully for the treatment plan and procedures with the patient</li> <li>• Carry out clinical and laboratory steps in construction of RPD safely and properly</li> <li>• Demonstrate proficiency in various impression techniques used for partially dentate arches</li> <li>• Demonstrate the ability to use a surveyor in designing of cast partial denture</li> <li>• Demonstrate the use of various intra coronal and extra coronal retainers.</li> <li>• Apply knowledge to compensate for the support problem in RPD.</li> <li>• Use semi-adjustable articulators appropriately.</li> <li>• Demonstrate the ability to set teeth in various occlusal schemes</li> <li>• Deliver a satisfactory prostheses</li> </ul>	<ul style="list-style-type: none"> <li>• Workplace (clinical and Laboratory) experience</li> <li>• Clinical cases for observational and personal treatment</li> <li>• Extra mural training</li> <li>• Attend trainee seminars within department</li> <li>• Attendance at suitable courses</li> <li>• Attendance at suitable meetings</li> <li>• Independent study</li> </ul>	<ul style="list-style-type: none"> <li>• Workplace based assessments (CBD, DOPS, Mini-CEX, MSF)</li> <li>• Written Examination/ VIVA</li> <li>• OSCE</li> </ul>



## SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

<ul style="list-style-type: none"><li>• Occlusal schemes for partial dentures</li><li>• Ability to proficiently fabricate and deliver Prostheses</li><li>• Dealing with post insertion complaints and complications</li><li>• Managing sequel of partial dentures</li></ul>	<ul style="list-style-type: none"><li>• Communicate effectively with the patient during all procedures</li><li>• Give proper guidance and instructions to the patient on what to expect and how to use prosthesis</li><li>• Listen carefully to the patient's post insertion complaints</li><li>• Carry out the post insertion adjustments</li><li>• Resist pressure from patient or attendants to provide inappropriate treatment e.g. provision of suction disc for retention</li><li>• Be willing to offer care.</li><li>• Behave appropriately when dealing with a demanding patient.</li><li>• Diagnose and manage sequel of complete dentures in light of history and examination finding</li><li>• Demonstrate the ability to utilize latest evidence based recommendation in RPD treatment</li></ul>		
---	--	--	--



# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

## REMOVABLE PROSTHESES:

### REPLACEMENT DENTURES AND MAINTAINANCE

Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
<p>To provide in depth knowledge and skill in:</p> <ul style="list-style-type: none"> <li>• Ability to assess the denture bearing area and potential denture space.</li> <li>• Diagnosis and treatment planning of a case for special replacement removable prostheses</li> <li>• Selection of an appropriate prosthesis for a given situation</li> <li>• Ability to proficiently fabricate and deliver a replacement dentures prostheses</li> <li>• Dealing with post insertion complaints and complications</li> </ul>	<p>The trainee should be able to:</p> <ul style="list-style-type: none"> <li>• Demonstrate an understanding of various aspects of immediate dentures, overdentures, single dentures, copy/duplicate denture, use of interim prosthesis</li> <li>• Understand chief complaint/patients desires and discover the patient's needs through clinical assessment</li> <li>• Develop a treatment plan that reflects best management of desires and needs of the patient</li> <li>• Consult the patient skillfully for the treatment plan and procedures</li> <li>• Carry out clinical and laboratory steps in construction of replacement dentures safely and proficiently</li> <li>• Use semi-adjustable articulators appropriately.</li> <li>• Execute appropriately sequenced treatment with a planned follow up</li> <li>• Communicate effectively with the patient during all procedures</li> <li>• Give proper guidance and instructions to the patient on what to expect and how to use prosthesis</li> </ul>	<ul style="list-style-type: none"> <li>• Workplace (clinical and Laboratory) experience</li> <li>• Clinical cases for observational and personal treatment</li> <li>• Extra mural training</li> <li>• Attend trainee seminars within department</li> <li>• Attendance at suitable courses</li> <li>• Attendance at suitable meetings</li> <li>• Independent study</li> </ul>	<ul style="list-style-type: none"> <li>• Workplace based assessments (CBD, DOPS, Mini-CEX, MSF)</li> <li>• Written Examination/ VIVA</li> <li>• OSCE</li> </ul>



## SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

<ul style="list-style-type: none"><li>• delivering prostheses services to increase the age of a useful prosthesis</li></ul>	<ul style="list-style-type: none"><li>• Be willing to offer care. Behave appropriately when dealing with a demanding patient.</li><li>• Demonstrate the ability to utilize latest evidence based recommendations for replacement and interim dentures</li><li>• Deliver appropriate maintenance services for a replacement denture, including relining rebasing or repair.</li></ul>		
---	--	--	--





# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

## MAXILLOFACIAL PROSTHODONTICS:

### Diagnosis and management of acquired and congenital defects

Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
<p>To provide in depth knowledge and skill in:</p> <ul style="list-style-type: none"> <li>• Applied anatomy and physiology with respect to the acquired or congenital maxillofacial defects</li> <li>• Dental materials and their manipulation used in maxillofacial prostheses</li> <li>• Ability to assess the defect area, available abutment health and potential prosthesis space</li> <li>• Formulation of a treatment plan according to the patient's requirement, including the type of prosthesis best suited for the situation</li> <li>• Designing an appropriate surgical, interim or definitive</li> </ul>	<p>The trainee should be able to:</p> <ul style="list-style-type: none"> <li>• Demonstrate an understanding of various aspects of maxillofacial prostheses (intra-oral, extra-oral and treatment prostheses)</li> <li>• Apply knowledge to diagnose &amp; plan maxillofacial prostheses</li> <li>• Consult the patient skillfully for the treatment plan and procedures</li> <li>• Carry out clinical and laboratory steps involved in construction of maxillofacial prosthesis safely and properly</li> <li>• Deliver a satisfactory prostheses</li> <li>• Communicate effectively with the patient during all procedures</li> <li>• Give proper guidance and instructions to the patient on what to expect and how to use prosthesis</li> </ul>	<ul style="list-style-type: none"> <li>• Workplace (clinical and Laboratory) experience</li> <li>• Clinical cases for observational and personal treatment</li> <li>• Extra mural training</li> <li>• Attend trainee seminars within department</li> <li>• Attendance at suitable courses</li> <li>• Attendance at suitable meetings</li> <li>• Independent study</li> </ul>	<ul style="list-style-type: none"> <li>• Workplace based assessments (CBD, DOPS, Mini-CEX, MSF)</li> <li>• Written Examination/ VIVA</li> <li>• OSCE</li> </ul>





## SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

<p>prosthesis for a patient with a maxillofacial defect</p> <ul style="list-style-type: none"><li>• Understand the special psychological needs of the patient with congenital and acquired defects</li><li>• Understanding and identifying local and systemic effects of surgical treatment, chemotherapy and radiotherapy</li><li>• Ability to fabricate and deliver a maxillofacial prostheses</li><li>• Dealing with post insertion complaints and complications</li><li>• Identification and management of biological, biomechanical &amp; functional problems associated with the prosthesis use</li><li>• Know when to refer to or consult with other specialists' e.g. plastic surgeon, speech therapist, and orthodontist.</li></ul>	<ul style="list-style-type: none"><li>• Carry out the post insertion adjustments</li><li>• Counsel and educate the patient for special needs arising from the surgical defects like speech impairments and nutritional deficiencies</li><li>• Be willing to offer care.</li><li>• Demonstrate effective team communication and team work with the other specialties involved in the patient treatment, e.g. cleft palate team</li><li>• Identify and manage the local effects of chemotherapy and radiotherapy, and know when to refer the patient to treating physician for systemic problems</li><li>• Demonstrate the ability to utilize latest evidence based recommendation in prostheses treatment</li></ul>		
--	--	--	--



# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

## TEMPOROMANDIBULAR JOINT DISORDERS

### Management of temporomandibular joint disorders

Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
<p>To provide in depth knowledge and skill in:</p> <ul style="list-style-type: none"> <li>• Ability to identify a differential diagnosis for facial pain based upon history and relevant investigations and knows investigations &amp; treatment options.</li> <li>• Diagnose and relate oral para-function and other factors in the development of dysfunction of mandibular movements and the TMJs.</li> <li>• Know when to refer to or confer with other specialists.</li> <li>• Ability to undertake therapy in a safe manner and to recognize and deal with complications that may arise.</li> </ul>	<p>The trainee should be able to:</p> <ul style="list-style-type: none"> <li>• Take a comprehensive history and examine the TMJ and muscles of mastication.</li> <li>• Formulate and instigate a treatment plan.</li> <li>• Communicate effectively and empathetically with patients to identify potential etiological factors and signs and symptoms of temporomandibular disorders.</li> <li>• Show a high degree of skill in the choice and execution of appropriate techniques for treatment in conjunction with other specialists/dental care professionals managing the patient.</li> <li>• Deliver and follow up the appropriate removable splints</li> </ul>	<ul style="list-style-type: none"> <li>• Systematic simulation laboratory exercises</li> <li>• Workplace (clinical) experience</li> <li>• Clinical cases for observational and personal treatment</li> <li>• Attend trainee seminars within department</li> <li>• Attendance at suitable courses</li> <li>• Attendance at suitable meetings</li> <li>• Independent study</li> </ul>	<ul style="list-style-type: none"> <li>• Workplace based assessments (CBD, DOPS, Mini-CEX, MSF)</li> <li>• OSCE</li> </ul>



## SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

<ul style="list-style-type: none"><li>• Provide behavioral advice for the management of these problems</li><li>• Prescribe appropriate medication for pain and muscle relief</li><li>• Construct appropriate occlusal appliances for the diagnosis and treatment of these problems with monitoring of effectiveness.</li><li>• Communicate and work with colleagues on the multidisciplinary management of these problems.</li></ul>	<p>as part of TMJ disorder therapy</p> <ul style="list-style-type: none"><li>• Exclude other serious causes of pain in that region.</li><li>• Refer patients requiring surgical intervention to oral surgeon timely and follow up with their management</li></ul>		
--	---	--	--



# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

## PRINCIPLES OF OCCLUSION

Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
<p>To provide in depth knowledge and skill in:</p> <ul style="list-style-type: none"> <li>• Evaluation of natural and artificial occlusion</li> <li>• Functional and para functional movements</li> <li>• Occlusal trauma</li> <li>• Occlusal therapy</li> <li>• Occlusal schemes for natural and artificial dentition</li> </ul>	<p>The trainee should be able to:</p> <ul style="list-style-type: none"> <li>• Appreciate the difference in natural and artificial occlusion</li> <li>• Apply knowledge of occlusion in the assessment and management of teeth and prostheses</li> <li>• Accurately record and transfer various occlusal records from the patient to the articulator</li> <li>• Use face bow and program articulators competently</li> <li>• Evaluate occlusion in a patient and on the articulator</li> <li>• Determine the occlusal interferences and occlusal trauma</li> <li>• Identify the effects of pathogenic occlusion</li> <li>• Understand the various factors of occlusion and their application in creating artificial occlusion</li> <li>• Prescribe an effective occlusal scheme for a given patient</li> <li>• Deliver the selected occlusal scheme in the prosthesis</li> <li>• Manage the cases of occlusal trauma by performing appropriate occlusal adjustment in natural dentition</li> </ul>	<ul style="list-style-type: none"> <li>• Workplace (clinical) experience</li> <li>• Attend trainee seminars within department</li> <li>• Attendance at suitable courses</li> <li>• Attendance at suitable meetings</li> <li>• Independent study</li> </ul>	<ul style="list-style-type: none"> <li>• Workplace based assessments (CBD, DOPS, Mini-CEX)</li> <li>• Written Examination/ VIVA</li> <li>• OSCE</li> </ul>





# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

## IMPLANT SUPPORTED PROSTHESES

### Surgical and prosthetic management of osseo-integrated dental implants

Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
<p>To provide in depth knowledge and skill about :</p> <ul style="list-style-type: none"> <li>• Dental implants as replacement of missing dentition and oral tissues.</li> <li>• Components of implants and different systems</li> <li>• Principles of osseointegration &amp; factors affecting it</li> <li>• Various types of implant supported prostheses</li> <li>• Clinical &amp; radiographic evaluation of a patient for implant supported prosthesis</li> <li>• Formulation of a treatment plan according to the patient's requirement, including the type of prosthesis best suited for the situation, planning of</li> </ul>	<p>The trainee should be able to:</p> <ul style="list-style-type: none"> <li>• understand the implant components &amp; systems</li> <li>• Evaluate risk factors for osseointegration</li> <li>• Evaluate the patient clinically &amp; radiographically for implants</li> <li>• Devise a treatment plan paying particular attention to the number, position and angulation of implants</li> <li>• Execute the surgical &amp; prosthetic phase of treatment</li> <li>• Monitor and evaluate the implants</li> <li>• Manage problems related to implant placement &amp; maintenance</li> </ul>	<ul style="list-style-type: none"> <li>• Systematic simulation</li> <li>• laboratory exercises</li> <li>• Work place (clinical) experience</li> <li>• Clinical cases for observational and personal treatment</li> <li>• Attend trainee seminars within department</li> <li>• Attendance at suitable courses</li> <li>• Attendance at suitable meetings</li> <li>• Independent study</li> </ul>	<ul style="list-style-type: none"> <li>• Workplace based assessments (DOPS, Mini-CEX, MSF)</li> <li>• OSCE</li> </ul>





## SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

<p>number, position &amp; and angulation of implants</p> <ul style="list-style-type: none"><li>• Execution of surgical &amp; prosthetic phase of treatment</li><li>• Post-operative care and evaluation</li><li>• Identification and management of biological, biomechanical &amp; functional problems</li><li>• Know when to refer to or confer with other specialists' e.g. restorative specialist.</li><li>• Current and seminal literature on indications for, success / failure criteria and biological implications of provision of dental implants.</li></ul>	<ul style="list-style-type: none"><li>• Ability to recognize and deal with complications that may arise in long and short term.</li><li>• Refer the patient to specialist oral surgeon for advanced surgical procedures required in placement of implants</li></ul>		
--	---	--	--



## Allied specialties

Trainee will be rotating in the following departments for the clear understanding of the basic concepts

- Operative dentistry: (3 Months)
  - Evaluation and management of patients with special emphasis on diagnosis of and relief of dental pain. Attaining clinical skills in simple restorative and endodontic procedures.
- Periodontology: (2 Months)
  - Assessment, diagnosis and management of periodontal problems, with special emphasis on periodontal prophylaxis and surgical crown lengthening procedures.
- Oral & Maxillofacial Surgery: (2 Months)
  - Evaluation and management of patients requiring minor oral surgical procedures, with special emphasis on pre-prosthetic and implant surgeries.
- Orthodontics (1)
  - Understating basic orthodontic assessment and prosthodontic interface.



# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

## Research

The resident would be required to undertake a research project and to present the result for examination in the form of a thesis. They would be encouraged to present and publish the result of the project in refereed journals.

Rule and regulation regarding the research mandatory for MDS is available on university website

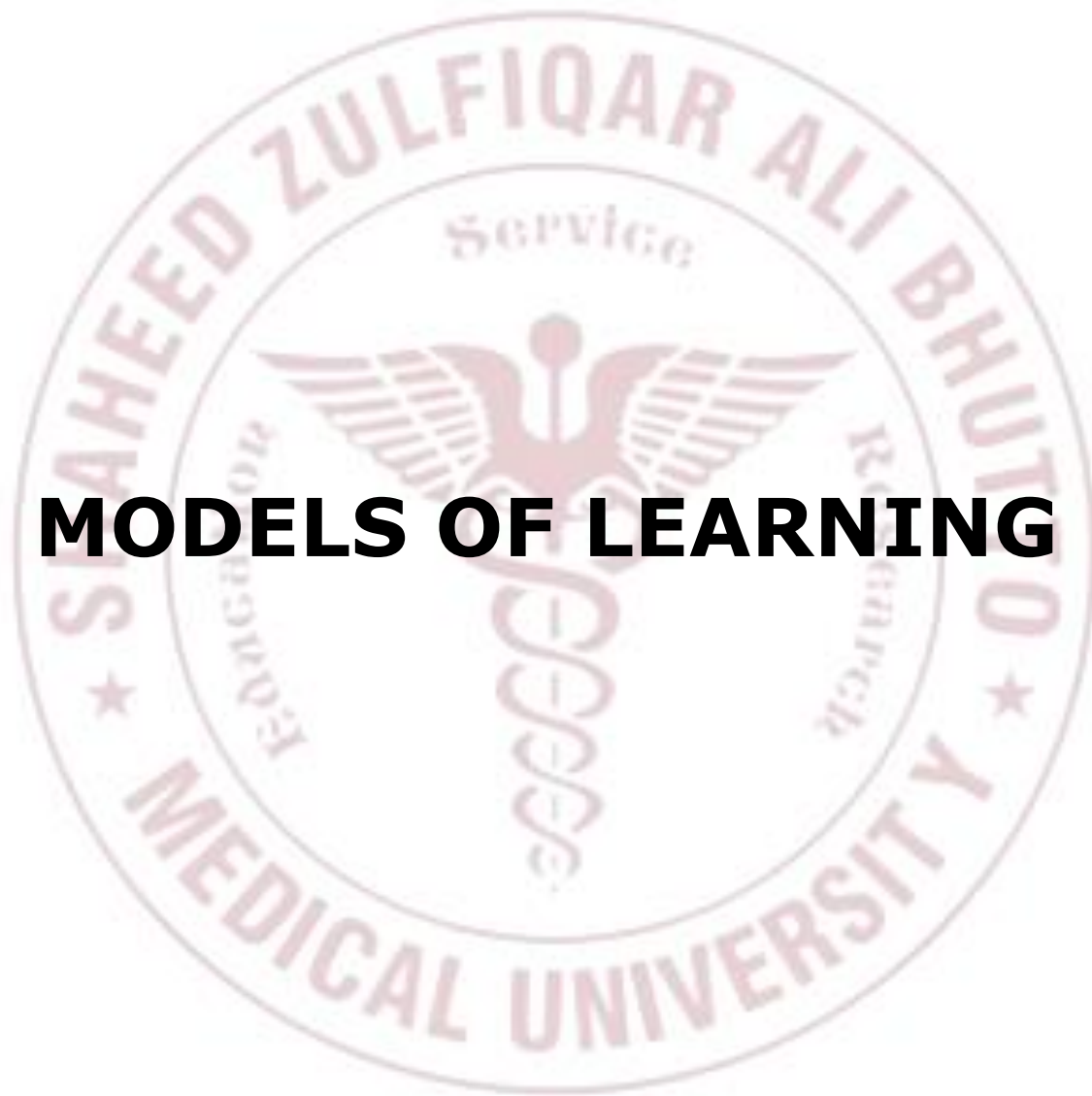
<http://www.szabmu.edu.pk/downloads#thesis>

The guideline for synopsis and thesis writing is available on University website at

<http://www.szabmu.edu.pk/content/downloads/guidelines-for-synopsis-writing.pdf>

<http://www.szabmu.edu.pk/content/downloads/guidelines-for-thesis-writing.pdf>





# MODELS OF LEARNING



## MODELS OF LEARNING

Practice of this specialty requires a range of skills (thinking, mental visualization, knowledge, manual dexterity, communication, investigative, management) which will be developed systematically through a number of suitably designed learning opportunities. Learning outcomes will be matched with appropriate instructional strategies. Trainees will undertake their learning in following ways

- Guided theoretical learning during formal and timetabled periods which will be geared towards developing an understanding of the subject by critical appraisal and synthesis of the classical and contemporary literature through individual and group activities
  - Technical skills development through systematic simulation laboratory exercises.
  - Learning at the workplace by supervised clinical training sessions
  - Clinical meetings
  - Learning from peers through journal club review and case discussion sessions
  - Problem solving exercises
  - Extra mural training
  - Self-directed and independent study
- **Direct clinical care:** approximately 60% of training time should be devoted to direct clinical care. This should largely comprise of direct consultation, review and/or treatment of patients. In addition a further 20% of training time should be devoted to "other training activities" which may include indirect patient contact (such as attendance at medical clinics/ward rounds), attending management related activities etc. The remaining 20% should be ring-fenced for study, audit and research activity.
- **Independent self-directed learning:** This should be encouraged by providing reference text books, journals and e-learning resources.
- **Departmental teaching sessions:** These occur on a regular basis in most departments and may include case reviews, journal clubs and other forms of didactic/seminar based teaching.
- **Regional & national training courses:** These are valuable learning opportunities. Trainees should be released from service duties to attend. They also allow trainees to identify their position in relation to the curriculum and their peers.
- **Scientific meetings:** Research and the understanding of research are essential to the practice of Prosthodontics. Trainees should be encouraged to attend and present their work at relevant meetings.
- **Multidisciplinary clinics (MDCs):** Attendance at and contribution to MDCs offers the opportunity for trainees to develop an understanding of multidisciplinary clinical management in conjunction with related specialties. The MDC is also an important arena for the development of inter-professional communication skills.





## SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

- **Audit:** trainees should play an active role in departmental audit activity.

The curriculum will be delivered through a variety of learning experiences. Trainees will learn, from practice, clinical skills that are appropriate to their level of training and to their attachment within the department. Opportunities for concentrated practice in skills and procedures will be given throughout training via specialist clinical settings.

Learning from peers will occur at clinical meetings, and in larger departments more senior trainees may be involved in mentoring less experienced trainees. Formal situations (such as journal club, above) should be part of every departmental timetable and provide specific learning experiences. External courses (as above) will be available to trainees. Each rotation/attachment will allow time during the week for personal study, and the trainee will meet their educational supervisor regularly for specific input.

Most of the curriculum is suited to delivery by work-based experiential learning and on-the-job supervision. Where it is clear from trainees' experience that parts of the curriculum are not being delivered within their work, appropriate education or rotations to other work places will be arranged. The key will be regular work-based assessment by educational supervisors who will be able to assess, with their trainee, their on-going progress and whether parts of the curriculum are not being delivered within their present work-place.



# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

## ALLOCATED CLINICAL WORK

Sr. No	Description	Total Number of Cases
1	Conventional Complete dentures	30
2	Removable partial dentures	30
3	Fixed Prosthesis (PFM, All Ceramic,) <ul style="list-style-type: none"> <li>• Crowns anterior &amp; posterior (full and partial coverage)</li> <li>• Veneers</li> <li>• Inlays &amp; onlays</li> <li>• Endoposts &amp; Core Build-ups</li> <li>• Conventional bridges</li> <li>• Minimal preparation bridges</li> <li>• Temporary/interim fixed prosthesis</li> </ul>	40 05 05 20 20 10 10
4	Implant supported prostheses	03
5	Maxillofacial prosthesis	05
6	Obturator	05
7	Occlusal splints	10
8	Overdentures	05
9	Immediate dentures	10
10	Copy dentures	05
11	Pre-prosthetic surgery	05
12	Surgical crown lengthening	05
13	Denture relining & rebasing	10
14	Denture repair	10
15	Periodontal procedures <ul style="list-style-type: none"> <li>• Prophylaxis</li> <li>• Surgical periodontics</li> </ul>	10 03
16	Full Mouth Rehabilitation	05
17	Endodontics	10
18	Simple restorations <ul style="list-style-type: none"> <li>• Amalgam</li> <li>• Composite</li> </ul>	10 10

Each trainee will be required to maintain a complete record of all cases



# ASSESSMENT



## ASSESSMENT

Assessment of trainees will cover the cognitive, psychomotor and affective domains. It will take two forms

- Formative Assessment
- Summative Assessment

### Formative Assessment

It is the continuous assessment of progress and competence. It will be conducted through workplace based assessment throughout the training. Assessment will be undertaken by a range of assessors and will cover a range of procedures appropriate to the stage of training. Formative assessment will include

- Directly observed practical skills (DOPS)
- Case based discussion (CbD)
- Mini clinical examination exercises (Mini-CEX)
- Multiple source feedback (MSF)

### Summative Assessment

Summative assessment will be held twice in four years

- Intermediate Module (At the end of second year)
- Final Examination (After the completion of 4 years of training)

The level of performance required for passing the exam will depend on the knowledge and skills necessary for acceptable performance and will not be adjusted to regulate the number or proportion of persons passing the examination. The pass point will be determined by careful analysis and judgment of acceptable performance.

### Record of Clinical Cases

The trainees will be required to keep a record of the allocated clinical work in a log book. It will be the responsibility of trainee to keep the log book up to date with the signature of the faculty certifying the work.

Apart from the log book, a case book will also be maintained for the multidisciplinary cases.



**Table of Specifications**  
**MDS PROSTHODONTICS**







# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

## TOS FOR MTA SPECIALITY COURSE PAPER

TOS ID	Subject	Topic	%	MCQs
PROS-1	Principles Of Prosthodontics, Pre-Prosthetic Mouth Preparations, Treatment Planning And <i>Introduction to research</i>	1.1 Patient evaluation, diagnosis and treatment planning	<b>10</b>	<b>10</b>
		1.2 Counseling		
		1.3 Sequencing of treatment plan		
		1.4 Interdisciplinary treatment planning and referrals		
1.5 Principles of micro-esthetics and macro-esthetics				
1.6 Pre-prosthetic mouth preparations				
		1.7 <i>Introduction to research</i>	<b>5</b>	<b>10</b>
		1.8 <i>Introduction to statistical interface</i>	<b>5</b>	
PROS-2	<b>Removable Prosthodontics</b>			
	a. Partial dentures with applied materials	2.1 Applied Dental materials	<b>15</b>	<b>15</b>
		2.2 Applied anatomy and physiology		
		2.3 Components of RPD		
		2.4 Patient evaluation, diagnosis and treatment planning		
		2.5 Surveying and designing		
		2.6 Steps of prosthesis fabrication and delivery		
		2.7 Post insertion follow-up		
	b. Conventional complete dentures with applied materials	2.8 Applied Dental materials	<b>15</b>	<b>15</b>
		2.9 Applied anatomy and physiology		
2.10 Patient evaluation, diagnosis and treatment planning (including single dentures)				
2.11 Phonetics				
Prosthesis maintenance	2.12 Steps of prosthesis fabrication and delivery	<b>5</b>	<b>5</b>	
	2.13 Post insertion follow-up			
	2.14 sequel of complete dentures			
	2.15 Relining, rebasing & repairs of removable prosthesis			
	2.16 Applied materials			
PROS-3	Replacement Dentures,	3.1 Replacement removable prostheses (overdenture, immediate, copy,	<b>7</b>	<b>7</b>



## SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

	Interim Prosthesis, Appliances	interim, transitional, and treatment dentures) 3.2 Applied materials		
PROS-4	Basics Of Fixed Prosthodontics With Applied Materials	Conventional Full and partial coverage restorations 4.1 Evaluation, diagnosis and treatment planning of simple cases 4.2 Indications & limitations of full and partial coverage restorations 4.3 Various types and components 4.4 Principles of tooth preparation 4.5 Atraumatic management of soft tissues 4.6 Biological, mechanical and aesthetics considerations for prosthesis design 4.7 Resin bonded restorations 4.8 Applied materials 4.9 Temporary restorations	<b>15</b>	<b>15</b>
PROS-5	Basic of Gerontology	5.1 Commonly encountered problems in geriatric patients 5.2 Nutritional deficiency and tendency of malnutrition 5.3 General dental problems and their management	<b>8</b>	<b>8</b>
PROS-6	Basics of Occlusion for CD, FDP and RDP	<b>6.1</b> Description and general features(Definitions and factors of occlusion) 6.2 Functional and para functional movements & envelope of motion, 6.3 Evaluation of natural and artificial occlusion 6.4 Occlusal schemes for removable partial, conventional complete and fixed partial dentures	<b>10</b>	<b>10</b>
PROS-7	Infection control in Prosthodontics	7.1 Infection control in prosthodontics clinic and laboratory	<b>5</b>	<b>5</b>
<b>Total</b>			<b>100</b>	<b>100</b>



**MTA-PRACTICAL**

**10 OSCE-Stations (100 Marks 10 Marks each)**

**(7mins each station)**

- **8 Static stations** (including Prosthesis Design and procedural Skills)
- **2 Interactive Stations**

Topic	Stations	Type of station
1 Complete Dentures	2	Static
2 Fixed partial dentures	2	Static
3 Removable partial dentures	2	Static
4 Occlusion &TMD/ Replacement dentures/ materials	2	Static
5 viva/treatment planning of Prosthodontic patient	2	Interactive
6 <b>Total</b>	<b>10</b>	



# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

## TOS FOR EXIT FINAL EXAM

TOS-ID	Topic		%	MCQs	%	SEQs
PROS-8	Patient evaluation and treatment planning for a Prosthodontic patient	8.1 Prosthodontic evaluation, diagnosis and treatment planning for patients with complex medical problems 8.2 Referral and consent	5	5	5	1
PROS-9	Advanced Removable prostheses	9.1 Unconventional Complete dentures 9.2 Partial dentures with precision attachment, sectional and swing lock dentures 9.3 Applied materials	20	20	15	3
PROS-10	Replacement Dentures,	10.1 Evaluation, diagnosis and treatment planning 10.2 Selection of appropriate prosthesis (overdenture, immediate, copy, interim, transitional, and treatment dentures) 10.3 Steps of fabrication and delivery 10.4 Post insertion complaints and complications	5	5	5	1
PROS-11	Fixed prosthodontics advanced procedures	11.1 Complicated treatment plans and full mouth rehabilitation for patients requiring confirmative or reorganized approach 11.2 Combination treatment 11.3 Aesthetic parameters and shade replication 11.4 CAD CAM and digital impression etc. 11.5 Applied materials	20	20	20	4
PROS-12	Advanced Gerontology	12.1 Prosthodontic management of patients with compromised systemic status	10	10	10	2
PROS-13	Maxillofacial prosthodontics, patient evaluation and treatment with	13.1 Applied anatomy and physiology of maxillofacial defects 13.2 Applied Dental materials 13.3 Evaluation, diagnosis and treatment planning	10	10	10	2





# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

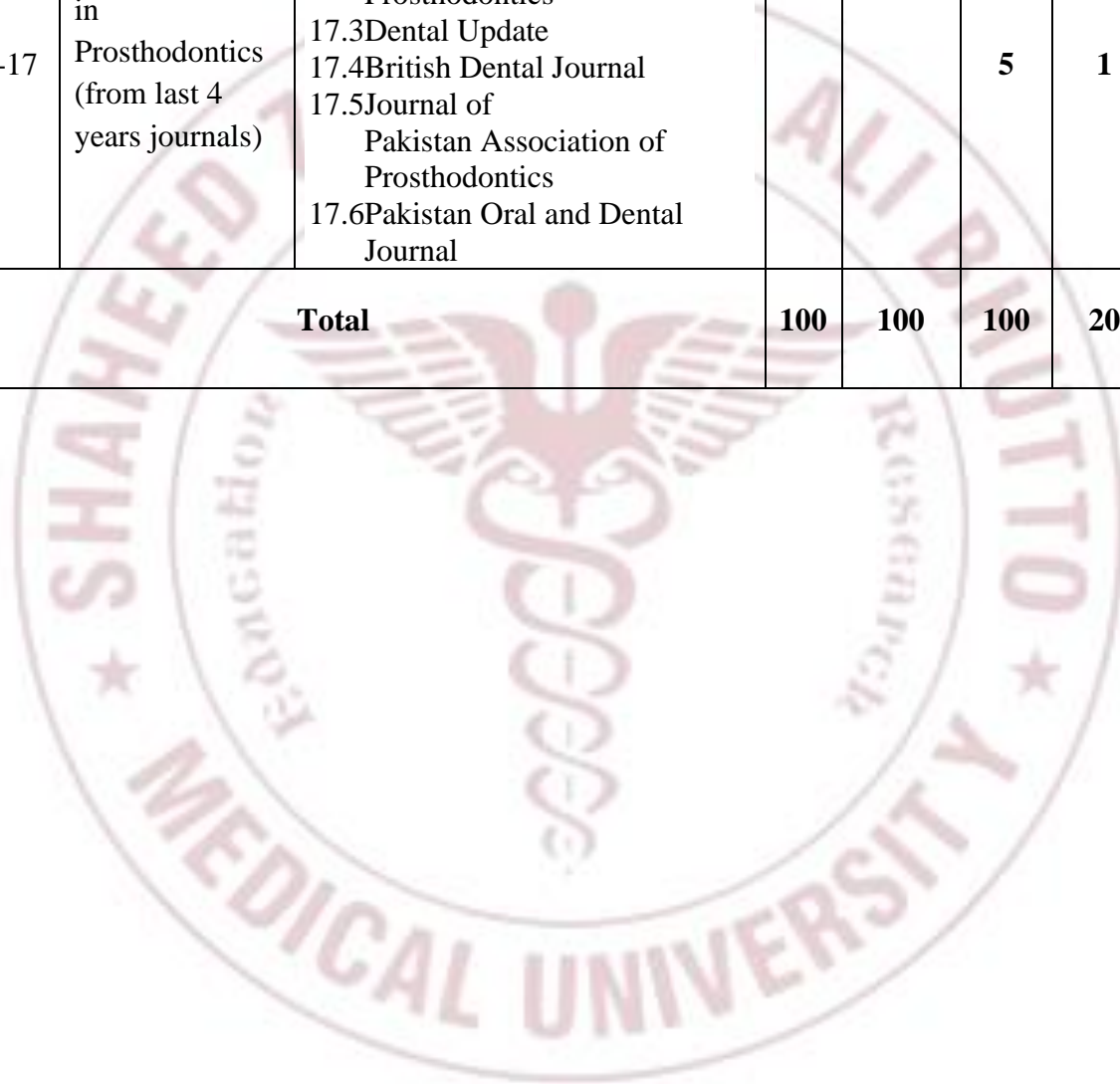
	applied dental materials	13.4 Maxillofacial Prosthesis Designing 13.5 Psychological problems & needs 13.6 Local and systematic effects of surgical treatment, chemotherapy and radiotherapy 13.7 Post insertion complaints and complications 13.8 Referral and consultation with other specialists' e.g. plastic surgeon, speech therapist, and orthodontist.				
PROS-14	Implant supported prostheses with applied dental materials	14.1 Components of different implant systems 14.2 Principles of osseointegration & factors affecting it 14.3 Evaluation, diagnosis and treatment planning, according to the patient's requirement, including the type of prosthesis best suited for the situation, planning of number, position & and angulation of implants 14.4 Surgical & prosthetic phase of treatment 14.5 follow up care 14.6 Implant protected occlusion 14.7 Biomechanics of dental implants 14.8 Referral 14.9 Current recommendations for success / failure criteria	<b>15</b>	<b>15</b>	<b>15</b>	<b>3</b>
PROS-15	Occlusion and TMD	15.1 Evaluation, diagnosis and treatment planning of pathologic occlusion and TMD 15.2 Etiology 15.3 Treatment options 15.4 Management of Disc displacement with and without reduction 15.5 Occlusal appliances 15.6 Complications	<b>10</b>	<b>10</b>	<b>10</b>	<b>2</b>





## SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

		15.7 Multidisciplinary management, Referral and consultation				
PROS-16	Infection control in prosthodontics	16.1 Infection control in prosthodontics clinic and laboratory	<b>5</b>	<b>5</b>	<b>5</b>	<b>1</b>
PROS-17	Advancements in Prosthodontics (from last 4 years journals)	17.1 Journal of Prosthetic Dentistry 17.2 International Journal of Prosthodontics 17.3 Dental Update 17.4 British Dental Journal 17.5 Journal of Pakistan Association of Prosthodontics 17.6 Pakistan Oral and Dental Journal			<b>5</b>	<b>1</b>
<b>Total</b>			<b>100</b>	<b>100</b>	<b>100</b>	<b>20</b>





## **TOS for Final Exit Examination**

There will be three parts of this examination: written examination consisting of two theory papers, practical and viva consisting of case defense, OSCE stations, short cases, long case and thesis defense. The details are as under:

### **1. Written examination**

- 1.1 **Paper A** (100 MCQs) Specialty (Prosthodontics) **100 Marks**
- 1.2 **Paper B** (20 SEQs/SAQs) Specialty (Prosthodontics) **100 Marks**

### **2. Practical and Viva**

- 2.1 **Five (05) finished cases of different problems treated by the candidate**  
(06 Min each -10 Marks each) **50 Marks**
- 2.2 **OSCE (10 Stations, 07 Mins each, 07 marks each)** **70 Marks**

Topic	Stations	Type of station
1 Communication skill	1	Interactive station
2 Removable Dentures, Fixed Prosthesis, implant supported prosthesis and Occlusion	5	Static stations
3 Procedural Skill	2	Interactive station
4 Interactive stations (Viva)	2	Interactive station
5 <b>Total</b>	<b>10</b>	

- 2.3 **Four (04) short cases (10 Min each -10 marks each)** **40 Marks**
- 2.4 **One (01) Long case (60 Min -40 Marks)** **40 Marks**

3. **Thesis Defense** (Presentation 15 mins. followed by Q&A) **100 Marks**
- Total Marks** **500 Marks**



**LEARNING RESOURCES**



## List of Essential Reading

### **BOOKS:(Latest Edition)**

1. Prosthodontic treatment for edentulous patients; Authors. Zarb, Hobkirk, Eckert, Jacob
2. Complete Dentures Prosthodontics; Authors; Basker and Davenport
3. McCracken removable partial dentures; authors, Glen P.McGivney, Alan B.Carr.
4. Stewart's Removable partial dentures; authors, Rodney D. Phoenix , David R. Cagna, Charles F. Defreest, Kenneth L. Stewart .
5. Dental implant prosthodontics; Author. Carl E Misch
6. Fundamentals of the fixed prosthodontics; authors Herbert T.Shillinburg, Jr.; Sather David A.; Wilson, Edwin L., Jr.; Cain, Joseph R.; Mitchell, Donald L.; Blanco, Luis J.; and Kessler, James C.
7. Contemporary fixed prosthodontics by Rossential and Fujimoto.
8. Diagnosis and treatment planning in prosthodontics; William R Laney, Thomas J. Salinas, Alan B Carr.
9. Management of Temporomandibular Disorders and Occlusion; Author Jeffrey P. Okeson DMD.
10. Clinical Maxillo-facial prosthodontics, Taylor Francis.

### **JOURNALS:**

1. Journal of Prosthetic Dentistry
2. International Journal of Prosthodontics
3. Dental Update
4. British Dental Journal
5. Journal of Pakistan Association of Prosthodontics
6. Pakistan Oral and Dental Journal





# PROGRAM EVALUATION





## SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

### PROGRAM EVALUATION

The program director will continue to ensure that the program is fit for purpose in that it provides the trainee with the appropriate knowledge, skills, attitudes and competencies required to meet the requirements of a specialist.

Program evaluation will be carried out after every two years according to the CIPP model of evaluation. Any suggested updates will only be made following appropriate consultation with stakeholders, including trainees and lay members.

Feedback forms are attached as "Annexure B"





## **ANNEXURE "A"**

### **List of Essential Reading**

#### **Journals**

1. Journal of Prosthetic Dentistry
2. International Journal of Prosthodontics
3. Dental Update
4. British Dental Journal
5. Journal of Pakistan Association of Prosthodontics
6. Pakistan Oral and Dental Journal

#### **Books**

11. Prosthodontic treatment for edentulous patients; Authors. Zarb, Hobkirk, Eckert, Jacob 13th edition
12. Complete Dentures Prosthodontics; Authors; Basker and Davenport, 2nd Edition
13. McCracken removable partial dentures; authors, Glen P.McGivney, Alan B.Carr, 13th edition
14. Stewart's Removable partial dentures; authors, Rodney D. Phoenix , David R. Cagna, Charles F. Defreest, Kenneth L. Stewart 4<sup>th</sup> edition
15. Dental implant prosthodontics; Author. Carl E Misch
16. Fundamentals of the fixed prosthodontics; authors Herbert T.Shillinburg, Jr.; Sather David A.; Wilson, Edwin L., Jr.; Cain, Joseph R.; Mitchell, Donald L.; Blanco, Luis J.; and Kessler, James C. 4th edition revised
17. Contemporary fixed prosthodontics by Rossential and Fujimoto. 5th edition
18. Diagnosis and treatment planning in prosthodontics; William R Laney, Thomas J. Salinas, Alan B Carr; 2nd Edition
19. Management of Temporomandibular Disorders and Occlusion; Author Jeffrey P. Okeson DMD, 7<sup>th</sup> edition
20. Clinical Maxillo-facial prosthodontics, Taylor Francis, 2<sup>nd</sup> Edition

**\*BOOK EDITIONS RECOMMENDED ARE AT THE TIME OF SUBMISSION OF THIS DOCUMENT. NEW EDITIONS AS AND WHEN PUBLISHED WILL BE REPLACE THESE.**



ANNEXURE B

Supervisor Evaluation Form

Date: \_\_\_\_\_ Supervisor's Name: \_\_\_\_\_

Your Name: \_\_\_\_\_ Signature: \_\_\_\_\_

Evaluations of supervisors by Trainee's are an important process for providing supervisors with an assessment of the quality of their work. Annual supervisor assessments can be used to compliment a supervisor for doing a good job. Annual assessments can also identify areas for improvement. Evaluations can strengthen communications between supervisors and trainee's.

Trainees have three options for evaluating supervisors:

- 1) Completing the Evaluation of Supervisor form.
2) Writing a signed memo evaluating the supervisor.
3) Meeting with the supervisor's department head.

Evaluations received by the deadline (January 15) will be incorporated into the annual review of the supervisor. Forms and/or signed memos should be sent to the Human Resources department.

\*\*\*

E=Excellent, G=Good, S=Satisfactory, N=Needs Work, U=Unsatisfactory, Ø=No Opinion

Performs Supervisory Functions

Table with 7 columns (Function, E, G, S, N, U, Ø) and 9 rows of supervisory functions.



# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Develops Innovative Procedures

Is receptive to new ideas	E	G	S	N	U	Ø
Is receptive to questions	E	G	S	N	U	Ø
Encourages initiative and innovation	E	G	S	N	U	Ø

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### III. Maintains Positive Work Environment

Recognizes contributions	E	G	S	N	U	Ø
Motivates workers	E	G	S	N	U	Ø
Provides relaxed yet efficient work atmosphere	E	G	S	N	U	Ø
Encourages staff development	E	G	S	N	U	Ø

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

---

---

---

## Knows the Operations of the Department

Understands employee workload	E	G	S	N	U	Ø
Is alert to potential problems	E	G	S	N	U	Ø
Keeps staff informed about department and university developments	E	G	S	N	U	Ø

Comments:

---

---

---

---

---

---

---

---

---

---

## Work Habits

Acknowledges own limitations and mistakes	E	G	S	N	U	Ø
Maintains a positive work attitude	E	G	S	N	U	Ø
Uses time efficiently and effectively	E	G	S	N	U	Ø
Demonstrates a good work ethic	E	G	S	N	U	Ø

Comments:

---

---

---

---

---

---

---

---

---

---





# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

*Please use the bottom and back of this sheet as space for expanding on any comments above or to make any additional comments.*





# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

## Program Evaluation Form

Please use the following scale to indicate your response to the statements below:

**SA** = strongly agree

**A** = agree

**N** = neither agree/disagree

**D** = disagree

**SD** = strongly disagree

The information was presented effectively	SA	A	N	D	SD
The information presented was practical	SA	A	N	D	SD
The program provided a good working knowledge of the subject matter presented	SA	A	N	D	SD
The program has allowed me to acquire practical skills and knowledge to manage my business more effectively and efficiently	SA	A	N	D	SD
The program attended was sufficient for my purpose	SA	A	N	D	SD