

PERIODONTOLOGY

Residency Training Program Leading to the degree of

Master of Science (MSc)

SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY ISLAMABAD

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CURRICULUM

Master of Science (clinical)

(MSc)

Periodontology

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CURRICULUM DEVELOPMENT COMMITTEE

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ROAD MAP OF MSc PERIODONTOLOGY (A Brief Summary)

GENERAL INFORMATION AND PROGRAM GOALS:

University offer a 02 years MSc program in the field of Periodontology. This program intends to attract candidates that have an interest in Oral and dental diseases, pathologies, defects and related research methodologies. The curriculum focuses on formal teaching & training as well as practical fieldwork.

This MSc program aims to train and equip the post-graduate students with all the necessary knowledge & skills, at par with international standards, required to be a leader in the field of Periodontology. The candidates, upon graduation, will be expected to demonstrate a high level of expertise in the field of Periodontology with a more specific focus on community-oriented diseases.

COURSE DESCRIPTION:

A total of one sixty-four (64) credit hours of instruction and supervised activities are distributed over two years academic period. This comprises approximately 960 contact hours of instruction and approximately 2880 scheduled hours including formal didactic, clinical, research and laboratory experience.

		1	
	Year 01		
ID	Title	Credit Hours	
Perio-1	Introduction to Research	3	
Perio-2	Anatomy, Histology, Biochemistry and Physiology of periodontium, soft tissues and peri-implant tissue	3	
Perio-3	Oral Microbiology, Plaque and calculus	1	
Perio-4	Host immune Defense Mechanism	2	
Perio-5 Periodontal Wound healing and Regeneration and Repair of soft and hard tissue:		3	



Perio-6	Diagnosis and Classification	1
Perio-7	Pathogenesis and diagnosis of gingival diseases (Part I)	3
Perio-8	Pathogenesis and diagnosis of periodontal diseases (Part I)	3
Perio-9	Chemotherapeutics (part I)	2
Perio-10	Systemic influence on periodontium Oral Medicine Diagnosis and management (part I)	1
Perio-11	Dental Implants (part I)	3
Perio-12	The influence of trauma, parafunctional habits, orthodontic forces etc. on the periodonium	2
Perio-13	Surgical periodontal treatment (Part I)	5
4.1	Total	31

	221 2-	
	Year 02	
ID	Title	Credit Hours
Perio-14	Oral Microbiology:	SIC
Perio-15	Oral Medicine Diagnosis and management (PartII)	2
Perio-16	Pathogenesis, diagnosis and management of gingival diseases (part II)	2
Perio-17	Pathogenesis, diagnosis and management of periodontal diseases (part II)	<u>_</u> /
Perio-18	Management of multi-rooted teeth	2
Perio-19	Risk assessment and prognosis of periodontal disease	3
Perio-20	Chemotherapeutics (part II)Host modulation therapy	1
Perio-21	Periodontal Medicine and focal infection theory	2
Perio-22	Pigmentation of gingiva and its management	1
Perio-23	Imaging and investigations	2
Perio-24	Dental Implants (part II)	3



Perio-25Surgical periodontal treatment (Part II)5				
Perio-26	Periodontal and allied	3		
Perio-26	Supportive Periodontal Therapy	3		
	Total	33		
Grand Total (Year 01 + Year 02) 64				
EXIT FINAL EXAMINATION BY UNIVERSITY				

Requirements of MSc Degree for Graduate students Enrolled in the Program

- Fulfillment of University requirements for postgraduate study.
- Four (2) years of consecutive full time advanced study and clinical training.
- Complete and approved master's thesis based on original research during the course of study in an area related to specialty, 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.
- A minimum of 60% must be earned in all work/examinations attempted in the master's program. A grade below this will require re-examination.

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



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INTRODUCTION

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INTRODUCTION

The residency program in Periodontology is a two-year course covering all aspects of Periodontology and leading to the degree of Master of Science (MSc) in Periodontology.

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 than 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.



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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 especially in remote areas in the field of periodontology.
- Dearth deficiency of competent faculty in the field.
- Deficiency of state of the art periodontology training center.

Purpose of training

The purpose of this curriculum is to guide the training of an individual to the core level of competence required for specialist and consultant. This training will produce consultant who are specialists 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 MSc in Periodontology will be of 02 years full time.



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AIMS & OBJECTIVES

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AIMS & OBJECTIVES

Aims of Training

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

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 periodontology.
- 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 periodontology.

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.
- 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 periodontology.
- Demonstrate competency in teaching methods, use of information technology, appraisal and assessment techniques and development of appropriate learning methods 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 dental team.
- Demonstrate full and clear understanding of equality and diversity legislation as it applies to the workplace and to professional practice.





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ENTRY CRITERIA

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ENTRY CRITERIA:

Eligibility to apply for MSc Periodontology

- Candidate must possess BDS or equivalent degree and one year house job from PMDC recognized Institutions.
- Permanent valid registration with PM&DC.
- Declared successful in admission entry examination specified by Shaheed Zulfiqar Ali Bhutto Medical University
- 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
- Passing certificate of admission entry examination
- Experience Certificates (if any)
- 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



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CONTENT OF LEARNING:

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CONTENT OF LEARNING:

The program outline addresses both the knowledge needed in Periodontology and allied medical specialties in its scope. A minimum of two 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 as well as advance Periodontology competently.

The top	The topics are considered as under:-				
ID	Course	Topics			
Perio-1	Introduction to Research	 1.1 Basic Epidemiology terms 1.2 Epidemiological Study Designs 1.3 Basic Biostatistics 1.4 Write a research proposal 1.5 Critical Appraisal 			
Perio-2	Anatomy, Histology, Biochemistry and Physiology of periodontium, soft tissues and peri-implant tissue	 2.1 Periodontal and peri-implant mucosa and connective tissue 2.2 Cementum and periodontal attachment apparatus 2.3 Alveolar bone and biology of mineralization 2.4 Blood supply and lymphatic system of periodontium 2.5 Periodontal and peri-implant innervation and proprioception 2.6 Gingival crevicular fluid characteristics and functions 			
Perio-3	Oral Microbiology, Plaque and calculus	 3.1 Nature, composition, physiology of plaque biofilm and its role in inflammatory periodontal disease 3.2 Periodontal Microbiology, Periodontal pathogens 3.3 Microbial Virulence: general concepts, cellular microbiology and microbial interaction, periodontal context and microbial interaction 3.4 Calculus formation, composition, structure, mineralization and clinical implications. 3.5 Microbiological methods classical and molecular approaches and relevance for periodontal methodology 3.6 Techniques to identify microorganisms, their application and utility in periodontal practice 			



		4.1 Innate elements of defense
		4.2 Innate inflammatory mediators
Perio-4	Host immune Defense	4.3 Collagen and matrix metalloproteinases
	Mechanism	4.4 Extra cellular Matrix
		5.1 Basic principle, physiology and control of wound
		healing with application to human periodontium
		5.2 Cellular and molecular changes and interaction in
	Periodontal Wound healing	normal wound healing of periodontal and peri-
	and Regeneration and	implant hard tissue.
Perio-5	Repair of soft and hard	5.3 Acquired systemic factors affecting normal
	tissue	periodontal wound healing—possible mechanisms
		and basic theory supporting appropriate intervention.
	100	5.4 GTR and agents used to enhance periodontal healing
	1 - 1-	and regeneration—biological basis
		6.1 Classification and epidemiology of periodontal
	Level Land	diseases
Perio-6	Diagnosis and Classification	6.2 Examination, Diagnosis, Treatment plan of
	441	periodontal patients
10		7.1 Gingivitis
1	Pathogenesis and diagnosis	7.2 Gingival abscess
Perio-7	of gingival diseases	7.3 Acute gingival conditions
1.5	of gingival discuses	7.4 Gingival enlargement
	100 L 2	7.5 Desquamative gingivitis
		8.1 All forms of Periodontitis
Perio-8	Pathogenesis and diagnosis	8.2 Systemic diseases associated with periodontitis
1 0110 0	of periodontal diseases	(Bidirectional relationship) 8.3 Periodontal Abscess
	+ 10	
	- 1 UZ	9.1 Local antibiotics/antiseptics
Perio-9	Chemotherapeutics	9.2 Systemic antibiotics
	Chan Internet	9.3 Host Modulation
Perio-10	Imaging and Investigations	10.1
	Deletion of Co. (11.1 Influence of Systemic Conditions
Perio-11	Relation of Systemic diseases and health of	11.2 Impact of periodontal infections on systemic
rerio-11	periodontium	health
	periodonitum	11.3 Periodontal medicine (focal infection theory)
		12.1 White lesions
		12.1 White lesions12.2 Lesions of tongue
Perio-12	Oral Medicine Diagnosis	12.1 White lesions12.2 Lesions of tongue12.3 Mucocutaneous disorders
Perio-12		 12.1 White lesions 12.2 Lesions of tongue 12.3 Mucocutaneous disorders 12.4 Oral infections
Perio-12	Oral Medicine Diagnosis	 12.1 White lesions 12.2 Lesions of tongue 12.3 Mucocutaneous disorders 12.4 Oral infections 12.5 Pigmented lesions
Perio-12	Oral Medicine Diagnosis	 12.1 White lesions 12.2 Lesions of tongue 12.3 Mucocutaneous disorders 12.4 Oral infections 12.5 Pigmented lesions 12.6 Halitosis
Perio-12	Oral Medicine Diagnosis	 12.1 White lesions 12.2 Lesions of tongue 12.3 Mucocutaneous disorders 12.4 Oral infections 12.5 Pigmented lesions 12.6 Halitosis 13.1 Science and biology of osseo-integration
	Oral Medicine Diagnosis and management	 12.1 White lesions 12.2 Lesions of tongue 12.3 Mucocutaneous disorders 12.4 Oral infections 12.5 Pigmented lesions 12.6 Halitosis 13.1 Science and biology of osseo-integration 13.2 Implant biomaterials—types characters and
Perio-12 Perio-13	Oral Medicine Diagnosis	 12.1 White lesions 12.2 Lesions of tongue 12.3 Mucocutaneous disorders 12.4 Oral infections 12.5 Pigmented lesions 12.6 Halitosis 13.1 Science and biology of osseo-integration



		13.4 Peri-implantitis and peri-implant mucositis—
		prevalence and basic concepts and rationale of
		treatment.
		13.5 Dental implants in periodontally compromised
		patients
		13.6 Implant supported restoration
		13.7 Risk Assessment of Implant patients
		13.8 Treatment planning and management of peri-
	Management of Multing stad	implant lesions
Perio-14	Management of Multirooted teeth	14.1
	Distances	15.2 Oral infections
Perio-15	Risk assessment and	UAR N
Perio-15	prognosis of periodontal diseases	
	uiseases	
	10/0	13.9 Rationale for supportive periodontal care
	11.7 / 1	13.10 Maintenance program
	Supportive periodontal	13.11 Prevention and treatment of gingivitis
Perio-16		16.1
	therapy	16.2 Risk Assessment of Implant patients
1		16.3 Treatment planning and management of peri-
		implant lesions
1.5	Periodontal and Allied	17.1 Perio-orthodontic interface
	112	17.2 Periodontal and endodontic lesion
Peri-17	-	17.3 Perio-restorative interrelationship
	- I - I	17.4 Aesthetics and periodontics
1.5		17.5 Laser and periodontal therapy
	Surgical periodontal	18.1 Infection control protocols
	treatment	18.2 Principles of periodontal surgery
	1.12	18.3 Flap techniques for pocket reduction
	12	18.4 Gingivectomy
	100	18.5 Regeneration procedures
		18.6 Root resection/hemisection
D • 10	150	18.7 Management of pigmented gingiva
Perio-18	1910	18.8 Mucogingival and plastic periodontal surgery
	1. 1.	a) Gingival augmentation
	- AI	b) Root coverage procedures
		c) Crown lengthening procedure d) Interdental papilla reconstruction
		18.9 Management of edentulous ridge
		18.9 Management of edentifious hdge 18.10 Ridge augmentation procedure
		18.10 Ridge augmentation procedure 18.11 Periodontal dressing and sutures
		10.11 renouonital diessing and sutures



	Response of periodontal	11.1	Trauma from occlusion
	tissue to external and	11.2	Adaptive capacity of periodontium to occlusal
	Occlusal Forces and	fo	rces
	Occlusal evaluation and	11.3	Pathological tooth migration
Perio-19	therapy	11.4	Pathogenesis
		11.5	Occlusal function and dysfunction
		11.6	Parafunction
		11.7	Occlusal therapy
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Periodontology Specialty Courses

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PRINCIPLES OF PATIENT MANAGEMENT

Patient assessment, examination, diagnosis & treatment planning

 History taking Examination of orofacial soft tissues Make a differential diagnosis Perform relevant diagnostic tests Attendance at Written 	Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
Interdisciplinary considerations in treatment planning	 experience in: History taking Examination of orofacial soft tissues Examination of Teeth & hard tissues Review of periodontium Examination of occlusion Various diagnostic tests & investigations Treatment plan sequencing Interdisciplinary considerations in 	 Examine the patient thoroughly Make a differential diagnosis Perform relevant diagnostic tests & carry out investigations to establish definitive diagnosis 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 	 experience Attend trainee seminars within department Attendance at suitable courses Attendance at suitable meetings 	 based assessments (CBD, DOPS) Written Examination/



Biological Basis of Periodontology

Anatomy, Biochemistry and Physiology of periodontium, soft tissues and peri-implant tissue

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Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
• To provide in depth knowledge of the anatomy, histology and physiology of the tissues of the periodontium and related structures	 The trainee should be able to: Apply knowledge of the anatomy, histology and physiology of the tissues of the oral cavity and related structures to clinical practice. 	 Basic science presentation Attend trainee seminars within department Attendance at suitable meetings Self-directed & Independent study 	 Written Examination/ VIVA





Biological Basis of Periodontology

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Classification and epidemiology of periodontal diseases

Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
 To provide in depth knowledge of classification of periodontal diseases and diagnosis Epidemiology of the periodontal diseases and relevant epidemiology indices and tools for disease assessment and diagnosis 	 The trainee should be able to apply knowledge of: Classification and epidemiology of the periodontal diseases for correct diagnosis and treatment planning. Epidemiology in critical appraisal of the literature 	 Basic science presentation Attend trainee seminars within department Attendance at suitable meetings Self-directed & Independent study Take part in outreach programmes Journal club 	Written Examination/ VIVA



Biological Basis of Periodontology

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Etiology of periodontal diseases

Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
 To provide knowledge of oral microbiology , plaque biofilm and calculus. To give in depth knowledge on relationship of local and environmental factors to periodontal health 	 The trainee should be able to apply knowledge of microbiology with emphasis on: The nature, composition and physiology of plaque biofilm and its relationship to inflammatory periodontal diseases. Techniques to identify microorganisms, their application and utility in periodontal practice. Apply knowledge of environmental risk factors for periodontal diseases and methods for their modification (including tobacco, stress, and diet) to treatment planning of the patient Apply knowledge to treatment planning ofperidontal patients with local risk factors and methods for their modification 	 Basic science presentation Attend trainee seminars within department Attendance at suitable meetings Self-directed & Independent study Take part in outreach programmes Journal club/Literature review Clinical cases for observational and personal treatment 	• Written Examination/ VIVA



Biological Basis of Periodontology

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Relationship between periodontal disease and systemic health LIIAA

Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
To provide knowledge about the influence of systemic conditions on periodontium and the effect of periodontal disease on systemic health.	 Apply knowledge of the periodontal- systemic bi-directional relationships to the diagnosis, management and maintenance of patients. 	 Basic science presentation Attend trainee seminars within department Attendance at suitable meetings Self-directed & Independent study Take part in outreach programmes Journal club/Literature review Clinical cases for observational and personal treatment 	 Written Examination/ VIVA Workplace based assessments (DOPS, Mini- CEX, MSF) OSCE



Biological Basis of Periodontology

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Gingival and Periodontal Pathology

Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
 To provide in depth knowledge of pathogenesis of disease and provide skill to diagnosis and manage gingival diseases, including chronic gingivitis, gingival abscess, necrotizing ulcerative gingivitis, and acute gingival conditions. To provide knowledge of pathogenesis of disease and provide skill to diagnosis and manage periodontal diseases, including chronic periodontitis and diseases modified by local and/or systemic factors. 	 Apply knowledge of infectious, inflammatory and immunological processes in oral diseases with emphasis on the pathogenesis of periodontal diseases. Apply knowledge of pathogenesis of disease to the diagnosis and management of gingival diseases, including chronic gingivitis, gingival abscess, necrotizing ulcerative gingivitis, and acute gingival conditions. Apply knowledge of pathogenesis of disease to the diagnosis and management of periodontal diseases, including chronic periodontitis and diseases modified by local and/or systemic factors. Apply knowledge of pathogenesis of disease to the diagnosis and management of periodontitis and diseases modified by local and/or systemic factors. 	 Basic science presentation Attend trainee seminars within department Attendance at suitable meetings Self-directed & Independent study Take part in outreach programmes Journal club/Literature review Clinical cases for observational and personal treatment 	 Written Examination/ VIVA Workplace based assessments (DOPS, Mini- CEX, MSF) OSCE







CLINICAL PERIODONTICS

Diagnosis, Prognosis and Treatment Planning

Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
 To provide in depth knowledge of history taking, examination, investigations, chair positioning, risk assessment and prognosis of periodontal diseases in clinical setup To provide in depth knowledge and skill to manage medically compromised patient suffering from periodontal diseases 	 Document relevant medical and dental history, including, periodontal charting, study casts, photographs and draft a comprehensive treatment plan (including alternatives). This should also include a fully documented record of each phase of treatment in order to subsequently present these cases for assessment, if and when required Should be able to prescribe and assess different imaging techniques and adjunct investigations for the diagnosis and management of periodontal diseases. Should be able to identify risk factors for periodontal diseases and methods for their modification. Should have knowledge about prognosis and be able to identify factors for determination of prognosis. 	 Basic science presentation Attend trainee seminars within department Attendance at suitable meetings Self-directed & Independent study Take part in outreach programmes Journal club/Literature review Clinical cases for observational and personal treatment 	 Written Examination/ VIVA Workplace based assessments (DOPS, Mini- CEX, MSF) OSCE







CLINICAL PERIODONTICS

Non-Surgical Periodontal Treatment

Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
 To provide knowledge and skill for non- surgical periodontal treatment of periodontal patients. To provide knowledge of adjunctive therapeutics used in non-surgical therapy 	 Should know all the steps of non surgical periodontal phase Should be able to educate patients on preventive techniques, tooth brushing techniques, inter-dental cleaning, and any other technique relevant to patient's needs. Should prescribe, perform, justify and evaluate non-surgical therapy, including scaling and root planing, and be proficient in the use of routine periodontal instruments (scalers, Gracey curettes, power driven scalers etc). Apply knowledge of the mechanisms, effects and interactions of medications used for the prevention and therapy of periodontal diseases, including host modulation agents, chemotherapeutics etc. 	 Basic science presentation Attend trainee seminars within department Attendance at suitable meetings Self-directed & Independent study Journal club/Literature review Clinical cases for observational and personal treatment 	 Written Examination/ VIVA Workplace based assessments (DOPS, Mini- CEX, MSF) OSCE Portfolio Long & Short case



CLINICAL PERIODONTICS

Surgical Periodontal Treatment

Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
 To provide knowledge and skill for basic principles of periodontal surgery To provide knowledge and skill for different periodontal surgical techniques for pocket management and regeneration of lost tissue 	 Prescribe and justify surgical techniques used in periodontics, their indications and contraindications, advantages and disadvantages; and be familiar with use of specialized surgical instruments. Prescribe, perform and evaluate (in a timely manner) basic surgical procedures under indirect supervision, including: a. Gingivectomy/Local excision, b. Periodontal Flap Surgery including access flaps and apically positioned flaps, with or without concomitant osseous surgery, Plan for, and carry out under direct supervision advanced periodontal surgery, including: 	 Basic science presentation Attend trainee seminars within department Attendance at suitable meetings Self-directed & Independent study Journal club/Literature review Clinical cases for observational and personal treatment 	 Written Examination/ VIVA Workplace based assessments (DOPS, Mini- CEX, MSF) OSCE Portfolio Long & Short case







PERIODONTICS AND ALLIED

Surgical Periodontal Treatment

Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
 To provide knowledge on interrelationship of periodontal health and treatment with restorative and orthodontic therapies To provide knowledge and skill to manage the periodontal and pulpal diseases effecting each other. 	 Trainee should be able to: Interpret the interrelationship of periodontitis to pulpal disease (Perioendo Lesions) and know their management. Interpret the interrelationship of restorative therapy with periodontal health (Perio-restorative interrelationship). Interpret the interrelationship of orthodontic therapy with periodontal health. 	 Basic science presentation Attend trainee seminars within department Attendance at suitable meetings Self-directed & Independent study Journal club/Literature review Clinical cases for observational and personal treatment 	 Written Examination/ VIVA Workplace based assessments (DOPS, Mini- CEX, MSF) OSCE Portfolio Long & Short case



DENTAL IMPLANTOLOGY

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Insertion of osseointegrated dental implants including bone augmentation and soft tissue management

Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
To provide in depth knowledge and skill about : • Biology, biomechanics and placement of implants.	 The trainee should have knowledge of osseointegration as well as the anatomy, biology and function of the peri-implant tissues. The trainee should be able to: Plan, perform and evaluate single tooth replacement with dental implants in non-aesthetic zone. Plan and prescribe advanced surgical placement of oral implants in all areas of the dentition, in partially edentulous patients, bone augmentation procedures including grafting, guided bone regenerative procedures in conjunction with oral implants. Apply knowledge of the various (cellular) mechanisms leading to 	 Systematic simulation laboratory exercises Workplace (clinical) experience Clinical cases for observational and personal treatment Attend trainee seminars within department & wards Attendance at suitable courses Attendance at suitable meetings Independent study 	 Workplace based assessments (DOPS, Mini- CEX, MSF) OSCE






SUPPORTIVE PERIODONTAL THERAPY

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Supportive periodontal care for Implants and Teeth

Objectives	Learning Outcomes	Teaching & Learning Methods	Assessments
To provide in depth knowledge about supportive periodontal care	 The trainee should be able to Assess health of periodontium around teeth and implants Understand the rationale of supportive periodontal care Have knowledge about specific methods of maintenance programmes. 	 Workplace (clinical) experience Clinical cases for observational and personal treatment Attend trainee seminars within department & wards Attendance at suitable meetings Independent study 	 Workplace based assessments (DOPS, Mini- CEX, MSF) OSCE





Allied specialties

Trainee will be rotating in the following department for the clear understanding of the basic concepts. Mandatory rotations for Periodontology will be as follow

- Department of Operative Dentistry 1 month
- Department of Prosthodontics 1 month
- Department of Oral & Maxillofacial surgery 1 month

*Outcomes of mandatory rotations are attached as "Annexure B"





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 MSc 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

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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

Final/Exit Examination

- Mid Term Assessment (MTA)
- (At the end of 1st year) (At the end of 2nd Year)

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.



TABLE OF SPECIFICATION

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TABLE OF SPECIFICATION

Table of specification for Mid Term Assessment (MTA) and Final (Exist) Examination is here as under:

MID TERM ASSESSMENT (MTA)

Theory Paper

Paper I	Specialty Courses	MCQs	100 Marks								
H	Vivo Voce Practical Exam										
Viva Voce	Specialty Co	ourse	50 Marks								
Practical/OSPE/Table Viva	Specialty Co	ourse	50 Marks								
1 10	Total		200 Marks								

Supervisor will not be paper setter /Examiner of his/her candidate as per PMDC regulation 2001.



FINAL EXAMINATION

1.1

/	Theory Paper		S
Paper I	Specialty Course	MCQs	100 Marks
Paper II	Specialty Course	SAQs	100 Marks
E	Viva Voce Practical and Tl	nesis Defense	2
12	Viva Voce	6	60 Marks
actical and OSCE/OSPE	5	6	140 Marks
a. Long Case (one)	(40 Marks)	1000 H	0
b. Short Case(three)c. OSCE	(30 Marks) (70 Marks)	Pe	
	Thesis Defense	*/	
3	Thesis Defense	11	100 Marks
	Total	C	500 Marks



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SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

TOS FOR MTA THEORY EXAMINATION

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TOS ID	Title	Kn	owled	lge		Skill		1	Attitu	de	%	MCQs
10510	1100	C1	C2	C3	P1	P2	P3	A1	A2	A3		
PERIO-1	Introduction to Research	-	03	-	0	4	1				03	03
PERIO-2	Anatomy, Histology, Biochemistry and Physiology of periodontium, soft tissues and peri-implant tissue	50	13	lc,	2	1	2	6			13	13
PERIO-3	Oral Microbiology, Plaque and calculus	2	9	13				1	5		13	13
PERIO-4	Host immune Defense Mechanism	3	1	10	15	7	10	1	9	$\langle \rangle$	10	10
PERIO-5	Periodontal Wound healing and Regeneration and Repair of soft and hard tissue	C	ť	07			0.00		100		06	06
PERIO-6	Diagnosis and Classification	5	1	05			0.10	1	5	P/	05	05
PERIO-7	Pathogenesis and diagnosis of gingival diseases		5	10			3	1	×	1	10	10
PERIO-8	Pathogenesis and diagnosis of periodontal diseases	- 9	E)	10			1	1	1		10	10
PERIO-9	Chemotherapeutics		<u> </u>	03	/	10	5	-	1		03	03
PERIO-10	Imaging and Investigations	1	11	02		-	/	12			02	02
PERIO-11	Relation of Systemic diseases and health of periodontium			04	2						04	04



PERIO-12	Oral Medicine Diagnosis and management		06				06	06	
PERIO-13	Dental implants	F10	06	D	1		06	06	
PERIO-18	Surgical periodontal treatment		07	1	91		07	07	
PERIO-19	PERIO-19 Response of periodontal tissue to external and Occlusal Forces and Occlusal Forces and therapy 02 02								
	TOTAL								

Note: The details of these modules titles are given below





Detail of TOS for MTA Theory Examination

TOS ID	Title	TOS Sub ID	Detail of Title	Weightage %	MCQs
		PERIO-1.1	Basic Epidemiology Terms		
		PERIO-1.2	Epidemiological study Design		
PERIO-1	Introduction to Research	PERIO-1.3	Basic Biostatics	03	03
	1	PERIO-1.4	Writing research proposal	3	
	1	PERIO-1.5	Critical appraisal		
	12	PERIO-2.1	Periodontal and peri-implant mucosa and connective tissue		
	Anatomy, Histology,	PERIO-2.2	Cementum and periodontal attachment apparatus		
	Biochemistry and	Biochemistry and hysiology of eriodontium, soft PERIO-2.3 Alveolar bone and biology of mineralization PERIO-2.4 Blood supply and lymphatic system of periodontium Ssues and peri- PERIO-2.5 Periodontal and peri implant inpervation and propriocention	12	12	
PERIO-2	periodontium, soft		Blood supply and lymphatic system of periodontium	13	13
	tissues and peri- implant tissue		Periodontal and peri-implant innervation and proprioception		
		PERIO-2.6	Gingival crevicular fluid and characteristics and functions	/	
		PERIO-3.1	Nature, composition, physiology of plaque biofilm and its role in inflammatory periodontal disease		
	Oral	PERIO-3.2	Periodontal Microiology, Periodontal pathogens		
PERIO-3	Oral Microbiology, Plaque and calculus	PERIO-3.3	Microbial Virulence: general concepts, cellular microbiology and microbial interaction, periodontal context and microbial interaction	13	13
		PERIO-3.4	Calculus formation, composition, structure, mineralization and clinical implications.		



TOS ID	Title	TOS Sub ID	Detail of Title	Weightage %	MCQs
		PERIO-4.1	Innate elements of defense		
	Host immune	PERIO-4.2	Innate inflammatory mediators		
PERIO-4	Defence	PERIO-4.3	Adaptive immune response	10	10
	Mechanism	PERIO-4.4	Collagen and matrix metalloproteinases		
		PERIO-4.5	Extra cellular Matrix	0	
	1	PERIO-5.1	Basic principle, physiology and control of wound healing with application to human periodontium		
	Periodontal Wound healing	PERIO-5.2	Cellular and molecular changes and interaction in normal wound healing of periodontal and peri-implant hard tissue.	1	
PERIO-5	and Regeneration and Repair of soft and hard tissue	and Repair of soft PERIO-5.3 wound healing—poss	Acquired systemic factors affecting normal periodontal wound healing—possible mechanisms and basic theory supporting appropriate intervention.	06	06
	0	PERIO-5.4 GTR and agents used to enhance periodontal healing and regeneration—biological basis			
	Diagnosis and	PERIO-6.1	Classification and epidemiology of periodontal diseases	1	
PERIO-6	Classification	PERIO-6.2	Examination, Diagnosis, Treatment plan of periodontal patients:	05	05
)	PERIO-7.1	Pathogenesis, clinical features, diagnosis and management of Gingivitis		
PERIO-7	Gingival diseases	PERIO-7.2	Pathogenesis, clinical features and diagnosis of Gingival abscess	10	10
			Pathogenesis, clinical features, diagnosis and management of Gingival enlargement		
PERIO-8	Periodontal	PERIO-8.1	Pathogenesis, clinical features, diagnosis and management of All forms of Periodontitis	10	10
PERIO-8	diseases	PERIO-8.2	Systemic diseases associated with periodontitis (Bidirectional relationship)	10	IU



TOS ID	Title	TOS Sub ID	Detail of Title	Weightage %	MCQs
		PERIO-8.3	Pathogenesis, clinical features, diagnosis and management of Periodontal Abscess		
		PERIO-9.1	Local antibiotics/antiseptics		
PERIO-9	RIO-9 Chemotherapeutics PERIO-9.2 Systemic antibiotics		03	03	
Perio-10	Imaging and investigations	PERIO-10.1	Service	02	02
	Relation of	PERIO-11.1	Influence of Systemic Conditions	3	
Perio-11	Systemic diseases	PERIO-11.2	Impact of periodontal infections on systemic health	04	04
	and health of periodontium PERIO-11.2 Impact of periodontal infections on systemic health PERIO11.3 Periodontal medicine (focal infection theory)			1	
	Oral Medicine	PERIO-12.1	White lesions		
Perio-12	Diagnosis and	PERIO-12.2	Lesions of tongue	06	06
	management				
	0	PERIO-13.1	Science and biology of osseo-integration		
	1	PERIO-13.2	Implant biomaterials—types characters and supporting material science	1	
Perio-13	Dental Implants	PERIO-13.3	Various cellular mechanisms leading to boneloss around oral implants (peri-implantitis)	06	06
		PERIO-13.4	Peri-implantitis and peri-implant mucositis—prevalence and basic concepts.		
		PERIO-18.1	Infection control protocols		
Deria 10	Surgical Periodontal	PERIO18.2	Principles of periodontal surgery	07	07
Perio-18	Treatment	PERIO18.3	Flap techniques	07	07
		PERIO18.4	Gingivectomy		



TOS ID	Title	TOS Sub ID	Detail of Title	Weightage %	MCQs
	Response of periodontal tissue	PERIO19.1	Trauma from occlusion		
Perio-19	to external and Occlusal Forces	PERIO-19.2	Adaptive capacity of periodontium to occlusal forces	02	02
Peno-19	and Occlusal evaluation and therapy	PERIO-19.3	Pathological tooth migration	02	02

TOS FOR MTA PRACTICAL EXAMINATION

10 OSCE-Stations (100 Marks)

2

(5 minutes each station)

100

TOS ID	Title	Stations
PERIO-06	Diagnosis and Classification	3/ +1
PERIO-07	Pathogenesis and diagnosis of gingival diseases	1
PERIO-08	Pathogenesis and diagnosis of periodontal diseases	1
PERIO-18	Surgical Periodontal Treatment	2
	Total	10



TOS for Final/Exit Examination MSc (Periodontology)

Final Examination (After completion of 2 years)

The student shall submit completion of training certificate, Log Book, mandatory workshop attendance, thesis on research topic approved by supervisor, through the Dean to the Controller of Examination. If the thesis not approved by the supervisor, application for extension may be recommended by supervisor through Registrar to the AS&RB. The final examination of major subject, thesis evaluation and viva voce examination will be conducted by board examiners in major subjects. The candidate will be examined in major subject and thesis as under: supervisor will not be paper setter /Examiner of his/her candidate as per PMDC regulation 2001.

Paper I Paper II	Speciality Course MCQs Speciality Course SAQs	100 Marks 100 Marks	
Viva Voce & Prac			200 Mar
Viva Voce		40	Marks
Practical and	OSCE/OSPE	140) Marks
a. L	ong Case (One)	(40 Marks)	
	Short Case (Three)	(30 Marks)	
	DSCE	(70 Marks)	
Thesis Defence	ZA S		100 Mar
TOTAL		50	0 Marks



TOS for Theory Paper A & B Final Exit Examination

					SEQs/		
TOS ID	Titles	Knowledge (C3)	Skill	Attitude	Total %	MCQs	SAQs
PERIO-3	Oral Microbiology	05		1	2.5	05	0
PERIO-7	Pathogenesis, diagnosis and management of gingival diseases	13		10	11	12	01
PERIO-8	Pathogenesis, diagnosis and management of periodontal diseases	16			12.5	15	01
PERIO-9	Chemotherapeutics	03	2	21	1	02	01
PERIO-11	Relation of Systemic diseases and health of periodontium	06		150	7.5	05	01
PERIO-12	Oral Medicine Diagnosis and management	06		2	3	06	0
PERIO-13	Dental Implants	17		3	17.5	15	02
PERIO-14	Management of Multirooted teeth	04		12	6.5	03	01
PERIO-15	Risk assessment and prognosis of periodontal diseases	03		15	1.5	03	0
PERIO-16	Supportive periodontal therapy	02	1	S	1	02	0
PERIO-17	Periodontal and Allied	08	E	5	8.5	07	01
PERIO-18	Surgical periodontal treatment	25			12.5	23	02



			Weig	htage			SEQs/	
TOS ID	Titles	Knowledge (C3)	Skill	Attitude	Total %	MCQs	SAQs	
PERIO-19	Response of periodontal tissue to external and Occlusal Forces and Occlusal evaluation and therapy	02	9,	1	1	02	0	
	TOTAL				100	100	10	

The details of these Titles are given below





Detail of TOS for Theory Paper A & B Final Exit Examination

TOS ID	Titles	TOS Sub ID	Detail of Titles	Weightage %	MCQs	SEQs/ SAQs
PERIO-3	Oral	Perio-3.5	Microbiological methods classical and molecular approaches and relevance for periodontal methodology	- 10	10	01
PERIO-5	Microbiology	Perio-3.6	Techniques to identify microorganisms, their application and utility in periodontal practice	10	10	01
		Perio-7.3	Pathogenesis, clinical features, diagnosis and management of Acute gingival conditions			
PERIO-7	Gingival diseases	Perio-7.4	Pathogenesis, clinical features, diagnosis and management of Gingival enlargement	10	10	04
	Perior 7.5 Pathogenesis, clinical features, diagnosis and management of		Pathogenesis, clinical features, diagnosis and management of Desquamative gingivitis			
		Perio-8.1	Pathogenesis, clinical features, diagnosis and management of all forms of Periodontitis			
PERIO-8			Systemic diseases associated with periodontitis (Bidirectional relationship)	10	10	01
		Perio-8.3	Pathogenesis, clinical features, diagnosis and management of Periodontal Abscess			
PERIO-9	Chemotherapeu tics	Perio-9.3	Host Modulation therapy	05	05	01
PERIO-11	Relation of Systemic diseases and health of periodontium	Perio-11.3	Periodontal medicine focal infection theory)	20	20	04
	Oral Medicine	Perio-12.3	Mucocutaneous disorders			
PERIO-12	Diagnosis and	Perio-12.4	Oral infections	15	15	03
	management	Perio-12.6	Halitosis			
PERIO-13	Dental Implants	Perio-13.4	Peri-implantitis and peri-implant mucositis—prevalence, basic concepts and rationale of treatment	10	10	02



TOS ID	Titles	TOS Sub ID	Detail of Titles	Weightage %	MCQs	SEQs/ SAQs
		Perio-13.5	Dental implants in periodontally compromised patients			
		Perio-13.6	Implant supported restoration			
		Perio-13.7	Risk Assessment of Implant patients			
		Perio-13.8	Treatment planning and management of peri-implant lesions			
PERIO-14	Management of Multirooted teeth	Perio-8.1	Service	10	10	02
	Risk assessment	Perio-15.1		0		
PERIO-15	and prognosis of periodontal diseases	Perio-15.2	Oral infections	05	05	01
		Perio-16.1	Rationale for supportive periodontal care	2.1		
	Supportive	Perio-16.2	Maintenance program			
PERIO-16	periodontal	Perio-16.3	Prevention and treatment of gingivitis	05	05	01
	therapy	Perio-16.4				
		Perio-16.5	Risk Assessment of Implant patients			
PERIO-17	Periodontal and	Perio-17.1	Perio-orthodontic interface			
	Allied	Perio-17.2	Periodontal and endodontic lesion	1		
		Perio-17.3	Perio-restorative interrelationship			
		Perio-17.4	Aesthetics and periodontics			
		Perio-17.5	Laser and periodontal therapy	/		
PERIO-18	Surgical	Perio-18.5	Regeneration procedures			
	periodontal	Perio-18.6	Root resection/ hemisection			
	treatment	Perio-18.7	Management of pigmented gingiva			
		Perio-18.8	Mucogingival and plastic periodontal surgery			
			a) Gingival augmentation			
			b) Root coverage procedures			
			c) Crown lengthening procedure			
		Dorio 19.0	d) Interdental papilla reconstruction			
		Perio-18.9	Management of edentulous ridge			



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TOS ID	Titles	TOS Sub ID	Detail of Titles	Weightage %	MCQs	SEQs/ SAQs
		Perio-18.10	Ridge augmentation procedure			
		Perio-18.11	Periodontal dressing and sutures			
PERIO-19	Response of periodontal tissue	Perio-19.5	Occlusal function and dysfunction			
	to external and Occlusal Forces and Occlusal	Perio-19.6	Parafunction			
	evaluation and therapy	Perio-19.7	Occlusal therapy	1		

TOS for Practical/Viva Voce Final Exit Examination ÷

2

1.10

10 OSCE-Stations (70 Marks)

(5 minutes each station) .

TOS ID	Title	Stations
PERIO-1	Principles of oral & maxillofacial surgery	01
PERIO-2	Minor oral surgery	02
PERIO-3	Maxillofacial infections	01
PERIO-4	Dental & Maxillofacial Implantology	01
PERIO-5	Maxillofacial trauma	02
PERIO-6	Maxillofacial pathology & Reconstruction	01
PERIO-7	Oro-facial pain & Temporomandibular joint disorders	01
PERIO-8	Facial deformity & Orthogenetic surgery	01
PERIO-9	Facial aesthetic surgery	UI UI
	TOTAL	10







LEARNING RESOURCES

List of Essential Readings

Books:

Latest edition of the all of the following books

- 1) Carranza's Clinical Periodontology
- 2) Clinical Periodontology and Implant Dentistry
- 3) Complications in Oral Implantology Carl E.Misch, Resnick
- 4) Contemporary Implant Dentistry -Carl E. Misch
- 5) Periodontal Surgery: A Clinical Atlas

Journals:

Issues of last two years of the following journals

INTERNATIONAL JOURNALS:

- 6) Journal Of Clinical Periodontology
- 7) Journal of Periodontology
- 8) International Journal Of Implant Dentistry

OICAL

9) Dental Update

LOCAL JOURNAL:

1) Pakistan Oral and Dental Journal







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 A"

ICAL





ANNEXURE A

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

Provides on-going positive and negative feedback	E	G	S	N	U	ø
Makes expectations known	E	G	S	N	U	ø
Is tactful and considerate	E	G	S	N	U	ø
Promotes teamwork and good working relationships	E	G	S	N	U	ø
Recognizes and addresses concerns in a timely manner	E	G	s	N	U	ø
Delegates authority appropriately	E	G	S	N	U	ø
Provides training of new employees	E	G	S	N	U	ø



E	G	S	Ν	U	Ø
Е	G	S	Ν	U	ø
	E	E G E G	E G S E G S	E G S N E G S N	E G S N U E G S N U

Comments:



Develops Innovative Procedures

Is receptive to new ideas	0 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:	000		1	1	*/	
CAL	UN	VE	4	/		

III. Maintain Positive Works Enivrement

Recognizes contributions	Ε	G	S	N	U	Ø
Motivates workers	E	G	S	N	U	Ø



Provides relaxed yet efficient work atmosphere	Ε	G	S	Ν	U	Ø
Encourages staff development	E	G	S	Ν	U	Ø

Comments: _____

1



Knows the Operations of the Department

The second second

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	5	G	S	N	8	ø
Comments:	B		40.0	1	*/	
4	5		1	2	1	
S Die	9	1	S		/	
CAL	INT	18	\mathcal{V}	/		

Work Habits

Acknowledges own limitations and mistakes	Ε	G	S	Ν	U	Ø
Maintains a positive work attitude	E	G	S	Ν	U	Ø
Uses time efficiently and effectively	E	G	S	Ν	U	Ø



Demonstrates a good work ethic	E	G	S	N	U	Ø

Comments:

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





Program Evaluation Form

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

RAL/

- **SA** = strongly agree
- $\mathbf{A} = agree$
- \mathbf{N} = neither agree/disagree
- **D** = disagree
- **SD** = strongly disagree

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