

MUHAMMAD DENTAL COLLEGE MIRPURKHAS



**DEPARTMENT OF DENTAL EDUCATION
STUDY GUIDE
FINAL YEAR BDS PROGRAM
BATCH-III
2024-2025**

ABBREVIATIONS

ASSIG/AS	Assignment
BCQS	Best Choice Questions
CBL	Case Based Learning
CDC	Curriculum Development Committee
CME	Continuous Medical Education
CP	Class Presentation
CQ	Class Quiz
CR	Clinical Rotation work in OPD
CS	Clinical Session
CW	Clinical work (OPD)
HEC	Higher Education Commission
HO	House Officers
HOD	Head of the Department
IL	Interactive Lecture
MIT	Modes of Information Transfer
MOD	Modular
OMFS	Oral And Maxillofacial Surgery
OPD	Outpatient Department
OSCE	Objective Structured Clinical Evaluation
OSPE	Objective Structured Practical Evaluation
PBL	Problem-Based Learning
PMDC	Pakistan Medical and Dental Council
PPT	Power Point Presentation
PW	Practical work
QEC	Quality Enhancement Cell
SC	Short case
SEQS	Short Essay Questions
SGD/S	Small Group Discussion/Session
SGIS	Small Group Interactive Session
Skill Lab	Phantom Lab
SURVIVE	Online Weekly assessment
SS	Self-Study
Viva	Viva
VD	Visual Display

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VISION AND MISSION STATEMENT

MISSION STATEMENT OF MOHAMMAD DENTAL COLLEGE

Nurturing students' potential by providing them with the highest quality education, thereby producing individuals with strong values, compassion, **inclusiveness, leadership** and professionalism, emphasizing community engagement, particularly with marginalized segments of the rural population, encouraging students to become empathetic and socially responsible professionals by training them in the best evidence- based practice, capable of contributing to advancements through research and innovation.

VISION OF ISUM

To be an internationally recognized institution, famous for its ethical work, emphasizing the importance of integrity, honesty, and moral principles, highlighting the University 's commitment to serving the community and producing unbiased and empathetic educated people, **who are inclusive and have leadership skills**, encouraging them to engage in research, critical thinking, innovation, and evidence-based best practices.

VISION OF LIAQUAT UNIVERSITY OF MEDICAL AND HEALTH SCIENCES (LUMHS)

Liaquat University of Medical and Health Sciences (LUMHS) seeks to be a top-tier healthcare Institution, producing ingenious academic leaders, medical researchers, and healthcare advocates to serve the global community.

BDS PROGRAM OUTCOME

By the end of the Four years of BDS program at MUHAMMAD DENTAL COLLEGE (aims to produce dental graduates who are able to:

- Demonstrate appropriate basics knowledge of medical and dental sciences.
- Evaluate the use of laboratory tests and imaging studies and interpret the results to arrive at clinical decision making by critical thinking.
- Recognize patient with special care and perform dental emergencies by having good communication skills.
- Engage in research activity aimed at improving quality of health care, including behavior modification of individual and communities for quality life
- Elicit professional skills while providing patient-centered care by a relevant and comprehensive physical and dental examination.
- Commit to lifelong learning to keep up to date with developments in dental practice and trends in disease at the population level by strong leadership and management skills.
- To exhibit ethical patient-centered care based on integrity, humility, social accountability, and high ethical values of this sacred profession

GOALS AND OBJECTIVES: COMPETENCIES REQUIRED IN A DENTIST TO BE ACHIEVED AT THE UNDERGRADUATE LEVEL STANDARDS OF SEVEN STARS COMPETENCIES

The goal of creating a medical curriculum is to create skilled, compassionate, and effective medical professionals who can offer patients high-quality care. A modular integrated curriculum that synchronizes the BDS program results with the nationally designated seven-star doctor competencies has been developed in order to accomplish this goal.

The following are the anticipated general competencies for a medical/dental graduate:

1. Skillful
2. Knowledgeable
3. Community Health Promoter
4. Critical Thinker
5. Professional
6. Scholar
7. Leader and Role Model

"A seven-star physician" A Pakistani medical graduate ought to exhibit the different qualities listed under each competency. These qualities are the absolute necessities. The program's results are comparable to those that the country's regulatory bodies have processed for BDS graduates up to this point. These seven-star competencies are translated into the session-specific learning objectives by the curriculum outcomes.

A Pakistani medical graduate who has become a "seven-star doctor" is supposed to exhibit a range of qualities within each competency, according to the national regulating authorities. These characteristics are deemed necessary and need to be demonstrated by the person both personally and professionally.



A 'seven-star doctor' Pakistani medical/dental graduate should be able to demonstrate various traits as detailed under each competency. These attributes are minimum and not exhaustive by any means.

I. Skills: Under Graduates must be competent to:

- 1.1 Apply appropriate interpersonal and communication skills.
- 1.2 Apply psycho-social and behavioral principles in patient-centered health care.
- 1.3 Communicate effectively with individuals from diverse populations.
- 1.4 Well versed with basic dental morphology and application of dental materials

II. Knowledgeable:

A. Assessment, Diagnosis, and Treatment Planning: *Under Graduates must be competent to:*

- 2.1 Manage the oral health care of the infant, child, adolescent, and adult, as well as unique needs of women, geriatric, and special needs patients.
- 2.2 Identify, prevent, and manage trauma, oral diseases, and other disorders.
- 2.3 Obtain, and interpret patient / medical data, including a thorough intra/extra oral examination, and use these findings to accurately assess and manage patients.
- 2.4 Select, obtain, and interpret diagnostic images for the individual patient.
- 2.5 Recognize the manifestations of systemic disease and how the disease and its management may affect the delivery of dental care.
- 2.6 Formulate a comprehensive diagnosis, treatment, and/or referral plan for the patients.

B. Establishment and Maintenance of Oral Health: *Under Graduates must be competent to:*

- 2.7 Utilize universal infection control guidelines for all clinical procedures.
- 2.8 Prevent, diagnose, and manage pain and anxiety in the dental patient.
- 2.9 Prevent, diagnose temporo-mandibular joint disorders.
- 2.10 Prevent, diagnose, and manage periodontal diseases.
- 2.11 Develop and implement strategies for the clinical assessment and management of caries.
- 2.12 Manage restorative procedures that preserve tooth structure, replace missing or defective tooth structure, maintain function, are esthetic, and promote soft and hard tissue health.
- 2.13 Diagnose and manage developmental or acquired occlusal abnormalities.
- 2.14 Manage the replacement of teeth for the partially or completely edentulous patient.
- 2.15 Diagnose, identify, and manage pulpal and peri-radicular diseases.
- 2.16 Diagnose and manage oral surgical treatment needs.
- 2.17 Prevent, recognize, and manage medical and dental emergencies.
- 2.18 Recognize and manage patient abuse and/or neglect.
- 2.19 Recognize and manage substance abuse.
- 2.20 Evaluate outcomes of comprehensive dental care.
- 2.21 Diagnose, identify, and manage oral mucosal and osseous diseases.

III. Community Health Promoter: *Under Graduates must be competent to:*

- 3.1 Provide prevention, intervention, and educational strategies.
- 3.2 Participate with dental team members and other health care professionals in the management and health promotion for all patients.
- 3.3 Recognize and appreciate the need to contribute to the improvement of oral health beyond those served in traditional practice settings.

IV. Critical Thinker: *Under Graduates must be competent to:*

- 4.1 Evaluate and integrate emerging trends in health care as appropriate.
- 4.2 Utilize critical thinking and problem-solving skills.
- 4.3 Evaluate and integrate best research outcomes with clinical expertise and patient values for evidence-based practice.

V. Professional and Role Model: *Under Graduates must be competent to:*

- 5.1 Apply ethical and legal standards in the provision of dental care.
- 5.2 Practice within one's scope of competence and consult with or refer to professional colleagues when indicated.

VI. Researcher: *Under Graduates must be competent to:*

- 6.1 Apply the current research for innovations in treatment, keeping at par with international standards
- 6.2 Conduct independent research based on the community requirements

VII. Leader: *Under Graduates must be competent to:*

- 7.1 Manage self, taking responsibility and utilizing the time to the best of his/her ability.
- 7.2 Effectively work in a group, as a leader or as a team member
- 7.3 recognize and comply with the working system of any Institute.

INTRODUCTION OF STUDY GUIDE

When a dental student enters dental college, a new era of academic life begins. This study guide has been designed to help students sail smoothly during their transitional phase. The very first week is spent in familiarizing the students with the environment of Muhammad Dental College.

1. Objectives of the Study Guide

The purpose of this study guide is to:

- Inform students what they are expected to learn during their study period.
- Guide students on how the student-learning program has been organized, and how it would be implemented.
- Help students organize and manage their studies throughout the year.
- Inform students about the code of conduct at Muhammad Dental College (MDC).
- Inform on organization and management of the team at MDC. This will help you contact the right individual in case you have any difficulty.
- Describe the course content that will be taught and what the students are expected to learn.
- Impart the information on learning methods that you will experience during the course. The methods include tutorials, lectures, practical skills, experiments, field visits, OPD and research. These learning methods should help you achieve the course objectives.
- Guides you about the available learning resources for the terms. These include: books, computer-assisted learning programs, videos and other aids
- Makes you aware of the contribution of internal evaluation and term examinations to students' overall performance.
- Passes the information on the methods of assessment.
- Inform regarding the examination policy, rules, and regulations.

2. Preamble:

Integration has been accepted as an important educational strategy in medical education. PMDC & LUMHS believes in continuous curriculum revision through regular reviews and feedback of stakeholders. This curriculum has been updated with Correlation as a minimum level of integration in BDS. This curriculum is outcome-based patient centered, community relevant, promotes health and prevents disease. It has been revised by the faculty of basic and clinical Dental sciences in collaboration with LUMHS Academic Directorate and MDC department of Medical Education

3. Curriculum Perspective

LUMHS curriculum is evolved taking into consideration constructivist and behaviorist with some element of cognitivist approach. It allows students to construct their own knowledge based on what they already know and to use that knowledge in purposeful activities requiring decision making, problem solving, and judgments.

4. Level of Integration:

MDC will follow Correlation i.e. level 7 of Harden's level of Integration in first three years. The emphasis remains on disciplines or subjects with subject-based courses taking up most of the curriculum time. Within this framework, an integrated teaching session or course is introduced in addition to the subject-based teaching. This session brings together areas of interest common to each of the subjects. Though the teaching is discipline based, topics are correlated and taught with clinical context for better understanding and application of concepts. However clinical teaching increases gradually with advancing years. BDS Year IV is for clerkships.

5. Curricular Organization and Structure

- a. In MDC, BDS curriculum in the first two years shall be delivered in a System Based Modular Format with clinical relevance. However, in year III, students shall get clinical exposure through rotations in the wards and OPDs and in Year IV through clerkships
- b. There are three modules in year I, each will have modules, duration of which depends upon the number and complexity of the objectives to be achieved in that module
- c. The curriculum will be delivered by modular teams of multidisciplinary basic science faculty and relevant clinical dental sciences faculty.
- d. The planning and delivery will be coordinated by year coordinators who will guide module coordinators of their respective years for efficient implementation
- e. Modular Coordinator will be responsible for teaching and assessment during each module. S/he will be appointed by Principal in coordination with Department of Medical Education.
- f. Clinical Coordinator will be responsible for placement, teaching and assessment during clinical rotations.
- g. MDC will provide study guides of each year to the students.
- h. To attain the integration in BDS program, teaching shall be done in three spirals Basis of Medicine **(Spiral I -Years I & II)**: The syllabus will be integrated horizontally around systems of the body in which Anatomy, Physiology and Biochemistry will be taught with clinical relevance. Additional chunks of content will be added in a module that exactly does not fit in the central theme of the module.
- i. Longitudinal themes, General Education **(Behavioral Sciences, Islamiyat, English, Pakistan Studies, Art & Humanities, Communication Skills, Clinical Care, Professionalism, Research Methodology, Leadership, Management, Dental & Dental Ethics, Patient Safety, EBM & Infection Control, ICT (Computer Skills, Self Study** are an integral part of year I. However, assessment of these subjects will be the responsibility of the institute itself.
- j. Islamiyat and Pakistan Studies will be assessed by the University in the first professional examination.
- k. Apart from attending daily scheduled sessions, students should engage in self-directed learning to achieve the desired objectives.
- l. Professional Exams will be module-wise. There will be three papers, one for each module.

6. Competencies:

The focus of this curriculum is on the roles of a general physician as identified by PMDC. These are skillful, knowledgeable, community health promoters, critical thinker, professional and role model, researcher and leader. Competencies focused in year I and II are: -

- a. Medical Knowledge
- b. Procedural skills
- c. Problem solving
- d. Communication skills
- e. Professionalism
- f. Research

7. Outcomes:

By the end of Third year BDS, students should be able to:

- a. Apply clinical knowledge of dental sciences with medical sciences.
- b. Communicate clearly and effectively.
- c. Discuss the applied principles of research

8. Academic calendar, Final Year BDS is attached at the end of the Study Guide:

Contact Hours for Teaching, Learning & Assessment (40 weeks)		
Subjects	Contact Hours	PMDC Requirement
Oral & Maxillofacial & Anesthesia	268	250
Orthodontics	268	250
Operative Dentistry	268	250
Prosthodontics	268	250
Pediatric Dentistry	160.8	100
Research Methodology & EBM, General Education, Extra Curricular Activities	107.2	100
GRAND TOTAL	1310	1200

9. Educational Strategies:

(These are proposed, but institutes can use other evidence-based teaching methodologies that suit their context)

- a. Interactive Lectures
- b. Small group discussion
- c. Lab practical
- d. Skill lab
- e. Problem-based learning/Case-based learning
- f. Tutorials
- g. Integrated sessions using any of the above strategies
- h. Community Oriented Medical Education

10. Resources:

To be provided by the institute

- a. Faculty
- b. Facilities
- c. Administration for Course
- d. Administrative structure
- e. Communication with students

11. Internal Assessment:

Formative assessment (low stake) is at faculty discretion like mid module test and other class tests. There will be three end of modules and one pre-annual examination in year I, which will be taken by LUMHS and contributes towards the weighing of internal assessment i.e. 20% in first professional BDS Examination.

12. Annual Professional Examination:

The University will take the first professional Examination at the end of the academic year. Annual Theory & Practical Examination will be of 200 marks for General Medicine, General Surgery, Community Medicine, Oral Medicine & Diagnosis, Periodontology and Operative Dentistry and Prosthodontics. The passing score is 50% in theory and practical separately

13. Evaluation of the Course:

To be filled in by the institute.

- a. The major goals of the evaluation are to monitor quality and improve the curriculum
- b. Student portfolio shall be maintained in the departments in which students will give their feedback either by name or anonymously. Feedback may be taken at the end of module, online and informal student feedback during the running module.
- c. Faculty suggestions if any, for improvement of curriculum and teaching may be incorporated in the next session

15. Implementation of curriculum

- a. The university will give academic calendar, year wise distribution of modules, learning outcomes, table of specifications and assessment policy.
- b. Implementation of curriculum including timetable, distribution of content across the whole years and rotations plan is upon the discretion of the medical college/institute.
- c. Early clinical exposure may be achieved by allocating hours to skill labs, Clinical dental sciences rotations in OPD/Wards, Medicine & Surgery ward visits in each module or patient may be brought before the students as per the decision of institute.

EDUCATIONAL ROADMAP

CURRICULUM FRAMEWORK OF A FOUR-YEAR BDS PROGRAM

The BDS Curriculum in MDC is spiral in which students will learn the same topics throughout their education program with each encounter increasing in complexity and reinforcing previous learning.

Vacations: Students will avail vacations in accordance with the schedule decided by the College Academic Council. Hospital teaching continues during summer vacation. Students performing hospital duty will be divided in batches.

Timetables for various batches will be prepared by the timetable Committee as received the timetable grid from LUMHS. If needed, classes may also be continued during the summer vacation. Timetable of lectures, SGDs, practical classes and hospital training will be notified by the head of the institution before the commencement of the academic session and during the session if a change is required. Classes teaching, training, syllabus, courses, End of Module examinations & final professional examination are carried out according to the rules and regulations of the LUMHS.

- The Liaquat University of Medical & Health Sciences (LUMHS) has designed a four-year modular framework for Integrated Curriculum based on Specific Themes, Clinical Clerkships, Quran and Professionalism, Ethics, research & Leadership.
- The time calculation for completion of module is based on 35 hours per week.
- Total hours of teaching, learning and formative/summative internal assessment to be completed in a year are 1200.

Year	Module	Modular Configuration	Weeks
First Year BDS	1	Block I	12 Weeks
	2	Block II	12 Weeks
	3	Block III	12 Weeks
	General Education	General education (including Islamic studies, Pakistan studies, English, Arts & humanities, behavioral sciences, and research)	Parallel Subject
		Pre-Clinical Rotation in (Operative, Prosthodontics, Clinical Care, Dental Anatomy)	9*3=36 Weeks
Second Year BDS		Disease, Infections & Therapeutics I	17 Weeks
		Disease, Infections & Therapeutics II	
		Neoplasia, Hemodynamics & Genetics	10 Weeks
		Parallel Subject: Science of Dental Materials	36 Weeks
		Pre-Clinical Rotation in (Pre-Clinical	

		Dental Sciences (Dental material, Operative & Prosthodontics) & Clinical care & Professionalism)	9*3=36 Weeks
	General Education	General education, including behavior science, ICT, and research	Parallel Subjects
Third Year BDS	1	Removal Prosthesis+ Research	9 Weeks
	2	Oral Medicine, Exodontia, Pain Control & Oral radiology (OMFS+ Oral Medicine & Diagnosis)	9 Weeks
	3	Cariology (Operative Dentistry)	9 Weeks
	4	Periodontics (Gingiva & Periodontal Disease) + Behavioral Sciences	9 Weeks
	5	Community Dentistry & Public Health Services & Oral Radiology	36 Weeks
		General Medicine & General Surgery	36 Weeks
	General Education	PERLs 3 (Professionalism, Ethics, Research & Leadership), Behavioral Sciences, Medical Education & ICT.	Parallel Subjects
Final Year BDS	1	Oral Maxillofacial Surgery	8 Weeks
	2	Operative Dentistry & Endodontic	8 Weeks
	3	Orthodontics	8 Weeks
	4	Prosthodontics	8 Weeks
	5	Paediatric Dentistry	8 Weeks
	General Education	PERLs 4 (Professionalism, Ethics, Research & Leadership), Behavioral Sciences, Medical Education & ICT.	Parallel Subjects

A few salient features that have been incorporated for all the three domains of training after deliberations and through an iterative process by subject experts, medical educationists and the university lead as follows.

○ **Horizontal Integration- COGNITIVE:**

The Curriculum framework has 15 modules spanning 03 years. Horizontal integration is evident in the modular configuration where different basic disciplines approach the themes simultaneously. Modules have been structured where all the basic disciplines are represented

based on their respective weightage of content. Assessment framework ensures that the applied/clinical aspect also is inculcated in the concept development of the learner keeping the clinical relevance and context at the core.

- **Clinical Relevance & Theme-COGNITIVE:**

The recommended themes and clinical relevance precede all module objectives. These are grounded in the rationale of the module so that the pattern of learning could be steered for a practical professional approach. However institutional discretion does not prohibit adopting any other thematic approach provided that the program outcomes are adequately achieved.

- **Vertical Integration- COGNITIVE:**

Spiral placement of the modules within the framework ensures a revisit of the basic sciences. In the first step the applied / clinical learning objectives orient the learner and the repetitive module horizontally rhymes with the clinical rotations with a backdrop of basic sciences. The final year of clerkship is the final revisit, which is primarily workplace-based/logbooks and principally involves the perfect integrated blend of tri-domain learning.

- **C-FRC-PSYCHOMOTOR:**

Clinical Skills follow a spiral that is entirely skills dominant. This spiral is the core of psychomotor training. The first two years will be of **Clinical Skills- Foundation**, which will represent clinical orientation. The clinical orientation will be conducted in OPD, skills lab and simulation centers (depending on the available resources). The clinical orientation, along with the applied/clinical component of the knowledge base is important for the practical and professional aspect of learning.

The subsequent two years the spiral will move on to **Clinical Skills Rotations**. The rotations in different wards will be based on foundational developmental already commenced in pre-clinical years. The year 3 and year 4 which have the rotations will also have the second visit of the modules which would now be more clinically inclined with a stronger base of Pharmacology and Pathology. Community oriented practices will also be broadening the element of systems thinking and diversity of practice for a healthcare leader of tomorrow.

- **Clinical Clerkship:** Finally, **Clinical Clerkships** are aimed to be entirely facilitated in workplace environments. The clerkship model will involve the delegation of duties thus adding to the acquisition of professional accountability as a competency. The psychomotor training and skills acquisition will be the maximum in the year of clerkship. The entire process of Clinical competencies will be endorsed in a logbook which would be the training base of the learner for future references and exam evaluations.

- **PERLs-AFFECTIVE:**

Affective training has been formally inculcated in the curricular framework. The model of PERLs has been introduced so that the yield of doctors has a strong, resilient, ethically driven character. PERLs stands for Professionalism, Ethics, Research and Leadership skills. PERLs rounds up professional development for the effective application of the knowledge and skills base achieved. For a professional to be social accountable and to be able to play the

healthcare leadership role for societal elements like advocacy, equity or resources and healthcare access, a formal training is a must.

The spiral of PERLs will be monitored directly by the respective department of Medical Education. However, the teaching sessions, and mentoring process, can and will be assigned to other disciplines. For example, communication skills can have an input from the faculty of Family Medicine and research can be facilitated by the Community Medicine & Public Health faculty. Ethics can be jointly covered by the Behavioral sciences. Leadership is an ambit where the students will be motivated if the institutional leads themselves get involved and can also have the input of the successful alumni. The Faculty of Medical Education will look after the entire process and will also engage in the teaching sessions, when and wherever required.

STUDENT'S CODE OF CONDUCT

The administration manages the code of conduct, discipline, dress code, and educational performance. There is a director designated for dealing with Student Affairs.

The Vice Principal/administrator can be approached for queries on educational matters, any breach of discipline, and referrals for electives, and advice about leave of absence or leave for medical reasons. All faculty members are also responsible for maintaining all aspects of discipline. Breaches of the university's code of conduct are routinely referred to the committee and disciplinary action is taken as it deems appropriate.

1. Dress code:

Male students:

1. Casual Trousers
2. Jeans (Plain blue) without an image, graphics and write ups
3. Casual Shirts (Half/ Full sleeves)
4. T Shirts without any messages, images, graphics and write ups
5. Casual shoes or Joggers with socks
6. Shalwar Qameez with shoes (only on Friday)
7. Suit/ Combination
8. Coat/ Pullovers/ Sweaters/ Jackets in winter

Female students:

1. Shalwar Qameez
2. Hijab, Abaya, Chaddar etc
3. Full length Jeans with long shirt/ kurta (knee length)
4. Light jewelry and light makeup
5. Shoes, Sandals and Joggers
6. Duppatta/ Scarf is compulsory with all dresses

NOTE: MDC students are expected to wear white coat during classes, hospital rotations and other wise.

2. Personal behavior.

The University expects that all students should sustain professional manner when interacting with colleagues and others. The University recognizes that personalities, characters and management styles may differ but, notwithstanding these differences, as a minimum standard, all staff is expected to: Work co-operatively with others in order to achieve objectives, and establish good working relationships. All should behave and speak professionally, respectfully, and courteously at all times.

- Tidiness and cleanliness must be adhered at all times within the MDC premises which will help us maintain a safe, clean, and professional learning environment.
- Use the college's property, facilities, supplies, and other resources in the most effective and efficient manner.
- Unacceptable behavior such as Aggressive or abusive behavior, shouting or personal insults or spreading rumors or gossip, or insulting someone is to be avoided at all costs. All these matters, if

experienced, should be reported to the vice principal or administrator or a senior faculty member.

3. Punctuality.

Students are expected to arrive in class well in time. All cell phones, smart phones, and other electronic devices (e.g., pagers, iPods) must be turned off and hidden from view during class time. Talking and other disruptive behaviors are not permitted while classes are in session. If the students miss a class they are themselves responsible for the missed part of the course. It is the student's responsibility to contact a classmate or teacher to determine and cover what was missed.

At MDC classes starts immediately after holidays. There is no lag period after leave. There will be no relaxation for students who were absent. **Please inform your parents of this and make your travel arrangements accordingly.** Avoid taking leave for personal reasons like weddings during the academic year.

4. Conduct in Hospital:

While working in a hospital and when dealing with patients, treat those whom you serve, with whom you work, and the public with same degree of respect you would wish them to show you.

Treat patients and colleagues with kindness, gentleness, and dignity. Respect the privacy and modesty of patients. Do not share the medical or personal details of a patient with anyone except those health care professionals integral to the well-being of the patient or within the context of an educational endeavor. Lastly, students are required to strictly follow the college dress code during and outside the college hours inside the campus & at hospital.

5. Conduct in the library, cafeteria and common rooms:

Use of Library is to help support learning and promote academic success. Through the Library, the college provides students with access to computers, books, periodicals, study space, and other academic help, comfortable seating, and formal and informal learning spaces. Students are expected to follow college rules, guidelines, and the honor code of conduct in order to maintain their good standing and to continue receiving library privileges.

Use the cafeteria and common rooms with care, courtesy, and respect for others. Place garbage and recyclables in the appropriate containers. This behavior will maintain a clean and enjoyable environment for all.

COLLEGE DISCIPLINARY COMMITTEE

The Committee deals with the maintenance of discipline on-campus. All cases of breach of discipline will be brought before this committee. The ruling of the committee cannot be challenged. The student will be dealt accordingly.

Students are to avoid the following: -

- a. Unauthorized use of the University's name or logo, which is property of the University
- b. Harassment, sexual or otherwise, or intimidation of any member of the University
- c. Coming late for classes. The student may be considered absent and marked accordingly.
- d. Improper/inappropriate dress
- e. Loud and aggressive behavior in Cafeteria common rooms or within the premises of the MDC/Hospital and University.
- f. Non-clearance of bills/dues. Non-clearance of dues may prevent student from appearing in the professional examination. The student may also be refused permission to attend classes.

Smoking

Smoking is strictly prohibited in campus.

POLICY ON DISCIPLINARY ACTION AGAINST USE OF UNFAIR MEANS

Zero tolerance for cheating/use of unfair means is to be maintained during Examinations.

A committee is to be formulated to consider all the cases pertaining to **plagiarism and use of unfair means** in exams. Two committees are to be formed; one each for MBBS and BDS. These committees are to be headed by the respective Principals.

The Committee shall follow the following procedures in handling such cases:

- a. The Invigilator who has caught the student using unfair means will report to the Head Invigilator, who will inform the Head of the Examination Department, MMC.
- b. The material being used and the answer sheet will be confiscated immediately.
- c. The Principal Dental Section will be informed at once.
- d. Further action will be taken locally by the Disciplinary Committee against use of Unfair Means and Plagiarism which has been formed. The punishments which this committee can advise are: withdrawal from that paper, withdrawal from the entire examination but allowed to sit for supplementary or to repeat the year or get expelled from college.
- e. Chancellor ISU will be the approving authority for the recommendations of the committee.
- f. Director Examinations ISU will be informed in writing of the action taken.
- g. The material being used and the concerned answer sheet will be sealed and kept at MMC examinations department.
- h. Instruction explaining the term “unfair means” will be displayed at the venue of examination as well as given in study guide.
- i. Following actions are considered as “unfair means”
 - Possession of written material/ books/ notes of any sort within the examination venue, whether that material is related or unrelated to the paper.

- Writing on palm, arm or anywhere on the candidates body/clothing.
- Any attempt to copy, take or give help during examination.
- Possession of mobile phones, personal digital appliances (PDAs) and any other electronic device.

SRMLG SYSTEM TO EXECUTE AND MONITORING OF THE CURRICULUM:

Some people like to fondly remember these pillars by “Syed Razi Muhammad’s Learning Group” (SRMLG).

Ibn e Sina University, Mirpurkhas (ISUM) is a newly formed University, which is the first university of Mirpurkhas Division. It follows a vertically integrated modular system. There are 37 modules divided in 5 years of MBBS Curriculum and 16 modules in four years of BDS program. Each year has an average of 36 to 40 weeks of studies. Weekly plan is organized as a “theme”.

Regular classes, practicals, clinics, and hospital duties are amply supported by 5 pillars that contribute to the high standards of this first-ever university of Mirpurkhas division. These pillars include:

1. **“Survive”** a three-pronged system of weekly tests, assignments and post-test discussions.
2. **“RLSE”** or “Running Lives by Sharing Experiences”, a weekly mentoring program.
3. **“MCS”** or daily “Mobile Clinics by Students”.
4. **“LBAS”**, or “Learner Based Annual Symposia”.
5. **“GSAT”** Annual “Gastroenterology session with Students as Teachers”. Conducted by Prof. Dr. Syed Zafar Abbas.

1. SURVIVE:

In ISUM, like weekly “Survive” and other tests, assignments include posttest Discussion (PTD) and attendance.



IBN-E-SINA UNIVERSITY, Mirpurkhas - 2024

Online Moodle Test Schedule for 2024

S. No	Days	Time	Year/Class
1	Monday	01:00pm to 02:00pm	Third Year BDS
2		02:30pm to 03:30pm	Final Year MBBS
3	Tuesday	10:00am to 11:00am	Third Year DPT
4		01:00am to 02:00PM	Fourth Year MBBS
5		02:30pm to 03:30pm	Final Year BDS
6	Wednesday	02:30pm to 03:30pm	Third Year MBBS
7	Thursday	10:00am to 11:00am	Second Year BDS
8		11:00am to 12:00pm	CHPE Morning Program
9		12:00am to 01:00am	Second Year DPT
10		02:30pm to 03:30pm	Second Year MBBS
11	Friday	11:30am to 12:30pm	First Year DPT
12		12:30pm to 01:30pm	First Year BDS
13		02:30pm to 03:30pm	First Year MBBS

IT DEPARTMENT

2. **“RLSE” or “Running Lives by Sharing Experiences”, a weekly Mentoring Program.**

Significance of Mentoring in ISUM:

Mentoring in higher education or medical education plays a vital role. It helps students or young professionals develop skills, gain insights, and build confidence. A good mentor provides guidance, support, and valuable feedback, which can lead to better academic or professional outcomes. In medical

education, mentoring is particularly crucial as it helps shape future healthcare professionals. Some benefits include:

- Personalized guidance and support
- Improved critical thinking and problem-solving skills
- Enhanced professional development and networking
- Increased confidence and self-awareness
- Strengthening the teacher and student relationship.
- Better academic or professional performance

One contact hour is reserved for students' character building and development during regular mentoring activities.

Time: Meeting time will be reserved for one hour per week (Wednesday 1-2 pm between mentees & mentors, schedule is mentioned in the timetables of all respective years and programs.

Mentor will have weekly meeting with 5-10 students every week at the mentoring hour (Wednesday 1-2pm). In a class of 100 about 12 and in a class of 50 about 8 mentors have assigned the role of mentor.

- **Chief Mentor:** Prof. Dr. Farzana Majeed
- **Course Coordinator:** Dr. Kiran Fatima
- **Course Manager:** Mr. Mehmood (Responsible to get all the weekly data completed and updating it online).
- **Meeting Venue & time:** Every Wednesday (from 1:00-2:00 pm) for meeting with the mentees- must be in the timetable slot
- **Meeting with chief mentor:** Every Thursday (from 1:00-2:00 pm)
- **Name of the Mentors of Final year BDS:**
Dr Asma Kauser
Dr Shagufta
Dr Faryal
Dr Najmus Seher
Dr Nimra Kaka
Dr Saif ur Rehman
Dr Ali Raza Zia

RESPONSIBILITIES OF CLASS COORDINATORS/TIMETABLE COORDINATOR:

- ❖ Will ensure that the attendance and results of boys are posted in the boys' group and parents of boys' group; similarly, attendance and results of girls are posted in girls' group and parents of girls' group.
- ❖ Keep the record of Mentoring, SURVIVE, attendance, and Assignments in soft & hard form
- ❖ Please ensure that parents of poor performers are called for a meeting with the senior faculty member.
- ❖ Class coordinators are mentors too' of their respective year group, such as class (A1, 2, 3, B1, 2, 3, C1,2,3 and D1, 2, 3).
- ❖ This will help students to liaise with the class activities.
- ❖ Coordinators should help in completing the parents' groups, adding the contacts of parents

and ensuring that only the admins should be able to post in the groups.

- ❖ They must also share the attendance and results of weekly survive and any other tests in students' and parents' groups.
- ❖ They also need to coordinate with the HoDs, Chief Mentors and Principals

MENTORING GROUPS WITH THE NAMES OF MENTORS

Group	Mentors	Mentee1 (GPL)	Mentee2	Mentee3	Mentee 4	Mentee 5	Mentee 6	Mentee 7
A1	Dr. Asma Kousar	Aisha Rashid	Alia	Anushiya	Aqsa Asad	Areeba	Arisha Adnan	Pooja Kumari
A2	Dr. Shagufta	Bibi Ayesha Fareed	Faiza Batool	Fatima Tuz Zahra	Gul Noor	Hira Hassan	Hira	Iqra Khan Zainab Lashari
B1	Dr. Faryal	Kainat Bibi	Laiba Aijaz	Laila Khatoon	Mah Hoor	Mahnoor Turk	Mahrugh Turk	Maria
B2	Dr. Najmul Sehar	Misbah Musadique	Neha	Noor Un Nissa	Pooja Kumari	Qurat Ul Ain	Rabia	Zaib Un Nisa And Esha Bano
C1	Dr. Nimra Kaka	Rimsha Israr	Sabhiyan	Sadia Eman	Syed Bisma Shah	Syeda Aman Zehra	Yumna	Zainab
C2	Dr. Ali Zia	Muhammad Abdullah	Arslan Khan	Waleed Naeem Siddiqui	Inam	Muhammad Bilal	Behishat Sajjad	Muhammad Hassan Raza
D1	Dr. Saif	Muhammad Mohsin	Sadaqat Alies Saqlain	Sameer	Sameer Nisar	Shahrukh Bashir	Uzair Ahmed	Ameer Humza

○

3. MOBILE CLINICS BY THE STUDENTS (MCS)

“MCS” or daily “Mobile Clinics by Students” is a part of the unique 5-pillars system, which supports the vertically integrated modular system of Ibne Sina University, Mirpurkhas (ISUM). This was started in 2018 in collaboration with APPNA, when the President of APPNA supplied 4 mobile health systems to MMC/ ISUM to run this unique system. In the MBBS program from the third year till final year students and in the BDS Program, third year & final year BDS students must have to participate in the MCS, in groups of two from each class as per the schedule provided by the administration.

4. LEARNER BASED ANNUAL SYMPOSIUM (LBAS) 26TH SYMPOSIUM:

LBAS has been conducted every year from previous 26 years along with the exceptional team of academicians, students, and staff for 26 consecutive years. In 2024, Rigorous reverberation on scientific symposium started from October 1 to 11, 2024, encompassing pre-symposium workshops, research papers from faculty, students and invited speakers from Karachi, Hyderabad, Nawabshah, Sukkur, Gambat & other cities of interior Sindh. Muhammad Medical College, Mirpurkhas, Sindh, successfully organized pre-symposium workshops, a symposium, and a conference on the theme as

Role of Universities in Promoting Higher Education in Underprivileged Areas of Pakistan

The events aimed at providing a platform for medical professionals, researchers, and students to share knowledge, exchange ideas, and discuss cutting-edge advancements in the field.

5. “GSAT” ANNUAL “GASTROENTEROLOGY SESSION WITH STUDENTS AS TEACHERS”

Muhammad Medical College (MMC), a constituent college of Ibn-e-Sina University, Mirpurkhas (ISUM), has become an icon in the field of medical education and healthcare services in Pakistan. Not only it provide quality formal medical education, but as part of its innovative activities, it keeps holding several nontraditional activities to stimulate and provoke scientific curiosity among its students and teachers throughout the year. It therefore came as no surprise that under the leadership of its Chancellor Professor Syed Razi Muhammad, ISU received the prestigious National Healthcare Excellence Award 2025 recently at Lahore from the Federal Minister of Health in early April this year.

LEARNING STRATEGIES

Interactive Lectures:

The traditional lecture system is used to introduce a subject and discuss the broad concepts in that specific field of study. Interactive lectures to smaller groups remain an effective and essential way of teaching. More recent methods of learning and teaching, such as case-based learning and small group-based problem-solving sessions are also employed.

Small Group Based Learning:

Small group and tutorial sessions are regularly held to enable students to discuss the details of a lecture topic. Students are expected to prepare presentations on applied topics and discuss their implications with their fellow students. The lecturer acts as a facilitator. By participating in these group discussions, students can interact and learn from one another.

Hands on Training:

Students in final year students will deal daily with patients in OPD, moreover students of BDS program are exposing to pre-clinical dental subjects from very first year of BDS to gain, enhance and polish their clinical knowledge and skills. Lectures and tutorials will regularly be held for providing clinical orientation on the subjects.

Clinical/Practical Learning:

Theoretical and practical knowledge is augmented with community services and integration of clinics. Clinical case presentations provide students with essential hands-on experience. Pre-Clinical teaching and exposure to students is provided from very first year of BDS program.

Community-Based Learning:

MDC is committed to provide the environment and training that would enable professionals to successfully contribute to the improvement of the health sector, particularly in less privileged communities under the Community-Oriented Medical Education Program. Community-Based Learning is provided to students in collaboration with the Community Dentistry and Community Medicine Departments.

The university involves its students in research-developing work in these designated communities. Students are encouraged to participate in the preventive and curative care and management of patients and their families in Primary Health Care field settings from very first year of the BDS program.

Problem-Based Learning (PBL):

Various learning strategies are implemented in all four years of dental education, focusing on small group teaching. In pre-clinical or junior years, the learners are exposed to teaching strategies like problem based learning (PBL), large group discussions, small group discussions, demonstrations, Skills lab, interactive tutorials, seminars, poster competitions and simulations, while clinical students are exposed to case based learning (CBL), clinical rotations, small group discussions, didactic lectures, Skills lab, interactive sessions and seminars.

The typical features of PBL and CBL are aimed at student-centered learning. PBL has formed the core of many educational programs throughout the world in recent decades, promoting an orientation towards active learning in small collaborative groups. Many models of PBL have evolved to fit into different curriculum structures, meet diverse learning needs and accord with available resources. A tutor facilitates the group learning process. The PBL problem introduces a real patient or a hypothetical case. In this students identify the key elements of the case, develop and test hypotheses based on the pathophysiological mechanisms, decide on the diagnosis and discuss principles of management. The development of PBL cases is a challenging process, as each case must reflect a defined set of learning objectives, have face validity, suit the student's stage of maturity, and fit with restraints of time and resources. A typical PBL tutorial consists of a group of students (usually 8 to 10) and a tutor, who facilitates the session with minimum interference. The PBL tutorials comprised of three sessions of two hours and the time is allocated in the timetable.

Case-based learning (CBL):

Case-based learning (CBL) is an adaptation of the PBL process and is used more generally in clinical medical education to provide knowledge in context and to offer opportunities for the development of clinical reasoning and judgment. Written case studies, prepared by the tutors present the background data and students are required to work together to identify the clinical problems, prepare differential diagnoses and suggest potential investigations and treatment. Students set their own learning objectives and identify the learning resources required to confirm or refute their diagnostic possibilities. The CBL format is flexible and may involve the incorporation of role play or the acquisition of data by gaining further clinical experience to solve the clinical problems. CBLs are overseen by facilitators who guide the students in case they are not on the right track as unlike PBLs, the CBL session has to be completed in one day.

ATTENDANCE POLICY FOR STUDENTS

PMDC rules for eligibility in annual examinations.

- Minimum attendance requirement is 75% in each subject: attendance is for lectures, demos, practicals, clinics, PBLs, SURVIVE, CPC, presentations etc: indoor and outdoor.
- The attendance is not simply for lectures.

Attendance is maintained by the Department of Student Affairs at MDC.

All students should try and achieve 100% attendance. Every teaching session is essential. You are expected to have at least 75% attendance in all subjects individually; to be allowed to appear in the professional examinations.

- a. Lecture Attendance is marked at the start of the class.
- b. Students who come more than 10 minutes late will be marked absent.
- c. A random head count is done to ensure correct entry of attendance.
- d. The attendance sheet is signed by the teacher and sent to Department of Student Affairs.
- e. The attendance is entered into the spread sheet as soon as possible on that day.
- f. No correction will be made later than 24 hours as the system is then locked.

ATTENDANCE FOR LECTURES, DEMOS, PRACTICALS ETC

- a. The teacher will mark the attendance of students and countercheck it by Head count. The attendance sheet should not be rotated among the students.
 - b. The teacher/ assistant/CR must immediately hand over the attendance sheet to the Scholastics Department daily
 - c. Attendance submitted later than Friday of the current week will not to be accepted.
- The University rules permit a 5% shortfall for genuine reasons of personal illness of a life-threatening nature or unavoidable circumstances such as death of a blood relative. This 5% relaxation cannot be taken in case of students going away for holidays.

In case of attendance less than 75% even due to health issues, you will be asked to repeat the year.

ATTENDANCE POLICY FOR STUDENTS REPEATING THE YEAR

- a. Students who are repeating the year either due to poor attendance or failure in professional or supplementary examination will need to attend all the classes of the particular subject in the next year.
- b. Their previous years' attendance will not be taken into consideration.
- c. If their attendance is AGAIN less than 75% in the current academic year, they will not be allowed to appear in the upcoming annual examination.
- d. This includes all practical classes, demonstrations, CBL sessions, lectures and clinical classes.

ATTENDANCE POLICY FOR STUDENTS APPEARING IN SUPPLEMENTARY EXAMS

- a. Only those students who have appeared in the professional examination can appear in the supplementary examination.
- b. Students who were not eligible for the annual exam will not be allowed to sit in the supplementary exam either.
- c. Those who did not avail the chance must repeat the year and cannot appear in the supplementary.
- d. Students who fail to pass their first annual exam will be provisionally promoted to the next class while preparing for the supplementary examination.
- e. Attendance will be marked in the class to which they have been promoted.
- f. The students will prepare for the supplementary exams in their personal time without compromising the attendance of the year they are provisionally promoted to .
- g. In case the student fails to pass the supplementary exam he/she will revert to the previous class and the attendance in the new class will be counted in the class to which they revert to.
- h. Those students who do not attend classes will be marked absent and may face a shortage of attendance and will be asked to repeat the year.

ELIGIBILITY CRITERIA FOR APPEARING IN ANNUAL PROFESSIONAL EXAMINATIONS

A student will be eligible to appear in the annual professional examination if he/she fulfills the following criteria:

- a. At least 75% attendance in every subject.
- b. Have cleared all financial dues.
- c. Must appear in all three end-of-module examinations.
- d. Must have scored passing marks in at least two of end of end-of-module examinations.
- e. No breach of discipline should have occurred for which the Disciplinary Committee has advocated a punishment.
- f. A student who has failed 2 end-of-module tests will be permitted a “resit” at the end of the academic year.
- g. Students who did not appear in end of end-of-module tests will not be allowed in the “resit” .
- h. No student can appear in one subject in an annual professional examination but must appear in all the subjects for that year.
- i. Subjects may be designated for the supplementary exams or for students repeating a year.
- j. There will be no remedial or extra classes in any subject for making good the shortfall in attendance.
- k. Departments may offer revision classes but these will not be considered formal classes and will not be entered in the regular attendance.

POLICY OF ASSESSMENT

MDC will conduct periodic tests as well as end-of-the-chapter tests in each subject on regular basis. Most of the tests will be conducted online, similar to the Muhammad Medical College.

There is a policy of ongoing or formative assessment of all students and summative assessment at the end of the module. Muhammad Dental College Mirpurkhas is affiliated with Liaquat University of Medical & Health Sciences, Jamshoro.

Formative or ongoing assessment:

- Marks for CBL sessions, SURVIVE, logbooks, history writing or clerking of patients.
- End of OPD rotation examinations, CATs, quizzes and tests held in a department. The end-of-module test comprises:
 - OSCE or OSPE examination
 - Viva voce exam.
 - Written theory examination
 - The written examination has 2 parts an MCQ and a short answer or short essay type examination.

Summative Assessment:

- Annual examination will be conducted by the affiliating university as per PM&DC guidelines.
- **The end-of-module test comprises 30% of the final professional examinations**
 - Written Final professional theory examination based on MCQs=70%
- **Final OSPE/OSCE.OSVE:**
 - OSCE or OSPE examination, Viva voce exam=80%
 - Internal evaluation =20%

Generation of internal evaluation marks from each module.

- 20% MARKS will be calculated from each end of the module exam and will be counted in the final examinations. The Internal evaluation is communicated to the University by the administration department.
-

SCHEME OF INTERNAL ASSESSMENT/EVALUATION-20%-2025			
Overall attendance		7%	
Modular Test/Ward test/OPD Test		2% (6%)	
SURVIVE		7%	
SURVIVE 7%			
Final Year		Remaining Years	
Test	3%	Test	3%
Assignment	2%	Assignment	2%
Post Test Discussion	2%	PTD/Practical Book/Logbook	2%
Total	7%	Total	7%

POLICY FOR ELECTIVES

- a. Electives are not mandatory nor are they a part of the curriculum. Electives are considered add on extra-curricular activities with benefits for selection for jobs or postgraduate training after BDS.
- b. The Electives Rotation will be of four weeks' duration.
- c. It will be planned at least six months in advance during the 3rd or 4th Year.
- d. The Elective will be planned during the **SUMMER HOLIDAYS** preferably.
- e. The institution or department will be of the student's choice.
- f. During the elective, the student will not get credit for attending lectures at MDC.
- g. It is the student's responsibility to ensure that his/her overall attendance record is not affected adversely by the elective.**
- h. The student will not proceed on an elective without informing the Principal or the Concerned chairperson designated for this purpose who will take permission from the Principal.
- i. The student will sign a waiver to the effect that any shortfall in attendance is his /her own responsibility and will be dealt with as per rules of Liaquat University of Medical & Health Sciences (LUMHS).
- j. The adequacy of education during the elective is the student's own responsibility.
- k. Permission to attend an elective is given by the Associate Dean designated for this purpose. This simply implies that the college authorities are aware that the student is away for this period so admission is not cancelled.
- l. The student will ensure that the Elective Supervisor completes an evaluation report at the end of the elective.
- m. MDC will not provide any financial assistance for the elective.

DIRECTORATE OF STUDENTS' ACTIVITIES

Directorate of Student Affairs is responsible for providing a constructive learning environment that fosters positive learning, personal development and enhances the quality of life for students. This department encourages students to achieve the objective of building a balanced personality.

The Directorate of Students Affairs establishes a connection between students, faculty and University administration. It is an important component of university that offers a platform for curricular and co-curricular activities to explore, enlighten and polish the hidden capabilities of the students so that they can enjoy pleasant environment and deliver a series of programmes to enrich the campus life. It is committed to enable all students to participate in an engaging, healthy, and active learning environment during their time at MDC-ISU. All these pursuits tend to improve the level of confidence among the students.

The Directorate has the following major duties

- To promote extra co-curricular and cultural activities such as organizing Debate competitions, Quiz competitions, workshops, Bake sale, welcome party, and farewell.
- Providing sports facilities and regular organization of sports competitions.
- Arranging different lecture sessions for Personal and Professional Development.
- Arranging community visits.
- Conducting various seminars on current national and international issues.
- Arranging blood donation camps and much more.

CURRICULAR FRAMEWORK AND SEQUENCE OF CONTENT OF BDS PROGRAM

Organization of modular curriculum and teaching from First to Third year BDS & Conventional Curriculum in Final Year.

The modular configuration with duration is mentioned as under.

Year	Module	Modular Configuration	Weeks
First Year BDS	1	Block I	12 Weeks
	2	Block II	12 Weeks
	3	Block III	12 Weeks
	General Education	General education (including Islamic studies, Pakistan studies, English, Arts & humanities, behavioral sciences, and research)	Parallel Subject
		Pre-Clinical (Rotation in Operative, Prosthodontics, Clinical Care, Dental Anatomy)	36 Weeks
Second Year BDS		Disease, Infections & Therapeutics I	17 Weeks
		Disease, Infections & Therapeutics II	
		Neoplasia, Hemodynamics & Genetics	9 Weeks
		Dental Materials & Pre-Clinical Dental Sciences	9 Weeks
	General Education	General education, including behavior science, ICT, and research	Parallel Subjects
Third Year BDS	1	Removal Prosthesis+ Research	9 Weeks
	2	Oral Medicine, Exodontia, Pain Control & Oral radiology (OMFS+ Oral Medicine & Diagnosis)	9 Weeks
	3	Cariology (Operative Dentistry)	9 Weeks
	4	Periodontics (Gingiva & Periodontal Disease) + Behavioral Sciences	9 Weeks
	5	Community Dentistry & Public Health Services & Oral Radiology	36 Weeks
		General Medicine & General	36 Weeks

		Surgery	
	General Education	PERLs 3 (Professionalism, Ethics, Research & Leadership), Behavioral Sciences, Medical Education & ICT.	Parallel Subjects
Final Year BDS	1	Oral Maxillofacial Surgery	8 Weeks
	2	Operative Dentistry & Endodontic	8 Weeks
	3	Orthodontics	8 Weeks
	4	Prosthodontics	8 Weeks
	5	Paediatric Dentistry	8 Weeks
	General Education	PERLs 4 (Professionalism, Ethics, Research & Leadership), Behavioral Sciences, Medical Education & ICT.	Parallel Subjects

- Learning objectives for each module are written down in the study Guide issued at the beginning of each academic year to each student. Curriculum for each module can be provided on request.
- A schedule is issued for each module re-enforced by a weekly schedule issued 2 weeks in advance of the teaching dates.
- This includes lecture, CBL, Practicals, Demonstrations, Ward Clinics, Evening Clinics, Classes in Skills Lab, Self-Study and Library period.
- The assessment schedules such as end-of-module tests as well as period of preparation leave and timing of OSCE/ OSPE, are given in the Academic Calendar.
- The assessment result is displayed on departmental notice boards and recorded in the Examinations Department of MMC and Student Affairs of MDC.

ORIENTATION OF VARIOUS DEPARTMENTS

Department of Operative Dentistry

Department of Orthodontics

Department of Oral and Maxillofacial Surgery

Department of Prosthodontics

Department of Paedodontics

DEPARTMENT OF DENTAL EDUCATION

High-quality Medical /Dental education is a vital prerequisite for high-quality patient care. Dental education's ultimate aim is to supply society with a knowledgeable, skilled and up-to-date cadre of professionals who put patient care above self-interest, along with developing their expertise over the course of a lifelong career.

The department of Dental Education has expanded beyond the classroom all around the world, and quality patient care is learned by bedside teaching and with the practical introduction of clinical cases in preclinical years. The Dental Education department ensures that the educational content synchronizes with the learning strategies, the assessment tools, and provides effective feedback to enhance the learning process. The Department of Medical/ Dental Education at Ib-ne-Sina University is interested in raising the standards of teaching by continuously developing a pool of trained faculty members. Faculty training is done in educational content as well as in diverse teaching skills to encourage a flexible and learner-centered approach during teaching. For this purpose, interactive, practical, and hands-on workshops are constantly designed, focusing on current and effective modes of evidence-based teaching and assessment tools. Self-reflection and critique of teaching techniques are also vital in propelling an Institute towards excellence. Our Dental Education department aims to achieve that and more.



.FACULTY IN THE DEPARTMENT OF DENTAL EDUCATION

Name	Designation	Qualification
Prof Dr Syed Razi Muhammad	Chairman/Professor	MBBS, FCPS, FRCP, MHPE
Dr Kiran Fatima	Assistant Professor	BDS, MCPS-HCSM, MHPE
Dr Taqdees Maryam	Lecturer	BDS, CHPE
Dr Nosheen Zafar	Lecturer	BDS, CHPE

DEPARTMENT OF OPERATIVE DENTISTRY

The Department of Operative Dentistry at Muhammad Dental College is highly motivated and focused on achieving the academic goals of the institute, through vigorous hands-on training, patient treatment, regular theoretical lessons, interactive discussions and research.

The field of Operative Dentistry involves the diagnosis, prevention and treatment of dental caries and the restoration of teeth which have undergone loss of tooth structure either through infection, disease or trauma. Operative Dentistry further subdivides itself into the following sub-specialties:

- Restorative Dentistry
- Endodontics

Restorative dentistry uses various materials to build up and restore part of lost tooth structure. Restoration of teeth not only involves restoring their function, but also to reestablish or improve their esthetics, to allow the patient to smile, talk, eat and laugh with confidence.

Endodontics deals with the etiology, diagnosis, prevention and treatment of diseases and injuries involving the dental pulp, and conditions resulting from them (sequelae). The root canals are cleared of their pulpal tissue and filled with inert material, thereafter allowing restoration of the previously infected tooth.

FACULTY IN THE DEPARTMENT OF OPERATIVE DENTISTRY		
Name	Designation	Qualification
Dr Asadullah Khan Tareen	Chairman/Professor	BDS, M.Sc. (Conservative Dentistry)
Dr Shuja Aslam	Assistant Professor	BDS, FCPS
Dr Mohsin Ali Deeraaj	Assistant Professor	BDS, FCPS
Dr Saima	Registrar	BDS, FCPS (Trained)
Dr Asma Kauser	Registrar	BDS, FCPS (Trained)
Dr Priyanka	Registrar	BDS
Dr Moon Irum	Registrar	BDS, FCPS (trained)

Learning Outcomes: Students will be given opportunities to practice manual skills on acrylic teeth and on patients under supervision, and thereby prepare for the clinical work on a patient.

Knowledge: The student should be able to:

- Make a diagnosis of dental caries, NCCL, & Cracked tooth
- Define the principles of cavity preparations for the currently available restorative materials.
- Use of hand instruments and rotating instruments
- Handling of the dental materials used during the course
- Describe the physical characteristics of the currently used adhesive and restorative materials.
- List various techniques used to restore different cavity preparations.

Skills: At the end of this course, the student should be able to:

- Demonstrate patient-operator positioning
- Demonstrate different restorative dentistry techniques.
- Prepare Different cavity designs for both amalgam and tooth colored restorations.
- Manipulate different bases and liners.

Attitudes: Through training, the student is expected to have acquired a positive and self-critical attitude towards technical quality and demonstrate good time management skills during practical sessions.

DEPARTMENT OF ORTHODONTICS

Department of Orthodontics deals with correction of the mal-aligned teeth, along with improving the esthetics and function of patients. Students are introduced to this department/ subject for the first time since they started their BDS course. So we hope they are able to grasp the concepts easily and take interest in this new field.

At the end of the year we expect that graduates are able to identify the dento-alveolar, growth related, and functional abnormalities or any deviations from the normal development in primary, mixed and permanent dentition.

You should also be able to identify the environmental factors and etiologies that are contributing towards the occurrence or exacerbation of the malocclusion, conduct or at least know about preventive and interceptive Orthodontics, and be able to design, insert and adjust the space maintainers. You should be able to evaluate the need for Orthodontic treatment, formulate a treatment plan for simple malocclusions and also be able to execute simple treatment procedures like inserting and adjusting removable appliances.

FACULTY IN THE DEPARTMENT OF ORTHODONTICS		
Name	Designation	Qualification
Dr. Waheed Gul Shaikh	Professor	BDS, FCPS
Dr Mahmood Shah	Assistant Professor	BDS, MCPS
Dr Asha Devi	Senior Registrar	BDS, FCPS
Dr Abdul Rehman Khan	Senior Registrar	BDS, FCPS
Dr Veshal Dherwani	Registrar	BDS
Dr Nimra Kaka	Registrar	BDS

DEPARTMENT OF ORAL AND MAXILLOFACIAL SURGERY

The Department of Oral & Maxillofacial Surgery offers an accessible introduction to the full range of Oral & Maxillofacial Surgery and takes a practical approach, focusing on the core competencies required by undergraduates and house officers.

Our department is highly motivated and focused on achieving the academic goals of the institute, through hands-on training on patients, case presentations, journal clubs, interactive sessions and research projects.

The field of Oral & Maxillofacial Surgery is the specialty of Dentistry that involves the diagnosis, surgical management, and adjunctive treatment of diseases and facial deformity, including both functional and esthetic aspects of hard and soft tissues of the oral & maxillofacial region.

The foremost objective is to prepare the students by obtaining theoretical and practical knowledge and skills including history taking and performing clinical examination to formulate treatment plan. The students should be able to recall principles of Exodontia, Local and General Anesthesia, basic armamentarium and to perform BLS and ATLS.

Moreover, the students should be able to plan and perform most procedures related to surgical removal of mandibular third molars. Finally, the students should be able to describe and explain the most important pre- and post-operative complications in relation to Oral & Maxillofacial Surgery.

FACULTY IN THE DEPARTMENT ORAL & MAXILLOFACIAL SURGERY		
Name	Designation	Qualification
Dr Qadeer-UL-Hassan	Chairman/ Professor	BDS, MCPS
Dr Maya Madhuri	Assistant Professor	BDS, FCPS
Dr Ali Raza Zia	Assistant Professor	BDS, FCPS
Dr Ameer Hamza	Senior Registrar	BDS, FCPS
Dr Farzana Lakho	Senior Registrar	BDS, FCPS
Dr Anil Kumar	Registrar	BDS
Dr Faryal Rashid	Registrar	BDS

DEPARTMENT OF PAEDODONTICS

Paedodontics specifically deals with primary and early permanent dentition in young children, treating infected primary teeth or newly erupted permanent teeth, to prevent further damage to un-erupted permanent teeth as the child grows. It not only involves treating dental caries, but also devising comprehensive treatment plans for children who are present with various dental anomalies and require intervention to allow a healthy and stable permanent dentition.

FACULTY IN DEPARTMENT OF PAEDODONTICS		
Name	Designation	Qualification
Dr Asad Tahir	Incharge /Senior Registrar	BDS, FCPS (Operative dentistry)
Dr Najmus Sehar	Senior Registrar	BDS, FCPS (Operative dentistry)
Dr Narvina	Registrar	BDS

DEPARTMENT OF PROSTHODONTICS

Prosthetic dentistry is the branch of dentistry about the restoration and maintenance of oral functions, comfort, appearance, and health of the patient by restoration of teeth and/or replacement of the missing structures with removable and fixed dental prosthesis.

The department caters to patients through the provision of removable complete and partial denture prosthesis; fixed prosthesis, maxillofacial prosthesis, and temporomandibular disorders management.



FACULTIES OF SCIENCE OF PROSTHODONTICS		
Name	Designation	Qualification
Dr Atif Jawad	Chairman /Professor	BDS, FCPS
Dr Uzma Bashir	Associate Professor	BDS, M.Sc.
Dr Shagufta	Registrar	BDS, M.Sc (FCPS)
Dr Champa Kumari	Registrar	BDS, (FCPS)
Dr Rehan	Registrar	BDS

PROGRAM INTENDED LEARNING OUTCOMES OF FINAL YEAR BDS

MODULE: I-OPERATIVE DENTISTRY			
Terminal Objectives	<ul style="list-style-type: none"> • Demonstrate appropriate basic knowledge of medical and dental sciences. • Evaluate the use of laboratory tests and imaging studies and interpret the results to arrive at clinical decision-making by critical thinking. • Recognize patients with special care and perform dental emergencies, having good communication skills. • Engage in research activity aimed at improving the quality of health care, including behavior modification of individuals and the community for a quality life • Elicit professional skills while providing patient-centered care by a relevant and comprehensive physical and dental examination. • Commit to lifelong learning to keep up to date with developments in dental practice and trends in disease at the population level by strong leadership and management skills. • To exhibit ethical patient-centered care based on integrity, humility, social accountability and high ethical values of this sacred profession 		
Rationale	<p>Teaching Endodontics and Operative Dentistry in the final year of BDS equips students with essential clinical skills needed for independent dental practice. These subjects develop competence in diagnosing and restoring diseased teeth, managing dental pain, and performing root canal treatments with confidence. Students learn to apply evidence-based techniques, select appropriate materials, and prioritize patient-centered care. Training in these areas strengthens critical thinking, enhances manual dexterity, and prepares graduates to handle common restorative and endodontic challenges encountered in daily practice. By mastering these skills, future dentists are better prepared to deliver safe, effective, and comprehensive oral healthcare.</p>		
S.no	Learning Objectives: At the end of the module, students should be able to:	Teaching Strategies	Assessment Tool
1.	Define Endodontics	IL	BCQs/VIVA
2.	Memorize Aims of Endodontics	IL	BCQs
3.	Identify Anatomy of the root canal system	IL	OSCE
4.	Review the dental Pulpal System	IL/SGD	BCQs/SEQs
5.	Know the cells and extracellular components of the dental pulp	IL	BCQs
6.	Debate the blood vessels, lymphatic system and Innervations of dental pulp	IL	BCQs
7.	Discuss the theories of dentine hypersensitivity	IL/SGD	SEQs

8.	Recognize the age changes in the dental pulp	IL	BCQs
9.	Revise the function of the dental pulp	IL/SGD	BCQs
10.	Illustrate various canal configurations	IL/SGD	OSCE
11.	Understand the periapical tissues	IL	BCQs
12.	Debate Iatrogenic Effects on the dental pulp	IL/SGD	BCQs/SEQs/OS CE
13.	Manage how to protect the Dental pulp	IL/CR/CBL	BCQs/SEQs/ VIVA
14.	Plan Vital Pulp Therapies	IL/CR	SEQs/OSCE
15.	Perform Step-wise excavation	IL/CR	BCQs/SEQs/OS CE
16.	Execute Direct Pulp Capping	IL/CR	SEQs/OSCE
17.	Propose Pulpotomy (partial and complete)	IL/CR	SEQs/OSCE
18.	Understand Apexogenesis	IL/CR/CBL	SEQs/OSCE
19.	Discuss the procedure of Apexification	IL/CR/CBL	SEQs/OSCE
20.	Describe the types of endodontic infection	IL/SGD	BCQs/SEQs
21.	Relate the route of entry of microorganisms to the pulpal infection	IL/SGD	BCQs/ VIVA
22.	Name the microorganisms associated with pulpal and periradicular diseases	IL	BCQs/SEQs /VIVA
23.	Explain the development of pulpal pathosis	IL	BCQs
24.	Differentiate between pulp diseases and their clinical features	IL/SGD/CR	BCQs/SEQs/OS CE
25.	Know etiology of reversible and irreversible pulpitis	IL/SGD	BCQs/SEQs/VIV A
26.	Perform management of reversible and irreversible pulpitis	IL/CR	BCQs/SEQs/OS CE
27.	Recognize the pulp polyp	IL/CR	BCQs/SEQs/OS CE
28.	Classify Periapical Lesions of pulpal origin	IL/SGD	BCQs/SEQs/OS CE
29.	Explain etiology, sign symptoms and management of symptomatic apical periodontitis	IL/SGD	BCQs/SEQs/OS CE
30.	Discuss clinical features and management of asymptomatic apical periodontitis	IL/SGD	BCQs/SEQs/OS CE
31.	Define Condensing Osteitis	IL/SGD	BCQs
32.	Differentiate between acute apical abscess and chronic apical abscess	IL/SGD	BCQs/SEQs/OS CE

33.	Relate primary endodontic and secondary periodontal lesion	IL/CR	BCQs/SEQs/OSCE
34.	Know primary periodontal lesion and secondary endodontic lesion	IL/CR	BCQs/SEQs/OSCE
35.	Report the healing of periapical lesions after root canal treatment	IL/CR	BCQs
36.	Practice diagnosis for pulpal & periapical infection	CR	BCQs/OSCE
37.	Speak the correct questions about history and symptoms of the present complaint	CR	OSCE /VIVA
38.	Apply methods for Extraoral & Intraoral examination	CR	OSCE /VIVA
39.	Perform clinical tests to check pulp and periapical status	CR	OSCE
40.	Interpret Radiographic findings for diagnosis	CR/SGD	BCQs/OSCE
41.	Formulate treatment plan for endodontic emergencies	IL/CR/SGD	BCQs/OSCE
42.	Identify endodontic instruments	CR/SGD	BCQs/OSCE
43.	Express importance of endodontic radiology	IL/CR	BCQs/OSCE
44.	List components of X-ray film packet	IL/CR	BCQs/OSCE
45.	Revise principle of ALARA	IL/CR/SGD	BCQs/SEQs/OSCE
46.	Restate indications of Periapical radiograph	IL/CR	BCQs/SEQs
47.	Demonstrate and apply positioning technique of periapical radiograph	CR	BCQs/OSCE
48.	Compare paralleling and bisecting angle technique	IL/SGD	BCQs/OSCE
49.	Use SLOB rule	IL/SGD	BCQs/OSCE
50.	Recognize the importance of digital radiography	IL/SGD	BCQs
51.	Apply techniques of local anesthesia (Infiltration & Block anesthesia)	CR	BCQs/SEQs/OSCE
52.	Implement technique of supplemental anesthesia including Intraosseous, Intraligamentary, Intrapulpal	IL/CR	BCQs/SEQs/OSCE
53.	Practice principal of Isolation in endodontic	Skill Lab/CR	OSCE
54.	Identify objectives of straight line access preparation in both anteriors and posteriors teeth	IL/SGD/CR	BCQs/ VIVA
55.	Describe the sequences of operations to start access preparations on various teeth	IL/SGD/CR	BCQs/ VIVA
56.	Demonstrate the location of each canal orifice	IL/SGD/CR	BCQs/OSCE
57.	Perform the pulpectomy	IL/SGD/CR	BCQs/OSCE
58.	Establish the working length of the root canals	IL/SGD/CR	BCQs/OSCE

59.	Explain cleaning and shaping of root canals	IL/SGD/CR	BCQs/SEQs/OS CE
60.	Differentiate between step-back and crown-down techniques of canal preparation	IL/SGD/CR	BCQs/SEQs/OS CE
61.	Know the Irrigants use during cleaning and shaping	IL/SGD/CR	BCQs/SEQs/ VIVA
62.	Execute passive step-back, balanced force and Ni-ti rotary techniques of canal preparation	IL/CR	BCQs/SEQs
63.	Quantify the criteria for evaluating cleaning and shaping	IL/SGD/CR	BCQs/SEQs
64.	Understands the objectives of intracanal medicaments in root canal treatment	IL/SGD/CR	BCQs/SEQs/ VIVA
65.	Perform the use of intracanal medicaments	IL/SGD/CR	BCQs/SEQs
66.	Apply temporary restorations to seal the access cavity	IL/SGD/CR	SEQs
67.	Know when to obturate the canal	IL/SGD/CR	BCQs
68.	Write obturation and sealer materials	IL/SGD	BCQs/SEQs
69.	Perform different techniques of obturation (lateral condensation, vertical compaction)	IL/CR	BCQs/SEQs/ OSCE
70.	Execute restoration of endodontically treated teeth	IL/CR	BCQs /VIVA
71.	Recognize Procedural Accidents during root canal treatment	IL/CBL	BCQs/SEQs/OS CE
72.	Memorize Indications of retreatment in failed endodontic tooth	IL	BCQs/SEQs
73.	Execute procedure for Retreatment	IL	BCQs/SEQs/ VIVA
74.	Describe indications and contraindications of periapical surgery	IL	BCQs/SEQs
75.	Perform procedures involved in periapical surgery	IL	BCQs/SEQs
76.	Differentiate between Root amputation, Hemisection and Bicuspidization	IL	BCQs/SEQs/OS CE
77.	Evaluate Endodontic Outcomes	IL	BCQs
78.	Categories longitudinal tooth fractures	IL	BCQs/SEQs
79	Perform Diagnosis of longitudinal tooth fractures	IL	BCQs/SEQs/OS CE
80	Plan management of longitudinal tooth fractures	IL	BCQs/SEQs/OS CE
81	Define Dental Caries	IL	BCQs (one best)
82	Recall carious lesions according to GV. Black	IL	BCQs(one best)
83	Memorize Graham Mount Classification	IL	BCQs/SEQs

84	Debate causes of dental caries	IL/CBL	BCQs/SEQs
85	Summarize caries risk factors	IL/CBL	BCQs/ VIVA
86	Classify Dental caries by ICDAS	IL/CBL	BCQs/SEQs
87	Perform clinical examination and diagnosis of dental caries	IL/SGD/ CBL	OSCE
88	Know new tools for caries detection	IL	BCQs/SEQs
89	Plan risk-based caries management	IL/SGD	BCQs/SEQs
90	Explain preventive treatments for dental caries	IL/CBL	BCQs/SEQs/ VIVA
91	Apply noninvasive treatments for dental caries	IL/CBL	BCQs/SEQs/ VIVA
92	Discuss the risk factors for root caries	IL	SEQs
93	Apply preventive and restorative treatment for root caries	IL/CR	SEQs
94	Use NICE guidelines for patient recall interval	IL	SEQs
95	Know the importance of dental record	IL	BCQs
96	Identify the Instruments used in restoration	CR	OSCE
97	Apply method of isolation in restorative dentistry	IL/SGD	OSCE
98	Review the composition of amalgam	IL	BCQs/SEQs
99	Establish the significance of gamma-2 phase	IL	BCQs/ VIVA
100	Know the advantages and disadvantages of amalgam	IL	BCQs/SEQs
101	Distinguish between different types of amalgam according to their composition and shape	IL	BCQs
102	Apply principles of cavity preparation for Class I, II,& V amalgam restorations	CR/SGD/CA	BCQs/SEQs /OSCE
103	Describe complex restorations for amalgam	IL	BCQs
104	Perform Nayyar core and compo core	IL/CR	BCQs /VIVA
105	Execute accessory means of retention	IL/CR	BCQs/ VIVA
106	Memorize significance of amalgam bonding	IL/CR	BCQs/SEQs
107	Differentiate between cavity liners, sealers and bases	IL/SGD	SEQs/OSCE/SC
108	Apply lining to protect the pulpal floor of the cavity	CR	OSCE
109	Explain different steps of amalgam placement	SGD/CR	OSCE/SC
110	Execute finishing and polishing of amalgam restorations	SGD/CR	BCQs/SEQs /OSCE/SC

111	Rewrite mercury hazards and describe its hygiene	IL/CR	SEQs
112	Discuss methods of Sterilization and Disinfection	IL/CR	BCQs/SEQs
113	Describe Adhesive Dentistry	IL	BCQs
114	State the Principles of Adhesion to enamel & dentine	IL	BCQs/SEQs
115	Explain the process of etching to enamel and dentine	IL	BCQs/SEQs/ OSCE
116	Enumerate the factors affecting adhesion to enamel and dentine	IL	SEQs/ VIVA
117	Classify bonding systems	IL	BCQs/SEQs
118	Argue dry and wet bonding	IL	BCQs/SEQs
119	Memorize composition of dental composites	IL	BCQs
120	Execute clinical steps for Class III & Class IV for resin composite restorations	IL/CR	BCQs/SEQs/ OSCE
121	Explain advantages & disadvantages of posterior composite as a restorative material	IL	BCQs/SEQs
122	Describe the indications of posterior composite	IL	BCQs/SEQs
123	Perform fissure sealant application	IL/CR/SGD	BCQs
124	Use of preventive resin restoration technique	IL/CR/SGD	BCQs/SEQs
125	Distinguish between fissure sealant and preventive resin restorations	IL	BCQs/SEQs/ VIVA
126	Perform placement of posterior composite restoration in Class I, II	IL/CR	OSCE
127	Establish tight proximal contact for posterior composite restoration	IL/CR	OSCE
128	Recognize the importance of C-factor	IL	BCQs/SEQs
129	Know how to decrease C-factor to improve longevity of composite restoration	IL/CR	BCQs/SEQs/ OSCE
130	Apply various matrix systems for Class II, III, IV	IL/Skill Lab	OSCE
131	Explain the principles behind bonded based and snow plough techniques	IL	BCQs/SEQs/ VIVA
132	Identify the instruments and materials used for finishing and polishing of composite restorations	IL/CR	OSCE
133	Perform finishing & polishing of composite fillings	IL/SGD/CR	OSCE
134	List the etiology of non-carious cervical lesions	IL	BCQs/SEQs
135	Use different restorative materials for non-carious cervical lesions	IL/CR	OSCE
136	State the causes of discoloration	IL	BCQs/SEQs
137	Enlist the Indications and contraindications of bleaching	IL	BCQs/SEQs

138	Know the mode of action of bleaching agent	IL	BCQs/SEQs
139	Plan bleaching of endodontically treated teeth	IL	BCQs/SEQs
140	Explain bleaching of vital teeth	IL	BCQs/SEQs
141	Factors affecting both the in-office and at-home bleaching	IL	BCQs/SEQs
142	Propose the procedure of micro abrasion and macroabrasion	IL	BCQs/SEQs/ OSCE
143	Write down the indications of veneers	IL	SEQs
144	Enlist materials used for veneers	IL	SEQs
145	Demonstrate tooth preparation for veneers	IL/CR	OSCE
146	Distinguish between inlay and on lay	IL	BCQs/SEQs
147	Perform tooth preparation of inlay and on lay	IL/CR	BCQs/SEQs/ OSCE
148	Execute cementation of inlay and on lay	IL	BCQs
149	Discuss the core materials	IL/CR	BCQs/SEQs
150	Discuss the indications of dental posts	IL/CR	BCQs/SEQs
151	Describe designs of dental posts and types	IL/CR	BCQs/SEQs/ OSCE/ VIVA
152	Perform preparation of the dental post in the canal	IL/CR	BCQs/SEQs/ OSCE
153	Execute cementation of post in the canal of tooth	IL/CR	BCQs/SEQs OSCE
154	Discuss mechanical and chemomechanical methods of fluid control	IL	BCQs/SEQs
155	Summarize steps of placement of the retraction cord	IL/CR	BCQs/SEQs
156	Recommend the use of CAD/CAM in dentistry	IL	BCQs/SEQs/ OSCE

S. No	Objectives: At the end of the module, students should be able to:	Teaching strategy	Assessment tool
OPERATIVE			
1.	Apply behavior management strategies' to the pediatric patient in a dental practice	IL/CBL	BCQs/SEQs
2.	Know Pharmacological management of the anxious child	IL	BCQs/SEQs
3.	Demonstrate local anesthesia for Paediatric dentistry	IL/CR	OSCE
4.	Describe the pattern of caries in pre-school children	IL	BCQs/SEQs

5.	Understand assessment of caries risk factors in children	IL/CR	BCQs/ VIVA
6.	Explain the relationship between diet, plaque, saliva and caries	IL/CBL	BCQs/SEQs
7.	Perform Dental caries detection and diagnosis in pre-school children in dental OPD	IL/CR	BCQs/SEQs
8.	Recognize the importance of Diet counseling to the parent and the child	IL	BCQs/SEQs/ VIVA
9.	Discuss the prevention of dental caries	IL	BCQs/SEQs
10.	Describe the importance of Fluoride administration in caries control	IL	BCQs/SEQs
11.	Explain Mode of action of Fluoride	IL/CBL	BCQs/SEQs
12.	Know importance of Water fluoridation	IL	SEQs
13.	Prescribe Fluoride supplement to reduce caries	IL/CR	SEQs
14.	Apply Fluoride gel/ varnish as a preventive measure	IL	SEQs
15.	Apply fissure sealant	IL/SGD	OSCE
16.	Appreciate the importance of temporization in Paediatric patients with multiple caries lesions	IL/CR	BCQs/SEQs
17.	Apply operative procedure to restore the primary teeth when pulp is not involved	IL/CR	BCQs/SEQs
18.	Recognize the importance of pulp therapy in a primary dentition	IL/CR	BCQs/SEQs/O SCE
19.	Express medicaments used for pulpotomy in primary dentition	IL/CR	BCQs/SEQs/ VIVA
20.	Perform pulpotomy procedure in primary teeth	IL/CR	BCQs/SEQs/O SCE
21.	Discuss indication of Pulpectomy for primary teeth	CR/SGD	BCQs/SEQs/O SCE
22.	Demonstrate the procedure of pulpectomy in primary teeth	CR	BCQs/SEQs/O SCE
23.	Revise the application of fissure sealants and Preventive resin restoration in primary dentition	IL/CR	BCQs
24.	Know indications of Stainless steel crown	IL/CR	BCQs/SEQs
25.	Demonstrate procedure of stainless steel crown preparation	IL/CR	BCQs/SEQs
26.	Perform cementation of stainless steel crown	IL/CR	BCQs/SEQs
27.	Describe rationale of Hall technique in primary teeth	IL/CR	BCQs/SEQs /VIVA

28.	Outline the use of adhesive coping	IL/CR	BCQs/SEQs
29.	Explain alternatives to conventional cavity preparation	IL	BCQs
30.	Understand use of lasers in dentistry	IL	BCQs
31.	Apply operative procedure to restore the permanent teeth in mixed dentition when pulp is not involved	IL/CR	BCQs/SEQs
32.	Recognize the aetiological factors of dental trauma	IL	BCQs/SEQs/ VIVA
33.	Classify the nature of dento-alveolar injuries	IL	BCQs/SEQs
34.	Recognize the importance of history (medical & dental) in traumatic injuries	IL/CR	BCQs/SEQs/VI VA
35.	Examine intra-oral, extra-oral tissue in case of dental trauma	IL/CR	BCQs/OSCE
36.	Describe radiographic and clinical features of the various injuries to the primary dentition	IL/CR	SEQs/OSCE
37.	Write the sequelae of traumatic injuries to the primary dentition	IL	BCQs/SEQs
38.	Know the management of complications in permanent dentition occur due to traumatic injuries to the primary dentition	IL/CR	BCQs/SEQs/O SCE
39.	Describe clinical and radiographic features of the traumatic injuries to the hard dental tissue and the pulp in permanent dentition	IL/CR	BCQs/ SEQs/OSCE
40.	Apply treatment options to manage traumatic injuries to the hard dental tissue and the pulp in permanent dentition	IL/CR	BCQs/SEQs/O SCE/ VIVA
41.	Use pulp therapy procedures to treat traumatic injuries	IL/CR	BCQs/SEQs/O SCE
42.	Differentiate between various Tooth luxations injuries	IL	BCQs/SEQs/ OSCE
43.	Explain clinical and radiographic features of luxation injuries	IL	BCQs/SEQs/ OSCE
44.	Manage Concussion, Subluxation Lateral luxation, and Extrusive luxation injuries	IL	BCQs/SEQs/O SCE
45.	Use different treatment modalities to manage Intrusive luxation injuries of various degree	IL	BCQs/SEQs/ OSCE
46.	Execute replantation procedure for Avulsion injuries	IL	BCQs/SEQs/O SCE
47.	Know types of splints use in Paediatric dentistry	IL	BCQs/SEQs/O SCE
48.	Apply different types of Splinting techniques	IL	BCQs/SEQs

49.	Differentiate between various types of resorption	IL/CR/SGD	BCQs/SEQs/
50.	Define root resorption and explain its types	IL	BCQs/SEQs
51.	Write clinical and radiographic features of External inflammatory root resorption	IL/CR/SGD	BCQs/SEQs/O SCE/ VIVA
52.	Know management of External inflammatory root resorption	IL	BCQs/SEQs/O SCE
53.	Describe diagnosis of cervical resorption	IL	BCQs/SEQs
54.	Recognize various types of invasive cervical resorption	IL	BCQs/SEQs/O SCE
55.	Perform management of invasive cervical resorption	IL	BCQs/SEQs/O SCE
56.	Identify radiographic features of internal root resorption	IL	BCQs/SEQs/O SCE
57.	Apply procedure to manage internal root resorption	IL	BCQs/SEQs/O SCE
58.	Write clinical and radiographic differences between external and internal root resorption	IL	BCQs/SEQs/O SCE
59.	Explain the process of replacement resorption	IL	BCQs /VIVA
60.	Know management of replacement root resorption	IL	BCQs
61.	Recognize various abnormalities of tooth size	IL	BCQs/SEQs
62.	Explain prevalence and clinical difference between Megadont and microdontia	IL	BCQs
63.	Examine accessory cusp abnormalities in tooth form	IL/CR	OSCE
64.	Execute management for accessory cusp	IL/CR	BCQs/SEQs/O SCE
65.	Differentiate between Invaginated and Evaginated teeth	IL/CR	BCQs/SEQs
66.	Apply management for Invaginated and Evaginated teeth	IL/CR	OSCE/ VIVA
67.	Appreciate abnormalities of root form	IL	BCQs
68.	Explain Taurodontism and its types	IL	BCQs/SEQs
69.	Debate the inherited anomalies of enamel	IL/CR	OSCE
70.	Discuss diagnose and management of Amelogenesis Imperfecta in primary and mixed dentition	IL/CR	OSCE
71.	Know clinical features of Molar-incisal hypo mineralization	IL	BCQs/SEQs
72.	Understand clinical problems of Molar-incisal hypo mineralization	IL/CR	BCQs/SEQs/O SCE

73.	Perform management of Molar-incisal hypomineralization in primary and mixed dentition	IL/CR	BCQs/SEQs/O SCE
74.	Describe the inherited anomalies of dentine	IL/CR	OSCE
75.	Express clinical and radiographic findings of Dentinogenesis Imperfecta	IL	BCQs/SEQs/O SCE
76.	Execute management for Dentinogenesis Imperfecta in primary, mixed and permanent dentition	IL	BCQs/SEQs/O SCE

MODULE: II-ORAL AND MAXILLOFACIAL SURGERY			
Terminal Objectives	<ul style="list-style-type: none"> • Demonstrate appropriate basic knowledge of medical and dental sciences. • Evaluate the use of laboratory tests and imaging studies and interpret the results to arrive at clinical decision-making by critical thinking. • Recognize patients with special care and perform dental emergencies, having good communication skills. • Engage in research activity aimed at improving the quality of health care, including behavior modification of individuals and the community for a quality of life • Elicit professional skills while providing patient-centered care by a relevant and comprehensive physical and dental examination. • Commit to lifelong learning to keep up to date with developments in dental practice and trends in disease at the population level by strong leadership and management skills. • To exhibit ethical patient-centered care based on integrity, humility, social accountability, and high ethical values of this sacred profession 		
Rationale	<p>Teaching Oral and Maxillofacial Surgery in the final year of BDS prepares students to manage common surgical conditions of the oral cavity safely and effectively. It equips them with essential skills in tooth extractions, minor surgical procedures, infection control, and emergency management. Students learn to assess complex cases, understand surgical anatomy, and apply appropriate patient-management strategies. This training builds confidence, enhances decision-making, and ensures graduates can recognize conditions requiring specialist referral. By gaining practical and theoretical competence, future dentists are better prepared to provide safe, comprehensive care and handle surgical situations encountered in general dental practice.</p>		
S.no	Learning Objectives: At the end of the module, students should be able to:	Teaching Strategies	Assessment Tool
1.	Recall indications and contraindications of local anesthesia, general anesthesia and sedation	IL	BCQ
2.	Identify the role of conscious sedation in the field of Oral and Maxillofacial Surgery	IL	BCQ
3.	Enlist the complications associated with local and general anesthesia	IL	BCQ
4.	Recall Infiltration and Block techniques of Local anesthesia	IL/SGD/CR	OSCE
5.	Recall principles of flap design and incision	IL	BCQ/SEQ
6.	Recall the principles of suturing, types of sutures, advantages and disadvantages	IL/SGD	BCQ

7.	Interpret various hematological and radiological investigations	IL	BCQ
8.	List the instruments used in Oral & Maxillofacial surgery	IL/CR	BCQ/OSCE
9.	Take the history of patient at the chair side with relevant information, evaluation, assessment, diagnosis and treatment plan	IL/CR	SEQ/OSCE
10.	Identify and state the preventive measures for medical emergencies in Dental Office.	IL/CBL	BCQ/SEQ/CP
11.	Discuss the management of medical emergencies in dentistry	IL/CBL	BCQ/SEQ/CP
12.	Recall importance of sterilization and disinfection in Oral Surgery	IL	BCQ
13.	Tell the hazards of Cross-infection	IL	BCQ
14.	Apply personal barriers for prevention of cross infection	IL	BCQ
15.	Describe the principles of Exodontia	IL	BCQ/SEQ
16.	Identify complete armamentarium used in Oral and Maxillofacial Surgery and its dynamic	IL/CR	BCQ/OSCE
17.	Assess patient requiring Exodontia independently	IL/CR	BCQ
18.	Differentiate between simple and complex exodontia	IL	BCQ
19.	Recall the classification systems of Impacted Mandibular and Maxillary 3rd molar and maxillary canine	IL	SEQ
20.	Identify the complications of removal of Impacted teeth along with its indications and contraindications	IL	SEQ
21.	Enlist the dentoalveolar injuries and its management	IL	BCQ
22.	Identify the indications of Pre-prosthetic surgery and its role	IL	BCQ
23.	Describe Ridge augmentation and reduction (alveoloplasty) procedures	IL	BCQ
24.	Enumerate pre-prosthetic procedures commonly performed in maxilla and mandible	IL	BCQ/OSCE
25.	Know the principles of Endodontic surgery and relate periodontal consideration for oral surgery procedures	IL	BCQ
26.	Enumerate the indications of Endodontic Surgery	IL	BCQ
27.	Classify orofacial pain	IL/CBL	BCQ/SEQ
28.	Enumerate the causes of oro-facial pain	IL	BCQ
29.	Formulate differential diagnosis of pain in the oral and maxillofacial region and devise management plan accordingly	IL/CBL	OSCE
30.	Odontogenic Infection	IL	BCQ

31	Differentiate between abscess and cellulitis	IL/CR	BCQ/SEQ
32	Compare both specific and non-specific infections involving facial spaces	IL	BCQ/CQ
33	Enumerate the principles of management of Odontogenic Infection	IL	SEQ
34	Identify complex odontogenic infections	IL/CBL	BCQ/SEQ
35	State the management of Ludwig's angina	IL/CBL	SEQ
36	Identify potential spaces for spread of infection	IL	BCQ/CQ
37	Recall the importance of antibiotic in managing Oral infections	IL	BCQ
38	Discuss the treatment options with the patient like incision and drainage augmented with antibiotic therapy and follow ups	IL/SGD	BCQ
39	Evaluate clinical, imaging and laboratory findings associated with Oral & Maxillofacial pathology including mucosal and malignant lesions	IL	BCQ/CQ
40	Apply diagnostic and therapeutic options for the management of Oral infections and pathology	IL/SGD	OSCE
41	Diseases of Maxillary Sinus		
42	Identify Maxillary antrum diseases on the basis of clinical and radiographic findings.	IL	BCQ
43	Investigate maxillary antrum diseases via periapical and panoramic radiographs	IL	BCQ
44	Enlist management and complications of maxillary sinus that may occur during dentoalveolar surgical procedures like Oroantral Communication and Oroantral Fistula	IL/CR	BCQ
45	Salivary Gland Disorders		
46	Recall the anatomy of major salivary glands	IL	BCQ
47	Classify disorders of Salivary gland	IL	BCQ
48	Enumerate diagnostic tools used for detection of Salivary gland diseases	IL	BCQ/SEQ
49	Recall the diseases of Salivary Glands which comprises of sialolithiasis, Mucocele, Ranula, Sialadenitis, Nectrotizing Sialometaplasia, Sjogren syndrome to develop differential diagnosis with treatment options	IL/CBL	BCQ/CQ
50	Identify the tumors of salivary glands both Benign and Malignant along with means of investigation, diagnosis and treatment plan	IL	BCQ/SEQ
51	Cyst and Tumors of the Jaw		

52	Define & classify cysts and tumors of the head and neck region.	IL	SEQ
53	Develop differential diagnosis for Oral & Maxillofacial pathology	IL	SEQ/OSCE
54	Enlist clinical, radiographic and laboratory investigations of various oral diseases along with oral manifestations of systemic diseases.	IL	SEQ
55	Enlist the histological and radiographic features of different cysts and tumors	IL	BCQ
56	Formulate differential diagnosis and devise management plan for removal of cysts and tumors	IL/CBL	BCQ/SEQ
	OPERATIVE/ OMFS / ORTHODONTICS/RADIOLOGY		
1	Dental Radiology		
2	Define Radiograph	IL/CR	BCQ
3	Enumerate various radiographs used in Dentistry	IL/CR	OSCE
4	Define & distinguish terminologies used in Dental radiology	IL/CR	BCQ
5	Use the terms radiopaque and radiolucent correctly	IL/CR	OSCE
6	Explain the principles of Imaging	IL	BCQ/CQ
7	Enumerate the components of X-ray units and X-ray tube	IL/CR	BCQ/CQ
8	Describe the factors influencing the size, shape and quality of the X-ray beam	IL/CR	BCQ/CQ
9	Differentiate between normal anatomical structures and artifacts	IL/CR	OSCE/CQ
10	Identify the basic components of Digital Imaging system	IL/CR	BCQ/CQ
11	Describe the Imaging principles and special terminologies associated with cone beam CT Imaging	IL/CR	BCQ
12	Enlist the advantages and disadvantages of cone beam CT & identify different axis	IL/CR	BCQ
13	Draw a flow chart showing sequence of steps involved in producing a radiograph from exposure to X-rays to mounting	CR	BCQ
14	Identify various intra-oral and extra-oral radiographic techniques used in OMFS, along with its use	IL/CR	BCQ/OSCE
15	Enlist the indications of different radiographs	IL	BCQ/OSCE
16	Identify the dental and skeletal structures in different radiographs	IL	OSCE
17	Identify the side effects of this diagnostic modality	IL	BCQ/CQ
18	Apply Principle of ALARA	IL/CR	BCQ

19	Demonstrate and apply positioning technique of periapical radiograph	CR	BCQ
20	Compare paralleling and bisecting angle technique	IL/CR	BCQ
21	Discuss indications of occlusal radiograph	IL	BCQ
22	Perform technique of occlusal radiograph	IL	BCQ
23	Demonstrate bitewing radiograph technique	CR	OSCE
24	Apply SLOB rule	IL	BCQ
25	Understand advantages of OPG	IL	BCQ
OMFS			
26	Malignant Disorders		
27	Enumerate the potentially malignant disorders of the oral cavity along with its diagnosis and management	IL/CR	BCQ/OSCE
28	Recall and describe diagnostic and therapeutic treatment options for Oral & Maxillofacial pathology including biopsy techniques, surgery, chemotherapy and radiation.	IL/CR	BCQ
29	Learn to manage patients in Dental OPDs, undergoing radiation	IL	BCQ
30	Interpret the biopsy report and manage the patient accordingly	IL	SEQ
31	Maxillofacial Trauma		
32	Describe the technique and significance of Basic Life support and Advanced trauma life support in Head and Neck Trauma	IL	SEQ
33	Record history of the patient with trauma and examine clinically by carrying out investigations	IL/CR	SEQ/CP
34	Learn the basic principles of diagnosis and management of Dentoalveolar injuries.	IL	BCQ/SEQ
35	Examine and interpret types of facial fractures following first line of treatment keeping in consideration the complications that might occur	IL	BCQ/SEQ
36	Describe maxillofacial injuries in children and elderly	IL	BCQ
37	Investigate, diagnose and devise management of Mandibular fractures, Zygomatic complex fractures, Orbital trauma, midfacial injuries, Nasal, Naso-orbitoethmoidal and frontal sinus injuries	IL	SEQ
OMFS / ORTHODONTICS			
1.	Enlist various Dentofacial deformities and syndromes of Orofacial complex	IL/CBL	BCQ/CP

2.	Describe basics of orthognathic surgery and its significance in correcting Dentofacial deformities	IL	BCQ/SEQ
3.	Enlist various orthognathic procedures	IL	BCQ
4.	Formulate treatment plan for management in patients with Oro-facial Cleft	IL/CBL	BCQ/SEQ
OMFS			
5.	Recall the principles of reconstruction of various jaw deformities	IL	BCQ
6.	Temporomandibular Joint Disorders		
7.	Recall basic anatomy and physiology of the Temporomandibular Joint and the pathologies related to it, which may be both congenital and developmental.	IL	BCQ
8.	Evaluate TMJ pain and dysfunction by thorough history, physical examination, and radiographic assessment.	IL/CBL	BCQ/OSCE
9.	Classify Temporomandibular Joint Disorders	IL	SEQ
10.	Develop differential diagnosis for Temporomandibular joint disorders/diseases	IL/CBL	SEQ/CP
11.	Plan treatment options for TMJ diseases, non-surgical and surgical management	IL/CBL	SEQ
12.	Learn the basics of laser, gene and immunotherapy	IL	BCQ
13.	Forensic Dentistry		
14.	Define Forensic Dentistry.	IL	BCQ/CQ
15.	Predict the importance of dentistry in forensic.	IL	CQ
16.	Outline the significance of age, gender and ethnic determination for personal identification.	IL	CQ
17.	Analyze role of forensic dentistry in Mass disaster, Bite marks, Chelioscopy and Rugoscopy.	IL	CQ
18.	Interpret the role of DNA in primary and permanent dentition.	IL	CQ
19.	Ethics in Dentistry		
20.	Outline the significance of ethics in Dentistry.	IL	BCQ
21.	Enumerate the ethical principles that must be taken into consideration for practicing dentistry.	IL/SGD	BCQ
22.	Explain the terms, values and concepts that are often used in health care.	IL/SGD	BCQ
23.	Describe the difference between a problem and an ethical dilemma	IL/SGD	BCQ

24.	Analyze the role of autonomy in Ethics.	IL	BCQ
25.	Choose the principles or values which are present and important in clinical scenarios	IL	BCQ
26.	Determine the role of informed consent in clinical practice of Dentistry	IL/CR	BCQ

MODULE: I-ORTHODONTICS			
	Terminal Objectives	<ul style="list-style-type: none"> • Demonstrate appropriate basic knowledge of medical and dental sciences. • Evaluate the use of laboratory tests and imaging studies and interpret the results to arrive at clinical decision-making by critical thinking. • Recognize patients with special care and perform dental emergencies, having good communication skills. • Engage in research activity aimed at improving the quality of health care, including behavior modification of individuals and the community for a quality life • Elicit professional skills while providing patient-centered care by a relevant and comprehensive physical and dental examination. • Commit to lifelong learning to keep up to date with developments in dental practice and trends in disease at the population level by strong leadership and management skills. • To exhibit ethical patient-centered care based on integrity, humility, social accountability and high ethical values of this sacred profession 	
	Rationale	Teaching Orthodontics in the final year of BDS helps students understand the diagnosis, prevention, and management of malocclusions, which are essential for comprehensive patient care. It enables future dentists to identify growth abnormalities, plan basic interceptive treatments, and make timely referrals for advanced care. Students learn to assess facial aesthetics, occlusion, and functional issues, improving their ability to provide holistic dental evaluations. Orthodontic training also enhances communication skills, as dentists must explain treatment options clearly to patients. By gaining foundational orthodontic knowledge, graduates are better prepared to support long-term oral health and collaborate effectively within multidisciplinary dental teams.	
S. No	Learning Objectives: At the end of the module, students should be able to:	Teaching strategy	Assessment tool
1.	Identify the different orthodontic terms	IL	OSCE

2.	Use the terms in the diagnosis and problem list of a case	IL/ CR	CQ /OSCE
3.	Relate which types of malocclusions are treatable with Orthodontic treatment	IL/ CBL/ CR	SEQ/OSCE
4.	Recall the normal anatomical structures of the head and face	IL	CQ
5.	Quote the importance of studying growth	IL	SEQ
6.	Quote different types of bone growth	IL	SEQ / BCQ
7.	State the reasons for different types of bone growth	IL	SEQ / BCQ
8.	Quote what are growth fields, sites and centers	IL	SEQ / BCQ
9.	List differences between the growth sites and centers	IL	SEQ / BCQ
10.	List areas which are fields, sites and centers	IL	BCQ
11.	Recall and present how the growth occurs in different areas of head and face	IL/CP	SEQ
12.	List out the different theories regarding how growth takes place	IL	SEQ
13.	Identify the theory that explains the growth process that is taking place in the jaw	IL	SEQ
14.	Quote what type of growth occurs in the maxilla and mandible	IL	SEQ
15.	Predict the changes that would occur in maxilla and mandible at different chronological ages	IL / CR	OSCE
16.	Identify changes in width, length and height of jaws during growth	IL	SEQ/ BCQ/ OSCE
17.	State the normal growth rotations that occur in jaws	IL / CBL	OSCE
18.	Recognize the abnormal growth rotations that occur in jaws	CBL	OSCE
19.	Identify the type of growth rotation that occurs in a particular patient	CR / CBL	OSCE
20.	State how occlusion develops	IL / CR	CQ
21.	Identify the physiologic spaces that occur in an arch during deciduous and mixed dentition	IL/ CR	OSCE/ BCQ
22.	Recognize the importance of the physiologic spaces that occur in an arch during deciduous and mixed dentition	IL	OSCE / BCQ
23.	Measure and calculate the physiologic spaces during mixed dentition for diagnosis	CR	OSCE
24.	Enlist various diagnostic aids before starting orthodontic treatment	IL /CR	OSCE/ SEQ
25.	Discuss the importance of the diagnostic aids for the treatment planning	IL	CQ
26.	Differentiate between the diagnosis and problem list of a case	IL/ CR	OSCE
27.	Formulate the problem list of the patient before the treatment	CR/ CBL	OSCE
28.	Execute problem problem-oriented approach for diagnosis and treatment planning	CR / CBL	OSCE

29.	List the treatment options for a particular patient based on the problem list and diagnosis	CBL /CR	OSCE /SEQ
30.	Design a comprehensive list of patient's pathological and developmental problems, maximizing the benefit to the patient	CR	OSCE
31.	Recognize what is esthetics, and describe the importance of achieving esthetics at the end of treatment	IL	OSCE /BCQ
32.	Recite the terms micro, mini and macro esthetics	IL / CR	OSCE
33.	Identify the problems with micro mini and macro esthetics in a patient	CR /CBL	OSCE
1.	Enlist various diagnostic aides before starting orthodontic treatment	IL /CR	OSCE/ SEQ
2.	Discuss the importance of the diagnostic aides for the treatment planning	IL	CQ
3.	Differentiate between diagnosis and problem list of a case	IL/ CR	OSCE
4.	Formulate the problem list of the patient before the treatment	CR/ CBL	OSCE
5.	execute problem oriented approach for diagnosis and treatment planning	CR / CBL	OSCE
6.	List the treatment options for a particular patient based on the problem list and diagnosis	CBL /CR	OSCE /SEQ
7.	Design a comprehensive list of patient's pathological and developmental problems, maximizing the benefit to the patient	CR	OSCE
8.	Recognize what is esthetics, and describe the importance of achieving esthetics at the end of treatment	IL	OSCE /BCQ
9.	Recite the terms micro, mini and macro esthetics	IL / CR	OSCE
10.	Identify the problems with micro mini and macro esthetics in a patient	CR /CBL	OSCE
ORTHODONTICS / OPERATIVE			
11.	Define what is golden proportion	IL /CBL/ CR	OSCE
12.	Identify if the golden proportion is achieved in an occlusion at the end of treatment	CR/CBL	OSCE
ORTHODONTICS			
13.	Quote terminologies that will be used during examinations, problem list making and while carrying out the treatment	IL /CR	OSCE
14.	Recognize various terms used to describe malocclusion, so as to have a better understanding of the condition when the problems regarding it are being discussed	IL /CR	OSCE
15.	Recognize the importance of various classifications	IL	CQ
16.	Recognize the short comings of various classifications	IL	CQ
17.	Relate medical problems with resulting malocclusions	IL /CP	OSCE/ SEQ

18.	Indicate what protocols will change in Orthodontic treatment while dealing with medically compromised patients	IL / CBL	OSCE
19.	Relate the syndromes that lead to malocclusions	CP	SEQ /OSCE
20.	Determine the etiological factors for a certain malocclusion	IL	SEQ / OSCE
21.	Recognize the impact of hereditary influences on a malocclusion	IL	BCQ
22.	comprehend how various environmental factors lead to a certain malocclusion	IL	BCQ /OSCE
23.	Recall the normal anatomy and physiology of dentition and surrounding structures	IL	CQ
24.	Write the theories on how tooth eruption will occur	IL	SEQ
25.	Summarize the basic biological process that occurs in bone due to the forces applied to teeth for Orthodontic tooth movement	IL	SEQ
26.	Define what is optimum force, and understand its importance	IL	OSCE
27.	Quote and write the optimum number of forces that can be applied for tooth movement	IL	OSCE
28.	Write and quote the side effects that can occur if the Orthodontic force is less or exceeds the normal limits	IL	SEQ/ BCQ
29.	Quote the importance of different force durations on tooth movements during orthodontic treatment	IL	SEQ/ BCQ
30.	Define what is anchorage	IL	OSCE
31.	Quote and identify the importance of anchorage while carrying out orthodontic tooth movement	IL /CBL	OSCE/BCQ
32.	Discuss and predict how anchorage can be increased in a case	IL/ CBL	OSCE
33.	Discuss and write the effects on treatment if anchorage is not maintained	IL	CQ
34.	Enlist different materials used for orthodontic treatment and discuss their properties	IL	SEQ
35.	Discuss the properties of each material used in Orthodontic treatment	IL	SEQ/BCQ
36.	Identify which wire should be used at which stage of treatment	IL	OSCE
37.	Quote and discuss the properties of an ideal wire	IL	SEQ /BCQ
38.	Differentiate between banding and bonding	IL	OSCE
39.	Quote and enlist the indications of banding	IL	OSCE /BCQ
40.	Identify the conditions when banding is preferred over bonding	IL	BCQ/ OSCE

41.	Quote the importance of correct bonding in a orthodontic case	IL	OSCE
42.	Quote the three order bends given in a wire	IL	OSCE
43.	Discuss the concept of straight wire appliance	IL	CQ
44.	Quote the importance of straight wire appliance	IL	CQ
ORTHODONTICS			
77.	Define preventive and interceptive treatment with regards to Orthodontics	IL	OSCE
78.	Differentiate between preventive and interceptive	IL	OSCE/ BCQ
79.	Enlist the treatment options that come under preventive and interceptive treatment	IL	OSCE/ BCQ
80.	discuss how the habits can influence development of malocclusion	IL	OSCE/ BCQ
81.	Recognize the importance of monitoring or controlling environmental factors for prevention of malocclusion	IL	OSCE
82.	Recall various spaces that should naturally be present in a dentition	IL / CBL	OSCE/ BCQ
83.	Discuss the importance of various spaces naturally present in a deciduous dentition	IL / CBL/ CR	OSCE/ BCQ
84.	Recognize the cases which are more liable to have crowding later in life	IL/ CR	OSCE/ BCQ
85.	Enlist the appliances which can maintain arch space to adjust the permanent dentition	IL	OSCE
86.	Identify methods used to re-create spaces in the arch to adjust teeth	IL	CQ
87.	Enlist the situations when extractions become necessary	IL	BCQ/ SEQ
88.	Enlist different methods by which space can be gained in an arch	IL	BCQ/ SEQ
89.	Identify the various removable appliances and their parts	CR	OSCE
90.	Enlist the indications of removable appliances	CR	OSCE
91.	Identify active components of a removable appliance	CR	OSCE
92.	Fabricate various components of a removable appliance	CR	OSCE
93.	Fabricate removable appliances	CR	End rotation

94.	Define what is functional jaw orthopedics	IL	OSCE
95.	Discuss the importance of functional jaw orthopedics as a treatment modality	IL	OSCE/ BCQ
96.	Enlist the appliances used for functional jaw orthopedics	IL	CQ/ BCQ
97.	Enlist different treatment options that are now available for the patients who come for orthodontic treatment	IL	OSCE
98.	Discuss the importance of a step wise approach in providing orthodontic treatment to patient	IL	CQ/ OSCE
99.	Enlist methods to manage eruption problems, space problems, and crowded arches.	IL/ CR	OSCE/ BCQ
100.	Discuss options available for treating eruption problems	IL/ CR	OSCE
101.	Identify the problems in occlusion at the end of treatment	IL / CR	OSCE
102.	Define relapse	IL	OSCE
103.	Quote causes of relapse	IL	OSCE/ BCQ
104.	Discuss importance of retention at the end of Orthodontic treatment	IL	OSCE/ BCQ
105.	Quote different methods that can be utilized to prevent, or minimize relapse at the end of Orthodontic treatment	IL	OSCE/ BCQ
106.	Enlist the conditions in which the retention methods would have to be varied and find its reason	IL	OSCE
107.	Quote the conditions which would need longer retention time	IL	OSCE/ BCQ
108.	learn about the condition in which fixed retention would be provided	IL	OSCE/ BCQ
109.	Write and quote the basic retention protocol	IL	BCQ
110.	Dentofacial anomalies		
111.	Recognize the factors that cause clefting in a fetus	IL	BCQ/SEQ
112.	Describe the preventive mechanisms	IL	BCQ
113.	Identify dental treatments that can be provided to patients of cleft lip and palate	IL/CBL	SEQ/OSCE

ACADEMIC SCHEDULES WEEKLY SCHEDULE OF MODULE IV PEDIATRIC DENTISTRY			
Week no.	Lecturer 1	Lecturer 2	Lecturer 3
W/1	Classification of Dental trauma LO (32-33)	Non- Pharmacological Behavior management LO (1)	History & examination of traumatic injuries LO (34-35)
W/2	Dental trauma of primary dentition LO (36)	Pharmacological Behaviour management LO (2)	Local anesthesia LO (3)
W/3	Sequelae of traumatic injuries LO (37)	Inherited anomalies of dentine LO (73-74) Inherited anomalies of enamel LO (68-69)	Complications in permanent dentition LO (38)
W/4	Dental trauma in permanent dentition LO (39)	Assessment of caries risk factors LO (4-6)	Management of trauma in permanent dentition LO (40)
W/5	Class Test LO (32-40)	Detection & Diagnosis of dental caries LO (7-8)	Pulp therapy procedures LO (41)
W/6	Tooth luxations injuries LO (42-44) Avulsion injuries LO (46)	Prevention of dental caries LO (9-13)	Intrusion injuries LO (45) Splinting LO (47-48)
W/7	Molar-incisal hypomineralization LO (70-71) Internal Resorption LO (55-59)	Fluoride Therapy & fissure sealant LO (14-16) Restorative options for primary teeth LO (17)	External Resorption LO (49-54) Abnormalities of tooth size LO (60-67)
W/8	Theory Examination OSCE & Viva Examination		

MODULE:V- COURSE CONTENT OF (PROSTHODONTICS) MODULE
FIXED PROSTHODONTICS

S #	Lecture topic	Learning outcomes At the end of each topic, a final year student should be able to:	Mode Of Teaching	Assessment Method
1	Principles of Fixed Prosthodontics	<p>Define the following terms:</p> <ul style="list-style-type: none"> - Fixed prosthodontics - Crown - Bridge - Partial veneer crown - Full veneer crown - Retainers - Connectors - Pontics - Abutment <p>Discuss the Indications and contraindications for fixed partial dentures.</p> <p>Perform the following examination of patient:</p> <ul style="list-style-type: none"> - General Examination (gait, complexion and personality, cosmetic index, mental attitude of patient) - Extra Oral examination (facial features, facial form, facial profile, lower facial height, muscle tone, complexion, lip competency) - TMJ examination - Neuromuscular examination - Intra Oral Examination (Hard and soft tissues, saliva) - Radiographic examination (crown to root ratio, periapical pathology, retained residual roots, thickness of mucosa, bone support and quality, root configuration of abutment teeth) - Cast Examination (lingual and palatal surfaces of all teeth) 	IL	MCQs, SEQs

		<p>Formulate a treatment plan based on following adjunctive care</p> <ul style="list-style-type: none"> - Elective endodontic procedure, - Crown lengthening procedure, - Restorations, - Scaling and root planning. <p>Discuss the following treatment options:</p> <ul style="list-style-type: none"> - Full veneer Crown, - Bridge, - Partial Veneer crown (Three quarter, seventh-eight, Proximal half crown, Reverse three quarter crown). 		
2	All metal Crowns	<p>Describe the principles of tooth preparation</p> <p>Discuss the indications, contraindications, advantages and disadvantages of these crowns</p>	IL, SGD, Lab demo	MCQs, SEQs
3	Metal Ceramic Crowns	<p>Describe the principles of tooth preparation</p> <p>Discuss the indications, contraindications, advantages and disadvantages of these crowns</p> <p>Discuss the materials available for these restorations</p>	IL, SGD, Lab demo	MCQs, SEQs
4	All Ceramic Crowns	<p>Describe the principles of tooth preparation</p> <p>Discuss the indications, contraindications, advantages and disadvantages of these crowns</p> <p>Discuss the materials available for these restorations</p>	IL, SGD, Lab demo	MCQs, SEQs
5	Tissue health for Crowns	<p>Discuss the following:</p> <ul style="list-style-type: none"> -conservation of tooth structure -avoidance of over contour -supragingival margin -harmonious occlusion -protection against fracture 	IL	MCQs, SEQs
6	Trial of bridge /crown	<p>Discuss the following</p> <ul style="list-style-type: none"> -proximal contact -marginal integrity 	IL, SGD	MCQs, SEQs

		-stability -occlusion		
7	Luting agents	Discuss the types composition, properties, merits and demerits of materials used for cementation	IL	MCQs, SEQs
8	Principles of tooth preparation (mechanical and esthetic considerations)	Discuss the following: -Retention form -Resistance form -deformation -minimal display of metal -maximum thickness of porcelain -porcelain occlusal surfaces -subgingival margins	IL	MCQs, SEQs
9	Restorations of endodontically treated tooth	Discuss the following: -tooth structure -resistance -support -dowel core	IL	MCQs, SEQs
10	provisional restorations	Discuss the biological, mechanical and esthetic considerations for temporization.	IL, SGD	MCQs, SEQs
11	Classification and types of Bridges	Classify fixed partial dentures. Discuss the following types of fixed partial dentures - Conventional bridges - Minimum preparation bridges - Fixed – fixed bridge - Fixed – moveable bridge - Cantilever bridge - Spring cantilever bridge	IL	MCQs, SEQs
12	Components of Bridge	Define the following: - Connector, - Pontic, - Retainer, - Abutment.	IL, SGD	MCQs, SEQs
13	Abutment selection considerations	Discuss criteria for selection of abutments: - Alignment of abutment teeth and retention - Appearance and condition of abutment teeth - Location, condition and position of tooth	IL	MCQs, SEQs

		<ul style="list-style-type: none"> - Root configuration and support, - Crown root ratio - Periodontal ligament area - Assessment of pulpal health <p>Discuss various types of abutments:</p> <ul style="list-style-type: none"> - Healthy/ideal abutments - Cantilever abutments - Pier abutments - Tilted abutments - Extensively damaged abutments 		
14	Resin bonded bridge	<p>Discuss the indications, contraindications, advantages and disadvantages of different types of resin bonded bridges:</p> <ul style="list-style-type: none"> - Rochette bridge, - Maryland bridge, - Cast mesh fixed partial dentures, - Virginia bridge. 	IL	MCQs, SEQs
15	Fiber reinforced bridge	<p>Discuss the following:</p> <ul style="list-style-type: none"> -material used -classification -contraindication -indication -advantage -tooth preparation -fabrication technique 	IL	MCQs, SEQs
16	Complaints of Fixed prosthesis	<p>Discuss the following:</p> <ul style="list-style-type: none"> -diagnosis -causes -solition 	IL	MCQs, SEQs
17	Occlusion including TMD	<p>Discuss the following:</p> <ul style="list-style-type: none"> -introduction -etiology -pathogenesis -diagnosis -management 	IL	MCQs, SEQs

CLINICAL SUPERVISION SCHEDULE OF (PROSTHODONTICS) MODULE
FIXED PROSTHODONTICS

WEEK 1- ORIENTATION		
Day	Task	Name of Facilitator
1	Orientation regarding OPD tasks, student armamentarium, terminologies	Dr. Atif Jawad
2	Demonstration on history taking and clinical examination, diagnosis, treatment planning	Dr. Paras Talpur
3	Practice	All faculty
4	Primary Impression taking and Cast formation	Dr. Uzma Bashir
5	Practice	All faculty
WEEK 2 – TRAY FABRICATION		
Day	Task Sterilization demo half group/ week	Name of Facilitator
1	Special tray fabrication and special trimming	Dr. Oan Muhammad
2	Practice	All faculty
3	Final impression technique	Dr. Champa
4	Practice	All faculty
5	Occlusal rims fabrication	Dr. Shagufta
WEEK 3: JAW RELATIONSHIP AND ARTICULATION		
Day	Task	Name of Facilitator
1	Jaw relationship and articulation	Dr. Paras Talpur
2	Practice	All faculty
3	Anterior Teeth setup	Dr. Uzma Bashir
4	Practice	All faculty

5	Posterior teeth setup	Dr. Uzma Bashir
WEEK 4 – DENTURE TRIAL		
Day	Task	Name of Facilitator
1	Practice	All faculty
2	Denture trial	Dr. Oan Muhammad
3	Flasking and Dewaxing	Dr. Champa
4	Curing and polishing	Dr. Shagufta
5	Insertion and post-insertion instructions	Dr. Paras Talpur
WEEK 5 – CROWN PREPARATION		
Day	Task	Name of Facilitator
1	Follow-up	Dr. Oan Muhammad
2	Crown-posterior tooth preparation	Dr. Champa
3	Practice	All faculty
4	Crown-anterior tooth preparation	Dr. Shagufta
5	Practice	All faculty
WEEK 6 - FIXED PROSTHESIS		
Day	Task	Name of Facilitator
1	Crown- trial and cementaion procedure	Dr. Paras Talpur
2	Crown-retraction cord placement and impression techniques	Dr. Oan Muhammad
3	Practice	All faculty
4	Crown-restoration of endodontically treated teeth	Dr. Champa
5	Crown-temporary or provisional restorations	Dr. Shagufta

WEEK 7: FIXED PARTIAL DENTURE		
Day	Task	Name of Facilitator
1	Practice	All faculty
2	Fixed Partial Dentures	Dr. Paras Talpur
3	Implant	Dr. Oan Muhammad
4	TMD, occlusion and maxillofacial prosthesis	Dr. Atif Jawad
5	Practice	All faculty
WEEK 8: ASSESSMENT AND PRESENTATION		
Day	Task	Name of Facilitator
1	Practice	All faculty
2	Completion of work and signing of logbooks	All faculty
3	Assessment	All faculty
4	Presentation	All faculty
5	Presentation	All faculty

CLINICAL SUPERVISION SCHEDULE OF OPERATIVE MODULE

WEEK 1- ORIENTATION		
Day	Task	Name of Facilitator
1	Orientation regarding OPD tasks and student armamentarium Demonstration on instruments, infection control and sterilization	Dr.Asad Tareen
2	Demonstration on history taking, clinical examination, diagnosis and treatment planning, caries detection and diagnosis, caries risk assessment and radiographic interpretation of caries	Dr.Shuja Aslam
3	Practice	Dr.Priyanka
4	Practice	Dr.Asma
5	Completion and signing of the task	Dr.Shuja Aslam
WEEK 2 – APPLICATION OF RUBBER DAM		
Day	Task Sterilization demo half group/ week	Name of Facilitator
1	Demonstration on isolation(rubber dam application) and matrix band application	Dr. Shuja Aslam
2	Practice	Dr.Asma
3	Demonstration on amalgam restorations(cavity preparation,lining,placement of amalgam,cuspal coverage and pin retained restorations and repair and replacement of old amalgam restorations	Dr.Shuja Aslam
4	Practice	Dr. Saima
5	Completion and signing of the task	Dr. Shuja Aslam
WEEK 3: POSTERIOR RESTORATION		
Day	Task	Name of Facilitator
1	Demonstration on anterior and posterior resin composite restorations(cavity preparation, placement of composite including isolation, etching, bonding, finishing and polishing, direct composite veneers and closure of midline diastema and restorations of class V lesions(sandwich technique)	Dr. Shuja Aslam
2	Practice	Dr.Asma

3	Demonstration on pit and fissure sealants, fluoride application and bleaching	Dr.Shuja Aslam
4	Practice	Dr. Saima
5	Completion and signing of the task	Dr. Shuja Aslam
WEEK 4 – INLAY ONLAY PREPARATION		
Day	Task	Name of Facilitator
1	Demonstration on inlay and onlay preparation	Dr.Shuja Aslam
2	Clinical implementation on patients	Dr. Priyanka
3	Clinical implementation on patients	Dr. Asma
4	Clinical implementation on patients	Dr.Saima
5	Posting test	Dr. Shuja Aslam
WEEK 5 – ACCESS CAVITY PREPARATION		
Day	Task	Name of Facilitator
1	Demonstration on access cavity preparation, working length determination and cleaning and shaping	Dr.Asad Tareen
2	Practice on extracted teeth	Dr. Saima
3	Demonstration on obturation	Dr. Shuja Aslam
4	Practice on extracted teeth	Dr.Asma
5	Completion and signing of the task	Dr. Shuja Aslam
WEEK 6 – PATIENT EVALUATION		
Day	Task	Name of Facilitator
1	Demonstration on Patient evaluation :history taking and oral examination, diagnosis and treatment planning Performing and interpretation of investigations(pulp testing, percussion, palpation, mobility test, sinus tracing)	Dr. Shuja Aslam
2	Practice	Dr. Saima

3	Reading radiograph and interpretation Case selection	Dr. Shuja Aslam
4	Practice	Dr. Asma
5	Completion and signing of the task	Dr. Shuja Aslam
WEEK 7: POST INSERTION		
Day	Task	Name of Facilitator
1	Demonstration on post insertion	Dr.Shuja Aslam
2	Performing endodontic on extracted teeth and patients	All teachers
3	Performing endodontic on extracted teeth and patients	All teachers
4	Performing endodontic on extracted teeth and patients	All teachers
5	Performing endodontic on extracted teeth and patients	All teachers
WEEK 8: PSYCHOMOTOR AND ASSESSMENT		
Day	Task	Name of Facilitator
1	Performing endodontic on patients	Dr.Saima
2	Performing endodontic on patients	Dr. Asma
3	Completion and signing of logbooks	Dr. Shuja Aslam and Dr.Asad Tareen
4	Presentations	Dr. Asad Tareen
5	Posting test	Dr. Shuja Aslam and Dr. Asad Tareen

LEARNING RESOURCES

The learning resources for the educational contents of BDS program are available for the students which assist learners to achieve the outcomes and by focusing on educational content. In addition; the names of the books for each subject as a learning resources is available with the educational content of the same subject.

Following learning resources can be used by the undergraduates;

- Books
- Evidence based articles from journals
- Digital library to search the material for self-directed learning
- Video Tapes
- Displays
- Models
- Phantom Heads
- Printed Notes
- Case based scenarios'
- Community Visits

Recommended Books Final YEAR BDS			
Oral and Maxillofacial Surgery	Prosthodontics	Operative Dentistry	Orthodontics
1. An Introduction of Oral & Maxillofacial Surgery David Mitchel 2. An Outline of Oral Surgery part I & Part II Killey, Seaward & Kay 3. Killey's Fractures of Middle Third of Facial Skeleton. 4. Killey's	Books: 1. McCracken's Removable Partial Prosthodontics by Alan B Carr, Glen P McGivney and David T Brown. 11 th Edition. 2. Stewart's Clinical Removable Prosthodontics by Rodney D Phoenix, David R Cagna, Charles F DeFreest. 4 th Edition.	4. Joseph R Evans, John H Wilke. Atlas of Operative Dentistry: Preclinical and clinical procedures. Quintessence books Publishing Co. 5. Richard L Kahn, Pinkerton RJ, Kagihara L 6. Fundamentals of Preclinical Operative Dentistry. www.bookdepository.co.uk 7. The Art & Science of Operative Dentistry by	1. Contemporary Orthodontics, by William R. Profit (5 th Edition) 2. Hand Book of Orthodontics, by Robert-E-Moyers (4 th Edition) 3. Essentials of facial growth by Donald H Enlow (2 nd Edition)

<p>Fracture of the Mandible</p> <p>5. Oral & Maxillofacial Surgery Laskin</p> <p>6. Oral & Maxillofacial Surgery Kruger</p> <p>7. Medical Problems in Dentistry Scully & Cawson</p> <p>8. Text book of Oral & Maxillofacial Surgery S.M Balaji</p> <p>9. Fundamentals of Orthognathic Surgery Malcolm Harris</p> <p>10. Oral & Maxillofacial Surgery John Peddler</p>	<p>3. Prosthodontic Treatment for Edentulous Patients by Zarb, Hobkirk, Eckert and Jacob. 13th Edition.</p> <p>4. Contemporary Fixed Prosthodontics by Rosenstiel, Land and Fujimoto. 4th Edition.</p> <p>5. Essentials of Complete Denture Prosthodontics by Sheldon Winkler. 2nd Edition</p> <p>Reference Books for Laboratory Procedures:</p> <p>2. Dental Laboratory Procedures. Complete Dentures. Morrow, Rudd, Eissmann. Vol 01, 1980.</p> <p>3. Dental Laboratory Procedures. Fixed Partial Dentures. Eissmann, Rudd, Morrow. Vol 02, 1980.</p> <p>Notes and handouts (for topics not available in the above mentioned books</p>	<p>Sturdurant.</p> <p>8. Pickardards Manual of Operative Dentistry by EAM Kidd.</p> <p>6. Fundamentals of Operative Dentistry by Schwartz</p> <p>7. Dental Restorative Materials – Craig</p> <p>8. Textbook of Operative Dentistry by Vimal K Sikri</p> <p>9. Harty’s Endodontic in clinical practice by T.R.Pittford</p> <p>10. Pathways of pulp by Stephen Cohen</p> <p>11. Endodontics Principals and Practice by Torabinejad</p>	
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MUHAMMAD DENTAL COLLEGE

MIRPURKHAS

Contact Hours - Final Year BDS - 2025

Subject	Operative Dentistry				Paediatric Dentistry				Prosthodontics				Oral Surgery				Orthodontics			
Week	Lec	SDL	Tut	OPD	Lec	SDL	Tut	OPD	Lec	SDL	Tut	OPD	Lec	SDL	Tut	OPD	Lec	SDL	Tut	OPD
1	1.5	0.7	5	17.5	1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7		
2	1.5	0.7	5	17.5	1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7		
3	1.5	0.7	5	17.5	1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7		
4	1.5	0.7	5	17.5	1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7		
5	1.5	0.7	5	17.5	1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7		
6	1.5	0.7	5	17.5	1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7		
7	1.5	0.7	5	17.5	1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7		
8	1.5	0.7	5	17.5	1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7		
9	1.5	0.7			1.5	0.7	5	17.5	1.5	0.7			1.5	0.7			1.5	0.7		
10	1.5	0.7			1.5	0.7	5	17.5	1.5	0.7			1.5	0.7			1.5	0.7		
11	1.5	0.7			1.5	0.7	5	17.5	1.5	0.7			1.5	0.7			1.5	0.7		
12	1.5	0.7			1.5	0.7	5	17.5	1.5	0.7			1.5	0.7			1.5	0.7		
13	1.5	0.7			1.5	0.7	5	17.5	1.5	0.7			1.5	0.7			1.5	0.7		
14	1.5	0.7			1.5	0.7	5	17.5	1.5	0.7			1.5	0.7			1.5	0.7		
15	1.5	0.7			1.5	0.7	5	17.5	1.5	0.7			1.5	0.7			1.5	0.7		
16	1.5	0.7			1.5	0.7	5	17.5	1.5	0.7			1.5	0.7			1.5	0.7		
17	1.5	0.7			1.5	0.7			1.5	0.7	5	17.5	1.5	0.7			1.5	0.7		
18	1.5	0.7			1.5	0.7			1.5	0.7	5	17.5	1.5	0.7			1.5	0.7		
19	1.5	0.7			1.5	0.7			1.5	0.7	5	17.5	1.5	0.7			1.5	0.7		
20	1.5	0.7			1.5	0.7			1.5	0.7	5	17.5	1.5	0.7			1.5	0.7		
21	1.5	0.7			1.5	0.7			1.5	0.7	5	17.5	1.5	0.7			1.5	0.7		
22	1.5	0.7			1.5	0.7			1.5	0.7	5	17.5	1.5	0.7			1.5	0.7		
23	1.5	0.7			1.5	0.7			1.5	0.7	5	17.5	1.5	0.7			1.5	0.7		
24	1.5	0.7			1.5	0.7			1.5	0.7	5	17.5	1.5	0.7			1.5	0.7		
25	1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7	5	17.5	1.5	0.7		
26	1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7	5	17.5	1.5	0.7		
27	1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7	5	17.5	1.5	0.7		
28	1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7	5	17.5	1.5	0.7		
29	1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7	5	17.5	1.5	0.7		
30	1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7	5	17.5	1.5	0.7		
31	1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7	5	17.5	1.5	0.7		
32	1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7	5	17.5	1.5	0.7		
33	1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7	5	17.5
34	1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7	5	17.5
35	1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7	5	17.5
36	1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7	5	17.5
37	1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7	5	17.5
38	1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7	5	17.5
39	1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7	5	17.5
40	1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7			1.5	0.7	5	17.5
Total	60	28	40	140	60	28	40	140	60	28	40	140	60	28	40	140	60	28	40	140
Hours	268				268				268				268				268			
Grand Total	1,340																			

Prepared By: Dr Salf ur Rehman (Final Year COORDINATOR-MDC)

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