



# Gandhara University Peshawar

Post Graduate Dental Sciences Sardar Begum Dental College

**PROSPECTUS**  
**2021-22**





*We are searching  
for the next generation of visionaries  
the brightest and the best,  
if it is you,  
come forward and take over*



# PESHAWAR

Peshawar is one of the  
Pakistan's Oldest Cities  
- Representing  
Gandhara Civilization.

*“ Small enough to be friendly  
&  
Large enough to accommodate its inhabitants. ”*



Peshawar is one of the oldest cities in Asia and is the capital of Khyber Pakhtunkhwa with Pashto being spoken in and around the city. So, if you happen to visit, you might have quite an edge in communication if you know Pashto. The name Peshawar has been derived from the Sanskrit word meaning “City of Men”.



Gandhara is noted for the distinctive Gandhara style of Buddhist art, which developed out of a merger of Greek, Syrian, Persian, and Indian artistic influence. This development began during the Parthian Period (50 BC – AD 75). Gandharan style flourished and achieved its peak during the Kushan period, from the 1st to the 5th century. It declined and suffered destruction after invasion of the White Huns in the 5th century. Stucco as well as stone was widely used by sculptors in Gandhara for the decoration of monastic and cult buildings. Stucco provided the artist with a medium of great plasticity, enabling a high degree of expressiveness to be given to the sculpture. Sculpting in stucco was popular wherever Buddhism spread from Gandhara – India, Afghanistan, Central Asia and China.

Gandhara University links old civilization with the modern one through dissemination of knowledge and values to improve living standard of humanity.



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## Vision

To become nationally recognized educational institution that contributes towards the development of the society and the nation through its conducive environment and excellence in education and research.

## Mission

Gandhara University aspires to be a centre of excellence in healthcare sciences and provide our students with education of highest quality, to groom their personality and inculcate in them a sense of responsibility, confidence commitment and dedication towards their profession, society and the country. Gandhara University aims to strengthen government's efforts in providing and creating equal opportunities of education and establishing educational standards compatible and competitive with the best, both at national and international level. It aims to reinforce struggle for self-reliance through increasing expertise in science, and technology.





## About the University

The Province of Khyber Pakhtunkwa has limited resources since partition. Its educational institutes were largely dependent on the lone government universities like, the University of Peshawar and Gomal University. The Government invited the private sector to come forth and develop health and educational facilities in the province.

It was then that with foresight and great hard work, the Late Professor Dr. Muhammad Kabir established the Gandhara University.

The University gets its name from this illustrious civilization, which was among the first of its kind, and great in its influence.

Gandhara University, Peshawar was granted its charter by the then Govt. of NWFP under "NWFP Ordinance No.LIV of 2002" Vide Notification No.Legis:1(11) 97 dated 23rd Nov: 2002.

Since then, Gandhara University achieved multiple milestones in its academic achievements including establishment of postgraduation in different department, emergence of new institutions and up gradation in standards of health care facilities.

The graduates and postgraduates of Gandhara University are working in different National & International Universities as students and faculty.





## ABOUT PROFESSOR SURGEON MUHAMMAD KABIR (Founder of Gandhara University Peshawar)

Professor surgeon Muhammad Kabir was born on 7th December, 1935. He belonged to the Awan tribe, originating from Arabs. He got his primary education at Abbottabad, DI Khan, and Bannu. For his secondary education, he joined Islamia College Peshawar, following which he continued his academic pursuit at Dow Medical College, university of Karachi. During his house job, he developed passion for surgery and pursued his career by qualifying FRCS from Royal College of Glasgow and Royal college of Edinburgh in 1966.

After his specialization, he returned to his homeland and started his career as assistant professor of surgery at Khyber Medical College, Peshawar. In 1971, at the age of 36, he was promoted to the post of associate professor and by the age of 40, he got promoted to the post of professor. He remained the head of surgery and orthopedic department till his retirement (1995).

During his career, Professor Muhammad Kabir served as administrator of Khyber Teaching Hospital and Lady Reading Hospital. He also remained the principal of Khyber Medical College (1981-1983). During 1991-1992, he worked as secretary health, government of Khyber Pakhtunkhwa.

He was the pioneer in establishing a center for laparoscopic surgery at Khyber teaching hospital. He had a versatile personality and apart from being a good teacher, surgeon, and administrator, he was the writer of 24 research papers. Professor Kabir was an inventor of Kabir's cholecystectomy forcep, Kabir's circumcision forcep, Kabir's kidney incision, and Kabir's 2.5 cm incision for open cholecystectomy. In short, he was educationist, surgeon, administrator, philanthropist, researcher, inventor and a visionary personality of setting new trends and standards. Following his retirement in December 1995, he took a revolutionary step to establish a medical and dental college, branching into other institutions, and eventually leading to the foundation of Gandhara University. Gandhara University is an undeniable testimony to the vision, dedication, and transcendence of Professor Muhammad Kabir. In fact, this is his best gift to the nation.

Professor Muhammad Kabir was an icon of inspiration and excellence in medical profession. He was a practicing surgeon and worked tirelessly for providing stable foundations to this institution. During his fight against ignorance and sufferings of humanity, this beam of light faded away at the age of 68 after suffering a heart attack.

May Allah rest his soul in Paradise. Amen

## MESSAGE FROM CHANCELLOR

The past 15 years brought great changes and challenges for Kabir Medical College and Sardar Begum Dental College. I can say with great pride that both colleges have been delivering medical and dental education at par with the best at national and international levels.

The institution also aims to develop a wholesome and broad based personality of its students and inculcate in them a sense of moral and social responsibility.

It is a matter of immense pride and pleasure for me to see that the Sardar Begum Dental College and its staff have progressed to the era of Post Graduate Dental Education in Clinical Basic Dental Sciences.

Sardar Begum Dental College has a well planned and advanced Under Graduate Dental Program and extensively developed Oral Health Care Facilities. Both of those provide a strong foundation for Post Graduate Dental Education in the province and the country. The University aims to build upon it and provide its students with an educational environment of the highest quality.

It is sincerely hoped that under the umbrella of Gandhara University we will see a continuous quantitative and qualitative improvement in human resource in the health care sector of the province, which will eventually lead to a better health care society.

I take this opportunity to congratulate the candidates for succeeding in getting admission in the Post Graduate Programs being offered and wish them every success in their careers.



### Prof Dr. Ejaz Hassan Khan

MBBS, M.Phil, FCPS, FRCP (Edin),  
PhD, FCPP.

## MESSAGES FROM VICE CHANCELLOR

We at Gandhara University are committed to provide the best environment for learning and training in medicine and dentistry at both undergraduate and postgraduate levels. Our constituent colleges are recognized for training at post graduate level by the Pakistan Medical Commission (PMC), College of Physicians and Surgeons Pakistan (CPSP), and Higher Education Commission (HEC).

We aim at producing the best healthcare providers through quality Medical and Dental Education, despite the uncertainties and difficulty created by the Covid 19 in the past two years. We have an excellent infrastructure and highly qualified faculty fulfilling the standards and criteria as laid down by the PMC for imparting training to the postgraduate medical doctors.

Our MDS, MPH, M.Phil, and MSc Programs are reputable programs enjoying national and international recognition, and CPSP recognizes us for imparting FCPS training to medical and dental postgrads.

I pray to Almighty Allah that Gandhara University fulfill the vision of its founder Professor Dr Muhammad Kabir, a worthy teacher and a most humane medical expert, to be a source of creating the best doctors from this relatively backward province of Pakistan, the Khyber Pukhtunkhwa, to serve its ailing population. I pray for the success of all the stakeholders of Gandhara University. Ameen



**Prof Dr. Jawad Ahmad Kundi**

BDS, DHPM, MCPS, FCPS,

## MESSAGE FROM THE DEAN POST GRADUATE DENTAL SCIENCES

Over a period of a quarter of a century, Gandhara University has grown as an Institute & its constituent college, the Sardar Begum Dental College shines among the brightest stars in the field. We have been offering Postgraduation in the field of Dentistry for more than a decade now & our Postgraduate Students today work as faculty in many renowned dental colleges of not only Khyber Pakhtunkhwa but also Punjab, Sindh & other parts of Pakistan as well as internationally.

We pride ourselves on inculcating a strong work-ethic, social responsibility & an attitude towards life-long learning in our students. Human conscience is an under-rated attribute among us humans, yet a highly valued characteristic in the eye of the Creator. To develop this Conscience, one needs to be self-aware, well-read in worldly sciences, religion & literature and practice a responsible way of life; morally, ethically, professionally, environmentally & socially. We pride ourselves on having a culture of inculcating such attributes in our students both at Undergraduate and Postgraduate levels.

We look forward to welcoming you on campus & hope for a mutually beneficial learning experiences. May Allah give barakah in your future endeavors. Ameen



## Fee and Subscriptions

1st Year MDS, M.Phil & M.Sc Programme	
Description	Amount (Rupees)
Tuition Fee (Per Annum)	Rs. 4,50,000/-
Admission Fee (Onetime)	20,000/-
University Registration Fee (Onetime)	6000/-
WH Tax @ 5% (For non-Filer)	23,800/-
<b>Total</b>	<b>4,99,800/-</b>

**Note:** Tuition fee and subscription are subject to increase with respect to inflation rate.

# COURSES OFFERED

## MDS Courses of Four Years Duration

- MDS Oral & Maxillofacial Surgery
- MDS Prosthodontics
- MDS Orthodontics
- MDS Operative Dentistry

## M.Phil Courses of Two Years Duration

- M.Phil Sciences of Dental Materials
- M.Phil Oral Biology
- M.Phil Oral Pathology

## M.Sc Courses of Two Years Duration

- M.Sc Operative Dentistry
- M.Sc Periodontology



# RULES & REGULATIONS

## A. Admission

1. The admission for postgraduate candidates shall be carried out under the supervision of the admission committee for Postgraduate Dental Sciences, Gandhara University.
2. Candidates seeking admission shall be required to have
  - a. Duly filled admission form. (full filling all the requirements given in admission form)
  - b. BDS degree from an institute recognized by PMC
  - c. One year house job certificate from an institution recognized by PMC
  - d. Valid PMC registration
  - e. Appearance in Entry Test
  - f. Appearance in Interview
3. Admission shall be made on the basis of following weightage.

a.	Academic record	20%
b.	Competitive test	60%
c.	Interview	20%
4. Each resident shall be required to pay tuition fee and other dues as determined by the University from time to time

## B. Courses

1. The eligibility for the postgraduate degree examination shall comprise course work and approved Thesis.
- 2.. Each resident shall follow the curriculum of studies as prescribed by the University. The curriculum of studies can be modified from time to time by the Academic Council with the approval of BASR, Gandhara University.
3. The registered resident has to complete at least 75% attendance in his/her course work each year and shall actively participate in the conferences, seminars, journals clubs, presentations, grand rounds and CPCs etc. The resident has to attend and participate in all mandatory workshops during the training.
4. Only 15 days causal leave per year shall be permitted to the resident during the training.
5. With the permission of competent authorities of university, the resident who discontinue training for valid reasons like health, family problems or other reason can rejoin the program, but the duration of discontinuity of the training shall not exceed one calendar year.
6. The candidate shall be bound to report to his/her supervisor in writing about any leave or discontinuation of his training. The candidate will report in writing upon rejoining the program.
7. The discontinuation/freeze from studies can be availed only once during the whole degree program.
8. The period of discontinuity/freeze of study will not be counted towards the completion of the training requirement. It means that the candidate will spend extra time in the respective department to compensate for that discontinuation period.

## C. Examination

1. Examinations of the postgraduate programs shall be held twice a year. The interval between two examinations shall not be less than 5 months and not more than 7 months.
2. The MDS residents have to complete a minimum of four years of training and M.Sc/M.Phil residents have to complete a minimum of two years training in respective specialities for the eligibility to appear in the final examination, provided they fulfil other requirements as described in eligibility criteria for examination.
3. The MDS resident shall make him/herself eligible for the exit examination within Seven years of admission and MSc/M.Phil resident within three years of admission. in case he/she fails to qualify for exit examination in the above mentioned period, the case will be decided by the competent authority of the university under prevailing rules of PMC and HEC.
4. The final examination shall have the following components.
  - a. Paper-A of 100 marks and shall consist 10 SEQs of the respective syllabi of the speciality.
  - b. Paper-B of 100 marks and shall consist 10 SEQs of the respective syllabi of the speciality.
  - c. Practical of 300 marks for MDS and 200 marks for M.Sc/M.Phil  
Structured viva, short cases, long case, OSCE / TOACS for clinical dental sciences  
Structured viva for M.Phil residents
  - d. Thesis Approval for MDS and MSc residents and Thesis Defense for M.Phil residents.
5. The candidate shall obtain minimum of 60% marks in both the papers and 60% marks in practical to pass the examination.
6. The candidates who have failed in written examination shall not be eligible to sit in practical examination.
7. The candidates, who have passed in written examination but failed in Practical examination, shall reappear only in practical examination.
8. The maximum number of attempts to re-appear in practical examination shall be three availed chances, after which the candidate shall have to appear in written examination again.
9. A candidate whose thesis has been accepted and approved, but who is declared failed in the examination, shall be permitted to reappear in the subsequent examination without writing new thesis.
10. M.Phil residents shall defend their thesis on the date notified by the University. MDS and M.Sc. residents require only approval of thesis from the respective University Boards/Committee and external reviewers.
11. Candidates found to steal the research work of other scholars any where in the world, will be debarred from the training programs immediately and his degree will be cancelled once found guilty of such an action after acquiring the degree.
12. Minimum attendance required to sit in the exit examination is 75% of total course tenure.

## D. Rules for submission of Synopsis & Thesis

### Synopsis:

1. The candidate shall write synopsis for the Research Project relevant to their specialty as per guidelines provided by the Gandhara University, and shall submit it before the end of first 12 months of the course.
2. The detailed guidelines for synopsis are available at the website of Gandhara University.
3. The synopsis shall be formally submitted through supervisor and Dean Postgraduate Dental Sciences to the Ethical Review Committee. The candidates are required to attach the plagiarism certificate with his/her synopsis. After approval by the Ethical Review Committee, the synopsis shall be submitted to the Board of Advance Studies and Research (BASR), Gandhara University for approval. The Candidate shall present his/her synopsis in power point to the BASR in the presence of his/her supervisor.

### Synopsis Submission Protocol

Step I	Submission of synopsis to Ethical Review Committee duly signed by the supervisor
Step II	Approval by the Ethical Review Committee
Step III	Scanning by turnitin for plagiarism
Step IV	Submission to the BASR for approval

### E. Thesis

The resident shall start research and thesis writing after the approval of synopsis by the BASR.

### Submission of Thesis

- I. The Resident shall submit thesis duly approved by the concerned supervisor to the Deans's office at least six months before the exit examination.
- II. Plagiarism clearing certificate issued by the Director Research Gandhara University Peshawar must be attached with the thesis.
- III. Certificate from the Ethical Committee (obtained at the stage of synopsis approval) must also be attached with the thesis.
- IV. Five copies of Thesis shall be printed on A4 size paper and be submitted in ring binding form along with soft copy for approval.
- V. After approval, five hard copies will be submitted in the office of the dean postgraduate dental sciences with golden lettering on the Title page and the spine in accordance with the specification of the Gandhara University.

## Thesis submission and approval Protocol

Step I	Submission of Thesis with the Dean at least 6 months before exit examination
Step II	a) Sending Thesis to three External Reviewers in case of MDS and M.Sc degree b) Thesis defense in case of M.Phil Degree
Step III	Thesis approval certificate by the Chairman BASR

## Residents Discipline

1. All the trainees shall abide by the rules, regulations and statutes of the University and shall follow all directives issued from time to time.
2. No trainee shall take part in political activities or any forum/union/association to become a member within the University or outside. However, they can be members of academic associations for academic purposes only.
3. No trainee by any communication shall approach the press in his own name or through an association.
4. Violation of these rules shall entail rustication/expulsion under the provisions of the University Ordinance.
5. Trainee shall not be allowed to enroll in two training programs of the university or CPSP/other DAI in the same or different specialties at the same time and to take examination of both institutions.
6. The trainee must ensure that the training activities are documented in logbook on regular basis and be verified by the supervisor.

## Structure of MDS programs

All the MDS programs are structured in three parts:

### Part - I

Part-1 is structured for the 1st and 2nd calendar year. The resident shall undertake training in their respective clinical disciplines along with learning in research Methodology & Biostatistics, Medical Ethics Synopsis and Thesis writing workshops.

The candidate shall submit the synopsis of his /her research project approved by the concerned supervisor to the Dean, Postgraduate Dental Sciences before the end of 1st year of training.

At the end of 2nd year of training, the resident shall appear in the Mid Term Assessment examination provided he/she fulfills the eligibility criteria for this examination.

## Mid Term Assessment (MTA)

All candidates admitted in MDS degree courses shall appear in MID Term Assessment at the end of 2nd year of training. The University shall appoint external examiners from other institutions and notify the date of the examination. MTA examinations shall be held twice year.

The examination shall have the following components:

- I. Paper-A of 100 marks and shall consist 100 MCQs of the concerned specialty and applied basic medical and dental sciences.
- ii. Paper-B of 100 marks and shall consists 10SEQs of the concerned specialty.
- III. Practical (4 short cases & one long case/OSCE or TOAC/viva)
  - a. To be declared successful in MID term Assessment (MTA) the candidate must secure 60% marks in each paper as well as 60% in each component of practical.
  - b. Passing the MTA examination is mandatory requirement for the MDS residents to appear in the final examination at the end of the training.
  - c. The candidates, who have passed in written examination but failed in Practical examination of MTA, shall reappear only in practical examination.
  - d. The candidates, who have passed in written examination but failed in Practical examination of MTA, shall reappear only in practical examination.
  - e. The maximum number of attempts to re-appear in practical examination shall be three (availed or un availed), after which candidates shall have to re-appear in both written and practical as whole.

## Eligibility criteria to appear in MTA Examination

### The candidate must submit:

- I Recommendation of the supervisor that the candidate has more than 75% attendance in the first two years clinical training and has participated in the presentations, seminars, journal clubs, and grand rounds.
- II. Logbook duly signed by the supervisor for part-1 training.
- III. Certificate of submission of accepted synopsis.
- IV. Examination fee as prescribed by the University.

### Part - II

Part-II is structured for the training of year 3 and year 4. The resident shall undergo training to achieve educational objectives of the specialty concerned through cognitive and competencies through clinical work along with training in the related specialities as mentioned in the table of rotations.

### Part - III

The resident shall write and complete his/her Thesis based on research work during the training and shall submit it with the recommendation in the table of rotations.

## Mandatory Workshops

All Postgraduates residents shall attend the following workshops during his training.

- Biostatistics & Research Methodology
- Synopsis & Thesis Writing
- Communication Skills
- Basic Life Support Skills
- Basic Life Support (BLS)
- Medical Ethics.

# GENERAL COURSE OUTLINE

## MDS PROGRAMME IN ORAL & MAXILLOFACIAL SURGERY

### 4 years Program

#### COURSE TITLE

Health Status Evaluation  
Prevention and Management of Medical Emergencies  
Wound Repair  
Basic Concepts of Surgery  
Principles of Asepsis  
Armamentarium  
Principles of Complicated & Uncomplicated Exodontia  
Post Operative Patient Management  
Prevention and Management of Surgical Complications  
Medico legal Considerations  
Principles of Management  
Prevention of Odontogenic Infections  
Complex Odontogenic Infections  
Management of the Radiotherapy or Chemotherapy Patients  
Odontogenic Infections of the Maxillary Sinus  
Diseases of the Salivary Glands  
Basic Pre-prosthetic Surgery  
Advanced Pre-prosthetic Surgery  
Dental Implants  
Principles of Differential Diagnosis of Oral Lesions  
Surgical Management of Oral Lesions  
Emergencies  
Soft Tissues and Dental Injuries  
Management of Facial fractures  
Correction of Dentofacial Deformities  
Management of Patients with Orofacial Clefts  
Surgical Reconstruction of Jaw Defects  
Facial Neuropathology  
Management of Temporo mandibular Joint Disorders  
Basic Concepts of Pain Control and Analgesia  
Sedation  
Local Anaesthesia  
General Anaesthesia  
Management of Hospitalized patients

#### Alumnus of Oral & Maxillofacial Surgery



#### SAHD RASHID

I dr sahd rashid belong to the pioneer batch of post graduation program (2011-2015) in the department of oral and maxillofacial surgery ,SBDC.my experience as a post graduate resident was great . During my training program,I performed number of different types of surgical cases including ,maxillofacial trauma, oncology, aesthetic surgical procedures and minor oral surgical procedures.I would certainly like to thank my supervisor for enlightened me in all aspects resulting in making me positively different in my professional life.currently I am working as a SENIOR REGISTRAR in the department of oral and maxillofacial surgery at REHMAN COLLAGE OF DENTISTRY .I am very much obliged to my parent institute and my best wishes for their success are always with them.

# GENERAL COURSE OUTLINE

## MDS PROGRAMME IN ORTHODONTICS

### 4 years Program

The Syllabus for MDS in Orthodontics is framed with the purpose of making the student competent in the art and science of Orthodontics. The course will endeavor to encourage the quest for knowledge, which will bring the student up to a good level of specialty practice and teaching and also to open doors for acquiring further knowledge and expertise throughout life.

### Core Curriculum

1. Anatomy of the head and neck.
2. Physiology of the Stomatognathic System, Neuromuscular Physiology, Myology and Osteology.
3. Genetics, Embryology and Histology.
4. Anthropology as related to dental evolution.
5. Physiology of Mastication and deglutition.
6. Growth and development, pre-natal, post-natal, child and adult.
7. Oral Pathology
8. Cephalometry
9. Orthodontic Diagnostic Procedures and Aids.
10. Physiology of Occlusion.
11. Classification of Malocclusion
12. Etiology of Malocclusion.
13. Temporomandibular Joint pathology, dysfunction and myofascial pain dysfunction syndrome.
14. Biomechanics and Applied Chemistry of orthodontic materials.
15. Biology of Tooth Movement.
16. Development and Principles of Orthodontic Appliances e.g. Activators, Functional Appliances, Removable Appliances, Fixed Appliances, Edgewise Appliances etc. Construction and Fabrication of Appliances.
17. Palatal Expansion.
18. Extraoral Forces used in Orthodontic Treatment.
19. Preventive and Interceptive Orthodontics.
20. Serial Extractions.
21. Habits, their Sequelae and Treatment.
22. Treatment of Class I Malocclusion
23. Treatment of Class II Malocclusion
24. Treatment of Class III Malocclusion
25. Treatments which do not fall in above classifications e.g. of Long Face Syndrome, Cleft lip & Palate etc. and treatment of adult patients.
26. Treatment of Temporomandibular Joint Disorders, Facial, Cervical and Myofascial pain.

### Alumnus of Orthodontics



### MUHAMMAD SAOOD

BDS, MDS Orthodontics  
Current position:  
Assistant Professor,  
Department of Orthodontics,  
Khyber College of Dentistry.

MDS program in Gandhara University started in June, 2011, and I was its first post-graduate resident. As it was the beginning of the program and it had yet to be further established, we had to face many hurdles along the way. With the passage of time, however, the university developed this program on both national and international standards which would not have been possible without the hard work of our teachers. I am very grateful to my mentor and supervisor, Prof. Dr. Imran Tajik and my co-supervisors; Prof. Dr. Nazir Ahmad, Prof. Dr. Nasir Mushtaq and Associate Prof. Dr. Sohrab Shaheed. They all were very supportive throughout my training and the fact that they had come from various institutions, made me learn comparatively much more. Today, as an Assistant Professor in Khyber College of Dentistry, I can proudly say that my mentors made me capable of acquiring this job.

# GENERAL COURSE OUTLINE

## MDS PROGRAMME IN ORTHODONTICS

### 4 years Program

27. Sequelae of Orthodontic Treatment, Oral Hygiene Management and prevention of Other Problems.
28. Speech Physiology, Pathology and Treatment.
29. Orthognathic Surgery, Diagnosis, Planning and related Orthodontic Treatment, both Pre-surgical and Post-surgical.
30. Multidisciplinary science and approaches including Periodontal and Prosthetic considerations.
31. Retention and Relapse.
32. Epidemiology and Bio-statistics
33. Educational, Teaching and Communication skills.
34. Patient management, behavioral psychology and patient motivation.
35. Management of routine emergencies in Clinics, dis-infection and sterilization procedures.
36. Practice Management, record keeping, Computerization etc.

## ELECTIVE ROTATIONS

In present day advancements, multidisciplinary approach is a key to integrated understanding of the basis of a specialty. The objectives of elective rotations are to provide a trainee, the applied knowledge, skills and interactions among various liaison departments with reference to the subject of Orthodontics. The students will be exposed to the all basic and applied sciences particularly general and oral anatomy, embryology, histology and physiology. Students will be required to attend lectures, seminars, clinical sessions, and presentations at basic medical sciences departments of the Gandhara University during first year of training. For exposure to dental clinical sciences other than their main specialty, students will be rotated in the following three main specialties of dentistry during first year of training.

### 1. Oral and Maxillofacial Surgery (2 months)

**To understand the basic minor and major surgical procedures in liaison with Orthodontics.**

- To be able to expose the impacted teeth (Canines, Incisors, Premolars) for orthodontic traction.
- To be able to perform the frenectomy
- To attend and give orthodontic assistance to the Oral Surgeon for major orthognathic surgical procedures.

### 2. Operative Dentistry & Paedodontics (2 months)

**To understand and perform following restorative/operative procedures:**

- Pit and fissure sealing
- Temporary / Steel crowns
- Space maintainers
- Fillings

### 3. Prosthodontics (2 months)

**To understand and perform the following:**

- Theories of occlusion and articulation
- Face bow recording for orthognathic surgical patients
- Articulation, Model surgery and Diagnostic Set up
- Myofacial pain dysfunctional appliances, TMJ pain syndromes splint therapy
- Ortho-Prosthodontic lesions



# GENERAL COURSE OUTLINE

## MDS PROGRAMME IN ORTHODONTICS

### 4 years Program

### Expected Competency Levels

- 1 = Observer status
- 2 = Assistant status
- 3 = Performed under direct supervision
- 4 = Performed under indirect supervision
- 5 = performed independently

ORTHODONTICS		MDS			
		Competency levels			
	Orthodontic treatment with fixed appliances including finishing and retention	Year 1	Year 2	Year 3	Year 4
1	<b>History taking</b>	4	5	5	5
	Diagnostic/retainer impressions	4	5	5	5
	Study models/base forming	4	5	5	5
	Cephalometric/panoramic x-rays taking	3	4	5	5
	Growth prediction on cephalometric x-rays	3	4	5	5
	Cephalometric tracings and analysis.	4	5	5	5
	Surgical/Prediction tracing.	2	3	4	5
	Extra oral and Intra oral Photographs	4	5	5	5
	Patient Case Presentations	3	4	4	5
	Treatment Planning	3	4	4	5
	Banding	3	4	5	5
	Bonding	3	4	5	5
	Wire bending skills	3	4	5	5
	Treatment transfers	2	3	4	5
	Appliance Removal	2	3	4	5
	Arch Expansion	3	4	4	5
	Retainers (both Removable & Fixed)	2	3	4	5
	Space Maintainers/Regainers/Supervision	3	4	4	5
	Minor Orthodontic Surgical Procedures	2	3	4	5
2	<b>Orthodontic treatment with removable appliances</b>	3	4	5	5
3	<b>Orthodontic treatment with functional appliances including bite registration &amp; appliance fabrication</b>	2	3	4	5
4	<b>Orthodontic treatment with fixed appliances</b>	2	3	4	5
5	<b>Cleft Lip &amp; Palate and Orthognathic surgical cases</b>	1	2	3	4

# GENERAL COURSE OUTLINE

## MDS PROGRAMME IN PROSTHODONTICS

### 4 years Program

#### FIRST YEAR OF TRAINING:

- Basic sciences lectures
- Clinical training
- Complete dentures
- Removable partial dentures
- Crowns (anterior)
- Endodontics
- Core build ups
- Foundation restorations / fillings

#### SECOND YEAR OF TRAINING:

- Posterior crowns
- Partial coverage crowns
- Inlays
- Onlays
- Fixed partial dentures (conventional)
- Fixed partial dentures (minimal preparatory)
- Veneers
- Surgical crown lengthening
- Periodontal procedures

#### THIRD YEAR OF TRAINING:

- Maxillofacial prostheses
- Obturators
- Over dentures
- Immediate dentures
- Copy dentures
- Preprosthetic surgery

#### FOURTH YEAR OF TRAINING:

- Full mouth rehabilitation
- Denture relining
- Denture repairs
- Cases related to relative axial movement
- Implant restorations/ prostheses
- Occlusal splints (stabilization splint and repositioning splints)
- Treatment planning of prosthodontic cases.

#### ROTATIONS:

Rotations in the departments of Oral & Maxillofacial Surgery, Orthodontics, Operative Dentistry, and Periodontics.



# GENERAL COURSE OUTLINE

## MDS PROGRAMME IN OPERATIVE DENTISTRY

### 4 years Program

- Cariology
- The Equipment and Instruments
- Cutting Instruments and Biological Considerations Of Cutting Dental Tissues
- All Types of Amalgam Restoration
- Tooth Colored Restoration
- Sterilization and Disinfection
- Oral Medicine
- Radiology
- Immunology
- Management of Emergencies In Dental Practice
- Preventive aspect of Operative Dentistry
- TMJ & Occlusus
- Pulpal Reactions to Caries And Dental Procedures
- Endodontic And Periodontic Interrelationship
- Diagnostic aids for pulpitis and periodontitis
- Different instrumentation and objurgation techniques
- Dental Materials related to operative dentistry
- Local Anaesthesia & Analgesic in Endodontics
- Non Surgical Endodontics & Surgical Endodontics
- Restoration Of Endodontically Treated Teeth
- Geriatric Endodontics
- Vital and non vital bleaching
- Veneers
- Thesis
- Rotations in the departments of Oral & Maxillofacial Surgery, Orthodontics, Prosthodontics and Periodontics.



Dr Inam Ullah Jan Khattak  
BDS, FCPS Operative Dentistry  
Assistant Professor  
Department of Operative Dentistry & Endodontics  
Shifa College of Dentistry  
Shifa Tameer-e-Millat University.  
I am working as an Assistant Professor in the Department of Operative Dentistry and Endodontics, Shifa College of Dentistry. I have done my under graduation from Hamdard University Karachi and completed my post-graduation (FCPS) training from Sardar Begum Dental College Peshawar. Sardar Begum Dental College has built its reputation for outstanding teaching, research and clinical practice. SBDC has a well-equipped and developed hospital for post-graduation in all relevant subjects. I am feeling lucky to be the part of this great institute which provided me the excellent learning environment and opportunity to work with cooperative, skilful and helping supervisors, teaching faculty and administrative staff.

# GENERAL COURSE OUTLINE

## M.PHIL PROGRAMME IN SCIENCE OF DENTAL MATERIALS

### 2 years Program

- 1: Fundamentals of basic sciences and material sciences.  
Principles of mathematics, physics, inorganic and organic chemistry, physical chemistry, polymer chemistry, metallurgy, microscopy, thermal analysis and other techniques. Methods of statistical analysis, thesis writing and research article writing.
- 2: Properties of Dental Materials.  
Mechanical properties, Rheological properties, Thermal properties, Adhesive, Chemical, and biological properties.
- 3: Gypsum products.
- 4: investment and refractory dies.
- 5: Waxes
- 6: Metals and alloys.  
General properties, Gold and its alloys, Noble metals and its alloys, Base metal casting alloys, Steel and Wrought alloys, Casting.
- 7: Ceramics products.
- 8: Synthetic polymers.
- 9: Denture base material.
- 10: Denture lining material.
- 11: Artificial teeth.  
Acrylic                      Porcelain.                      Zirconium
- 12: Impression materials .
- 13: Dental cements.
- 14: Dental Amalgam.
- 15: Adhesive restorative materials.  
Glass Ionomer.  
Composite Resins.  
Resin modified glass Ionomer
- 16: Abrasives, and polishing materials
- 17: Implant materials
- 18: Endodontic materials
- 19: Preventive materials
- 20: Materials used for maxillofacial prosthesis
- 21: Hazards of dental materials.

#### RESEARCH PROJECT (THESIS)

- The research project should have following considerations
- It must consist of reasonable sample size and sufficient numbers of Variables, to give training to the candidate to conduct research to acquire data, compile data and present data and draw conclusions and thus test the hypothesis of research.
  - The research Project Protocol (Synopsis) should be submitted during year-1 of the course, to the supervisor of the subject.
  - The Thesis recommended by the supervisor should be submitted in the minimum duration of 2-Years.

#### LOG BOOK, ASSIGNMENTS, ASSESSMENTS:

The Log Book is day-to-day record of academic work done by the trainee. The purpose of Log book is to assess the overall training of the candidate and to determine the deficiency if any, so that they may be corrected.

Trainees are advised to make the required entries on the same date as they take place. The supervisor must sign all entries on the day of event.

The Log Book will reflect the performance of the candidate on the following parameters.

- i. Year wise record of the competence of the technical skills
- ii. Year wise record of the assignment.
- iii. Year wise record of the evaluation regarding affective and interpersonal behavior.
- iv. Year wise record of the journal clubs, conferences, and lecture attended.

The Log Books will be developed and approved by committee of Science of Dental Materials faculty. The performance of the candidate will be evaluated on yearly basis.

The evaluation will be made by the supervisor (in consultation with co-supervisor if appointed).

#### Alumnus of Science of Dental Materials



Dr Aiman Khan I am currently serving at one of the most prestigious and oldest dental institutes of the country – Khyber College of Dentistry, as an Associate Professor in the department of Science of Dental Materials. I feel pride in introducing myself as a graduate as well as a postgraduate of Sardar Begum Dental College. This institute has given me an academic excellence and composed personality. In my opinion; Department of Science of Dental Materials provides an MPhil scholar, a rich research environment. Due to university's affiliation with CRL and MRL, material testing is quite feasible. Though a scholar might find few difficulties in research work but the supervisor – Dr Tahir Ali Khan is very supportive and cooperative. Being the Best graduate of SBDC and topper of four professional years, all I can conclude for my juniors/students is that: Set goals, dream high and hunt your aims by continuous efforts. "A river cuts through a rock, not because of its power but through its persistence."

# GENERAL COURSE OUTLINE

## GENERAL COURSE OUTLINE FOR M.PHIL PROGRAMME IN ORAL BIOLOGY

### 2 years Program

- Oral mucosa and skin.
- Normal structure and function.
- Keratin and keratinocyte biology.
- Mucosal defence and protection.
- Role of permeability barrier.
- Role of antimicrobial peptides.
- Mucosal immune system and the MALT.
- The periodontium.
- Anatomy of periodontium.
- Immunology: general and oral.
- Introduction and types of immunology.
- Antigen presentation and recognition.
- Effector molecules and mechanisms.
- Intrinsic protection: structural properties and turnover.
- The bone, anatomy, physiology and biochemistry.
- Organization of cells into tissues, labile and stable cells, stem cells.
- Lymphocyte/endothelial cells interactions and lymphocyte homing/ Trafficking
- Concept of adhesion molecules
- Hypersensitivity reactions.
- Autoimmunity.
- Immunology of chronic inflammatory diseases.
- Immunological reaction against bacteria, virus and fungi.
- Oral Microbiology.
- Bacterial Pathogens
- Virology
- Mycology
- Oral commensals and opportunistic pathogens.
- Pathogenicity and virulence factors.
- Fungal, bacterial and viral infections of the oral cavity.
- Clinical manifestations of the oral infections.

#### Alumnus of Oral Biology



I did Masters of philosophy from sardar begum dental college in 2014. I was the 1st post graduate student in the field of Oral Biology. It was a well organized training course where I came across to study the subject in depth. I had an opportunity to explore my abilities in research work. Though more focus is still required in lab techniques and clinical correlation with the subject. My post graduation was a great experience. I'm currently working as an Associate Professor in oral biology department Khyber college of dentistry. This is a great achievement for me after the post graduation and I thank Allah Almighty who rewarded me success and competency.

# GENERAL COURSE OUTLINE

## M.PHIL PROGRAMME IN ORAL PATHOLOGY

### 2 years Program

- **Cellular pathology:**
- Introduction to pathology
  - General Pathology
  - Cellular injury and adaptation
  - Wound healing
  - Fluid and hemodynamic derangements
  - Leopasi
- Hematology
  - Erythrocytes
  - Anemias and hemoglobinopathies,
  - Leukocyte ,
  - Granulocytic and monocytic series
  - Characteristics of leukaemias and lymphomas
  - Principles of hemostasis and thrombosis
  - Disorders of hemostasis and thrombosis
- Inflammation:
- Mechanism of acute inflammation
- Mechanism of chronic inflammation.
- Tissue damage and wound healing.
- Genetic basis of disease.
- Environmental factors in disease.
- Introduction to histopathology:
- Oral malignancy.
- Oral pathology:
- Variants:
- Microbiology, pathogenesis and immunology.
- Periodontal diseases
- Classification, pathology, microbiology and immunology
- Mucosal diseases:
- Recurrent oral ulceration.
- Vesicular and bullous lesions.
- White lesions.
- Lichen planus and related conditions.
- Soft tissue cysts and tumors.
- Red and blue lesions of the oral cavity
- Oral cancer and pre-cancer.
- Salivary gland pathology.
- Bone pathologies:
- Odontogenic tumors.

### Alumnus of Oral Pathology



My name is Dr Sofia Haider Durrani . I completed my M.Phil in Oral pathology from Sardar Begum Dental College, Gandhara university Peshawar in 2014.I was a pioneer post - graduate student and consider it an honour to have been selected to be a member of the first batch of post grad trainees of SBDC.During the course of my training I managed to attain not only very vast and diverse knowledge pertaining to the field of Oral Pathology but actively participated in labwork. I also accumulated knowledge of advanced diagnostic techniques and the in's and out's of research and data collection.I joined sbdc as a lecturer in 2014 and am currently working as an Assistant Professor in the department of Oral Pathology. Not only am I conducting undergraduate classes but am also currently working as the supervisor for oral pathology Post graduates. I am also currently the assistant Vice president for the KPK branch of Pakistan Society of Oral and Maxillofacial Pathologists.We have come a long way from 2014 till now and I am sure our post graduate programme will continue to grow and flourish.I am very thankful first of all to Allah and then this college for providing me this opportunity to transfer my knowledge and skills to our future post graduate students.

# GENERAL COURSE OUTLINE

## M.PHIL PROGRAMME IN ORAL PATHOLOGY

### 2 years Program

- Light microscopy.
- Introduction to optics
- Electron microscopy
- Ultra structural examination of oral mucosa.
- Normal oral mucosa and blood cells morphology.
- Inflammatory conditions.
- Pre-malignant, malignant conditions.
- Salivary gland conditions.
- Cysts of the oro-facial region.
- Odontogenic/ non odontogenic tumors.
- Bone pathology.
- Principles of serology
- Histological techniques.
- Principle methods of tissue processing.
- Fixation, embedding and microtomy.
- Stains and staining.
- Histochemical techniques.
- Oral histopathology
- Slide examination.
- Supervised reporting
- Oral Microbiology.
- Bacterial cultures.
- Fungal cultures.
- Antibiotic sensitivity.
- Oral radiology.
- Non-Odontogenic tumors.
- Systs of the jaws.
- Cemento-ossifying lesions of the jaw.
- Bone neoplasms.
- Metabolic and gentic diseases involving oral cavity.
- Developmental abnormalities of the teeth.
- Pigmented and connective tissue lesions.
- Inflammatory jaw lesions.
- Common skin lesions of head and neck.
- Hands on laboratory techniques.
- Introduction to laboratory based courses.
- Laboratory safety and good lab. Practices.
- Familiarization of routine lab. Techniques and equipment.
- Microscopy.



# GENERAL COURSE OUTLINE

## M.PHIL PROGRAMME IN ORAL PATHOLOGY

### 2 years Program

#### Topics to be studied in 2nd year

##### Oral Medicine

- Principles Of Diagnosis
- Diagnosis and Management of Oral And Salivary Gland Diseases
- Ulcerative, Vesicular Ad Bullous Lesions
- Red And White Lesions of Oral Mucosa
- Pigmented Lesions of Oral Mucosa
- Benign Tumors And Oral Cancer
- Orificial Pain And TMJ Disorders
- Principles of Medicine
- Forensic Dentistry

Expert witness basics, Bite-mark basics, Civil Torts, Digital, Bite-mark Forensic Identification Organizations, Ethics and legal, Forensic Anthropology, Body ID basics.

##### Hands on laboratory techniques

- Electron microscopy
- Ultra structural examination of oral mucosa.
- Principles of serology.
- Immunocytochemical techniques+immunofluorescence
- Processing & staining of hard tissues.

##### Haematology.

- Blood cell count using Haemocytometer.
- Peripheral blood film preparation.
- CPC using automated counter.
- Critical review of literature.
- Research methodology and medical writing.



# GENERAL COURSE OUTLINE

## M.SC PROGRAMME IN OPERATIVE DENTISTRY

### 2 years Program

- Cariology
- The Equipment And Instruments
- Cutting Instruments And Biological Considerations Of Cutting Dental Tissues
- All Types Of Amalgam Restoration
- Tooth Colored Restoration
- Sterilization And Disinfection
- Oral Medicine
- Radiology
- Immunology
- Management Of Emergencies In Dental Practice
- Preventive Aspect Of Operative Dentistry
- Tmj & Occlusus
- Pulpal Reactions To Caries And Dental Procedures
- Endodontic And Periodontic Interrelationship
- Local Anaesthesia & Analgesic in Endodontics
- Non Surgical Endodontics & Surgical Endodontics
- Restoration Of Endodontically Treated Teeth
- Geriatric Endodontics

# GENERAL COURSE OUTLINE

## M.SC PROGRAMME IN OPERATIVE DENTISTRY

### 2 Years Program

- Endodontic Failures, Post Treatment Apical Periodontitis
- Case Selection And Treatment Planning
- Endodontic Records And Legal Responsibility
- Cleaning And Shaping The Root Canal System
- Obturation Of The Cleaned And Shaped Root Canal System
- Pathobiology Of Primary Apical Periodontitis
- The Role Of Endodontics After Dental Traumatic Injuries
- Medical Emergencies in Dental Practice
- Dental Anomalies
- Periodontal considerations
- Mouth preparation
- Medically Compromised Children
- Craniofacial Growth And Development
- Psychology Of Child Development
- Pediatric Endodontics
- BIs
- Communication Skills And Bio Statistics
- Laboratory procedures regarding fixed prosthodontics
- Resin bonded FDP
- Fiber reinforced composite FDP
- Tooth preparation for cast crown & bridge
- Tooth preparation for metal ceramic crowns Bridge
- Tooth preparation for partial veneer crown, inlay and onlays.
- Tooth preparation for all ceramic crowns and bridge
- Restoration of the endodontically treated tooth
- Implant supported fixed prosthesis
- Tissue management and impression making
- Interim fixed and removable restorations
- Luting agents and cementation procedures
- Postoperative care & follow-up



# GENERAL COURSE OUTLINE


## M.SC PROGRAMME IN PERIODONTOLOGY


### 2 Years Program


1. Normal Periodontium
  - A)The Gingiva And The Tooth Supporting Structures
  - B)Aging And The Periodontium
2. Classification And Epidemiology Of Periodontal Disease
  - A)Classification Of Diseases And Conditions Affecting The Periodontium
  - B)Epidemiology Of Gingival And Periodontal Diseases
3. Etiology Of Periodontal Diseases
  - A)Microbiology Of Periodontal Diseases
  - B)The Role Of Dental Calculus And Other Predisposing Factors
  - C)Genetic Factors Associated With Periodontal Disease
  - D)Immunity And Inflammation: Basic Concepts
  - E)Microbial Interactions With The Host In Periodontal Diseases
  - F)Smoking And Periodontal Disease
  - G)Molecular Biology Of The Host-microbe Interaction In Periodontal Diseases
  - H)Host Modulation
4. Relationship Between Periodontal Disease And Systemic Health
  - A)Influence Of Systemic Disorders And Stress On The Periodontium
  - B)Periodontal Medicine: Impact Of Periodontal Infection On Systemic Health
  - C)Oral Malodor
5. Periodontal Pathology
  - A)Gingival Disease
  - B)Periodontal Disease





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