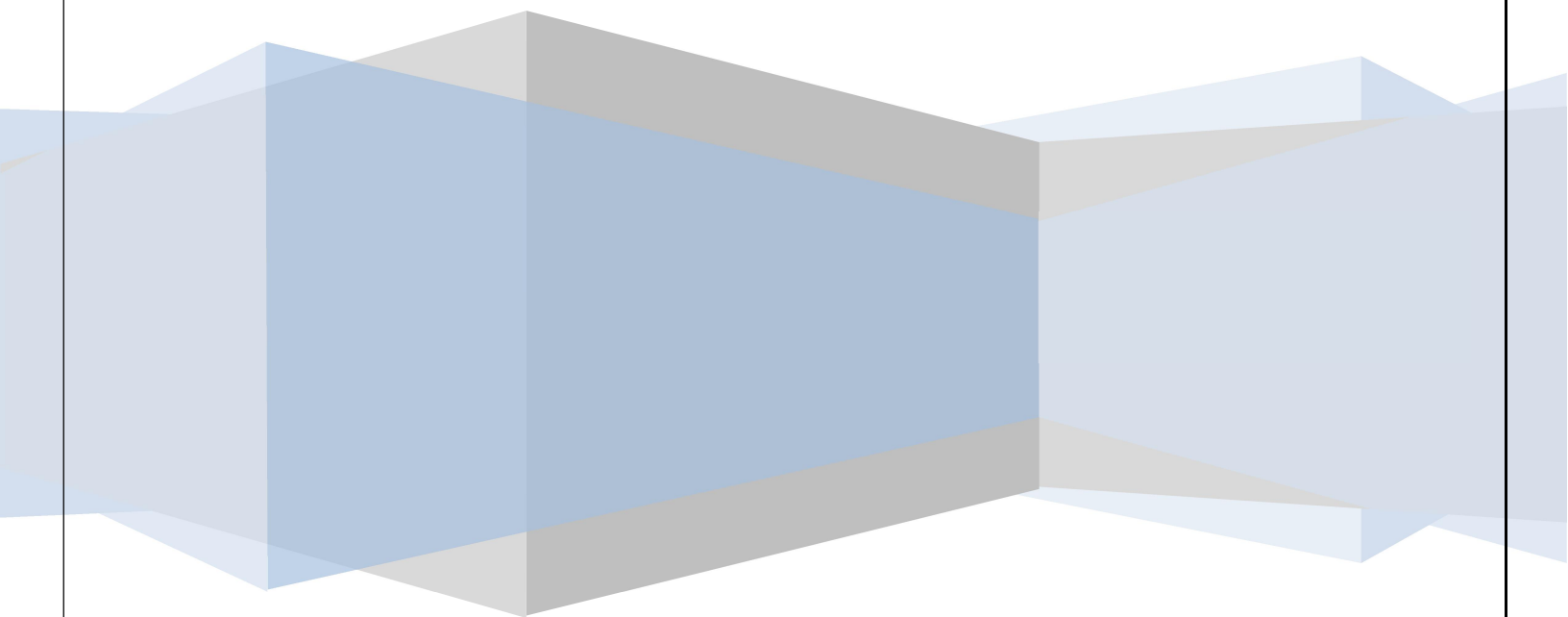


SHALAMAR MEDICAL AND DENTAL COLLEGE

OVERVIEW OF CURRICULUM



Background

Change is an inevitable part of society. While there will always be those welcoming it, viewing change as progressive and probably long overdue, there will be the opponents, who believe that there is nothing wrong with the old system. Curriculum restructuring and reform is no exception, with faculty staff and students either embracing or resisting the need to change. Reform often involves adopting a new philosophy. Those entrenched in the old system may find it difficult to adapt, particularly if their power and authority is challenged [1,2]. Students are probably no different from staff in the manner in which they accept the change. As the products of the restructuring process, however, they are directly affected by the reform, as they need to be 'marketable' in society, and in the case of medical training, they need to be educated to deliver an effective health care service. Implementing successful curriculum reform thus involves convincing both staff and students of the need for the innovation, which might involve highlighting shortcomings of the 'old'.

The 1993 World Summit on Medical Education, in evaluating the global need for a more effective health care delivery, provided the impetus for medical faculties to restructure their curricula. The WFME (1994) has advocated a redesigning of the 21st century doctor in order to train practitioners to provide an efficient primary health care service, communicate better with patients, be critical thinkers and life-long learners, as well as work as members of a multidisciplinary team for the benefit of the community [3]. Reform of the traditional medical curriculum should therefore be inevitable in the light of these recommendations. Successful implementation of any reform, however, requires considerable planning, advertising and convincing of staff and students of the need for and the benefits of change [4-9]. Bland and co-workers (2000), in an extensive review of the literature, provide a detailed analysis of the characteristics necessary for successful curriculum reform [8].

EXIT OUTCOMES OF SHALAMAR MEDICAL AND DENTAL COLLEGE (SMDC)

The desired outcomes of the medical graduates of Shalamar Medical & Dental College are:-

- **Care provider**
- **Leader**
- **Researcher**
- **Communicator**
- **Professional (Professionalism + Ethics)**

These were selected after a long discussion with the faculty members. There were suggestions to incorporate more areas, however for the purpose of simplicity and not to put too much load on the students it was decided to stick to these 5 areas.

Care Provider

This is the curriculum which focuses on Knowledge, Skills and attitudes that are required for the students to become doctors and includes subjects like Anatomy, Physiology, Biochemistry, Behavioral Sciences, Pathology, Pharmacology, Forensic Medicine, Community Medicine, E.N.T., Eye, Surgery, Medicine, Paediatrics and Gynecology+Obstetrics.

Leader

One of the most important attribute which the doctor should exhibit is the leadership particularly when dealing with Community. The doctors should understand the issues and problems pertaining to community and act in timely fashion. This Curriculum will run across all the 5 years and at places it will be explicit while at other places it will be implicit. In case of PBL the leadership role is being given to the students and also during presentation in the integrated seminar. It is expected that although implicit it will bring about a big change in the students. The explicit part will incorporate activities focusing mainly in the development of personality as leader. This will include conflict management, attributes of leader, team work and group dynamics. The leadership will be taught in the 1st year till final year.

Researcher

One of the important areas is that the students are exposed early to the research process. This will not only help them do a research but will also help them in terms of doing literature search effectively thus encouraging them to become lifelong learners. This is going to facilitate the students in terms of developing research proposal and actual conduct research during their stay in the medical college. This module will run during the first 4 years of M.B.B.S. class

Communicator

One of the important areas in medical education is Communication Skills. Infact it is important in almost all the fields. However the doctor in future has to communicate with the students with their colleagues, with the teachers, with patients and others like paramedic staff etc. In general it has been found that one of the deficient areas in doctors is Counseling Skills. The doctors do not give enough time to talk to their patients with the result that patients get dissatisfied and at times lead to poor compliance with medication. So the communication Skills will be addressed through out all the five years with particular emphasis on behavioural sciences. The emphasis on communication will be laid in the first three years.

Professional

One of the emerging areas in the field of medical education is professionalism. Professionalism is defined as

“Professional competence is the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values and reflection in daily practice for the benefit of the individual and community being served”.



It may be defines as “Contract with a society to heal”

Professionalism will be mainly in the last three years that is from 3rd to Final year M.B.B.S

GUIDING PRINCIPLES OF THE CURRICULUM

- Outcome focused
- Community Oriented
- Spiral Curriculum
- Based on Problem Solving
- Learning facilitated through clinical context
- Integration of modules with interdepartmental approach
- Appreciation of evidence as the basis for medical decision making
- Appreciation of investigation as a component of medical practice and learning
- Use of evaluation methods appropriate to assess different goal and objectives

PHASES

The undergraduate medical programme at UCM& D is organized and integrated in such a way that it ensures wide acquisition of knowledge in different fields of medicine. Medical education will take place in two phases

- **Phase 1** Focusing on 1st and 2nd years
Integrated system based modules
- **Phase 2:** It is divided into two parts that is:
Phase 2 A: Focusing on 3rd, 4th years
Phase 2 B: Focusing on 5th Year

PHASE 1

It includes Year 1 and 2. It has 12 modules. Phase I consists of foundation years (Years 1 & 2) of medical education during which students are exposed extensively to basic medical and clinical sciences. Phase I is modular & integrated, with problem-based learning as one of its key teaching/learning strategies. This is correlated to the clinical cases through the Problem-based learning packages and Early Clinical Exposure (ECE). Basic Sciences (Anatomy, Biochemistry & Physiology, Basic principles of General Pathology, Microbiology, Pharmacology, and Behavioral Sciences are learned & assessed during these two years.

- Horizontal integration of Anatomy, Physiology and Biochemistry with very little Vertical Integration of Pharmacology, Pathology, Community medicine, behavioural sciences and clinical subjects.
- Vertical integration will cover “the width and **not** the depth of knowledge

MODULE STRUCTURE

- Normal development
- Normal processes
- Abnormal processes
- Diagnosis, therapeutics and disease management
- Epidemiology and evidence-based medicine
- Prevention and nutrition
- Societal impact

Each module is organized as follows:

- Functional Anatomy and Structure (Imaging (Radiology) Gross Anatomy and Surgery)
- Embryology
- Microscopic Anatomy (Histology)

- Normal Organ function (Physiology, cell biology, biochemistry)
- Prevention of disease - nutrition, toxin exposure (e.g., cigarettes, alcohol), environment (e.g. sedentary vs. active lifestyle).
- Impact (Epidemiology, Sociology/Society, Public Health)

MODULES OF YEAR 1 AND 2 ALONG WITH THEIR DURATION

YEAR 1		YEAR 2	
Week	Module with duration	Week	Module with duration
1-3	Module Cell (3 weeks duration)	Week 1-5	MODULE Neuroscience (5 weeks duration)
4-8	MODULE 1 Core Concept (5 weeks duration)	Week 6-11	MODULE 9 Head and Neck&SPECIAL SENSES (6 weeks duration)
9-13	MODULE 2 Human development &Blood (5 weeks duration)	Week 12-17	MODULE 12 Endocrinology (6 weeks duration)
14-20	MODULE 3 Nerve & Musculoskeletal system (7 weeks duration)	Week 18-21	MODULE 11 Genetics& Developmental Dynamics (4 weeks duration)
21-26	MODULE 5 Respiration & Nutrition (6 weeks duration)	Week 22-26	MODULE 7 GIT system (5 weeks duration)
27-32	MODULE 4 CARDIOVASCULAR SYSTEM (6 weeks duration)	Week 27-30	MODULE 10 Renal system (4 weeks duration)
		Week 31-34	MODULE Reproductive system (4 weeks)

PHASE -2 A

It comprises of year 3 and 4 years.

Phase 2 A is the stage which has basic sciences subjects as well clerkship. In the 3rd and 4th years the examining subjects are basic sciences. During the clinical posting the main focus is on history taking and examination with little expectation on diagnosis and management in the 4th year.

Following areas are addressed in the 3rd and 4th years.

- Pharmacology and Therapeutics
- Microbiology
- Pathology.
- Forensic Medicine and Toxicology
- Behavior Sciences and Community Medicine run through the spiral curriculum & are assessed at the end of 3rd and 4th year respectively.
- Ophthalmology
- E.N.T.

Ophthalmology and E.N.T. are two clinical subjects which are assessed in the 4th year and their exit exam is taken while other clinical subjects are assessed in Final year.

PHASE 2 B

The major subjects in which the students are examined are as follows:

Medicine and Allied

Surgical and Allied

Gynaecology and Obstetrics

Paediatrics

The clinical rotations are carried out in the above mentioned fields and are assessed with the help of relevant assessment tools. These sessions help students to practice their doctor-patient relationship, gearing them up for their final practice in the community. The ethical issues related to medicine are also incorporated to prepare students for real life scenarios in medical practice, and strategies to tackle these. The students are taught on real patients as well as in skills Lab.

Year 3 Subjects	Examining subject	Rotation	Year 4 Subjects	Examining subject	Rotations
General Pathology	✓	Pathology Lab practicals	Special Pathology	✓	Pathology Lab
Pharmacology & Therapeutics	✓	Pharma lab practicals	Community Medicine	✓	Visit to community
Forensic Medicine & Toxicology	✓	Forensic Medicine lab. Autopsy	Ophthalmology	✓	Visit to clinics

		lab. M/L clinic			
Behavioural Sciences	✓	✗	E.N.T	✓	Visit to E.N.T
Community Medicine	✗	Community visits	Medicine	✗	Visit to clinics/skills lab
Medicine	✗	Visit to clinics/skills lab	Surgery	✗	Visit to clinics/skills lab
Surgery	✗	Visit to clinics/skills lab	Obstetrics	✗	Visit to clinics/skills lab
Gynae	✗	Visit to clinics/skills lab	Medical Education/Bioethics /Psychology	✗	✗
Medical Education/Bioethics/Psychology	✗	✗			

Year 5 Subjects	Examining subject	Rotation
Surgery	✓	Visit to clinics/skills lab
Medicine	✓	Visit to clinics/skills lab
Obstetrics	✓	Visit to clinics/skills lab
Gynaecology	✓	Visit to clinics/skills lab
Paediatrics	✓	Visit to clinics/skills lab

NOTE: Please note that during all these years the subjects like Professionalism, Leadership, Communication Skills as well as Research will be taught during the 5 years longitudinally

Strategies Suggesting Student Centered approach:

- PBL introduced
- Integrated Seminar where students make presentations
- Preparation and presentation of PowerPoint by students
- Development of posters
- E-Learning
- Early exposure of students to Clinical side
- Representation of students in Curriculum Committee meetings



ASSESSMENT

FORMATIVE ASSESSMENT

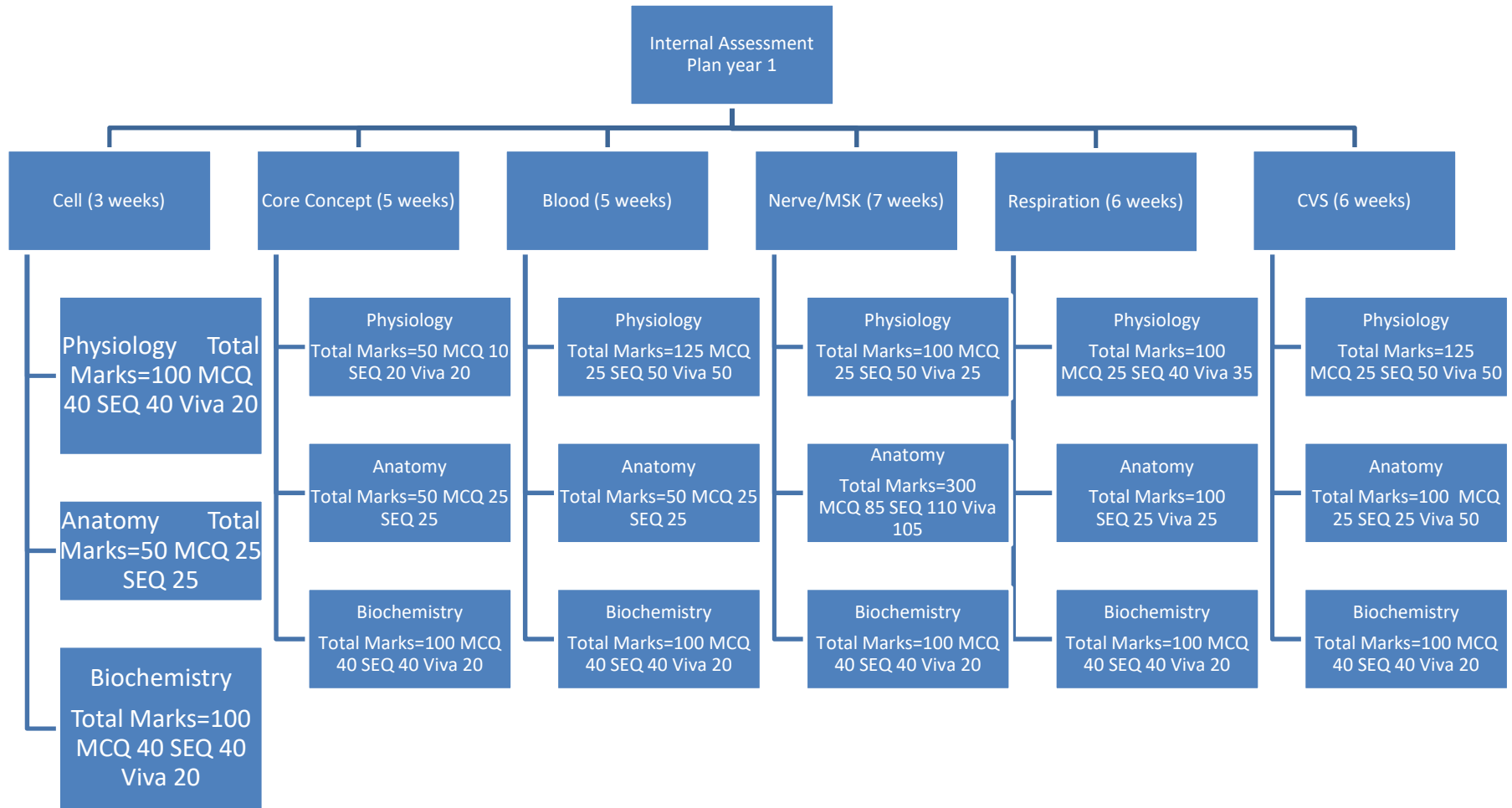
- During each module in 1st and 2nd years
- Subject- based
- Assessment tools:
 - MCQ's
 - quick spot-test
 - Quizzes
 - spotting
- Self – assessed

Note: No contribution to summative assessment

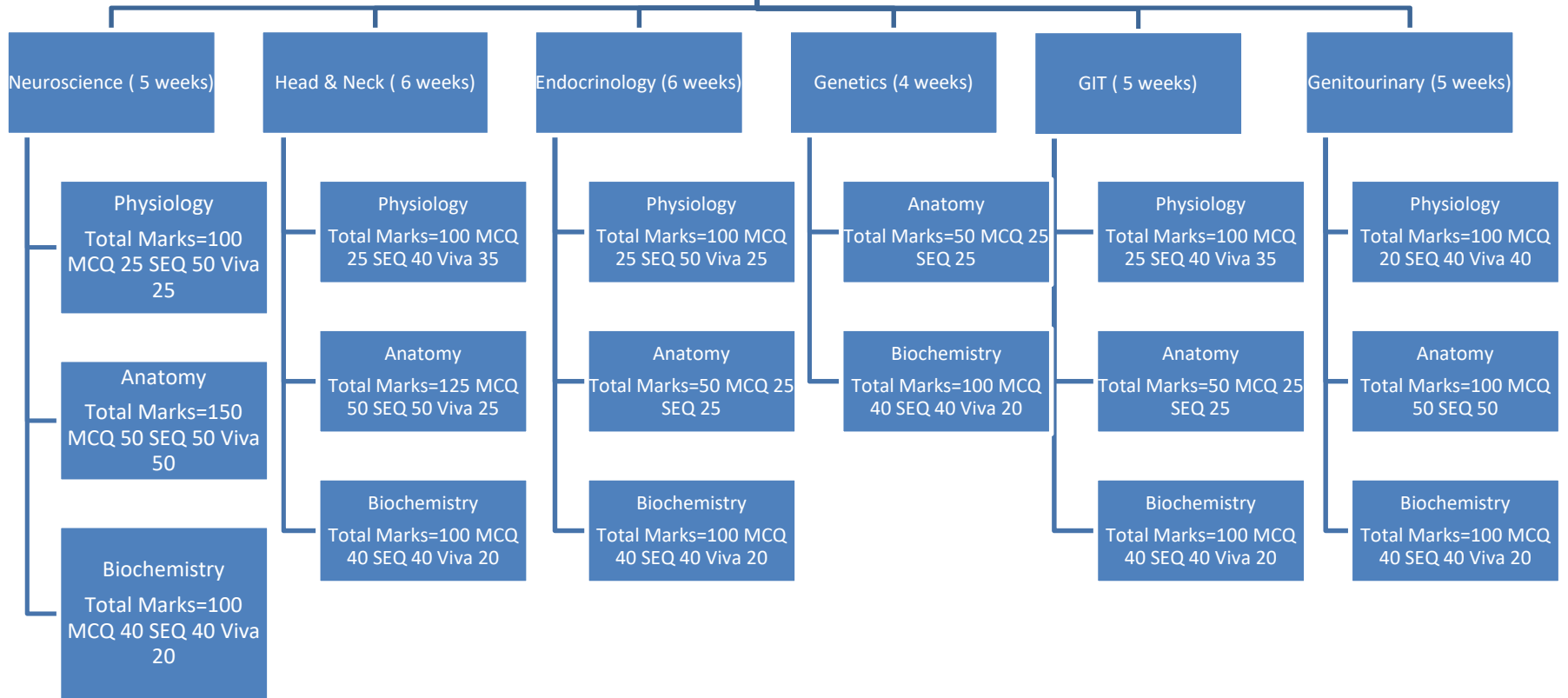
Summative Assessment

<u>Assessment</u>	<u>% Marks</u>	<u>Tools used</u>
<u>Internal Assessment</u>	<u>10%</u>	<u>Involves PBL SEQs, MCQs, Viva and OSPE (Throughout year)</u>
<u>End year Examination</u>	<u>90%</u>	<u>MCQs, SEQs, OSPE</u>
<u>Total</u>	<u>100%</u>	

Internal Assessment Plan for First and Second Year MBBS:



Internal Assessment Plan year 2



INTERNAL ASSESSMENT PLAN FOR MBBS (3rd year) **GENERAL PATHOLOGY:**

Sr. No	Test Topics	Marks	Components			
			MCQs	SEQs	OSPE	VIVA
1.	Cell injury / Accumulations / Adaptations Apoptosis, Calcification Inflammation, Wound healing General Bacteriology Sterilization & disinfection	100	1 x 35 = 35	7 x 5 = 35	-	30
2.	Staphylococcus Streptococci Enterococci Gram Positive Rods Mycobacteria TB / M. leprae / MOTT	100	1 x 35 = 35	7 x 5 = 35	-	30
3.	Neoplasia Viral infections	100	1 x 35 = 35	7 x 5 = 35	-	30
4.	Genetic disorders Neisserial diseases Enterobacteriaceae / GIT pathogens Respiratory tract pathogens Spirochetes	100	1 x 35 = 35	7 x 5 = 35	-	30
5.	Hemodynamic disorders Zoonotic pathogens	100	1 x 35 = 35	7 x 5 = 35	-	30
6.	Immune System / Immune Disorders Parasitic infections	100	1 x 35 = 35	7 x 5 = 35	-	30
7.	Send up whole course covered	300	1 x 65 = 65	14 x 5 = 70	48 + 24 = 72	63
			+ 15 (Internal Assessment)		+ 15 (Internal Assessment)	

INTERNAL ASSESSMENT PLAN FOR MBBS (3rd year) PHARMACOLOGY:

Sr. No.	Test Topics and their contents	Marks	Component			
			MCQs	SEQs	OSPE Written=15 Performance=10 Note Book=5 Table Viva=10 Class Assignments= 5	Viva
1	<p>Basic principles of Pharmacology :</p> <p>Introduction to Pharmacology, Sources of drugs, Active principles of drugs, Dosage forms and Doses of drugs, Clinical trials and factors affecting, Transport of drug across cell membrane, Pharmacokinetics Absorption, Routes of drug administration, Drug distribution, Biotransformation, Clearance and Excretion, Receptor and MOA, Dose Response Curves, Pharmacogenetics, Factors Modifying Action & Doses of Drug, Adverse Drug Reaction, Drug Interactions, MCQ's Exercise</p>	200	35	70	45	50
2	<p>ANS:</p> <p>Introduction to ANS Pharmacology, Cholinergic Drugs, Anticholinergic Drugs, Adrenergic Drugs, Antiadrenergic Drugs, Ganglion Blockers, Neuromuscular Blocking Drugs, MCQ's Exercise</p>	200	35	70	45	50
3	<p>CVS/BLOOD/KIDNEY</p> <p>Diuretics, Myocardial ischemia, Hypertensive Drugs, Treatment of CCF, Anti-arrhythmic drugs, Anticoagulant, Ant platelet drugs, Drug therapy for hypercholesterolemia and Dyslipidemia, Histamine and Antihistamine, Autacoids, Hematopoietic agents, Minerals and vitamins</p>	200	35	70	45	50

4. a	GIT: Gastric acidity, Peptic ulcers, Gastro esophageal reflux disease, IBS,	200	35	70	45	50
4. b	Purgatives and Laxatives, Anti-diarrheal, Emetics and Anti-emetics ENDOCRINOLOGY: Introduction to endocrinology, Thyroid and anti-thyroid drugs, Female sex hormones, Contraceptives, Androgens, Adrenal steroids, Endocrine Pancreas, Diabetes Mellitus, Agents affecting mineral ion homeostasis and bone turnover					
4. c	RESPIRATORY SYSTEM: Treatment of bronchial asthma, Treatment of dry cough					
5.	CNS: Introduction to CNS, NSAIDS, Hypnotics and sedatives, Anti-depressant, Pharmacotherapy of psychosis and mania, Pharmacotherapy of the epilepsies, Opioids, analgesia, and pain management, General anesthetics and therapeutic gases, Local anesthetics, Treatment of central nervous system degenerative disorders, Ethanol and methanol, Drug addiction, Antiparkinsonism drugs.	200	35	70	45	50

6.	<p>CHEMOTHRAPY:</p> <p>General principles of antimicrobial therapy, Protozoa infections, Chemotherapy of malaria, Chemotherapy of helminth infections, Sulfonamides, trimethoprim-sulfamethoxazole, Quinolones, Agents for UTI's, Penicillins, Cephalosporins, Beta-lactam antibiotics, Aminoglycosides, Macrolides, Protein synthesis inhibitors and miscellaneous antibacterial agents, Antifungal agents, Chemotherapy of tuberculosis, mycobacterium ovium complex, Leprosy, Antiviral agents, Antiretroviral agents and treatment of HIV infection, Antiseptic and disinfectants, Vaccines Immunoglobulin, Anticancer drugs,</p>	200	35	70	45	50
7	<p>Remedials:</p> <p>1st Remedial</p> <p>Content of 1st, 2nd and 3rd class tests.</p> <p>2nd Remedial</p> <p>Content of 4th, 5th and 6th class tests.</p>	200	35	70	45	50
8	<p>Send up</p> <p>All topics of six class tests.</p>	200	35	70	45	50

INTERNAL ASSESSMENT PLAN FOR MBBS (3rd year) FORENSIC MEDICINE:

Sr. No.	Test Topics	Marks	Component					
			MCQs	SEQs	OSPE	Internal Assessment	Viva	Copy
1	Thanatology, Autopsy, Gen. Toxicology	100	40	40	17	-	-	3
2	Personal Identity, Corrosives	100	40	40	17	-	-	3
3	Thanatology, Autopsy, Personal Identity, Traumatology, Trace Evidence, Gen. Toxicology, Corrosives, Vegetable Poisons, Organic Irritant, Cardiac, Dhatura, Cocaine, Cannabis	150	45	45	35	-	20	5
4	Traumatology, Qisas and Diyat Ordinance, Animal Poisons, Asphyxiants	100	40	40	17	-	-	3
5	Fire Arm Injuries, Asphyxia, Metallic & Non Metallic	100	40	40	17	-	-	3
6	Asphyxia, Law, Alcohol, Metallic & Non Metallic	150	45	45	35	-	20	5
7	Send up (Whole Book)	200	45	45	40	20	40	10

INTERNAL ASSESSMENT PLAN FOR MBBS (3rd year) BEHAVIOR SCIENCES:

Sr. No.	Test Topics	Marks	Component			
			MCQs	SEQs	OSPE	Viva
1	3 rd year: 1 st class test (Section A and B)	100	20	7	-	-
2	3 rd year: 2 nd class Test (Section C)	100	20	7	-	-
3	3 rd Year: 3 rd class Test (Section D&E)	100	20	7	-	-
4	3 rd year: Send Up examination	180	45	5	90	-
5	3 rd Year : Clinical rotation	40	-	-	40	-

INTERNAL ASSESSMENT PLAN FOR MBBS (4th year) SPECIAL PATHOLOGY:

Sr. No	Test topics	Marks	Components			
			MCQs	SEQs	OSPE	VIVA
1.	Blood vessels and Heart	100	40x1= 40	6x5=30		30
2.	Respiratory System	100	40x1= 40	6x5=30		30
3.	Hematology	100	40x1= 40	6x5=30		30
4.	Gastrointestinal System	100	40x1= 40	6x5=30		30
5.	Kidney & Lower Urinary System	100	40x1= 40	6x5=30		30
6.	Female & Male genital system, Breast Pathology	100	40x1= 40	6x5=30		30
7.	Send Up	300	65x1= 65	14x5=70	20x4=80	55
			+ 15 (Internal Assessment)		+ 15 (Internal Assessment)	

INTERNAL ASSESSMENT PLAN FOR MBBS (4th year) **COMMUNITY MEDICINE:**

Sr. No.	Test Topics	Year	Percentage	Marks	Component			
					MCQs	SEQs	OSPE	Viva
1.	Basic Concepts of Public Health	1	3	20	20	-	-	-
2.	Basic Concepts of Communicable and Non Communicable Diseases	2	3	20	20	-	-	-
3.	Basic Concepts of Epidemiology and Biostatistics	3	4	20	20	-	-	-
4.	Primary Health Care, Basic Concepts of Health and Disease, EPI Program of Pakistan, Epidemiology.	4	12	50	20	30	-	-
5.	Maternal and Child Health, Family Planning, Non-Communicable Diseases, Sexually Transmitted Infections, Reproductive Health.	4	12	50	20	-	30	-
6.	Biostatistics, Disaster management, Information, Education and Communication, Health Management Information System (HMIS), Demography.	4	12	50	20	20	-	10
7.	Environmental Health, Occupational Health, Food and Nutrition, School Health.	4	12	50	20	20	-	10
8.	Communicable diseases, Miscellaneous topics (Arthropods, Parasitic Diseases, Behavioural Problems, , Medical Ethics)	4	12	50	20	30	-	-
9.	Send-up Exam (Cover all above topics)	4	30	200	65	70	40	25

INTERNAL ASSESSMENT PLAN FOR MBBS (4th year) ENT:

Sr. No.	Test Topics	Marks	Component			
			MCQs	SEQs	OSPE	Viva*
1	Nose	60	30	30		
2	Disease of Ear	60	30	30		
3	Oral Cavity and Pharynx	60	30	30		
4	Esophagus	60	30	30		
5	Larynx and Tracheo Bronchial Tree	60	30	30		
6	Operative Surgery	60	50	50		
7	Revision of all ENT Topics	60	30	30		
8	Send-up	200	50	50	50	50

INTERNAL ASSESSMENT PLAN FOR MBBS (4th year) Ophthalmology:

Sr. No.	Test Topics	Marks	Month in which the test will be administered	Component			
				MCQs	SEQs	OSPE	Viva *
1	Anatomy of eye, Physiology of eye, Clinical Examination of eye	50	Jan	25	25	50	40
2	Investigation ,ciliary Body, Lens	50	Feb	25	25	50	40
3	Glaucoma ,vitreous & Retina	50	March	25	25	50	40
4	Lids and Infection, conjunctiva, Cornea and orbit	50	March	25	25	-	-
5	Optic, Nerve ,Orbit ,Intraocular Tumors	50	May	25	25	50	40
6	Cornea , Lacrimal Apparatus ,Sclera	50	July	25	25	50	40
7	Conjunctive, Lid , Uveitis , Treatment use of laser in eyes	50	Aug	25	25	50	40

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