



STUDY GUIDE
4th Year MBBS

**Sharif Medical and Dental
College, Lahore 2023**

Vision & Mission of UHS

Qualitative and Quantitative Revolution in Medical Education and Research through Evolution and thereby improve Health Care delivery to Populace.

UHS shall be innovative global center of excellence in learning and research, supporting a community of scholars and professionals committed to serving society, promoting the development of students to reach their true potential in becoming competent, ethical, caring and inquiring health professionals for the benefit of the country and the wider world.

Vision of SMDC

To be recognized for the provision of a safe and functional environment conducive to collaborative teaching & learning, comfortable working atmosphere and conducting world class research through professionalism and excellence.

Department of Pathology

PREFACE

Study guide plays a pivotal role in enhancing students' understanding and grasp of a subject. It acquaints the students about the course outline, teaching modules, and methodology. It also briefs about the assessment and evaluation policies in an academic session. This study guide aims to promote self-regulated learning among students. It gives an overview of course outcomes & learning objectives.

This study guide has been carefully planned to keep in view the mission of UHS, Lahore, and the vision of our institute. It is tailored according to the students' needs. This would hopefully enable our young inquisitive minds to develop a good understanding of this subject and adequately prepare for the examination.

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TEACHING AND LEARNING STRATEGIES

a) Modes of Information Transfer

PMC has allocated 250 hours of teaching in the subject of Special Pathology for the 4th Year MBBS course. Following teaching modules have been planned to impart core knowledge of Special Pathology so that student can grasp the subject fully and is adequately prepared for university examinations.

Large Group Interactive Session (LGIS)

A total of 140-150 LGIS are planned for the entire year. The session will be conducted by the Professor, associate professors, and assistant professors. The session will be interactive and students should actively participate in them. At the start of each session, the learning outcome will be displayed.

Practical Classes, Demonstration & Individual Performance

One practical class has been planned per week. The class will be divided into 03 batches to conduct the practicals effectively and one batch will be entertained once a week for these sessions. Practical will be conducted by demonstrators under the active supervision of senior faculty members. Students are required to enter their work in their practical notebooks and get them checked by the instructors regularly. It will comprise of practical on microscopic & gross appearance of the various organs & tissues. Practical for Haematology and Chemical laboratory tests will also be conducted.

Small-Group Discussion (SGD) & Case-based learning

The class will be divided into 03 batches. The batch will be further divided into smaller groups for effective learning. Topics for the SGD will be notified at the start of the month. Case-based learning and small group discussion will be conducted throughout the academic year. Clinical problems will be notified at least one week before the session. A senior demonstrator will be interactively facilitating the session and students are required to generate the discussion amongst themselves & the facilitator in line with the learning objectives of the topic.

Students' presentation

Presentations by the students will be scheduled after the completion of the course. Topics will be allocated to students and each presentation will be of 10-15 minutes duration with a Question & Answer session after it. This will help to increase student's engagement in their learning.

Skill Demonstration

For appropriate Skill demonstration, the class is divided into 5-6 batches and hands on practical skill demonstration is conducted on specimen and samples with the use of appropriate equipment. Fine Needle aspiration cytology and handling of specimen send to laboratory for histopathology is demonstrated with the use of adequate tools and specimen in Skills Laboratory. Once demonstrated, the students are asked to perform the skill

b) Venue for Learning Outcomes

- Lecture Halls
- Practical Laboratory
- Tutorial rooms
- Skill Laboratory
- Libraries including audio visual
- Online classes- Zoom/Google class room

LIST OF LECTURES

4th Year MBBS

CARDIOVASCULAR SYSTEM

Blood Vessel

Sr. No.	Topic	Doctor Name
1	Hypertension	Dr. Rafiq Ahmad
2	Atherosclerosis	Dr. Rafiq Ahmad
3	Aneurysm & dissection	Dr. Rafiq Ahmad
4	Vasculitis	Dr. Rafiq Ahmad
5	Vascular tumors	Dr. Rafiq Ahmad
6	Vein and lymphatics	Dr. Rafiq Ahmad

Heart

Sr. No.	Topic	Doctor Name
1	Valvular heart disease	Dr. Rafiq Ahmad
2	Cardiomyopathies & Myocarditis	Dr. Rafiq Ahmad
3	Ischemic heart disease	Dr. Rafiq Ahmad
4	Congenital heart disease	Dr. Rafiq Ahmad
5	Tumors of heart	Dr. Rafiq Ahmad
6	Pericardium – Pericarditis	Dr. Rafiq Ahmad

RESPIRATORY SYSTEM

Sr. No.	Topic	Doctor Name
1	ARDS, Atelectasis, COVID	Dr. Madiha Ehsan
2	Restrictive lung disease and Pneumoconiosis	Dr. Madiha Ehsan
3	Tuberculosis, Pathogenesis, Morphology and Clinical	Dr. Madiha Ehsan
4	Obstructive lung disease (Asthma, Emphysema, Bronchiectasis, Bronchitis)	Dr. Madiha Ehsan
5	Other granulomatous disease (Sarcoidosis), Hypersensitivity pneumonitis	Dr. Madiha Ehsan
6	Lung cancer (Classification, Morphology and Genes)	Dr. Madiha Ehsan
7	Pneumonia (Classification, Morphology, stages and types)	Dr. Madiha Ehsan
8	Pleura – Mesothelioma, Pleural effusion	Dr. Madiha Ehsan

SKIN

Sr. No.	Topic	Doctor Name
1	Basic terminologies, dermatitis	Prof. Tahir Saeed
2	Premalignant conditions of skin cancers and basal cell carcinoma	Prof. Tahir Saeed
3	Squamous cell carcinoma (Risk factors pathogenesis and morphology)	Prof. Tahir Saeed
4	Melanoma (types pathogenesis, morphology and genetics)	Prof. Tahir Saeed

ORAL CAVITY

Sr. No.	Topic	Doctor Name
1	Leukoplakia and oral infections	Dr. Madiha Ehsan
2	Squamous cell carcinoma	Dr. Madiha Ehsan
3	Salivary glands (Sialadenitis, Benign and Malignant tumors)	Dr. Madiha Ehsan

GASTROINTESTINAL TRACT (GIT)

Esophagus

Sr. No.	Topic	Doctor Name
1	Esophagitis, Baretts esophagus & dysplasia evaluation	Dr. Madiha Ehsan

Stomach

Sr. No.	Topic	Doctor Name
1	Gastritis (Acute & chronic, pathogenesis, H. pylori)	Dr. Madiha Ehsan
2	Peptic ulcer disease (Pathogenesis complications)	Dr. Madiha Ehsan
3	Gastric carcinoma (types, risk factors, morphology and pathogenesis)	Dr. Madiha Ehsan
4	Gastrointestinal stromal tumors	Dr. Madiha Ehsan
5	Carcinoid, MALT lymphoma	Dr. Madiha Ehsan

Intestine

Sr. No.	Topic	Doctor Name
1	Intestinal obstruction and Ischemic bowel diseases	Dr. Madiha Ehsan
2	Malabsorption, celiac disease (Pathogenesis, genetics complications)	Dr. Madiha Ehsan
3	Enterocolitis (Viral, bacterial, fungal)	Dr. Madiha Ehsan
4	Inflammatory bowel disease (differentiation, morphology and pathogenesis)	Dr. Madiha Ehsan
5	Adenoma and polyps	Dr. Madiha Ehsan
6	Hereditary syndromes and cancer	Dr. Madiha Ehsan
7	Adenocarcinoma (Genetics, Carcinogenesis and morphology)	Dr. Madiha Ehsan
8	Appendix (inflammation, tumors and carcinoids)	Dr. Madiha Ehsan

HEPATOBIILIARY SYSTEM

Liver

Sr. No.	Topic	Doctor Name
1	Jaundice and bilirubin pathophysiology and LFT	Dr. Rafiq Ahmad
2	Hepatitis types	Dr. Rafiq Ahmad
3	Hepatitis (A, B, C, D and E - Pathogenesis, morphology and serology)	Dr. Rafiq Ahmad
4	Liver abscess	Dr. Rafiq Ahmad
5	Alcoholic liver disease	Dr. Rafiq Ahmad
6	Non alcoholic fatty liver disease	Dr. Rafiq Ahmad
7	Metabolic disease	Dr. Rafiq Ahmad
8	Hemochromatosis, Wilson's disease, α -1 antitrypsin disease	Dr. Rafiq Ahmad
9	Liver cancer (Precursor lesions, Benign tumors, Hepatocellular carcinoma)	Dr. Rafiq Ahmad

Gall Bladder

Sr. No.	Topic	Doctor Name
1	Stones, Inflammation and cancer	Dr. Rafiq Ahmad

Pancreas

Sr. No.	Topic	Doctor Name
1	Acute and chronic pancreatitis (Pathogenesis)	Dr. Rafiq Ahmad
2	Pancreatic carcinoma	Dr. Rafiq Ahmad

DISEASES OF BREAST

Sr. No.	Topic	Doctor Name
1	Benign fibrocystic disease	Dr. Madiha Ehsan
2	Nipple discharge and adenoma	Dr. Madiha Ehsan
3	Fibroadenoma, Phyllodes tumors	Dr. Madiha Ehsan
4	Breast cancer (classification, molecular genetics and morphology)	Dr. Madiha Ehsan
5	Breast cancer (Prognostic factors, immunohistological classification)	Dr. Madiha Ehsan

FEMALE GENITAL TRACT

Sr. No.	Topic	Doctor Name
1	Cervix (Cervical intraepithelial neoplasia and carcinoma)	Dr. Madiha Ehsan
2	Endometrium (endometritis, endometriosis)	Dr. Madiha Ehsan
3	Dysfunctional uterine bleeding	Dr. Madiha Ehsan
4	Endometrial hyperplasia (types and morphology)	Dr. Madiha Ehsan
5	Endometrial carcinoma (types and morphology)	Dr. Madiha Ehsan
6	Endometrial stromal tumors and smooth muscle tumors	Dr. Madiha Ehsan
7	Ovary epithelial tumors	Dr. Madiha Ehsan
8	Ovary stromal and germ cell tumors	Dr. Madiha Ehsan
9	Placenta (molar pregnancy, gestational and trophoblastic disease)	Dr. Madiha Ehsan
10	Fallopian tubes (Ectopic pregnancy)	Dr. Madiha Ehsan

MALE GENITAL TRACT

Sr. No.	Topic	Doctor Name
1	Testis cryptorchidism, granulomatous inflammation	Prof. Tahir Saeed
2	Testicular tumors (Seminoma, germ cell tumor, stromal tumors)	Prof. Tahir Saeed
4	Prostatic carcinoma (morphology, Gleason scoring, immunohistochemical stains)	Prof. Tahir Saeed
5	Prostatitis	Prof. Tahir Saeed
6	Benign Prostatic hyperplasia	Prof. Tahir Saeed

URINARY SYSTEM

Renal

Sr. No.	Topic	Doctor Name
1	Renal function tests	Dr. Madiha Ehsan
2	Glomerulonephritis (types, pathogenesis, clinical presentation and morphology)	Dr. Madiha Ehsan
3	Pediatric Wilm's tumor	Dr. Madiha Ehsan
4	Renal cell carcinoma	Dr. Madiha Ehsan
5	Renal cyst	Dr. Madiha Ehsan

Urinary Bladder

Sr. No.	Topic	Doctor Name
1	Cystitis (types)	Dr. Madiha Ehsan
2	Tumor, urothelial carcinoma	Dr. Madiha Ehsan
3	Acute tubular necrosis – urine cytology	Dr. Madiha Ehsan

HEMATOPOIETIC & LYMPHOID SYSTEM

Sr. No.	Topic	Doctor Name
1	Haematopoiesis	Prof. Maria Aslam
2	Anemia (Classification, types, peripheral smear)	Prof. Maria Aslam
3	Hemolytic Anemia	Prof. Maria Aslam
4	Thalassemia	Prof. Maria Aslam
5	Polycythemia	Prof. Maria Aslam
6	Haemophilia	Prof. Maria Aslam
7	Leukocytosis and leukopenia complications	Prof. Maria Aslam
8	AML	Prof. Maria Aslam
9	ALL	Prof. Maria Aslam
10	CML	Prof. Maria Aslam
11	CLL	Prof. Maria Aslam
12	Multiple myeloma	Prof. Maria Aslam
13	DIC	Prof. Maria Aslam
14	TTP	Prof. Maria Aslam
15	Blood grouping and blood transfusion	Prof. Maria Aslam
16	Lymphoma (Classification) Non Hodgkin lymphoma	Prof. Maria Aslam
17	Hodgkin lymphoma	Prof. Maria Aslam

ENDOCRINOLOGY

Sr. No.	Topic	Doctor Name
1	Pituitary (Hypo and Hyper pituitarism)	Dr. Rafiq Ahmad
2	Pituitary tumors	Dr. Rafiq Ahmad
3	Hyperthyroidism – Goiter	Dr. Rafiq Ahmad
4	Hypothyroidism	Dr. Rafiq Ahmad
5	Autoimmune thyroiditis	Dr. Rafiq Ahmad
6	Thyroid adenoma	Dr. Rafiq Ahmad
7	Thyroid carcinoma – Papillary carcinoma, medullary carcinoma, follicular carcinoma	Dr. Madiha Ehsan
8	Hyper and Hypo parathyroidism	Dr. Rafiq Ahmad
9	Diabetes mellitus (Types, pathogenesis, complications and morphology)	Dr. Rafiq Ahmad
10	Adrenal gland – tumors, Cushing's syndrome, Addison's disease	Dr. Rafiq Ahmad

CENTRAL NERVOUS SYSTEM

Sr. No.	Topic	Doctor Name
1	Hydrocephalus, edema, hematoma	Dr. Madiha Ehsan
2	Meningitis (types, CSF findings)	Dr. Madiha Ehsan
3	Glial tumors	Dr. Madiha Ehsan
4	Non Glial tumors	Dr. Madiha Ehsan

MUSCULOSKELETAL SYSTEM & BONES AND JOINTS

Sr. No.	Topic	Doctor Name
1	Osteogenesis imperfecta, Achondroplasia	Prof. Maria Aslam
2	Osteoporosis (Risk factors, Pathogenesis)	Prof. Maria Aslam
3	Osteomyelitis (types and stages)	Prof. Maria Aslam
4	Pagets disease and Vit D deficiency and Rickets	Prof. Maria Aslam
5	Bone tumors (osteosarcoma- genetics, types, morphology)	Prof. Maria Aslam
6	Bone tumors (Giant cell tumors, Ewing's sarcoma, chondrosarcoma)	Prof. Maria Aslam
7	Osteoarthritis and Rheumatoid arthritis	Prof. Maria Aslam
8	Musculodystrophy myopathy	Prof. Maria Aslam

LIST OF PRACTICALS & TUTORIALS (SGDs)

4th Year MBBS

Blood Vessels

Sr. No.	Topic	Name
	Practicals	
1	Vascular tumors	Dr. Sameen Hassan
2	Atheroseclerosis	Dr. Sameen Hassan
	Tutorials (SGDs)	
3	Vasculitis	Dr. Ahmad Latif
4	Vascular tumors	Dr. Ahmad Latif
5	Atheroseclerosis	Dr. Ahmad Latif

Cardio-Vascular System

Sr. No.	Topic	Name
	Practicals	
1	Pneumonia	Dr. Sameen Hassan
2	COPD	Dr. Sameen Hassan
3	Lung cancer	Dr. Sameen Hassan
	Tutorials (SGDs)	
4	Pulmonary function test	Dr. Ahmad Latif
5	Restrictive lung diseases	Dr. Ahmad Latif
6	COPD	Dr. Ahmad Latif
7	Acute lung injury	Dr. Ahmad Latif
8	Pneumoconiosis – lung cancer	Dr. Ahmad Latif

Skin

Sr. No.	Topic	Name
	Practicals	
1	Skin tumors	Dr. Sameen Hassan
	Tutorials (SGDs)	
2	Skin tumors	Dr. Ahmad Latif

Gastrointestinal Tract

Sr. No.	Topic	Name
	Practicals	
1	Gastritis	Dr. Sameen Hassan
2	H. Pylori	Dr. Sameen Hassan
3	Barett's esophagus	Dr. Sameen Hassan
4	Gastric carcinoma	Dr. Sameen Hassan
5	GIST	Dr. Sameen Hassan
6	Colonic carcinoma and polyps	Dr. Sameen Hassan
7	Liver cirrhosis	Dr. Sameen Hassan
8	HCC	Dr. Sameen Hassan
9	Gall bladder	Dr. Sameen Hassan

	Tutorials (SGDs)	
10	Gastritis and peptic ulcer	Dr. Hira Ajmal
11	Esophagus	Dr. Hira Ajmal
12	Gastric carcinoma	Dr. Hira Ajmal
13	GIST	Dr. Hira Ajmal
14	Maltoma	Dr. Hira Ajmal
15	Colonic carcinoma and polyps	Dr. Hira Ajmal
16	Ulcerative colitis and Crohn's disease	Dr. Hira Ajmal
17	LFTs	Dr. Hira Ajmal
18	Non neoplastic liver disorders	Dr. Hira Ajmal
19	HCC and Ademona	Dr. Hira Ajmal
20	Gall bladder and pancreas	Dr. Hira Ajmal

Diseases of Breast

Sr. No.	Topic	Name
	Practicals	
1	Fibroadenoma	Dr. Sameen Hassan
2	Breast cancer	Dr. Sameen Hassan
	Tutorials (SGDs)	
3	Fibroadenoma	Dr. Hira Ajmal
4	Breast cancer	Dr. Hira Ajmal
5	Ductal carcinoma in situ	Dr. Hira Ajmal

Female Genital Tract

Sr. No.	Topic	Name
	Practicals	
1	Cervical cancer	Dr. Sameen Hassan
2	Leiomyoma	Dr. Sameen Hassan
3	Endometrial hyperplasia	Dr. Sameen Hassan
4	Ovary tumors	Dr. Sameen Hassan
	Tutorials (SGDs)	
5	Cervical cancer	Dr. Hira Ajmal
6	Leiomyoma	Dr. Hira Ajmal
7	Endometrial hyperplasia	Dr. Hira Ajmal
8	Ovary tumors	Dr. Hira Ajmal

Male Genital Tract

Sr. No.	Topic	Name
	Practicals	
1	Testicular tumor	Dr. Sameen Hassan
2	Benign prostatic hyperplasia and adenocarcinoma	Dr. Sameen Hassan
	Tutorials (SGDs)	
3	Testicular tumor	Dr. Hira Ajmal
4	Benign prostatic hyperplasia and adenocarcinoma	Dr. Hira Ajmal

Hematopoietic & Lymphoid System

Sr. No.	Topic	Name
	Practicals	
1	Anemias	Dr. Sameen Hassan
2	Leukemias	Dr. Sameen Hassan
3	Lymphomas	
	Tutorials (SGDs)	
4	Anemias	Dr. Ahmad Latif
5	Leukemias	Dr. Ahmad Latif
6	Lymphomas	Dr. Ahmad Latif

Urinary System

Sr. No.	Topic	Name
	Practicals	
1	Pyelonephritis	Dr. Sameen Hassan
2	Kidney stones	Dr. Sameen Hassan
3	Renal cell carcinoma and transitional cell carcinoma	
	Tutorials (SGDs)	
4	RFTs	Dr. Ahmad Latif
5	Glomerulonephritis	Dr. Ahmad Latif
6	Renal cell carcinoma and transitional cell carcinoma	Dr. Ahmad Latif

Musculoskeletal System and Bones & Joints

Sr. No.	Topic	Name
	Practicals	
1	Osteomyelitis	Dr. Sameen Hassan
2	Osteosarcoma	Dr. Sameen Hassan
3	Soft tissue tumors	
	Tutorials (SGDs)	
4	Bone developmental and metabolic disorders	Dr. Ahmad Latif
5	Bone tumors and Soft tissue tumors	Dr. Ahmad Latif
6	Liposarcoma, Rhabdomyosarcoma	Dr. Ahmad Latif

Endocrinology

Sr. No.	Topic	Name
	Practicals	
1	Multinodular Goiter	Dr. Sameen Hassan
2	Thyroid Adenoma	Dr. Sameen Hassan
	Thyroid carcinoma	
	Tutorials (SGDs)	
3	Thyroid function tests	Dr. Hira Ajmal
4	Pituitary gland and tumors	Dr. Hira Ajmal
5	Liposarcoma, Rhabdomyosarcoma	Dr. Hira Ajmal
6	Thyroid tumors	Dr. Hira Ajmal

Central Nervous System

Sr. No.	Topic	Name
	Practicals	
1	CNS tumors	Dr. Sameen Hassan
	Tutorials (SGDs)	
2	CSF evaluation	Dr. Hira Ajmal
3	CNS tumors	Dr. Hira Ajmal

LEARNING OBJECTIVES

BLOOD VESSELS AND HEART

1. Describe atherosclerosis with respect to the following factors:
 - Etiology and pathogenesis
 - Early lesion
 - Late and complicated lesion
 - Vessels effected
 - Complications
2. Differentiate between atherosclerosis, Monckeberg's medial calcify sclerosis and arteriolosclerosis.
3. Classify hypertension and list the causes of secondary hypertension.
4. Describe the vascular changes in hypertension.
5. Discuss the common pathogenic mechanisms of vasculitis.
6. Classify aneurysm according to etiology.
7. Describe atherosclerotic aneurysm with respect to:
 - Pathogenesis
 - Type of vessel involved
 - Morphological and clinical features
8. Describe varicose veins with respect to:
 - Common sites
 - Predisposing factors
 - Clinical features
9. List the benign and malignant tumors of blood vessels.
10. Describe the pathogenesis of ischemic heart disease.
11. Describe myocardial infarction with respect to the following:
 - Sequence of changes in myocardial infarction (MI)
 - Pattern of elevation of biochemical markers used in the evaluation of MI
 - Complications of MI
12. List the causes of sudden cardiac death.
13. Describe cor pulmonale and list the predisposing disorders.
14. Describe rheumatic fever with respect to etiology, pathogenesis, morphological and clinical features, and its sequelae.
15. List the causes of myocarditis and describe its morphological and clinical features.
16. Describe the three major clinico-pathological groups of cardiomyopathy (dilated, hypertrophic and restrictive).
17. List the causes of pericarditis and describe its clinical and morphological features.
18. List the primary and secondary cardiac tumours.
19. Describe the main features of Fallot's tetralogy and coarctation of aorta.
20. Describe valvular heart disease with respect to following:
 - Rheumatic heart disease
 - Infective endocarditis
 - Mitral valve prolapse
 - Complications of artificial valve
21. Identify the lesions of atherosclerosis, MI and myxoma on gross and microscopic examination.
22. Enlist and interpret the biochemical, serological and molecular tests in diagnosis of heart and vascular disease.

HAEMATOPOIETIC AND LYMPHOID SYSTEM

1. Outline the stages in the formation of red blood cells (RBCs), white blood cells (WBCs), platelets and correlate haematopoiesis with various haematopoietic growth factors.
2. List the normal values of red cell count, haemoglobin level, packed cell volume, MCH, MCV, MCHC, WBC count and platelet count.
3. Classify anaemia on the basis of morphology and underline pathogenesis of RBC production.
4. Enlist causes of hypochromic microcytic anaemia.
5. Describe the causes, clinical features, blood picture and diagnosis of iron deficiency anaemia.
6. Differentiate between the causes of based on risk factors and laboratory diagnosis with special emphasis on Vitamin B₁₂ and folate deficiency.
7. List the conditions which predispose to folate deficiency.
8. Describe vitamin B₁₂ deficiency with respect to cause, blood picture and clinical features.
9. Define anemia of chronic disease and explain its pathophysiology.
10. Differentiate between anemia of chronic disease and nutritional deficiency anemia.
11. Classify hemolytic anemias and describe their cardinal features and laboratory diagnosis.
12. Describe the pathophysiology, clinical features and lab diagnosis of hereditary spherocytosis.
13. Discuss the Pakistani perspective of beta thalassemia major with emphasis on incidence, common mutations, associated psychosocial problems and prevention.
14. Discuss the pathogenesis of thalassemia.
15. Classify thalassemia on the basis of clinical and genetic features.
16. Differentiate between the blood picture and clinical feature of Beta- thalassemia minor and major.
17. Discuss the mechanism of hemolytic anemia due to glucose-6-phosphate dehydrogenase deficiency.
18. Classify immune hemolytic anemia.
19. Differentiate between warm and cold antibodies in immune hemolytic anemia.
20. Discuss the inheritance, clinical features, lab diagnosis of von Willebrand's disease and Hemophilia A and B.
21. Describe aplastic anemia with respect to the etiology, pathogenesis, clinical features and laboratory diagnosis.
22. Describe polycythemia with respect to etiology, pathogenesis, clinical significance and laboratory diagnosis.
23. Describe the mechanisms which can cause neutropenia/ agranulocytosis.
24. Differentiate between the benign and malignant causes of leukocytosis.
25. Describe the epidemiological, morphological and clinical features of infectious mononucleosis.
26. Differentiate between acute and chronic non-specific lymphadenitis.
27. Describe the different classifications (REAL and working formulations) of non-Hodgkin's lymphoma.
28. Describe Hodgkin's disease with respect to classification, etiology, pathogenesis and clinical stages.
29. Classify leukemias.
30. Discuss the etiology, clinical features, laboratory diagnosis and prognostic factors of acute lymphoblastic and acute myeloblastic leukemias.
31. Describe the pathophysiology of chronic myeloid and chronic lymphocytic leukemias.
32. Describe multiple myeloma with respect to etiology, pathogenesis, morphology, clinical features and lab diagnosis.
33. Describe disseminated intravascular coagulation with respect to, etiology, pathogenesis, clinical features and laboratory diagnosis.

34. List the causes of thrombocytosis and thrombocytopenia.
35. Describe the pathogenesis of idiopathic & thrombotic thrombocytopenic purpura.
36. Indicate the value of following tests in the assessment of bleeding disorders:
 - Bleeding time
 - Clotting time
 - Platelets count
 - Platelet function test
 - Activated partial thromboplastin time
 - Prothrombin time
 - Mixing test studies
 - ABO and Rhesus blood groups
37. Describe ABO and Rhesus blood groups and outline the way in which a sample of blood is typed.
38. Explain the inheritance of ABO and Rhesus blood groups.
39. List the common indications of blood products (red cells, platelets and plasma) transfusion.
40. List the hazards of blood transfusion and discuss their prevention.
41. Identify the following on microscopic examination:
 - Anemia (iron deficiency, megaloblastic, aplastic), thalassemia.
 - Acute Lymphocytic Leukemia.
 - Acute Myeloid Leukemia.
 - Chronic leukemia (CLL, CML), bone marrow needle.
 - Hodgkin lymphoma.
42. Identification and use of ESR stand, micropipettes and haematology analysers.

RESPIRATORY SYSTEM

1. List micro-organisms causing upper respiratory tract infection.
2. Describe the etiology and clinical features of rhinitis and nasal polyps.
3. List and differentiate between malignant and benign tumours of nasopharynx and larynx.
4. Discuss and differentiate between pleural effusion, haemothorax, hydrothorax, pleuritis, pneumothorax and chylothorax.
5. Discuss and differentiate between acute pharyngitis, acute bacterial epiglottitis and acute laryngitis.
6. Classify atelectasis on the basis of underlying mechanisms.
7. Describe the etiology, pathogenesis, morphology and clinical features of asthma.
8. Discuss the disorders associated with airflow obstruction disease.
9. Differentiate between restrictive and obstructive lung disease on the basis of clinical features and pulmonary function tests.
10. Describe various types of emphysema, its pathogenesis, morphology and clinical features.
11. Describe pathogenesis and clinical features of chronic bronchitis.
12. Describe the predisposing factors, pathogenesis, morphology and clinical features of bronchiectasis.
13. Describe the pathogenesis, morphology and clinical features of adult respiratory distress syndrome.
14. Describe the pathogenesis, morphology and clinical features of sarcoidosis and hypersensitivity pneumonitis.
15. Describe different categories of pulmonary eosinophilia.
16. Describe the pathogenesis, morphology and clinical features of idiopathic pulmonary fibrosis.
17. Describe clinical features of Goodpasture's syndrome based on the pathology.

18. List the pathogenesis, morphology and clinical features of thromboemboli.
19. Describe the morphology & clinical features of pulmonary infarction.
20. List the causes of pulmonary hypertension and vascular sclerosis.
21. Describe the etiology, pathogenesis, morphology and clinical features of acute bacterial pneumonias.
22. List the micro-organisms causing atypical pneumonias.
23. Discuss the etiology, pathogenesis and clinical features of tuberculosis of the lung.
24. List the fungal infections of lung.
25. Describe classification, etiology, pathogenesis and clinical features of bronchogenic carcinoma.
26. Describe etiology & pathogenesis of mesothelioma.
27. Describe pneumoconiosis with respect to etiology, pathogenesis and clinical features.
28. List the common diseases caused by air pollutants and asbestos and describe asbestos related diseases.
29. Identify on gross and microscopic examination the following disease conditions:
 - Pneumonia
 - TB lung
 - Emphysema
 - Asthma
 - Carcinoma lung

THE ORAL CAVITY AND GASTROINTESTINAL TRACT

1. Define the term leukoplakia.
2. List the possible predisposing factors of leukoplakia (pipe smoking, ill-fitting denture, alcohol abuse, irritant foods).
3. Discuss the risk factors, clinical and morphological features of oral cancer.
4. Differentiate between the benign and malignant tumours of salivary glands.
5. Describe the clinical and morphological features of pleomorphic adenoma.
6. Differentiate between oesophagitis, Barrett's oesophagus and carcinoma of the oesophagus.
7. List the predisposing factors for gastritis and describe the pathogenesis and clinical features of acute gastritis.
8. Describe the pathogenesis, morphological and clinical features of chronic gastritis and peptic ulcer.
9. Describe gastric carcinoma with respect to risk factors, pathogenesis, clinical and morphological features and prognosis; and differentiate it from gastric lymphoma and gastrointestinal stromal tumor (GIST).
10. Describe the clinical and morphological features of Hirschsprung's disease.
11. Describe the pathogenesis, morphological and clinical features of celiac sprue and tropical sprue.
12. Describe the predisposing conditions, clinical and morphological features of ischemic bowel disease.
13. Differentiate between Crohn's disease and Ulcerative Colitis.
14. List the major causes of intestinal obstruction.
15. Describe the clinico-pathological features of amoebiasis, tuberculosis and typhoid
16. List the non-neoplastic polyps of intestine.
17. Classify adenomas on the basis of epithelial architecture and describe the clinical and morphological features of adenomas.
18. Discuss the pathogenesis of colorectal carcinoma.
19. Describe carcinoid tumor with respect to the peak incidence, most prevalent sites in

- the gut and morphological features.
20. Describe the clinical features of carcinoid syndrome.
 21. Describe the morphological features of Ulcerative Colitis, rectal polyp, carcinoma colon, Crohn's disease, TB intestine and typhoid.
 22. Describe the etiology, pathogenesis, morphological and clinical features of acute appendicitis.
 23. List the tumors of appendix.
 24. Identify acute appendicitis, chronic cholecystitis and TB intestine on microscopic and gross examination.

LIVER AND BILIARYTRACT

1. Describe the pathway of bilirubin metabolism and its elimination from the body.
2. Describe the types of jaundice with respect to the causes, clinical features and laboratory diagnosis.
3. Differentiate between intrahepatic and extrahepatic biliary obstruction.
4. List the causes, clinical features and important complications of hepatic failure, hepatic encephalopathy and hepato-renal syndrome.
5. List the common causes of viral hepatitis, cryptogenic, alcohol, biliary disease, genetic hemochromatosis, Wilson's disease and alpha-1 anti-trypsin deficiency.
6. Discuss the causes, pathogenesis and complication of cirrhosis.
7. Differentiate among viral hepatitis A, B, C, D and E with respect to route of transmission, incubation period, clinical features and potential outcome of acute infection.
8. Define carrier state and differentiate between acute and chronic hepatitis.
9. List the common causes of liver abscess and differentiate between them (amebic, echinococcal, bacterial, fungal) on the basis of clinical and morphological features, and laboratory diagnosis.
10. List the drugs and toxins which cause hepatic injury along-with their specific effects.
11. Discuss the pathogenesis of alcohol liver disease.
12. Differentiate between the morphological and clinical features of alcoholic hepatitis and cirrhosis.
13. List the causes of secondary hemochromatosis and describe its pathogenesis, morphological and clinical features.
14. Discuss the clinico-morphological features of Wilson's disease.
15. Describe the clinico-morphological features of alpha-1 anti-trypsin deficiency.
16. List the causes of neonatal hepatitis.
17. Differentiate between primary and secondary biliary cirrhosis.
18. Discuss the epidemiology, pathogenesis, morphological and clinical features of hepatocellular carcinoma.
19. Describe the pathogenesis and risk factors of cholelithiasis.
20. Describe the morphological and clinical features of acute and chronic cholecystitis.
21. Describe clinical and morphological features of gall bladder cancer.
22. Describe acute pancreatitis with respect to etiology, pathogenesis, clinical and morphological features.
23. Differentiate between acute and chronic pancreatitis on the basis of their clinical and morphological features.
24. Describe the clinical and morphological features of carcinoma of pancreas.
25. Identify on microscopic and gross examination: cirrhosis and carcinoma of liver.
26. Give interpretation of biochemical tests in differentiation of jaundice and interpretation of serological tests in viral hepatitis and acute pancreatitis.

URINARY SYSTEM

1. Define the terms: azotemia, uremia, acute renal failure, chronic renal failure
2. Discuss the types, pathogenesis, clinical features and complications of polycystic kidney disease.
3. Differentiate between the different types of glomerulonephritides based on their pathogenesis, etiology, morphology, clinical features and complications (membranous, minimal change, membranoproliferative and acute post-streptococcal glomerulonephritis).
4. Differentiate between nephritic and nephrotic syndromes.
5. Discuss the etiology, clinical course, pathogenesis and complications of acute pyelonephritis and differentiate it from chronic pyelonephritis.
6. Discuss pathogenesis, morphology, clinical features and complications of chronic pyelonephritis.
7. Define acute tubular necrosis, its pathogenesis and clinical course.
8. Differentiate between benign and malignant nephrosclerosis (on the basis of clinical data).
9. Differentiate between the different types of renal stones based on their pathogenesis, clinical features and lab diagnosis.
10. Define hydronephrosis, its causes, clinical features and complications.
11. Discuss the epidemiology, morphology and clinical features (paraneoplastic syndrome) of renal cell carcinoma.
12. Describe the clinical features, morphology and prognosis of Wilm's tumour.
13. Describe the etiology, morphology and clinical features of cystitis.
14. Describe the clinical features, etiology and morphology of transitional cell carcinoma of the urinary bladder.
15. Identify chronic pyelonephritis, renal cell carcinoma, transitional cell carcinoma of urinary bladder, renal stones; Wilm's tumour, cystic kidney on microscopic and gross examination.
16. Give interpretation of renal function tests.

MALE GENITAL SYSTEM

1. Discuss the following congenital conditions:
 - Hypospadias
 - Undescended testis
1. Describe the etiology, route of infection, pathogenesis and methods of diagnosis of gonococcal and non-gonococcal urethritis.
2. Discuss the etiology, pathogenesis and natural history of prostatitis, prostatic hyperplasia and prostatic carcinoma.
3. Discuss the causes, pathogenesis and clinical features of scrotal swelling due to:
 - Testicular adnexae
 - Varicocele
 - Hydrocele
 - Spermatocele
 - Inflammation of testis
 - Tumor of testis and epididymis
4. Discuss the causes, pathogenesis and relevant investigations of male infertility.
5. Classify the tumours of the male genital tract including prostate and testis.
6. Identification on microscopic and gross examination of:
 - BPH

- Carcinoma Prostate
- Testicular Tumors.

FEMALE GENITAL SYSTEM

1. List the causes, routes of infection and methods of diagnosis of sexually transmitted diseases.
2. List the causative micro-organism, route of infection, pathogenesis and methods of diagnosis of the following:
 - Gonorrhoea
 - Syphilis
 - Genital herpes
 - Genital warts
 - Trichomoniasis
3. Classify the neoplasms of cervix with special reference to cervical intraepithelial neoplasia.
4. Describe the causes, pathogenesis and clinical features of dysfunctional uterine bleeding with special reference to endometrial hyperplasia, endometrial polyp and carcinoma.
5. Describe the clinical features and pathogenesis of adenomyosis and endometriosis.
6. Classify tumours of the uterus on the basis of endometrium, endometrial stroma and myometrium.
7. Classify tumours of the ovary. Histogenesis of epithelial, germ cell and sex cord stromal tumours.
8. Describe the etiology, clinical features and pathogenesis of ectopic pregnancy and toxemia of pregnancy.
9. Classify gestational trophoblastic tumours with special reference to their clinical features.
10. Describe vulvar and vaginal squamous intraepithelial lesions.
11. Identification on microscopic and gross examination of:
 - Cystadenoma ovary
 - Teratoma of ovary
 - Ovarian tumors
 - Endometriosis
 - Endometrial hyperplasia
 - Endometrial carcinoma
 - Leiomyoma
 - Leiomyosarcoma
 - Cervical carcinoma
 - Cervical intraepithelial neoplasia

BREAST

1. List the causes of lump in the breast and differentiate the following on the basis of etiology, pathogenesis, morphology, clinical features and natural history:
 - Inflammation (Mastitis)
 - Fibrocystic disease of the breast
 - Benign tumours (fibroadenoma and phyllodes tumour)
 - Carcinomas of the breast (Ductal and Lobular)
2. Describe epidemiology, etiology and pathogenesis of the following:
 - In-situ (ductal and lobular)
 - Invasive carcinomas of the breast
3. Describe prognostic and predictive markers of breast carcinoma.
4. List the causes of nipple discharge with special reference to intraductal papilloma.
5. Describe gynaecomastia and list its causes.

6. Identify fibroadenoma of breast, carcinoma breast and fibrocystic disease on microscopic and gross examination.

MUSCULOSKELETAL SYSTEM

1. Describe the pathogenesis and clinical features of achondroplasia and osteogenesis imperfecta.
2. List the causes of osteoporosis and describe its pathogenesis, morphological and clinical features.
3. Describe osteomyelitis with respect to:
 - Common causative micro-organisms
 - Common routes of spread
 - Complications
4. List the common sites involved in tuberculous osteomyelitis.
5. Differentiate between acute and chronic osteomyelitis.
6. Describe the pathogenesis, morphological and clinical features of paget's disease.
7. List the benign and malignant bone forming tumours (osteoid osteoma, osteoblastoma, and osteosarcoma).
8. List the common sites of osteogenic sarcoma.
9. Describe the morphological and clinical features of osteogenic sarcoma.
10. List the most frequent sites of giant cell tumours of the bone.
11. Describe the clinical and morphological features of giant cell tumours of bone.
12. Differentiate between the peak incidence, common sites of origin, morphological and clinical features of:
 - Osteosarcoma
 - Osteoclastoma
 - Ewing's sarcoma
13. List the benign and malignant cartilaginous tumours and describe chondrosarcoma with respect to peak incidence, common sites of origin and morphological and clinical features.
14. Describe the pathogenesis, morphological and clinical features of osteoarthritis.
15. Describe rheumatoid arthritis with respect to pathogenesis, morphological and clinical features.
16. Classify gout and describe its pathogenesis, morphological and clinical features.
17. Describe the pathogenesis, morphological and clinical features of:
 - Duchenne's muscular dystrophy
 - Myotonic dystrophy
18. List congenital (central core disease, nemaline myopathy and centronuclear myopathy) and inflammatory myopathies (dermatomyositis, polymyositis and inclusion body myositis).
19. Describe the clino-pathological features of myasthenia gravis.
20. Differentiate between lipoma and liposarcoma.
21. Describe rhabdomyosarcoma with respect to:
 - Peak incidence
 - Histological variants (embryonal, alveolar, sarcoma botryoides, pleomorphic)
 - Frequent sites
22. Identification of giant cell tumour, osteosarcoma on microscopic and gross examination.

ENDOCRINE SYSTEM

1. List the causes of hyperpituitarism.
2. Describe the morphology and clinical features of pituitary adenomas.
3. Describe the clinical features of acromegaly and gigantism.

4. List the causes of hypopituitarism and describe the etiology, pathogenesis and clinical features of Sheehan's syndrome and dwarfism.
5. Describe the factors, clinical features and pathogenesis and laboratory findings in:
 - Inappropriate secretion of anti-diuretic hormone (ADH)
 - Diabetes insipidus
 - Syndrome of inappropriate ADH secretion
6. List the causes of adrenal cortical hyperfunction.
7. Describe the etiology, pathogenesis clinical features and laboratory diagnosis of:
 - Primary hyperaldosteronism (con's syndrome)
 - Hypercortisolism
 - Adrenogenital syndrome
8. List the causes of adrenal insufficiency and describe the etiology, pathogenesis, and clinical features of Addison's disease.
9. List the tumours of adrenal medulla and cortex and describe the clinical features and diagnosis of pheochromocytoma.
10. Interpret and list pituitary and adrenal function test.
11. List the etiology and clinical features of hyperthyroidism.
12. List the etiology and clinical features of hypothyroidism.
13. Differentiate between cretinism and myxoedema.
14. Describe the types, pathogenesis, morphology and clinical features of thyroid with special reference to auto-immune thyroiditis (hashimoto's thyroiditis and grave's disease).
15. Define goiter, list its types and describe the etiology, pathogenesis and clinical features of diffuse and multinodular goiter.
16. List the causes of solitary thyroid nodule and discuss its diagnostic approach.
17. Classify the etiology, pathogenesis, morphology and clinical features:
 - Follicular adenoma
 - Papillary carcinoma
 - Follicular carcinoma
 - Medullary carcinoma
 - Anaplastic carcinoma.
18. List the types of MEN syndromes.
19. Discuss the investigation/lab tests for diagnosis of thyroid dysfunction.
20. Identify the following on microscopic and gross examination:
 - Goitre
 - Papillary carcinoma of thyroid
 - Follicular adenoma thyroid
21. Differentiate between primary, secondary, tertiary and pseudo hyper-parathyroidism on the basis of causes, pathophysiology, diagnosis and clinical features.
22. List the etiological factors and clinical features of hypoparathyroidis.
23. Discuss calcium haemostasis and causes of hyper and hypocalcemia.
24. Classify Diabetes Mellitus and differentiate between Type 1 and 2 on the basis of pathogenesis, morphology, clinical features, laboratory diagnosis and complications.
25. List pancreatic endocrine neoplasms.
26. Give lab diagnosis of diabetes mellitus and diabetic ketoacidosis.

SKIN

1. Define the following macroscopic and microscopic terms:
 - Macule
 - Papule

- Nodule
 - Plaque
 - Vesicle
 - Bulla
 - Blister
 - Pustule
 - Scale
 - Lichenification
 - Excoriation
 - Hyperkeratosis
 - Parakeratosis
 - Acanthosis
 - Dyskeratosis
 - Acantholysis
 - Papillomatosis
 - Lentiginous spongiosis
2. Describe the morphological and clinical features of urticaria.
 3. Classify eczematous dermatitis.
 4. Describe the etiology, morphological features and pathogenesis of the following contact dermatitis:
 - Atopic dermatitis
 - Drug related eczematous dermatitis photo eczematous eruptions
 - Primary irritant dermatitis
 5. Describe the morphological and clinical features of acute eczematous dermatitis.
 6. List the conditions which are associated with erythema multiforme and describe its clinical features.
 7. Describe the pathogenesis, morphological and clinical features of psoriasis.
 8. Differentiate between the variants of pemphigus with respect to frequent site of involvement and clinical features and discuss its pathogenesis.
 9. Describe the clinical and morphological features of bullous pemphigoid.
 10. List the types of warts and their most frequent locations.
 11. List the pre-malignant epithelial lesions.
 12. List the predisposing factors for squamous cell carcinoma of skin.
 13. Differentiate squamous cell carcinoma from basal cell carcinoma on the basis of morphology and clinical features.
 14. List the types of nevocellular nevi (congenital nevus, blue nevus, Spitz's nevus, halo nevus, dysplastic nevus) along with their clinical significance.
 15. Describe the clinical and morphological features of dysplastic nevi.
 16. Describe malignant melanoma with respect to frequent site of origin, clinical and morphological features.
 17. Identify squamous cell carcinoma, basal cell carcinoma and squamous papilloma on microscopic and gross examination.

CENTRAL NERVOUS SYSTEM

1. Describe clinico-pathological features of hydrocephalus.
2. Describe the categories of cerebral edema (vasogenic and cytotoxic).
3. List the types of herniation of brain along with clinical significance.
4. Describe the clinical and morphological features of intra-cranial haemorrhage.
5. Differentiate between acute purulent meningitis and acute lymphocytic meningitis.

6. List the aetiologic agents of chronic meningitis (mycobacterium tuberculosis, cryptococcus neoformans, treponema pallidum) and describe its clinical and morphological features.
7. List the route of infecting agents causing brain abscesses and describe the clinical and morphological features (tuberculosis meningitis).
8. List the causative organisms of viral encephalitis (herpes simplex virus, cytomegalovirus, HIV, JC virus, arbovirus).
9. Describe clinico-pathological features of guillain barre syndrome.
10. List the infectious agents associated with polyneuropathies (leprosy, diphtheria, Varicella-zoster virus).
11. List the organic and inorganic compounds which can produce toxic neuropathy (organophosphorous esters, vincristine, acrylamide, hexame, ethanol, arsenic and lead).
12. List the important types of intracranial tumours (astrocytoma, oligodendroglioma, ependymoma, medulloblastoma and meningioma) along with clinical significance of glial tumours.
13. List the frequent metastatic tumours to the brain (carcinoma of the lung, breast, malignant melanoma, leukemia and lymphoma).
14. List common primary peripheral nerve sheath neoplasms along with their clinical significance.
15. Identify astrocytoma and meningioma on gross and microscopic examination.

CHEMICAL PATHOLOGY

1. Develop the concept of chemical pathology, reference/ranges conventional and SI units.
2. List biochemical markers of ischemic heart disease.
3. Name the renal function tests with interpretation.
4. Describe causes of proteinuria and its laboratory diagnosis.
5. Interpret the analytical results for diagnosis of diabetes mellitus.
6. List liver function tests and their interpretation.
7. Give laboratory diagnosis of hyperlipidemia and its clinical interpretation.
8. Describe the role of enzymes in diagnosis of pancreatitis.
9. List laboratory investigations of endocrine disorders.
10. Interpret thyroid function tests.
11. Give interpretation of adrenal function test.
12. Correlate the role of hormone estimation in diagnosis of infertility.
13. Describe role of hormone estimation in diagnosis of hyper and hypopituitarism.

ASSESSMENT PLAN

Formative Assessment:

It will be carried out throughout the academic year to provide timely feedback to the students and help them to identify learning gaps. It includes surprise quizzes, tests during SGDs and LGIS. They may be graded so that students can judge themselves in comparison with their peers.

Summative Assessment (Continuous Internal Assessment)

LIST OF FACULTY

Sr. No	Name	Designation	E-mail Address
01	Prof. Maria Aslam	Professor & HOD	mariaaslam77@outlook.com
02	Prof. M. Tahir Saeed	Professor	drtahirsaeed@yahoo.com
03	Prof. Saima Inam	Professor	saimainam@ymail.com
04	Dr. Rafiq Ahmed Shahid	Associate Professor	rafiqke@gmail.com
05	Dr. Madiha Ehsan ul Haq	Assistant Professor	madiha_ehsan@hotmail.com
06	Dr. Attia Lateef	Sr. Demonstrator	atialateef@hotmail.com
07	Dr. Sameen Hassan	Demonstrator	sameen.szh@gmail.com
08	Dr. Saleeha Maqsood	Demonstrator	sawleiha@hotmail.com
09	Dr. Naveen Bilal	Demonstrator	naveenbilal25@gmail.com
10	Dr. Ahmad Latif	Demonstrator	fabros50@gmail.com
11	Dr. Hira Ajmal	Demonstrator	hiraajmal47@gmail.com

PRESCRIBED BOOKS & REFERENCES

RECOMMENDED READING

1. Kumar, Cortan, Robbins. Pathological Basis of Disease. 9th Ed. W.B. Saunders.
2. Ackerman's Surgical Pathology.
3. AH Nagi. Clinical Pathology Interpretations.
4. John D Bancroft. Theory and Practice Of Histological Techniques.
5. Monica Cheesburgh. District Laboratory Practice in Tropical Countries. 2nd Ed. Part I & II.
6. Online Journals and Reading Materials through HEC Digital Library Facility.

REFERENCE BOOKS

1. James CE Underwood, Simon S Cross. General and Systematic Pathology: with STUDENT CONSULT Access. 5th Ed.
2. JB Walter, MS Israel. General Pathology. 7th Ed.
3. David Lowe. General Pathology: Vivas- Questions You Will be Asked.
4. Nicholas P. Money. Microbiology: A Very Short Introduction (Very Short Introductions)
5. Monica Cheesbrough. Medical Laboratory Manual for Tropical Countries: v.2: Microbiology.

**Department of Community
Medicine**

PLANNED TEACHING ACTIVITIES FOR 4th YEAR MBBS

DEPARTMENT OF COMMUNITY MEDICINE

PMC has allocated 200 hours of teaching in the subject of Community Medicine for the MBBS course. In order to meet this requirement following teaching modules have been planned. These modules have been carefully designed to impart core knowledge of Community Medicine in a manner that an undergraduate student can grasp the subject fully and is adequately prepared for university examinations.

Lectures:

A total of 130-140 lectures are planned for the entire year. The lectures will be conducted by the Professor, associate and assistant professors or by senior lecturers that have completed their post-graduation in the subject of Community Medicine. The lectures will be interactive and students should actively participate in them to clear their doubts. The students are required to take notes of the lectures and study the topic with the help of prescribed text books in light of the learning objectives of the topic enunciated by the teacher at the beginning of each lecture.

Tutorial classes:

One tutorial class per week is proposed throughout the academic session. The class will be divided into 03 batches. Topics for the tutorial will be notified at least one week before the class. Two instructors, one senior and one junior, will be deputed for every batch on rotation basis. A post tutorial quiz or presentation is taken for the enforcement of the topic. During this interactive session the students must clear their concepts regarding the topic by actively engaging with their respective teachers

Community based learning:

In Community based learning we take our students to different health related organizations. Various field visits are planned and students have to get information by personally visiting the site and then compiling their field visits journal to be submitted and checked by their respective demonstrator who accompanied them.

Skills development lab:

In this part students are trained to attain more knowledge and skills related to primary health care practice.

TRAINING PROGRAM FOR LECTURES
DEPARTMENT OF COMMUNITY MEDICINE
4th YEAR MBBS CLASS

GENERAL:

- To prepare them to function as community and first level physicians in accordance with the institutional goals.
- To make the students aware of environmental, social, financial, personal, occupational issues of the patients and to inculcate in the students the habit of considering the above aspects while rendering patient care.
- To teach them practiced techniques of prevention at Individual, National and International level for various health issues.
- To orient the students with Pakistan Health System, National Health Programmes and Policies and International Health Policies and Agencies.
- To teach research principles and methodologies so as to create scientific attitude.

Concept of Health and Disease

Sr. No.	Title of Lecture	Instructor
1.	Concept of health, its dimensions and determinants	Dr. Amna Iqbal Butt
2.	Indicators of Health	Dr. Amna Iqbal Butt
3.	Concept of Disease and Causation	Dr. Amna Iqbal Butt
4.	Spectrum of disease, iceberg phenomenon	Dr. Amna Iqbal Butt
5.	Natural history of disease	Dr. Amna Iqbal Butt
6.	Levels of prevention, Disease elimination and eradication, Disease surveillance	Dr. Amna Iqbal Butt

Introduction of Public Health and Health Systems in Pakistan

Sr. No.	Title of Lecture	Instructor
1.	Background and concepts	Dr. Samina Khalid
2.	Health System in Pakistan	Dr. Samina Khalid
3.	Partners in Health	Dr. Samina Khalid

Epidemiology and Disease Control

Sr. No.	Title of Lecture	Instructor
1.	General Epidemiology and Research methodology	Dr. Shahid Iqbal
2.	Background and concepts, uses, basic measurements in epidemiology	Dr. Shahid Iqbal
3.	Epidemiological methods	Dr. Shahid Iqbal
4.	Epidemiological transition, association and causation	Dr. Shahid Iqbal
5.	Investigation of an epidemic	Dr. Shahid Iqbal
6.	Screening for diseases	Dr. Shahid Iqbal
7.	Research and survey methodology	Dr. Shahid Iqbal
8.	Introduction to qualitative research methodology	Dr. Shahid Iqbal

Prevention and control of Infectious diseases of Public Health importance

Sr. No.	Title of Lecture	Instructor
1.	Diseases transmitted through inhalation	Dr. Amna Iqbal Butt
2.	Diseases transmitted through faeco-oral route	Dr. Amna Iqbal Butt
3.	Arthropod borne diseases	Dr. Amna Iqbal Butt
4.	Diseases of Animals conveyed to man	Dr. Amna Iqbal Butt
5.	Diseases due to direct contact	Dr. Amna Iqbal Butt

Epidemiology, control and prevention of non-infectious diseases of Public Health importance

Sr. No.	Title of Lecture	Instructor
1.	Hypertension, Coronary heart disease	Dr. Amna Iqbal Butt
2.	Cancers	Dr. Amna Iqbal Butt
3.	Injuries	Dr. Amna Iqbal Butt
4.	Diabetes	Dr. Amna Iqbal Butt
5.	Obesity	Dr. Amna Iqbal Butt
6.	Rheumatic fever and heart disease	Dr. Amna Iqbal Butt

Biostatistics

Sr. No.	Title of Lecture	Instructor
1.	Concepts and uses, Data and its types	Dr. M Shahid Iqbal
2.	Rates, ratios and proportions, Crude, specific and standardized rates	Dr. M Shahid Iqbal
3.	Collection and registration of vital events in Pakistan, Sources of health related statistics	Dr. M Shahid Iqbal
4.	Measures of central tendency	Dr. M Shahid Iqbal
5.	Measures of dispersion	Dr. M Shahid Iqbal
6.	Normal curve	Dr. M Shahid Iqbal
7.	Methods of data presentation	Dr. M Shahid Iqbal
8.	Interpretation of data (t-test and chi-square test)	Dr. M Shahid Iqbal
9..	Sampling and its various techniques	Dr. M Shahid Iqbal
10.	Health management information system	Dr. M Shahid Iqbal

Demography and population dynamics

Sr. No.	Title of Lecture	Instructor
1.	Concepts, demographic principles and demographic processes	Dr. M Shahid Iqbal
2.	Census, definition methodology and types	Dr. M Shahid Iqbal
3.	Determinants of fertility and mortality	Dr. M Shahid Iqbal
4.	Population pyramid and its interpretation	Dr. M Shahid Iqbal
5.	Demographic transition, demographic trap and its public health importance	Dr. M Shahid Iqbal
6.	Demographic and social implication of high population growth, Urbanization and Social mobilization	Dr. M Shahid Iqbal

Food and Nutrition

Sr. No.	Title of Lecture	Instructor
1.	Concepts, food groups and their functions	Dr. Samina Khalid
2.	Role of fiber in diet, Balanced diet	Dr. Samina Khalid
3.	Malnutrition, causes and prevention	Dr. Samina Khalid
4.	Common nutritional problems of public health importance and their prevention and control	Dr. Samina Khalid
5.	Dietary requirements of normal human being at different stages of life	Dr. Samina Khalid
6.	Food hygiene, pasteurization, fortification additives and adulteration and preservation	Dr. Samina Khalid
7.	Food poisoning	Dr. Samina Khalid
8.	Assessment of nutritional status of a community	Dr. Samina Khalid

Reproductive and Child Health

Sr. No.	Title of Lecture	Instructor
1.	Safe motherhood	Dr. Samina Khalid
2.	Maternal mortality, causes and prevention	Dr. Samina Khalid
3.	Infant care: growth and development, Breast feeding	Dr. Samina Khalid
4.	Common causes of morbidity and mortality , their prevention and control	Dr. Samina Khalid
5.	Child care	Dr. Samina Khalid
6.	IMCI	Dr. Samina Khalid
7.	Adolescent health	Dr. Samina Khalid
8.	Reproductive tract infections, Management of STDs	Dr. Samina Khalid

Health of School age children

Sr. No.	Title of Lecture	Instructor
1.	Role of teachers and doctors	Dr. Samina Khalid
2.	Procedures for determining health status of school age children	Dr. Samina Khalid

3.	Common health problems of school children	Dr. Samina Khalid
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Environmental Health Sciences

Sr. No.	Title of Lecture	Instructor
1.	Air	Dr. Amna Iqbal Butt
2.	Water I	Dr. Amna Iqbal Butt
3.	Water II	Dr. Amna Iqbal Butt
4.	Water III	Dr. Amna Iqbal Butt
5.	Climate	Dr. Amna Iqbal Butt
6.	Greenhouse effect	Dr. Amna Iqbal Butt
7.	Temperature, humidity and atmospheric pressure	Dr. Amna Iqbal Butt
8.	Radiation	Dr. Amna Iqbal Butt
9.	Healthful housing	Dr. Amna Iqbal Butt
10.	Noise	Dr. Amna Iqbal Butt

Occupational Health

Sr. No.	Title of Lecture	Instructor
1.	Concepts	Dr. Samina Khalid
2.	Ergonomics and its importance	Dr. Samina Khalid
3.	Occupational hazards, principles of control	Dr. Samina Khalid
4.	General principles of occupational disease prevention	Dr. Samina Khalid
5.	Organization of occupational health services	Dr. Samina Khalid
6.	Health Insurance and social security schemes	Dr. Samina Khalid

Arthropods and their Public health importance

Sr. No.	Title of Lecture	Instructor
1.	Common arthropod borne diseases	Dr. Amna Iqbal Butt
2.	Control of arthropods of medical importance	Dr. Amna Iqbal Butt

3.	Insecticides and their public health importance	Dr. Amna Iqbal Butt

Prevention and control of parasitic diseases of public health importance

Sr. No.	Title of Lecture	Instructor
1.	Prevention and control of parasitic diseases	Dr. Amna Iqbal Butt

Snake bite

Sr. No.	Title of Lecture	Instructor
1.	Personal protection and management	Dr. M. Shahid Iqbal

Mental Health

Sr. No.	Title of Lecture	Instructor
1.	Concept, common mental health problems, their causes	Dr. Amna Iqbal Butt
2.	Prevention and control, Juvenile delinquency	Dr. Amna Iqbal Butt

Behavioral sciences and lifestyle

Sr. No.	Title of Lecture	Instructor
1.	Concept, attitudes, health and illness behavior	Dr. M. Shahid Iqbal
2.	Drug abuse, addiction and smoking	Dr. M. Shahid Iqbal
3.	Child abuse and child labour	Dr. M. Shahid Iqbal
4.	Role of physical exercise in health and disease	Dr. M. Shahid Iqbal

Information, Education and Communication

Sr. No.	Title of Lecture	Instructor
1.	Concept, aims and objectives, Approaches used in public health	Dr. Amna Iqbal Butt
2.	Contents, principles and stages of health education	Dr. Amna Iqbal Butt
3.	Communication methods, barriers and skills in health education	Dr. Amna Iqbal Butt

4.	Planning, organizing and evaluating a health education programme	Dr. Amna Iqbal Butt

Disaster

Sr. No.	Title of Lecture	Instructor
1.	Definition, classification	Dr. Amna Iqbal Butt
2.	Epidemic of communicable diseases, man - made disasters	Dr. Amna Iqbal Butt
3.	Accidents, thermonuclear warfare, causes and prevention	Dr. Amna Iqbal Butt
4.	Magnitude and effects of disaster and public health consequences	Dr. Amna Iqbal Butt
5.	Disaster: preparedness and management	Dr. Amna Iqbal Butt

Medical Ethics

Sr. No.	Title of Lecture	Instructor
1.	Concepts and components, National recommended Guidelines	Dr. Amna Iqbal Butt

LIST OF LECTURES IN THE SUBJECT OF COMMUNITY MEDICINE AND THEIR
LEARNING OBJECTIVES
DEPARTMENT OF COMMUNITY MEDICINE
4TH YEAR MBBS CLASS

Concept of Health and Disease

Public health aims to improve the quality of life through prevention and treatment of disease, including mental health. This is done through the surveillance of cases and health indicators, and through the promotion of healthy behaviors.

Sr. No.	Title of lecture with learning objectives
1.	Concept of health, its dimensions and determinants At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Define health and knowledge about its various theories 2. Enumerate dimensions of health 3. Describe determinants of health
2.	Indicators of Health At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Enumerate the various indicators of health 2. Formulas of each indicators and application in community 3. Interpret the results of these indicators
3.	Concept of Disease and Causation At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Definition of disease and its outcome 2. Explain the concept of causation 3. Able to draw and explain with example epidemiological triangle, triad and its advanced model 4. Illustrate the web of causation
4.	Spectrum of disease, iceberg phenomenon At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Describe spectrum of disease 2. Describe iceberg phenomenon with examples and draw it

5.	<p>Natural history of disease</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Illustrate the natural history of disease with its basic understanding 2. Relationship between agent, host and environment and its role in disease causation
6.	<p>Levels of prevention ,Disease elimination and eradication, Disease surveillance</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Explain levels of prevention, with complete description 2. Define disease elimination and disease eradication and control 3. Understanding of disease monitoring and surveillance

Introduction of Public Health and Health Systems in Pakistan

Public health is about improving and protecting the health of groups of people. This course is designed to provide an overview of what is Public Health and some of its main components. It is particularly directed at those with an interest in health problems in developing countries.

Sr. No.	Title of Lecture with learning objectives
1.	<p>Background and concepts</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Concept of public health in Pakistan
2.	<p>Health System in Pakistan</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Understanding of the health system of Pakistan 2. Public and private sector organization 3. Enumerate diseases notifiable to national and international level 4. Describe DEWS
3.	<p>Partners in Health</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Knowledge of International, national and private health agencies 2. Role of partners in health in improving health sector performance

Epidemiology and Disease Control

Epidemiology is a sub-specialty of public health that simply stated, looks to determine where and how often disease occurs and why. It is more formally defined as the study of distributions (patterns) and determinants (causes) of disease in populations, and the application of this study to managing health problems.

Sr. No.	Title of Lecture with learning objectives
1.	General Epidemiology and Research methodology At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Definition of epidemiology 2. Components of epidemiology 3. Aims of epidemiology
2.	Background and concepts, uses, basic measurements in epidemiology At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Uses of epidemiology 2. Foundations of epidemiological approach 3. Basic measurements in epidemiology with their definitions and formulas 4. Basics concept of tools of measurements
3.	Epidemiological methods At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Should know about types of epidemiological methods 2. Should know about steps of conducting epidemiological study 3. Able to calculate odd's ratio, relative risk and attributable risk 4. Interpret the results of epidemiological study 5. Able to identify and differentiate between case-control, cohort and experimental studies
4.	Epidemiological transition, association and causation At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Able to classify association 2. Able to classify causation 3. Explain with examples
5.	Investigation of an epidemic At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Objectives of investigation of epidemic 2. Steps of investigation of epidemic
6.	Screening for diseases At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Definition of screening 2. Aims and objectives of screening 3. Uses of screening 4. Know about types of screening and their application 5. Knowledge about criteria of screening 6. Able to calculate sensitivity, specificity , positive predictive value and negative predictive value

7.	<p>Research and survey methodology</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Uses of research 2. Application of research and survey methodology
8.	<p>Introduction to qualitative research methodology</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Basics of qualitative research 2. Methodology of qualitative research

Prevention and control of Infectious diseases of Public Health importance

Infectious diseases is a wide term with various communicable diseases which are occurring in the community as endemic, epidemic or pandemic. It includes study of disease transmission dynamics, its epidemiological determinants and its prevention and control according to recommended national and international guideline.

Sr. No.	Title of Lecture with learning objectives
1.	<p>Diseases transmitted through inhalation</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Should have knowledge about dynamics of inhalational disease transmission 2. Able to diagnose the disease through clinical features (symptoms and signs). 3. Enumerate complications 4. Management of the disease 5. Ways of prevention and control of disease
2.	<p>Diseases transmitted through faeco-oral route</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Should have knowledge about dynamics of disease transmitted by faeco oral route 2. Able to diagnose the disease through clinical features (symptoms and signs). 3. Enumerate complications 4. Management of the disease 5. Ways of prevention and control of disease
3.	<p>Arthropod borne diseases</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Should have knowledge about dynamics of disease transmitted by arthropod. 2. Able to diagnose the disease through clinical features (symptoms and signs). 3. Enumerate complications 4. Management of the disease

	5. Ways of prevention and control of disease
4.	Diseases of Animals conveyed to man At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Should have knowledge about dynamics of disease transmission 2. Able to diagnose the disease through clinical features (symptoms and signs). 3. Enumerate complications 4. Management of the disease 5. Ways of prevention and control of disease
5.	Diseases due to direct contact At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Should have knowledge about dynamics of direct disease transmission 2. Able to diagnose the disease through clinical features (symptoms and signs). 3. Enumerate complications 4. Management of the disease 5. Ways of prevention and control of disease

Epidemiology, control and prevention of non-infectious diseases of Public Health importance

Non-infectious disease is a wide entity including non communicable chronic diseases and accidents and blindness. This is the era of such diseases due to lifestyle changes. This module encompasses the risk factors, diagnosis, features and prevention and control of such diseases.

Sr. No.	Title of Lecture with learning objectives
1.	Hypertension, Coronary heart disease At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Knowledge of epidemiological factors of the disease 2. Knowledge of risk factors 3. Knowledge of prevention and control
2.	Cancers At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Knowledge of epidemiological factors of the disease 2. Knowledge of risk factors 3. Must be able to diagnose common cancers 4. Knowledge of prevention and control
3.	Injuries At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Factors causing accidents

	<ol style="list-style-type: none"> 2. Indices for calculating its prevalence in the community 3. Knowledge of prevention and control
4.	<p>Diabetes</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Knowledge of types of the diabetes 2. Knowledge of risk factors 3. Knowledge of prevention and control
5.	<p>Obesity</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Able to classify obesity and calculate BMI 2. Knowledge of risk factors 3. Knowledge of prevention and control
6.	<p>Rheumatic fever and heart disease</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Knowledge of epidemiological factors of the disease 2. Knowledge of risk factors 3. Knowledge of prevention and control

Biostatistics

Biostatistics are the development and application of statistical methods to a wide range of topics in biology. It encompasses the design of biological experiments, the collection and analysis of data from those experiments and the interpretation of the results. Biostatistics is used extensively in epidemiology. Epidemiology is the basic science of public health. It uses statistics and research methodologies to reach conclusions about diseases within certain population groups and finds the causes and risks of certain diseases.

Sr. No.	Title of Lecture with learning objectives
1.	<p>Concepts and uses, Data and its types</p> <ol style="list-style-type: none"> 1. Basic definitions of biostatistics 2. Uses of biostatistics 3. Definition of data 4. Sources of data 5. Types of data
2.	<p>Rates, ratios and proportions, Crude, specific and standardized rates</p> <ol style="list-style-type: none"> 1. Able to calculate rates, ratios and proportions 2. Interpret the results
3.	<p>Collection and registration of vital events in Pakistan, Sources of health related statistics</p> <ol style="list-style-type: none"> 1. Knowledge of sources of health related data 2. Application of this data in community medicine
4.	<p>Measures of central tendency</p> <ol style="list-style-type: none"> 1. Ways of measuring central tendency 2. Formulas and practical application of these measures

	3. Advantages and disadvantages of each measurement
5.	Measures of dispersion <ol style="list-style-type: none"> 1. Ways of measuring central tendency 2. Formulas and practical application of these measures 3. Advantages and disadvantages of each measurement
6.	Normal curve <ol style="list-style-type: none"> 1. Definition of normal curve 2. Characteristics of normal curve 3. Implications of normal curve 4. Knowledge and concept of confidence limit and interval 5. Abnormal or skewed distribution curve
7.	Methods of data presentation <ol style="list-style-type: none"> 1. Different ways of data presentation 2. Application of these charts and graphs 3. Differentiate between qualitative and quantitative data presentation
8.	Interpretation of data (t-test and chi-square test) <ol style="list-style-type: none"> 1. Knowledge of ways of various tests of significance 2. Steps of performing these tests of significance on given data 3. Set up a null hypothesis 4. Interpretation of the results and accepting or rejecting null hypothesis
9.	Sampling and its various techniques <ol style="list-style-type: none"> 1. Definition of sampling 2. Techniques of sampling 3. Advantages and disadvantages of different types of sampling
10.	Health management information system <ol style="list-style-type: none"> 1. Elements of HMIS 2. Steps in developing HMIS 3. Components of HMIS 4. Information collected for HMIS

Demography and population dynamics

Demography is the study of changes in the size population, the composition of population (age and sex composition) and the distribution of population and how the population changes due to fertility, mortality and migration. Demography methods which consist of the procedure and techniques for working with demography data. Demography analysis is a powerful tool that can explain a number of sociological phenomena.

Sr. No.	Title of Lecture
1.	Concepts, demographic principles and demographic processes <ol style="list-style-type: none"> 1. Definition and terminologies related to demography 2. Stages of demographic transition 3. Population dynamics 4. Able to describe and calculate population doubling time
2.	Census, definition methodology and types

	<ol style="list-style-type: none"> 1. Definition of census 2. Describe methodology of census 3. Knowledge about types of census 4. Able to calculate population in between census years
3.	<p>Determinants of fertility and mortality</p> <ol style="list-style-type: none"> 1. Able to enumerate components of population growth 2. Describe determinants of fertility 3. Causes of high fertility 4. Explain basic fertility measures
4.	<p>Population pyramid and its interpretation</p> <ol style="list-style-type: none"> 1. Definition of population pyramid 2. Good knowledge of its types and able to differentiate and explain features of various population pyramids
5.	<p>Demographic transition, demographic trap and its public health importance</p> <ol style="list-style-type: none"> 1. Explain stages of demographic transition with examples 2. Describe demographic cycle and draw it 3. Define demographic trap and its phases 4. Define and explain population momentum
6.	<p>Demographic and social implication of high population growth, Urbanization and Social mobilization</p> <ol style="list-style-type: none"> 1. Implications of high population growth <ul style="list-style-type: none"> • Demographic implications • Economic implications • Social implications 2. Explain density of population 3. Define and explain briefly urbanization and social mobilization 4. Demographic features of Pakistan

Food and Nutrition

Nutrition may be defined as the science of food and its relationship to health. It is concerned primarily with the part played by nutrients in body growth, development and maintenance.

Sr. No.	Title of Lecture with learning objectives
1.	<p>Concepts, food groups and their functions</p> <ol style="list-style-type: none"> 1. Able to classify food in different ways 2. Define nutrients and its types 3. Describe macronutrients and micronutrients
2.	<p>Role of fiber in diet, Balanced diet</p> <ol style="list-style-type: none"> 1. Sources and functions of dietary fiber 2. Enumerate diseases due to fiber deficiency 3. Define balanced diet 4. Explain the factors affecting nutritional needs
3.	<p>Malnutrition, causes and prevention</p> <ol style="list-style-type: none"> 1. Describe types of malnutrition

	<ol style="list-style-type: none"> 2. Explain various forms of malnutrition 3. Describe and know about protein energy malnutrition and its types 4. Causes of protein energy malnutrition 5. Different classification of protein energy malnutrition 6. Clinical manifestations of PEM 7. Describe prevention of PEM
4.	<p>Common nutritional problems of public health importance and their prevention and control</p> <ol style="list-style-type: none"> 1. Able to explain nutritional and iron deficiency anemia ,its causes and prevention 2. Able to explain iodine deficiency , its causes and preventive measures 3. Able to explain vitamin A deficiency , its causes and preventive measures
5.	<p>Dietary requirements of normal human being at different stages of life</p> <ol style="list-style-type: none"> 1. Able to describe basal metabolism 2. Knowledge about daily calorie requirement of each gender and children and specific condition 3. Knowledge about daily calorie requirement of nutrients 4. Enumerate indicators of nutritional status
6.	<p>Food hygiene, pasteurization, fortification additives and adulteration and preservation</p> <ol style="list-style-type: none"> 1. Define food hygiene 2. Define pasteurization and its uses 3. Describe food fortification and its importance 4. Explain food adulteration, its sources and outcomes 5. Different ways of food preservation
7.	<p>Food poisoning</p> <ol style="list-style-type: none"> 1. Enumerate causes of food poisoning 2. Investigate a case of food poisoning 3. Describe preventive measures of food poisoning
8.	<p>Assessment of nutritional status of a community</p> <ol style="list-style-type: none"> 1. Able to describe assessment of nutritional status

Reproductive and Child Health

Reproductive Health addresses the reproductive processes, functions and system at all stages of life. Reproductive and Child Health (RCH) services as an integrated approach of providing healthcare to all individuals within the context of the primary health care strategies. Although the focus is on women and children, services provided are assemblage of curative, preventive, promotional and rehabilitative for improving the health of the population regarding morbidity & mortality

Sr. No.	Title of Lecture with learning objectives
1.	<p>Safe motherhood</p> <ol style="list-style-type: none"> 1. Enlist pillars of motherhood 2. Describe pillars with its practical application on community

2.	Maternal mortality, causes and prevention <ol style="list-style-type: none"> 1. Enumerate causes of maternal mortality 2. Calculate maternal mortality 3. Explain preventive measures to reduce maternal mortality 4. Overview of antenatal care and high risk signs
3.	Infant care: growth and development, Breast feeding <ol style="list-style-type: none"> 1. Describe normal growth and development with milestones 2. Outcomes of delayed growth and development and its prevention 3. Explain advantages of breast feeding 4. Define and describe weaning 5. Methods of assessment of growth 6. Describe normal growth chart
4.	Common causes of morbidity and mortality , their prevention and control <ol style="list-style-type: none"> 1. Enlist various causes of neonatal, infant and child mortality 2. Describe the preventive measures of increased morbidity and mortality
5.	Child care <ol style="list-style-type: none"> 1. Describe infancy and care needed 2. Explain neonatal care 3. Measuring growth of a baby and child 4. Features of neonatal screening
6.	IMCI <ol style="list-style-type: none"> 1. Knowledge about guidelines of diagnosis and treatment of common childhood illnesses
7.	Adolescent health <ol style="list-style-type: none"> 1. Definition of adolescent health 2. Approaches to deal adolescent health problems
8.	Reproductive tract infections, Management of STDs <ol style="list-style-type: none"> 1. Enlist various reproductive tract infections 2. Causes of STDs 3. Management of STDs

Health of School age children

School Health services in a branch of preventive medicine which deals with medical inspection of school children & their health protection, primarily in the environment of the school

Sr. No.	Title of Lecture with learning objectives
1.	Role of teachers and doctors <ol style="list-style-type: none"> 1. Describe key roles of school teachers in health improvement 2. Duties of a doctor visiting school
2.	Procedures for determining health status of school age children <ol style="list-style-type: none"> 1. Explain the procedures for assessment of health status of school age children 2. Interpretation of the results of assessment and possible preventive

	measures
3.	Common health problems of school children <ol style="list-style-type: none"> 1. Enumerate common health problems of school children 2. Measures to control these problems

Environmental Health Sciences

The branch of public health concerned with monitoring or mitigating those factors in the environment that affect human health and disease. According to WHO, Environmental health addresses all the physical, chemical, and biological factors external to a person, and all the related factors impacting behaviours. It encompasses the assessment and control of those environmental factors that can potentially affect health. It is targeted towards preventing disease and creating health supportive environments.

Sr. No.	Title of Lecture with learning objectives
1.	Air <ol style="list-style-type: none"> 1. Causes of air pollution 2. Methods of air purification 3. Ways of air sampling and its inspection
2.	Water I <ol style="list-style-type: none"> 1. Enlist uses of water 2. Enumerate sources of water 3. Describe the sources of water 4. Surveillance of drinking water 5. Water related diseases
3.	Water II <ol style="list-style-type: none"> 1. Explain water pollution 2. Indicators of water pollution 3. Hazards of water pollution 4. Criteria for checking quality of water
4.	Water III <ol style="list-style-type: none"> 1. Ways of water purification 2. Describe water purification on small scale 3. Describe water purification on large scale 4. Method of sampling of water from various sources of water
5.	Climate <ol style="list-style-type: none"> 1. Definition of climate and weather 2. Components of climate
6.	Greenhouse effect <ol style="list-style-type: none"> 1. Explain greenhouse effect with its mechanism 2. Describe global warming 3. Causes of greenhouse effect 4. Effects on health 5. Explain its preventive measures
7.	Temperature, humidity and atmospheric pressure <ol style="list-style-type: none"> 1. Effects of temperature on health

	<ol style="list-style-type: none"> 2. Able to diagnose the effects of temperature in a person by clinical features 3. Types of humidity 4. Ways of measuring the humidity in environment 5. Describe the effects of atmospheric pressure
8.	Radiation <ol style="list-style-type: none"> 1. Sources of radiation 2. Describe the adverse effects of radiation on human body 3. Explain the preventive measures of radiation hazards
9.	Healthful housing <ol style="list-style-type: none"> 1. Criteria for healthful housing 2. Effects of healthful housing on health
10.	Noise <ol style="list-style-type: none"> 1. Sources of noise 2. Effects caused by excess of noise 3. Describe the preventive measures of noise pollution

Occupational Health

It includes the outline of the scope and nature of occupational Health. This module covers the moral, social and economic reasons for maintaining and promoting good standards of occupational health in the workplace. This unit explains the role of governments and international bodies in formulating a framework for the regulation of occupational Health management. It enables the students to demonstrate an understanding of the risk assessment process and methodology.

Sr. No.	Title of Lecture with learning objectives
1.	Concepts Successful completion of this module will enable the learner to: <ol style="list-style-type: none"> 1. Definition of occupation and its types. 2. Features of various occupations. 3. Understanding of Occupational health 4. Aims and objectives of occupational health 5. Functions of occupational health services
2.	Ergonomics and its importance <ol style="list-style-type: none"> 1. Definition of ergonomics 2. Objectives of ergonomics 3. Application of ergonomics
3.	Occupational hazards, principles of control <ol style="list-style-type: none"> 1. Explain hazards related to various occupations 2. Classification of occupational diseases 3. Features of various occupational diseases 4. Management plan to prevent occupational hazards and diseases
4.	General principles of occupational disease prevention <ol style="list-style-type: none"> 1. Enlist the means of occupational disease prevention 2. Principles of prevention

5.	Organization of occupational health services <ol style="list-style-type: none"> 1. Measures for general health promotion 2. Measures for the protection of workers
6.	Health Insurance and social security schemes <ol style="list-style-type: none"> 1. Description of health insurance policy and its implementation 2. Understanding of social security schemes and its application

Arthropods and their Public health importance

Arthropods such as insects, and mammals such as rats, play major roles. The public health importance of vectors is related to disease transmission, damage to food and property.

Sr. No.	Title of Lecture with learning objectives
1.	Common arthropod borne diseases <ol style="list-style-type: none"> 1. Enumerate the common arthropod borne infections 2. Explain the epidemiological factors of each disease 3. Able to diagnose the infection and its management
2.	Control of arthropods of medical importance <ol style="list-style-type: none"> 1. Ways of prevention and control of arthropod borne diseases
3.	Insecticides and their public health importance <ol style="list-style-type: none"> 1. Define insecticides 2. Classification of insecticides 3. Describe the insecticide resistance

Prevention and control of parasitic diseases of public health importance

Medical parasitology traditionally has included the study of three major groups of animals: parasitic protozoa, parasitic helminths (worms), and those arthropods that directly cause disease or act as vectors of various pathogens. A parasite is a pathogen that simultaneously injures and derives sustenance from its host. Infections of humans caused by parasites number in the billions and range from relatively innocuous to fatal. The diseases caused by these parasites constitute major human health problems throughout the world.

Sr. No.	Title of Lecture with learning objectives
1.	Prevention and control of parasitic diseases <ol style="list-style-type: none"> 1. Enumerate the common parasitic diseases 2. Explain the epidemiological factors of each disease 3. Able to diagnose the disease and its management

Snake bite

Snake bite is a common problem faced by agricultural workers or people of developing countries. Its timely management is essential to prevent its effects.

Sr. No.	Title of Lecture with learning objectives
1.	Personal protection and management <ol style="list-style-type: none"> 1. Diagnosis of snake bite (clinical, signs and symptoms)

	<ol style="list-style-type: none"> 2. Differentiate between various snakes venom and their effects on human body 3. Management of snake bite
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Mental Health

Mental healthcare is not only a public health priority but has far reaching consequences for the state. In 2004, a study from Pakistan stated that 34 per cent of people suffered from common mental disorders. According to the World Health Organisation, mental health is defined as “a state of well-being in which every individual realises his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community”.

Sr. No.	Title of Lecture with learning objectives
1.	Concept, common mental health problems, their causes <ol style="list-style-type: none"> 1. Enumerate various mental health diseases 2. Causes of mental health diseases 3. Diagnosis of mental health disease 4. Outcomes of mental health issues
2.	Prevention and control, Juvenile delinquency <ol style="list-style-type: none"> 1. Prevention and control of mental health diseases 2. Define and explain juvenile delinquency

Behavioral sciences and lifestyle

A branch of science (such as psychology, sociology, or anthropology) that deals primarily with human action and often seeks to generalize about human behavior in society. The term behavioural sciences is often confused with the term social sciences. They typically include fields like sociology, economics, public health, anthropology, demography and political science. Many subfields of these disciplines cross the boundaries between behavioral and social sciences.

Sr. No.	Title of Lecture with learning objectives
1.	Concept, attitudes, health and illness behavior <ol style="list-style-type: none"> 1. .Acquire basic knowledge of motivation, stress, and life-span development 2. Basic knowledge of social stress and health. 3. Acquire basic knowledge of the effects of social and cultural factors on health. 4. Understand the role of communication in promoting health
2.	Drug abuse, addiction and smoking <ol style="list-style-type: none"> 1. Definition of Drug abuse and addiction 2. Enlist the effects of drug abuse and addiction 3. Enumerate the causes of smoking 4. Outcomes of smoking and tobacco use 5. Control measures of tobacco use
3.	Child abuse and child labour <ol style="list-style-type: none"> 1. Describe child abuse and child labour

	<ol style="list-style-type: none"> 2. Enlist various ways of child abuse 3. Legislative measures for the control of abuse and labour in children
4.	Role of physical exercise in health and disease <ol style="list-style-type: none"> 1. Explain the effects of physical exercise on health 2. Ways of improving disease condition and living a healthy lifestyle

Information, Education and Communication

Through communication people transfer facts, idea, emotion, knowledge, attitude and skills to make informed decision about their health.

Sr. No.	Title of Lecture with learning objectives
1.	Concept, aims and objectives, Approaches used in public health <ol style="list-style-type: none"> 1. Enlist aims and objectives of communication 2. Components of communication process 3. Able to draw and explain Shannon Weaver Communication Process
2.	Contents, principles and stages of health education <ol style="list-style-type: none"> 1. Enumerate the principles of health education 2. Explain stages of health education 3. Effects of health education on a community
3.	Communication methods, barriers and skills in health education <ol style="list-style-type: none"> 1. Classification of various ways of communication 2. Describe the methods in health communication and health education
4.	Planning, organizing and evaluating a health education programme <ol style="list-style-type: none"> 1. Able to draw and explain the planning cycle 2. Define evaluation and its types 3. Enlist ways of evaluation 4. Enumerate the outcomes of evaluation

Disaster

Disaster is the occurrence of an event which causes physical damage , ecological disruption, loss of human life and deterioration of health and health related services on a large scale that requires help from outside the affected community or area.

Sr. No.	Title of Lecture
1.	Definition, classification <ol style="list-style-type: none"> 1. Define disaster 2. Classify disaster
2.	Epidemic of communicable diseases, man made disasters <ol style="list-style-type: none"> 1. Enlist the communicable diseases common after disasters 2. Measures of prevention of these diseases in disasters
3.	Accidents, thermo nuclear warfare, causes and prevention <ol style="list-style-type: none"> 1. Causes of accidents and thermo nuclear warfare 2. Measures of prevention of these accidents

4.	Magnitude, and effects of disaster and public health consequences 1. Magnitude and measurement of effects of disaster 2. Social reactions following a disaster
5.	Disaster: preparedness and management 1. Surveillance cycle 2. Steps in disaster management

Medical Ethics

The term Biomedical Ethics refers to a system of moral principles that apply values to the practice of clinical medicine, biology & in scientific research

Sr. No.	Title of Lecture
1.	Concepts and components, National recommended Guidelines 1. Background concepts & components. 2. Knowledge about recommended guidelines.

LIST OF PRACTICAL AND COMMUNITY BASED TRAINING

Student should have practical experience in questionnaire development, data collection, compilation, presentation, analysis and report writing.

Field visits

- Visit to BHU and RHC
- Visit to an NGO
- Visit to a primary school to assess the nutritional status of school children
- Visit to MCH/Reproductive Health Centre to observe the organization, and function of the centre and to demonstrate counseling skills in one of the following:
 - Nutritional counseling for children, pregnant and lactating women.
 - Antenatal Care
 - Family planning services
 - Immunization, others
 - Visit to a hospital to see the hospital waste disposal.
 - Visit to an industry
 - Visit to a physical/mental/social rehabilitation centre.
 - Visit to dog bite center
 - Visit to water testing lab
- **Skills development lab**
 - Water purification at domestic level.
 - Contraceptives
 - Vaccination including the cold chain
 - Oral rehydration solution

ASSESSMENT PLAN
DEPARTMENT OF COMMUNITY MEDICINE
SHARIF MEDICAL AND DENTAL COLLEGE LAHORE

CHAPTER TESTS

Multiple choice question and short essay question test will be used after completing each chapter to assess the learning of knowledge. These all assessment exercises will be formative. The written tests like Multiple-Choice Questions (MCQs) and Short-Essay Questions (SEQs) test formats are used for the assessment of cognitive domain. The MCQs are more objective and essentially select type of item response format. The SEQs are more subjective and have a supply or construct type item response format and can effectively assess problem solving skills.

OSPE

OSPE will be used to evaluate problem based knowledge and skills. The OSPE is a method of practical skill assessment which are difficult to evaluate with written examinations.

Viva Voce

Viva voce is used for assessment of knowledge and problem solving ability of students. This method is useful evaluating cognitive domain.

Assignments / Research / Practical Journal

Students will be given assignment of different nature such as research and literature search and surveys and report writing of field visits and household surveys.

INTERNAL ASSESSMENT

- i. The weightage of internal assessment shall be 10% of totals mark. Internal assessment will be calculated out of 30 on the basis of all these tests that will be conducted throughout the year.
- ii. Continuous internal assessment shall consist of evaluation at the end of each chapter, e.g. class tests, etc., attitudinal assessment from educational supervisors.
- iv. The score of internal assessment shall contribute to the score in the final examination, Final university examination of each subject shall contribute 90 to total score, and the candidate shall pass in aggregate.
- v. Proper record of continuous internal assessment shall be maintained.

Pre-annual Exam:

This will be undertaken in coordination with other departments, exactly following the format of university professional examinations. It will comprise of MCQs, SEQs, OSPE and Viva voce.

Distribution of Marks in the Subject of Community Medicine

4th Professional MBBS Theory:

Total marks: 300

Theory: 135 (MCQs 65 marks, SEQs 70 marks)

FORMAT		
SR. NO.	Comments	Marks
1	OSPE 10 stations	40
2	HOUSE OLD SURVEY, RESEARCH PROJECT, FIELD VISITS,	25 marks
3	STRUCTURED VIVA VOCE (related to curriculum)	70 marks 35+35 (Internal and External)
4	INTERNAL ASSESSMENT	30 marks
5	THEORY	135 marks 65 MCQs 70 SEQs
6	TOTAL	300 marks

1. OSPE 10 Stations (10 non-observed stations related to practicals (each of 03 marks) 30

2. HOUSE HOLD SURVEY, RESEARCH PROJECT, FIELD VISITS, 35

3. STRUCTURED VIVA VOCE (related to curriculum 70 35+35 (External + Internal)

4. INTERNAL ASSESSMENT 30

5. THEORY 135

Total 300

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PRESCRIBED TEXT BOOKS & REFERENCES

1. Text book of Community Medicine by Park J E. Latest Edition
2. Text book of Community Medicine. 6th Ed. by Ilyas Ansari.
3. Text book of Community Medicine by Maxie Rozani. Latest Edition
4. Medical Statistics. 2nd Ed. by R. Turkwood.
5. Online Journals and Reading Materials through HEC Digital Library Facility.

**Department of
Otorhinolaryngology**

Teaching Hours

Total Teaching Hours	<u>140</u>
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Subjects	Number of Classes
Lectures	2/Week
Practicals/Clinical classes	5/Week

Teaching Schedule for 4th year M.B.B.S Class

Sr. #	Topic	No. of Lectures
1	Ear	30
2	Nose and Paranasal Sinuses	19
3	Throat and Neck	24

UHS Syllabus- ENT

General Learning Outcomes of the Otorhino laryngology Course:

To equip them with essential knowledge, skills and attitude to enable them to:

- Identify ENT diseases including emergencies, provide primary health care, refer to appropriate center and provide follow-up to the patients.
- Perform essential minor ENT procedures.
- Communicate effectively with the patient, the family and the community regarding disease and its relevant issues.
- Understand medical ethics and its application pertaining to ENT and maintain the confidentiality of the patient.
- To understand the prevalence and prevention of the common Public Health Problem related to ENT in the community
- Understand the principles of medical research including fundamentals of Information Technology

INSTRUCTIONAL STRATEGY

METHODOLOGY

- Problem-based Learning
- Tutorials/ Practical sessions/Skills Lab practice
- Clinical rotations and ward visits
- Lectures/Seminars/CPC's – using modern audio visual techniques,
- Distant learning using electronic devices and current Information
- Technology facilities.

COURSE CONTENTS

NOSE:

- Anatomy and physiology
- History taking and examination
- Diseases of external nose
- Congenital lesions, choanal atresia, meningocele, encephalocele, trauma, cleft nose, fractures, external deformities.
- Diseases of septum
- Epistaxis
- Deviation
- Haematoma
- Septal abscess
- Perforation
- Rhinitis
- Allergic
- Atrophic
- Hypertrophic
- Foreign bodies.
- Vestibulitis
- Polyps
- Mucous
- Ethmoidal
- Antrochoanal
- Bleeding polypus
- Foreign body nose
- Rhinolith
- Mucocoeles
- Sinusitis
- Acute sinusitis
- Chronic sinusitis, complications
- Fungal infection of nose and paranasal sinuses
- Causes of rhinorrhoea

- Tumours
- Basal cell carcinoma
- Squamous cell carcinoma
- Pappiloma
- Osteoma
- Headache and its ent causes

BUCCAL CAVITY, ORAL CAVITY, OROPHARYNX

- Anatomy and physiology
- History and examination
- ORAL CAVITY ULCERS:
- Traumatic
- Aphthus,
- Vincents angina
- Agranulocytic
- Tuberculous
- Maligant uclers
- Thrush
- Leukoplakia
- Behcet's disease
- Ulcerative lesions of oral cavity
- OROPHARYNX
- Acute tonsillitis
- Chronic tonsillitis
- Peri tonsillitis and abscess
- Diphtheria
- Differential diagnosis of white patch on the tonsil
- Tonsil/oral cavity
- Tumours of tonsil
- Retro-pharyngeal abscess
- Pharyngeal abscess acute/chronic
- Sleep apnea syndrome
- AIDS

- Ludwig's angina
- LARYNX
- Anatomy
- Physiology
- History
- Examination
- Glottic stenosis/laryngocoele
- Laryngomalacia
- Trauma, Foreign Body & Infections of Larynx
- Supraglottitis
- Acute laryngitis
- Laryngotracheobronchitis
- Diphtheria
- Chronic laryngitis
- Tuberculosis
- Syphilis
- Leprosy
- Non specific chronic laryngitis
- Vocal nodules
- Vocal cord paralysis
- Functional aphonia
- Tumours
- Papilloma larynx
- Polyp
- Carcinoma larynx
- TNM classification
- Tracheostomy
- Indications
- Contra indications
- Complication
- Operation steps

- Post op care
- EAR
- Anatomy and physiology
- History and examination
- Tuning fork tests. Pure tone audiometry/impedance audiometry
- Pre auricular sinus
- Deafness
- Pain in the ear
- External ear
- Perichondritis
- Trauma to pinna/haematoma
- Wax ear
- Foreign body ear
- Hyper ostosis
- Neoplasia
- Boil ear
- Fungus
- Acute diffuse otitis externa
- Malignant otitis externa
- Myringitis bulliosa
- Traumatic rupture
- Middle ear
- Acute otitis media
- Acute necrotising otitis media
- Serous otitis media
- Chronic otitis media
- i Tubo tympanic
- ii Mucosal disease
- iii Attico antral
- Complications Of Otitis Media / Mastoiditis
- Oto toxicity

- Acoustic trauma
- Traumatic perforation of tympanic membrane.
- Deaf child
- Speech therapy
- Oto sclerosis
- Vertigo
- Meniere's disease
- Facial nerve paralysis
- Eustachean tube dysfunction
- HEAD & NECK
- Cleft palate
- Hare lip
- Thyroglossal cyst / sinus
- Pre auricular cyst / sinus
- D/D of mass neck
- Lesions of salivary glands

PRACTICAL SKILLS:

By the end of the clerkship in the department of ENT, the student should be able to:

- Obtain an appropriate history.
- Perform a complete regional examination
- Identify common E.N.T. Head & Neck problems for a given patient and outline appropriate management plans.
- Identify problems needing referral to an Otolaryngologist.

GENERAL SKILLS.

The students should be able to:

- Demonstrate the use of the head mirror for adequate illumination of the nasal cavity
- Examine the oropharynx and the neck
- Examine Larynx by indirect laryngoscopy
- Examination of postnasal space by posterior rhinoscopy.

SPECIAL SKILLS:

- Use the tongue blade to aid inspection of the buccal/cavity.
- Use the finger palpation examination of the oral cavity and tongue
- Palpate the neck to assess the lymph-nodes and salivary glands in the neck.
- Examination of cranial nerves
- Identify structures (of the neck, sinuses and ear) on X-ray (MRI, CT Scan)
- Demonstrate the appropriate use of nasal speculum
- Demonstrate the use of otoscope to aid in examination of the external auditory canal and the tympanic membrane.
- Learn pneumatic otoscopy. (Use of Seigle's speculum)
- Demonstrate the use of tuning fork and interpret the findings
- Interpret pure tone and speech audiometry
- Syringing of ear.
- Removal of wax from ear
- Anterior nasal packing

Observe the Following Operations and the Use of the Listed Instruments

- Abscess incision drainage/ haematoma
- Reduction of fracture nose
- Septal correction surgery
- Antral wash out
- Cald Well Luc's operation

Introduction to New Procedures

- Nasal packing (anterior)
- Tracheostomy
- Laryngotomy
- Management of obstructed airway
- Foreign body in tracheo-bronchial tree and Larynx
- Ear operations

Instruments

- Ear instruments like myringotome and ear speculumWalsham's Forceps
- Ashe's Forceps
- Trocar and Cannula
- Nasal Speculum
- Freer elevator
- Suction Tube
- Lucl's forceps
- Tilly Nasal Dressing Forceps
- Bayonet Nasal Forces
- Myle's Retrograde Perforator.
- Nasal Snare

- Balenger Swivel Knife
- Eustachean Catheter
- Sinus forceps
- Endotracheal tube, cuffed, non-cuffed
- McGill forceps
- Tracheostomy tubes
- Tracheal dilator
- Retractors
- Crecooid hook
- Endoscopes
- Laryngoscopes
- Bronchoscopes
- Oesophagoscopes
- Nasopharyngoscope (Rigid/flexible)
- Adenoid curette
- Boyle Davis mouth gag
- Tonsil holding forceps
- Tonsillar artery forceps
- Tonsil snare
- Knot pusher

**LIST OF LECTURES IN THE SUBJECT OF OTORHINOLARYNGOLOGY AND THEIR
LEARNING OBJECTIVES
DEPARTMENT OF OTORHINOLARYNGOLOGY
4TH YEAR MBBS CLASS**

Concept of Ear Disease.

Ear disease aim to know accurate signs & symptoms of different ear disease. Factor effecting, different investigations to confirm diagnosis & best treatment option to relieve patient ear disease.

Sr. No.	Title of lecture with learning objectives:
1.	Concept of ear disease, its factors effecting and management At the end of course students will be capable to: <ol style="list-style-type: none"> 4. Introduction of ENT: <ol style="list-style-type: none"> a. Awareness of disease of ear, nose & throat. b. Diagnosis of ear, nose & throat. c. Different treatment options for disease.
2.	Diseases of external ear: At the end of course students will be capable to: <ol style="list-style-type: none"> 4. Basic anatomy of external ear. 5. Different diagnosis of ear. 6. Different treatment for ext. ear.
3.	BPPV: At the end of course students will be capable to: <ol style="list-style-type: none"> 5. Define vertigo. 6. Different types of vertigo. 7. Different treatment options of vertigo.
4.	Secretory otitis media. At the end of course students will be capable to: <ol style="list-style-type: none"> 3. Definition of otitis media. 4. Different factors causing otitis media. 5. Investigate & treatment option for otitis media.
5.	Acute otitis media: At the end of course students will be capable to: <ol style="list-style-type: none"> 3. Definition of acute otitis media. 4. How patient clinically present in this condition. 5. Medical & surgical option in this diasease.
6.	Assessment of hearing: At the end of course students will be capable to: <ol style="list-style-type: none"> 4. Definition of hearing loss. 5. Causative factor of hearing loss disease. 6. Treatment of hearing loss.
7	Diseases of middle ear: At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Different diseases of middle ear. 2. Different causative factor causing middle ear disease.

	3. Different treatment options for middle ear disease.
8	Chronic suppurative otitis media.: At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Define CSOM. 2. Different types of CSOM. 3. Diagnosis & treatment.
9	Complications of CSOM: At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Enumerate different complications of CSOM. 2. Factors causing complication of CSOM. 3. Treatment options for CSOM.
10	Aero-otitis media: At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Define aero-otitis media. 2. Causative factor causing otitis media. 3. Treatment options.
11	Hearing loss: At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Know to different types of hearing loss. 2. Causative factors & diagnosis for hearing loss. 3. Treatment options for hearing loss.
12	Occupational noise induce hearing loss: At the end of course students will be capable to: <ol style="list-style-type: none"> 1. How intense of sound effect hearing. 2. How to avoid. 3. Treatment options for noise induce hearing loss.
13	Facial nerve and its disorders: At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Anatomy, physiology & land mark of facial nerve. 2. Different types of facial nerve disorders. 3. Treatment options of facial nerve.
14	Otalgia: At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Define otalgia. 2. Local & distant factor for otalgia. 3. Management of otalgia.
15	Hearing impairment & rehabilitation: At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Types of hearing impairment. 2. Different investigations to diagnose hearing impairment. 3. Use of cochlear implant & hearing aid.
16	Disease of inner ear: At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Anatomy & physiology of inner ear.

	<ol style="list-style-type: none"> 2. Different diseases of inner ear. 3. Management of inner ear.
17	<p>Mastoidectomy:</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Anatomy & physiology of mastoid air cells. 2. Types of mastoidectomy. 3. Indicators & follow up of mastoidectomy.
18	<p>Menier's disease:</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Define meniere's disease. 2. Causative factor for meniere's disease. 3. Medical treatment & surgical treatment for meniere's disease.
19	<p>Trauma temporal bone:</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Different cause producing trauma to temporal bone. 2. Its effects & complications. 3. Management.
20	<p>Otosclerosis:</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Define otosclerosis. 2. Aetio-pathogenesis. 3. Medical & surgical options.
21	<p>Acoustic neuroma:</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Define acoustic neuroma. 2. Different diagnosis. 3. Clinically presents & management.
22	<p>SNHL:</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Causative factor of SNHL. 2. Investigations to confirm diagnosis. 3. Treatment options.
23	<p>Tinnitus & vertigo:</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Causative factor. 2. Investigations. 3. Treatment.
24	<p>Tumors of ear:</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Enumerate different types of tumors of ear. 2. Diagnosis of ear tumor. 3. Treatment of ear tumor.

Concept of Nose Disease.

Nose disease aim to know accurate signs & symptoms of different nose diseases. Factor effecting, different investigations to confirm diagnosis & best treatment option to relieve patient nose disease.

25	Anatomy nose & paranasal sinuses: At the end of course students will be capable to: <ol style="list-style-type: none">1. Anatomy of nose & paranasal sinuses.2. Different diseases.3. Different treatment options.
26	Allergic rhinitis: At the end of course students will be capable to: <ol style="list-style-type: none">1. Define allergic rhinitis.2. Types of allergic rhinitis.3. Conservative treatment & immunotherapy.
27	Acute rhinosinusitis: At the end of course students will be capable to: <ol style="list-style-type: none">1. Definitions.2. Diagnosis.3. Treatment.
28	FESS protocol: At the end of course students will be capable to: <ol style="list-style-type: none">1. Define proptosis.2. Types of FESS.3. Complications of FESS & management.
29	Chronic rhinosinusitis: At the end of course students will be capable to: <ol style="list-style-type: none">1. Define chronic rhinosinusitis.2. Pre-disposing factors.3. Complications & treatment.
30	CSF rhinorrhea: At the end of course students will be capable to: <ol style="list-style-type: none">1. Define CSF rhinorrhea.2. Causative factor.3. Investigations & management.
31	Diseases of ext. nose & vestibule. At the end of course students will be capable to: <ol style="list-style-type: none">1. Different diseases of ext. nose.2. Clinically signs & symptoms.3. Treatment options.
32	Granulomatous disease: At the end of course students will be capable to: <ol style="list-style-type: none">1. Define granulomatous.2. Types of granulomatous.

	3. Treatment options.
33	Trauma to face & tumor of nose. At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Effect of facial trauma. 2. Clinically signs & symptoms. 3. Complications & treatment.
34	Nasal polyp & foreign body nose: At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Define polyp. 2. Different types of foreign bodies. 3. Treatment options of polyps & F.B nose.
35	Epistaxis: At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Types of epistaxis. 2. Investigations. 3. Treatment options.
36	Nasal septum & its diseases: At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Anatomy & physiology. 2. DNS. 3. Investigations & treatment.

Concept of Throat Disease.

Throat disease aim to know accurate signs & symptoms of different throat diseases. Factor effecting, different investigations to confirm diagnosis & best treatment option to relieve patient throat disease.

37	Acute & chronic inflammation of larynx: At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Anatomy & physiology of larynx. 2. Causative factor of laryngitis. 3. Treatment.
38	Sleep apnea syndrome: At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Definition. 2. Investigations to diagnosis. 3. Treatment options.
39	Congenital lesion of larynx: At the end of course students will be capable to: <ol style="list-style-type: none"> 1. Different types of congenital lesion of larynx. 2. How to investigate. 3. How to manage.
40	Angiofibroma: At the end of course students will be capable to:

	<ol style="list-style-type: none"> 1. What is angiofibroma. 2. Why it bleed so profusely. 3. Clinically feature & management.
41	<p>Salivary gland disorders:</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Role of salivary glands. 2. Causative factors causing salivary gland disorders. 3. Management of salivary gland disorders.
42	<p>Salivary gland tumors:</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Types of salivary gland tumors. 2. Investigations to confirm types of tumors. 3. Treatment options.
43	<p>Tonsil disease:</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Anatomy of tonsil. 2. Feature of inflammation. 3. Causative factors & treatment.
44	<p>Tracheostomy:</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Factors causing airway problem. 2. Indication of tracheostomy. 3. Care of tracheostomy tube.
45	<p>Tumors of oropharynx:</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Different types of tumors. 2. Investigations to confirm diagnosis. 3. Medical & surgical treatment.
46	<p>Tumors of nasopharynx:</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Anatomy & physiology of nasopharynx. 2. Clinically signs & symptoms of nasopharynx. 3. Investigations & treatment.
47	<p>Hoarseness of voice:</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Causative factor effective vocal cord. 2. Investigations to confirm diagnosis. 3. Treatment.
48	<p>Laryngeal trauma:</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Types of laryngeal trauma. 2. Acute signs & symptoms of laryngeal trauma. 3. Treatment options.
49	<p>Retro-pharyngeal abscess:</p>

	<p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Define retro-pharyngeal abscess. 2. Causative factor. 3. Effects on airway & emergency management.
50	<p>Deep neck space infections:</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Anatomy of deep neck space. 2. Clinically importance. 3. Causative factor & treatment.
51	<p>Foreign body throat:</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Types of foreign body in throat. 2. Sign & symptoms. 3. Complications & treatment.
52	<p>Laryngeal paralysis:</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Types of laryngeal paralysis. 2. Investigations to confirm. 3. Treatment options.
53	<p>Malignancy of larynx:</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Factor effecting for malignancy of larynx. 2. Investigations to confirm malignancy of larynx. 3. Different treatment options.
54	<p>Tumors of hypopharynx:</p> <p>At the end of course students will be capable to:</p> <ol style="list-style-type: none"> 1. Types of hypopharynx tumor. 2. Investigations to confirm hypopharynx tumors. 3. Treatment for hypopharynx tumors.

RECOMMENDED BOOKS

1. **Text book of ENT** by Logan Turner. Latest Ed.
2. **Diseases of ENT** by Dhengra. Latest Ed.
3. **Text Book of ENT** by Masud.
4. **Oxford Hand Book of ENT** by Prescott.
5. Online Journals and Reading Materials through HEC Digital Library Facility.

Ward Schedule of ENT Department

SHARIF MEDICAL & DENTAL COLLEGE							
TIME TABLE, 4th YEAR MBBS (Session 2022 + 2023)							
S.M&D.C No/076-22/Path/3347-23/2023 Dated: 12-03-2023							
Day & Time	8:30am-9:15am	9:15am-10:00am	10:00am-10:45am	10:45am-12:45pm	12:45pm-02:30pm		
Monday	Community Medicine Lecture Lecture Hall 3	Pathology Lecture Lecture Hall 3	ENT Lecture Lecture Hall 3	Pathology Practical A Pathology Tutorial (SGD) B Community Medicine Practical/Tutorial (SGD)/Field Visit C			Hospital Work (SGD) Skill Lab*** Batch I (12:45 - 01:30pm) Batch II (01:30 - 02:30pm)
Tuesday	Medicine Lecture (21st March - 22nd August) Paediatric Lecture (29th August - 9th January) Lecture Hall 3		Eye Lecture Lecture Hall 3	Community Medicine (Research Methodology) Lecture Lecture Hall 3	Pathology Lecture Lecture Hall 3		Hospital Work (SGD)
Wednesday	Surgery Lecture Patient Safety Lecture (12th Apr - 26th Apr) Lecture Hall 3	Pathology Lecture Lecture Hall 3	ENT Lecture Lecture Hall 3	Break	Pathology Practical B Pathology Tutorial (SGD) C Community Medicine Practical/Tutorial (SGD)/Field Visit A		Hospital Work (SGD) Skill Lab*** Batch III (12:45 - 01:30pm) Batch IV (01:30 - 02:30pm)
Thursday	Community Medicine Lecture Lecture Hall 3	CPC Lecture Hall 4	Break	Eye Lecture Lecture Hall 3	Medicine Lecture Patient Safety Lecture (5th Mar - 18th Mar) Lecture Hall 4		Hospital Work (SGD) Skill Lab*** Batch V (12:00 - 12:45pm) Batch VI (12:45 - 01:30pm)
Friday	Hospital Work (SGD)**						
Saturday	Community Medicine Lecture Lecture Hall 3	Gynae/Obs. Lecture Lecture Hall 3	Pathology Lecture* Lecture Hall 1	Break*	Pathology Practical C Pathology Tutorial (SGD) A Community Medicine Practical/Tutorial (SGD)/Field Visit B	Orthopedics (21st Mar - 29th Jul) Anatomical (5th Aug - 9th Sep) Neurosurgery (16th Sep - 21st Oct) Urology (28th Oct - 9th Jan) Lecture Hall 3	Community Medicine Lecture Lecture Hall 3

Copy Forwarded to:
 1. Dr. Muhammad Adnan Khan Chief Executive SMC
 2. Principal SMDC
 3. Principal, College of Dentistry
 4. Heads of all concerned Departments
 5. Director Administration
 6. Ittefaq Hospital
 7. Notice Boards

* Amendments in Time Table QNT V for 2nd Saturday of every month.

1. Break 10:00am - 10:15am
2. No Pathology Lecture
3. Mentorship Session 10:15am - 11:00am

** Medicine, Surgery, ENT, Eye, Gynae/Obs. & Paeds batches will go to Ittefaq Hospital on every Friday only.
 *** The students of Clinical batches will spend rest of the time of Hospital Work in their respective wards.
 Skill Lab time table will be applicable from 27th March, 2023 to 8th June, 2023.

Prof. Maria Aslam
 Head Dept. of Pathology
 Chairperson Time Table Committee

SHARIF MEDICAL & DENTAL COLLEGE	
REVISED 4th YEAR MBBS CLINICAL ROTATION TIME TABLE	
CLASS IS DIVIDED INTO 6 BATCHES (Session 2022 - 2023)	
S.M&D.C No/076-22/Path/3423-23/2023 Dated: 23-02-2023	
Subbatches	Roll Numbers
I	20001 - 20017
II	20018 - 20029, 20031 - 20035
III	20036 - 20045, 20047 - 20053
IV	20054, 20056 - 20058, 20060, 20062 - 20065, 20067 - 20074
V	20075 - 20090
VI	20091 - 20101, 19023, 19024, 19096, 19099, 16050

Batch & Period of Posting	General Medicine & Dermatology*	General Surgery & Urology**	Paediatrics / Gynae & Obs.***	Cardiology & Nephrology****	Eye	ENT
21st March, 2023 - 10th May, 2023	I	II	III	IV	V	VI
11th May, 2023 - 21st July, 2023	II	III	IV	V	VI	I
22nd July, 2023 - 3rd September, 2023	III	IV	V	VI	I	II
4th September, 2023 - 10th October, 2023	IV	V	VI	I	II	III
11th October, 2023 - 15th November, 2023	V	VI	I	II	III	IV
16th November, 2023 - 24th December, 2023	VI	I	II	III	IV	V

21st Mar - 19th Apr	General Medicine	20th Apr - 10th May	Dermatology
11th May - 31st May	General Medicine	1st Jun - 21st Jul	Dermatology
22nd Jul - 11th Aug	General Medicine	12th Aug - 3rd Sep	Dermatology
4th Sep - 21st Sep	General Medicine	22nd Sep - 10th Oct	Dermatology
11th Oct - 27th Oct	General Medicine	28th Oct - 15th Nov	Dermatology
16th Nov - 4th Dec	General Medicine	5th Dec - 24th Dec	Dermatology

21st Mar - 19th Apr	General Surgery	20th Apr - 10th May	Urology
11th May - 31st May	General Surgery	1st Jun - 21st Jul	Urology
22nd Jul - 11th Aug	General Surgery	12th Aug - 3rd Sep	Urology
4th Sep - 21st Sep	General Surgery	22nd Sep - 10th Oct	Urology
11th Oct - 27th Oct	General Surgery	28th Oct - 15th Nov	Urology
16th Nov - 4th Dec	General Surgery	5th Dec - 24th Dec	Urology

21st Mar - 19th Apr	Paediatric	20th Apr - 10th May	Gynae & Obs.
11th May - 31st May	Paediatric	1st Jun - 21st Jul	Gynae & Obs.
22nd Jul - 11th Aug	Paediatric	12th Aug - 3rd Sep	Gynae & Obs.
4th Sep - 21st Sep	Paediatric	22nd Sep - 10th Oct	Gynae & Obs.
11th Oct - 27th Oct	Paediatric	28th Oct - 15th Nov	Gynae & Obs.
16th Nov - 4th Dec	Paediatric	5th Dec - 24th Dec	Gynae & Obs.

21st Mar - 19th Apr	Cardiology	20th Apr - 10th May	Nephrology
11th May - 31st May	Cardiology	1st Jun - 21st Jul	Nephrology
22nd Jul - 11th Aug	Cardiology	12th Aug - 3rd Sep	Nephrology
4th Sep - 21st Sep	Cardiology	22nd Sep - 10th Oct	Nephrology
11th Oct - 27th Oct	Cardiology	28th Oct - 15th Nov	Nephrology
16th Nov - 4th Dec	Cardiology	5th Dec - 24th Dec	Nephrology

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4. Heads of all concerned Departments
 5. Director Administration
 6. Notice Boards

Prof. Dr. Maria Aslam
 Head Dept. of Pathology
 Chairperson Time Table Committee

SKILL TIME TABLE OF ENT DEPARTMENT

Monday	Tuesday	Wednesday	Thursday
History Taking & Examination & small group discussion	Examination of Ear & History taking	Examination of Nose & history Taking	Examination of throat & history taking
Otoscopy	Facial nerve examination	Tuning fork test	Cerebellar test
Examination of nose	Ant. Rhinoscopy	Posterior rhinoscopy	Indirect laryngoscopy
Indirect laryngoscopy	Valsalva	Throat examination	Neck node palpable
Examination of deviated nasal septum	Examination of acute & chronic tonsillitis	Examination of polyps in the nose	Allergic rhinitis
Foreign body nose	Nasal boil	Foreign body in ear	Examination of the facial nerve
Examination for proptosis	How to perform fistula test for the ear	Dix Halpike test	Examination for cranial nerves
Palpation of the neck nodes superficial group	Palpation of the neck nodes deep group	Rombergs test	How to see nystagmus
Removal of wax from ears	Syringing	Examination of the larynx with endoscope	Examination of tympanic membrane with endoscope
Foreign body removal from nose under endoscopy	Foreign body removal from throat under endoscopy	Foreign body removal from ear under endoscopy	

ASSESSMENT PLANS
DEPARTMENT OF OTORHINOLARYNGOLOGY
SHARIF MEDICAL & DENTAL COLLEGE

Following modes of assessment are planned for 4th year MBBS class in the subject of Otorhinolaryngology. This plan has been designed keeping in view the university curriculum and hopefully will facilitate the students in preparing for 4th professional examination in the subject.

Class Tests:

These are conducted at the completion of every chapter. The test will comprise of MCQs and SEQs on the pattern of university examination. A preparatory time of at least 10 days shall be given prior to these tests. Each class will be followed by post-test discussion both in lecture and ward classes.

Ward Tests:

Topics of will be notified minimum one week before the ward test. Ward test will be conducted on the pattern of university examination (OSPE) and will comprise of 12 stations. There will be 7 un-observed stations which will cover the topics of ENT drugs, surgical instrument and clinical scenarios of ENT diseases. There will be 3 observed stations in which students will perform clinical methods and 2 interactive stations.

Final Assessment:

This will be undertaken in coordination with other departments, exactly following the format of university professional examinations. It will comprise of MCQs and SEQs.

Internal Assessment:

Internal assessment will be calculated out of 20 on the basis of these tests that will be conducted throughout the year.

Distribution of Marks in the Subject of Otorhinolaryngology`

4th Professional MBBS

Theory:

<u>Internal Assessment</u>	<u>MCQs</u>	<u>SEQs</u>	<u>To tal</u>
10	45	45	90

Viva Voce and OSPE

<u>Internal Assessment</u>	<u>OSPE + Viva</u>	<u>Short Case</u>	<u>Total</u>
10	60	30	90

Viva Voce: External&InternalExaminers15Markseach

OSPE:

- 1- 6 Un-observedstationsof04 marks each
- 2- 01 scenario/long case of 06 marks
- 3- 03 Observed stations for Clinical Method –30 marks

STAFF CONTACTS
OTORHINOLARYNGOLOGY DEPARTMENT
SMDC, LAHORE

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Department of Ophthalmology

PLANNED TEACHING ACTIVITIES FOR 4TH YEAR

DEPARTMENT OF OPHTHALMOLOGY

PMC allocated 100 hours to teach the curriculum of Ophthalmology for MBBS session. In order to meet this requirement following teaching modules have been planned. These modules have been carefully designed to impart core knowledge of Ophthalmology in a manner that an undergraduate student can retain the subject of ophthalmology and is adequately prepared for university examinations.

Lectures:

A total of 70-72 lectures are planned for the entire year. The lectures will be conducted by the Professor, associate and assistant professors or by senior registrar that have completed their post-graduation in the subject of Ophthalmology. The lectures will be interactive and students should actively participate to clear their doubts. The students can accompany their reference books are required to take notes of the lectures in light of the learning objectives of the topic.

Ward Classes:

Four ward classes have been planned per week. The class will be divided into 06 batches to conduct the ward classes effectively and one batch will be entertained for 06 weeks. It will comprise of history taking, clinical methods, case presentations and ophthalmic drugs. Ward classes will be conducted by senior registrar under an active supervision of Assistant Professor. Students are required to enter their ward work in their log books provided to them and get the signed after the completion of task.

Clinical Examination

Examination will be taught by the instructor on the patients. Instructor will perform it himself on the patient and demonstrate it to the students. After thorough observation instructor will ask each student to perform it and he will assess it and point out mistakes so students can completely understand the steps.

Small Group Discussions

Topics for the small group discussions will be given to the students to discuss and if any query is pointed out will be discussed with the instructor.

Case based learning

Case based learning classes will be conducted during the ward classes. A clinical case is identified and discussed with the students in detail. A brief history is taken by the students and clinical examination is performed under supervision. Diagnosis is made after detailed discussion and management plan is prepared of the case under consideration. The learning objectives and suggested reading material will be notified to the students. Students are required to generate the discussion amongst themselves to maximize the learning objectives of the topic discussed.

Seminars and walks

Departmental seminars and walks to create community awareness among the students. Clinical topics will be allocated to students and they will present a very short case history with ongoing treatment of the patient along with other available treatment. Each presentation will be of 10-15 minutes' duration with question and answer session after it

TRAINING PROGRAM FOR LECTURES
DEPARTMENT OF OPHTHALMOLOGY
4TH YEAR MBBS CLASS

Date	Day	Time	Topic	Tutor	Book
EYE					
21-3-23	Tuesday	09:15 to 10	Introduction to Ophthalmology	Dr. Faisal Anwar	Shafi M.Jatoi
28-3-23	Tuesday	10:15 to 11	Eye diseases secondary to hypertension	Dr. Faisal Anwar	Shafi M.Jatoi
30-3-23	Thursday	09:15 to 10	Glaucoma causes and diagnosis	Dr. Faisal Anwar	Shafi M.Jatoi
01-04-23 to 08-04-23			Spring Vacations		
11-4-23	Tuesday	09:15 to 10	Glaucoma- principles of management	Dr. Faisal Anwar	Shafi M.Jatoi
13-4-23	Thursday	10:15 to 11	Antiglaucoma therapeutics	Dr. Faisal Anwar	Shafi M.Jatoi
18-4-23	Tuesday	09:15 to 10	Ocular trauma-I	Dr. Faisal Anwar	Shafi M.Jatoi
20-3-23	Thursday	10:15 to 11	Ocular trauma-II	Dr. Faisal Anwar	Shafi M.Jatoi
25-4-23	Tuesday	09:15 to 10	TEST	Dr. Faisal Anwar	Shafi M.Jatoi
27-4-23	Thursday	10:15 to 11	Orbital cellulitis, epiphora and lacrimation	Dr. Faisal Anwar	Shafi M.Jatoi
2-5-23	Tuesday	09:15 to 10	Acute and chronic dacrocystitis	Dr. Faisal Anwar	Shafi M.Jatoi
4-5-23	Thursday	10:15 to 11	Paralytic squint	Dr. Faisal Anwar	Shafi M.Jatoi
9-5-23	Tuesday	09:15 to 10	Non paralytic squint	Dr. Faisal Anwar	Shafi M.Jatoi
11-5-23	Thursday	10:15 to 11	Thyroid eye disease-I	Dr. Faisal Anwar	Shafi M.Jatoi
16-5-23	Tuesday	09:15 to 10	Thyroid eye disease-II	Dr. Faisal Anwar	Shafi M.Jatoi
18-5-23	Thursday	10:15 to 11	Eye diseases secondary to diabetes	Dr. Faisal Anwar	Shafi M.Jatoi
23-5-23	Tuesday	09:15 to 10	Diabetic retinopathy	Dr. Faisal Anwar	Shafi M.Jatoi
25-5-23	Thursday	10:15 to 11	Cataract	Dr. Faisal Anwar	Shafi M.Jatoi
30-5-23	Tuesday	09:15 to 10	Carcinomas of eye	Dr. Faisal Anwar	Shafi M.Jatoi
1-6-23	Thursday	10:15 to 11	Collagen vascular diseases	Dr. Faisal Anwar	Shafi M.Jatoi
6-6-23	Tuesday	09:15 to	Pupil reaction	Dr. Faisal Anwar	Shafi

		10			M.Jatoi
8-6-23	Thursday	10:15 to 11	Pupillary reaction abnormalities	Dr. Faisal Anwar	Shafi M.Jatoi
13-6-23	Tuesday	09:15 to 10	Revision	Dr. Faisal Anwar	Shafi M.Jatoi
15-6-23	Thursday	10:15 to 11	TEST	Dr. Faisal Anwar	Shafi M.Jatoi
16-06-23 to 15-07-23			SUMMER VACATIONS		
18-7-23	Tuesday	09:15 to 10	Dry eyes	Dr. Faisal Anwar	Shafi M.Jatoi
20-7-23	Thursday	10:15 to 11	Uveitis	Dr. Faisal Anwar	Shafi M.Jatoi
25-7-23	Tuesday	09:15 to 10	Red eyes	Dr. Faisal Anwar	Shafi M.Jatoi
27-7-23	Thursday	10:15 to 11	Conjunctivitis-I	Dr. Faisal Anwar	Shafi M.Jatoi
1-8-23	Tuesday	09:15 to 10	Conjunctivitis-II	Dr. Faisal Anwar	Shafi M.Jatoi
3-8-23	Thursday	10:15 to 11	Pterygium	Dr. Faisal Anwar	Shafi M.Jatoi
8-8-23	Tuesday	09:15 to 10	Keratitis	Dr. Faisal Anwar	Shafi M.Jatoi
10-8-23	Thursday	10:15 to 11	Corneal ulcers	Dr. Faisal Anwar	Shafi M.Jatoi
15-8-23	Tuesday	09:15 to 10	3 rd cranial nerve palsy	Dr. Faisal Anwar	Shafi M.Jatoi
17-8-23	Thursday	10:15 to 11	4 th and 6 th cranial nerve palsy	Dr. Faisal Anwar	Shafi M.Jatoi
22-8-23	Tuesday	09:15 to 10	7 th cranial nerve palsy	Dr. Faisal Anwar	Shafi M.Jatoi
24-8-23	Thursday	10:15 to 11	Revision	Dr. Faisal Anwar	Shafi M.Jatoi
29-8-23	Tuesday	09:15 to 10	TEST	Dr. Faisal Anwar	Shafi M.Jatoi
31-8-23	Thursday	10:15 to 11	Vitamin A deficiency	Dr. Faisal Anwar	Shafi M.Jatoi
5-9-23	Tuesday	09:15 to 10	Orbital cellulitis	Dr. Faisal Anwar	Shafi M.Jatoi
7-9-23	Thursday	10:15 to 11	Epiphora	Dr. Faisal Anwar	Shafi M.Jatoi
12-9-23	Tuesday	09:15 to 10	Lacrimation	Dr. Faisal Anwar	Shafi M.Jatoi
14-9-23	Thursday	10:15 to 11	Entropion	Dr. Faisal Anwar	Shafi M.Jatoi
19-9-23	Tuesday	09:15 to 10	Ectropion blepharitis	Dr. Faisal Anwar	Shafi M.Jatoi

21-9-23	Thursday	10:15 to 11	Stye	Dr. Faisal Anwar	Shafi M.Jatoi
26-9-23	Tuesday	09:15 to 10	Chalazion	Dr. Faisal Anwar	Shafi M.Jatoi
28-9-23	Thursday	10:15 to 11	Ptosis-I	Dr. Faisal Anwar	Shafi M.Jatoi
3-10-23	Tuesday	09:15 to 10	Ptosis-II	Dr. Faisal Anwar	Shafi M.Jatoi
5-10-23	Thursday	10:15 to 11	Revision	Dr. Faisal Anwar	Shafi M.Jatoi
10-10-12	Tuesday	09:15 to 10	TEST		
12-10-23	Thursday	10:15 to 11	Vitreous hemorrhage	Dr. Faisal Anwar	Shafi M.Jatoi
17-10-23	Tuesday	09:15 to 10	Papilledema		
19-10-23	Thursday	10:15 to 11	Optic atrophy	Dr. Faisal Anwar	Shafi M.Jatoi
24-10-23	Tuesday	09:15 to 10	Drugs in eye diseases		
26-10-23	Thursday	10:15 to 11	Antibiotics ophthalmic therapeutics	Dr. Faisal Anwar	Shafi M.Jatoi
31-10-23	Tuesday	09:15 to 10	Antifungal ophthalmic therapeutics	Dr. Faisal Anwar	Shafi M.Jatoi
2-11-23	Thursday	10:15 to 11	Antiviral ophthalmic therapeutics	Dr. Faisal Anwar	Shafi M.Jatoi
7-11-23	Tuesday	09:15 to 10	Local anesthetics	Dr. Faisal Anwar	Shafi M.Jatoi
09-11-23	Thursday	10:15 to 11	Fluorescein dye	Dr. Faisal Anwar	Shafi M.Jatoi
14-11-23	Tuesday	09:15 to 10	Mydriatic and cycloplegic drugs	Dr. Faisal Anwar	Shafi M.Jatoi
16-11-23	Thursday	10:15 to 11	Steroids ophthalmic therapeutics	Dr. Faisal Anwar	Shafi M.Jatoi
21-11-23	Tuesday	09:15 to 10	Revision	Dr. Faisal Anwar	Shafi M.Jatoi
23-11-23	Thursday	10:15 to 11	TEST		
28-11-23	Tuesday	09:15 to 10	Case scenarios	Dr. Faisal Anwar	Shafi M.Jatoi
30-11-23	Thursday	10:15 to 11	Case scenarios	Dr. Faisal Anwar	Shafi M.Jatoi

**LIST OF LECTURE IN THE SUBJECT OF OPHTHALMOLOGY AND THEIR
LEARNING OBJECTIVES
DEPARTMENT OF OPHTHALMOLOGY
4TH YEAR MBBS CLASS**

Sr. No.	Topics	Learning outcome
1.	Basics Anatomy of Eye	<p>At the end of lecture students should know Anatomy of Eye and orbit Bony structure of orbit Foramina in orbital cavity Coats and layers of eye ball Muscle attachments and their movements Nerve supply Blood supply and lymphatic drainage Anatomy of Eyelids Nerve supply Blood supply and Lymphatic drainage</p>
2.	Orbital Diseases	<p>At the end of lecture students should know Orbital cellulitis Preseptal cellulitis Thyroid eye disease Orbital infections Applied anatomy and physiology</p>
3.	Eye Lids	<p>At the end of lecture students should know Blepharitis definition, types, causes and treatment. Stye definition causes and treatment. Chlazion definition, types, causes and treatment. Ptosis Definition, types, examination, causes and treatment. Entropion definition, types, causes and treatment Ectropion definition, types, causes and treatment Types of eyelid tumours Basal cell carcinoma Squamous cell carcinoma Sebaceous gland carcinoma</p>
4.	Conjunctival Diseases	<p>At the end of lectures students should know Applied anatomy of conjunctiva Different types of conjunctivitis and their clinical features. Allergic conjunctivitis causes, and management</p>

		<p>Signs and symptoms of conjunctiva</p> <p>Treatment of conjunctivitis</p> <p>Pterygium and pseudopterygium differences</p> <p>Causes, types of pterygium and treatment</p> <p>Xerophthalmia</p> <p>Pinguela management and causes</p> <p>Ophthalmiaeonatorum</p>
5.	Cornea	<p>At the end of lecture students should know</p> <p>Applied anatomy and physiology</p> <p>Keratitis and its types</p> <p>Management of keratitis</p> <p>Differences between Fungal, Bacterial and viral ulcers and their management</p> <p>Acanthamoeba keratitis and its management</p> <p>Herpes simplex and herpes zoster keratitis and their management</p> <p>Keratoplasty indications and clinical features</p> <p>Keratoconus Diagnosis and management</p> <p>Mooren ulcer</p> <p>Filamentary keratitis</p> <p>Neurotrophickeratopathy</p> <p>Disciform keratitis</p> <p>Corneal dystrophies</p> <p>Corneal degenerations</p> <p>Complications of keratitis</p>
6.	Sclera	<p>At the end of lecture students should know</p> <p>Applied anatomy and physiology</p> <p>Episcleritis and its treatment</p> <p>Scleritis and its management</p> <p>Differences between scleritis and episcleritis</p> <p>Management of scleral diseases</p>
7.	Pupil	<p>At the end of lecture students should know</p> <p>Applied anatomy and Physiology</p> <p>Pupillary Reflexes</p> <p>Light reflexes and its type</p> <p>Argyll-Robertson Pupil</p> <p>Adies's Pupil</p> <p>Horner's Syndrome</p>
8.	Lacrimal Apparatus	<p>At the end of lecture students should know</p> <p>Applied anatomy and physiology</p> <p>Composition & function of Tear Film</p> <p>Diseases of the Lacrimal Gland (Acute Dacryocystiti, Chronic Dacryocystitis, KeratoconjunctivitisSicca, Lacrimation)</p> <p>Diseases of Drainage System</p>

		(Congenital Nasolacrimal Duct Obstruction, Acute Dacryocystitis, Chronic Dacryocystitis, Epiphora)
9.	Therapeutics	At the end of lecture students should know Drugs used in common ophthalmic conditions
10.	Vitamin A	At the end of lecture students should know Ocular manifestations of vitamin A Deficiency and its management
11.	Uveal Tract	At the end of lecture students should know Applied anatomy and Physiology Uveitis Classification & Etiology (acute Iridocyclitis, Chronic Iridocyclitis, intermediate Uveitis, Posterior Uveitis, Endophthalmitis, Panophthalmitis)
12.	Lens	At the end of lecture students should know Applied anatomy and Physiology Cataract & its Classification Types of Cataract Classification Types of Cataract Extraction Complication of Cataract Surgery Aphakia& its management EctopiaLentis
13.	Glaucoma	At the end of lecture students should know Applied anatomy and Physiology Aqueous Humour Dynamics Glaucoma & its diagnosis Glaucomous Visual Field Defects Primary Open Angle Glaucoma Primary Open Closure Glaucoma Secondary Glaucoma Congenital Glaucoma Congenital Glaucoma Surgical procedures in glaucoma
14.	Vitreo-Retina	At the end of lecture students should know Applied anatomy and Physiology Disorders of vitreous (posterior vitreous detachment, opacities in vitreous, PHPV, vitreous haemorrhage) Diabetic Retinopathy Hypertensive Retinopathy Central Retinal Vein Occlusion Central Retinal Artery Occlusion Retinal Detachment & its types & Management Retinitis Pigmentosa Retinoblastoma
15.	Optic Nerve	At the end of lecture students should know Applied anatomy and Physiology Optic Disc Oedema

		<p>Optic Neuritis Papilloedema Optic Arophy Difference between papilloedema & Papillitis</p>
16.	Visual Pathway	<p>At the end of lecture students should know Applied anatomy and Physiology Lesions of Visual Pathway & its visual field defect</p>
17.	Injuries	<p>At the end of lecture students should know Applied anatomy and Physiology Extraocular Foreign Body Intraocular Foreign Body Contusion injury Chemical injury</p>
18.	Squint and Amblyopia	<p>At the end of lecture students should know Definition, Classification and Principle of management Amblyopia & its management Third nerve palsy Fourth nerve palsy Sixth nerve palsy</p>
19.	Errors of Refraction	<p>At the end of lecture students should know Introduction to Optical System of Normal Eye Emetropia, Myopia, Hypermetropia, Astigmatism, Presbyopia, Aphakia, Pseudophakia, Anisometropia, and Amblyopia</p>
20.	Systemic Diseases	<p>At the end of lecture students should know Ocular manifestation of Diabetes, Hypertension, Leukemia and HIV</p>

LIST OF WARD CLASSES
DEPARTMENT OF OPHTHALMOLOGY

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Histoty Taking & Examination	Visual acquity examination & case presentation	Corneal Reflection Test & library	Ocular Motility examination & case presentation	IHT	
3 rd cranial nerve Examination& small group discussion	Ant Segment Examination &small group discussion	4 th nerve examination & case presentation/O.T	6 th nerve examination & library and video session	IHT	
All Cranial Nerve Examination	7 th cranial nerve examination & small group discussion	Ptosis Examination/O.T	Proptosis Examination &library and video session	IHT	
External Ocular Examination	Pupil examination & small group discussion	Light Reflex Examination/O.T	5 th Nerve Examination &library and video session	IHT	
Digital tonometry & case presentation	Regurgitation Test & small group discussion	Anterior chamber depth examination & case presentation/O.T	Confrontational visual field examination &library & video session	IHT	
Cover and uncover test & case presentation	OSPE preparation &library and	Ophthalmic surgical instruments/O.T	Revision	IHT	
Revision	Ward Test	Discussion			

ASSESSMENT PLANS

DEPARTMENT OF OPHTHALMOLOGY

SHARIF MEDICAL & DENTAL COLLEGE

Following modes of assessment are planned for 4th year MBBS class in the subject of Ophthalmology. This plan has been designed keeping in view the university curriculum and hopefully will facilitate the students in preparing for 3rd professional examination in the subject.

Class Tests:

These are conducted at the completion of every chapter. The test will comprise of MCQs and SEQs on the pattern of university examination. A preparatory time of at least 10 days shall be given prior to these tests. Each class will be followed by post-test discussion both in lecture and ward classes.

Ward Tests:

Topics of will be notified minimum one week before the ward test. Ward test will be conducted on the pattern of university examination (OSPE) and will comprise of 14 stations. There will be 10 un-observed stations which will cover the topics of ophthalmic drugs, surgical instrument and clinical scenarios of ophthalmic diseases. There will be 2 observed stations in which students will perform clinical methods and 2 interactive stations.

Final Assessment:

This will be undertaken in coordination with other departments, exactly following the format of university professional examinations. It will comprise of MCQs and SEQs.

Internal Assessment:

Internal assessment will be calculated out of 20 on the basis of these tests that will be conducted throughout the year.

Distribution of Marks in the Subject of Ophthalmology 4th Professional MBBS

Theory:

<u>Internal Assessment</u>	<u>MCOs</u>	<u>SEQs</u>	<u>Total</u>
10	45	45	90

Viva Voce and OSPE

<u>Internal Assessment</u>	<u>OSPE + Viva</u>	<u>Total</u>
10	70	90

Viva Voce: External & Internal Examiners 10 Marks each

OSPE:

- 1- 10 Un-observed stations of 05 marks each
- 2- 02 Observed stations for Clinical Method –20 marks

STAFF CONTACTS OPHTHALMOLOGY DEPARTMENT

SMDC, LAHORE

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PRESCRIBED TEXT BOOKS & REFERENCES

- a) **Parson's Diseases of the Eye** by 3rd Edition
- b) **Ophthalmology** by- shafi M Jatoi Third edition
- c) **Clinical Textbook of Ophthalmology** by Dr. Saleem Akhtar
- d) **Kanski and Bowling** Clinical textbook of Ophthalmology
- e) **Ophthalmology Principles and Concepts** by Newill F W
- f) **Online Journals and Reading Material** through HEC Digital Library Facility

**PATIENT ASSESSMENT
COMPETENCIES**

NO.	PROCEDURE	DESCRIPTION	LEVEL OF COMPETENCE
1.	Taking patient's comprehensive history and related components	History covering sociodemographics ,complaints, h/o present illness, past history, family & personal history, gynae & obstetrics history and in pediatrics include developmental and immunization history also	Should take and practice independently in every ward
2.	Patient's base line vital signs and their recording well (all wards)	Measure temperature, respiratory rate, pulse rate, blood pressure, oxygen saturations, NG output and urine output.	Safe to practice under indirect supervision
3.	Conducting general physical examination and , systemic examination abdominal ,chest, nervous system, CVS, vascular, musculoskeletal, (all wards)	Systemic approach in clinical examination Complete All step by step examination and document positive findings for diagnosis	Safe to practice under indirect supervision
4.	Ophthalmoscopy- Eye ward rotation	Perform basic ophthalmoscopy and identify common abnormalities	Safe to practice under indirect supervision but get findings confirmed by a seniors
5.	Visual Acuity & Color vision examination	Perform and document the vision and color vision of patient	Safe to practice under indirect supervision

PATIENT CARE COMPETENCIES

Sr. No	PROCEDURE	DESCRIPTION		LEVEL OF COMPETENCE
6.	Perform surgical scrubbing up	Follow approved processes for cleaning hands and wearing appropriate personal protective equipment before procedures or surgical operations	- Clinical rotations in Ophthalmology - OT	Safe to practice under direct supervision
7.	Set up an infusion	Set up run through and intravenous infusion. Have awareness of the different equipment and devices used.	- Clinical rotations - ER	Safe to practice under direct supervision
8.	Use correct techniques for moving and handling, including patients who are frail	Use, and/ or direct other team members to use, approved methods for moving, lifting and handling people or objects, in the context of clinical care, using methods That avoid injury to patients, colleagues, or oneself	- Clinical rotations Ophthalmology ward & OT	Safe to practice under indirect supervision

**Procedural Skill
Competencies**

NO	PROCEDURE	DESCRIPTION		LEVEL OF COMPETENCE
9.	Blood cultures	Take samples of venous blood to test for the growth of infectious organisms in proper culture bottles	Clinical rotations Pathology	Safe to practice under direct supervision
10.	Carry out arterial blood gas and acid base sampling from the radial artery in adults	Insert a needle into a patient's radial artery (in the wrist) to take a sample of arterial blood and interpret the results. Use appropriate measures to prevent hematoma	Clinical rotations	Safe to practice under direct supervision

		formation at the site		
11.	Carry out Venipuncture	Insert a needle into a patient's vein to take a sample of blood for testing. Make sure that blood samples are taken in the correct order, placed in the correct containers, that these are labelled correctly and sent to the laboratory promptly	Clinical clerkship	Safe to practice under indirect supervision
12.	Measure capillary blood glucose	Measure the concentration of glucose in the patient's blood at the bedside using appropriate equipment. Record and interpret the results.	Clinical clerkship	Safe to practice under indirect supervision
14.	Take and / or instruct patients how to take a swab	Use the correct technique to apply sterile swabs to the conjunctival sac, cornea, eyelid injuries and wounds. Make sure that samples are placed in the correct containers, that they are labelled correctly and sent to the laboratory promptly and in the Correct way	Skill lab Clinical clerkship	Safe to practice under indirect supervision for conjunctival sac, cornea, eyelid injuries or wound swabs

Therapeutic competencies

15	Carry out intravenous cannulation	Insert a cannula into a patient's vein and apply an appropriate dressing.	Safe to practice under direct supervision	<ul style="list-style-type: none"> • Skills Lab • Clinical Rotation in ER & Wards
18	Carry out wound care and basic wound dressing	Provide basic care of surgical or traumatic wounds and apply dressing appropriately.	Safe to practice under direct supervision	<ul style="list-style-type: none"> • Skills lab • ER • Clinical Rotations
20	Use local anesthetics	Inject or topically apply a local anesthetic. Understand maximum doses of local anesthetic agents.	Safe to practice under direct supervision	<ul style="list-style-type: none"> • Eye OT • Skills lab
21	Interpretation of X-rays of orbit	should be able to identify gross bony and soft tissue pathology on X-rays	safe to practice under indirect supervision	<ul style="list-style-type: none"> • Skills Lab • Ophthalmology ward
22	Hertles Exophthalmometry	should be able to measure degree of proptosis	safe to practice under direct supervision	<ul style="list-style-type: none"> • Ophthalmology ward & OPD • Clinical rotation
23	Measure interpupillary distance	should be able to measure distance between center of two pupils	safe to practice under direct supervision	<ul style="list-style-type: none"> • OPD • Clinical Rotation in Ophthalmology
24	Distance direct ophthalmoscopy	Should be able to detect the ocular media opacity	safe to practice under direct supervision	<ul style="list-style-type: none"> • Clinical rotation in ophthalmology
25	Retinoscopy	Should be able to detect the spherical refractive errors of myopia and hypermetropia	safe to practice under direct supervision	<ul style="list-style-type: none"> • Clinical rotation in ophthalmology

26	Hirschberg test	Should be able to measure the degree of squint	safe to practice under direct supervision	<ul style="list-style-type: none">• Clinical rotation in ophthalmology ward and OPD
27	Conjunctiva foreign body removal	Should be able to remove under topical anaesthesia	safe to practice under direct supervision	<ul style="list-style-type: none">• Clinical rotation in Eye OPD

Department of Medicine

GENERAL STUDENT LEARNING OBJECTIVES:

The MBBS medical students at the end of the undergraduate training program in the subject of Internal Medicine, should possess essential knowledge, skills and attitude in order to enable them to:

1. Take comprehensive history, perform detailed physical examination and make a probable diagnosis with a list of differential diagnoses.
2. Devise an investigation plan, interpret the information and apply his knowledge.
3. Suggest a treatment plan for patients.
4. Apprehend and diagnose possible complications.
5. Document all aspects properly and timely.
6. Write and present the cases.
7. Identify medical diseases presenting in out-patients, in-patients and emergency departments.
8. Provide primary health care, at the community level.
9. Perform essential medical emergency and planned procedures.
10. Communicate and counsel effectively with the patient, their families and the community, regarding disease and its relevant issues.
11. Understand medical ethical issues and their application in reference to Internal Medicine.
12. Maintain the confidentiality of the patient.
13. Counsel patients and families regarding common medical problems.
14. Guide the patients and families regarding rehabilitation.
15. Understand the prevalence and prevention of the common Public Health Problems related to Internal Medicine in the community.
16. Understand the principles of medical research including medical writing.
17. Understand the fundamentals of Information Technology and basic computer soft wares.
18. Understands the principles of sterilization and disinfection techniques to prevent infections to the patients and save himself or herself from patients.
19. Be a life-long self-directed learner.
20. Exhibit Professionalism.
21. Competent in Preventive Medicine.

INTRODUCTION:

Medicine is one of the most important subject in the whole MBBS curriculum. It is called as the mother of all subjects, as no one can become a good doctor unless he or she is competent in the Medicine. Although clinical orientation is started from the very first day with names and terminologies being used in basic subjects and the correlations of all the basic subjects with Medicine. Especially Physiology, Pathology, Pharmacology and Community Medicine is closely related to Medicine.

Medicine is a very vast subject and is taught in three years. Main teaching of the subject is started in third year MBBS, when lectures and clinical classes on Medicine are started, and students start seeing real patients daily. The importance can be understood with the fact that a medical student has to learn Medicine in three years, as being a huge subject. This teaching is gradually increased in fourth year and full emphasis in final year. no student can grasp sufficient understanding and knowledge on the subject, unless he /she starts learning it from the beginning.

Medicine has many subspecialties like Cardiology (related to cardiovascular system), Gastroenterology & Hepatology (gastrointestinal tract & liver), Pulmonology (respiratory system), Endocrinology (endocrine glands), Neurology (Nervous system), Nephrology (Kidneys), Psychiatry (mind), Dermatology (skin), Rheumatology (muscles, bones, joints), Hematology (blood), and many more.

The course of the Medicine is designed to match the importance it has, for not only becoming a medical graduate but throughout the life of a doctor.

**The faculty of the Medicine Department at Sharif Medical & Dental College,
Lahore:**

- **Prof. Ayub Latif Khawaja** – Professor & Head of the Department
- **Prof. Taj Jamshad** – Professor of Medicine
- **Prof. Uzma Ahsan** – Professor of Dermatology
- **Dr. Aftab Rabbani** – Associate Professor of Medicine
- **Dr. Imran Johar** – Assistant Professor of Medicine
- **Dr. Zaheer Akhtar Malik** – Assistant Professor of Medicine
- **Dr. Amina Malik** – Assistant Professor of Neurology
- **Dr. Azhar** – Assistant Professor Psychiatry

COURSE OUTLINE:

FOURTH YEAR MBBS

The 4th year MBBS, will be continued with addition of teaching actual textbook Medicine in lectures, especially Psychiatry, Dermatology and one or two systems of Internal Medicine. In clinical classes students are expected to perform history taking, documentation, presentation and examination under supervision, to pick up the abnormal findings and make a differential diagnosis.

MODES OF INFORMATION TRANSFER:

LECTURES:

Lectures of students of 4th year MBBS are taken at the lecture halls of main college building according the annual devised schedule or academic calendar.

CLINICAL TEACHING:

Clinical teaching of students of 3rd, 4th& final year MBBS is done at the affiliated hospitals.

1. Sharif Medical City Hospital, Raiwind Road, Lahore.
2. Ittefaq Hospital, Ferozpur road, Lahore.

Clinical Teaching Strategies:

- **Out Door Teaching**
- **Ward Teaching**
 - History taking
 - Clinical methods
 - Bedside teaching
 - Ward rounds
 - Case presentation by the students
 - Case discussions
- **Clinical Tutorials**
- **Clinico-pathological Conference**
- **OSCE Examination Practice**
- **Clinical Cards/Log book**, to document and monitor clinical training.

Objectives of Clinical Classes / Training:

Clinical classes are meant to develop clinical orientation, and approach in a medical student to make him, knowledgeable and expert in dealing with patients in all aspects including, history taking, general & systematic physical examinations, investigations, treatment, rehabilitations, counseling, follow-ups, and possible complications. Students are taught how to manage a patient as a whole, not the concerned disease only.

TEACHING SCHEDULE OF FOURTH YEAR MBBS (2023):

There will be one lecture of Medicine & Allied every week in fourth year MBBS. This lecture will be covering three very important aspects orient the students regarding clinical aspects of Medicine at a very basic and initial level. They will be taught history taking, history writing & history presentation, general and systemic physical examinations, especially their theoretical aspects. The first 19 weeks these lectures will be taken by department of Medicine and later 19 lectures by department of Surgery.

Tutors:

- Associate Professor Dr. Aftab Rabbani

List of lectures (2023)

Topic	Facilitator
Heart – Dyslipidemia	Associate Prof. Dr. Aftab Rabbani
Heart Hypertension	Associate Prof. Dr. Aftab Rabbani
Heart-Ischemic Heart Disease	Associate Prof. Dr. Aftab Rabbani
Heart Valvular Heart disease (MS MR)	Associate Prof. Dr. Aftab Rabbani
Heart Valvular Heart disease (AS AR)	Associate Prof. Dr. Aftab Rabbani
Cardiomyopathy	Associate Prof. Dr. Aftab Rabbani
Heart - Heart Failure	Associate Prof. Dr. Aftab Rabbani
Respiratory Asthma -	Associate Prof. Dr. Aftab Rabbani
Respiratory – COPD	Associate Prof. Dr. Aftab Rabbani
Pneumonia	Associate Prof. Dr. Aftab Rabbani
Pneumoconiosis	Associate Prof. Dr. Aftab Rabbani
Tuberculosis	Associate Prof. Dr. Aftab Rabbani
Hyperthyroidism	Associate Prof. Dr. Aftab Rabbani
Hypothyroidism	Associate Prof. Dr. Aftab Rabbani
Diabetes mellitus	Associate Prof. Dr. Aftab Rabbani
Calcium Disorder	Associate Prof. Dr. Aftab Rabbani
Renal Function Test	Associate Prof. Dr. Aftab Rabbani
Polycystic Kidney Disease	Associate Prof. Dr. Aftab Rabbani
Glomerulonephritis	Associate Prof. Dr. Aftab Rabbani
Renal Cell Carcinoma	Associate Prof. Dr. Aftab Rabbani

Acute Tubular Necrosis	Associate Prof. Dr. Afftab Rabbani
Pyelonephritis	Associate Prof. Dr. Afftab Rabbani
Patients Safety 1	Associate Prof. Dr. Afftab Rabbani
Patients Safety 2	Associate Prof. Dr. Afftab Rabbani
Patients Safety 3	Associate Prof. Dr. Afftab Rabbani
Patients Safety 4	Associate Prof. Dr. Afftab Rabbani
Cystitis	Associate Prof. Dr. Afftab Rabbani
BPH	Associate Prof. Dr. Afftab Rabbani
Osteoporosis	Associate Prof. Dr. Afftab Rabbani
Osteosarcoma	Associate Prof. Dr. Afftab Rabbani
SLE	Associate Prof. Dr. Afftab Rabbani
Myopathies	Associate Prof. Dr. Afftab Rabbani
Rheumatoid Arthritis	Associate Prof. Dr. Afftab Rabbani
Cirrhosis	Associate Prof. Dr. Afftab Rabbani
Jaundice	Associate Prof. Dr. Afftab Rabbani
Hepatitis	Associate Prof. Dr. Afftab Rabbani
Celiac Disease	Associate Prof. Dr. Afftab Rabbani
Liver Tumors	Associate Prof. Dr. Afftab Rabbani
Bleeding Disorder	Associate Prof. Dr. Afftab Rabbani
Meningitis	Associate Prof. Dr. Afftab Rabbani

Summary of Clinical/Ward Lectures;

Clinical Program	Batch I	Batch II	Batch III	Batch IV	Batch V	Batch VI
	22-11-2022 To 17-01-2023	18-01-2023 To 05-03-2023	06-03-2023 To 28-04-2023	29-04-2023 To 15-06-2023	16-07-2023 To 28-08-2023	29-08-2023 To 15-10-2023
History Taking / GPE	22-11-2022 To 29-11-2022	21-01-2022 To 24-01-2023	06-03-2023 To 12-03-2023	29-04-2023 To 02-05-2023	16-07-2023 To 22-07-2023	29-08-2023 To 04-09-2023
GIT	03-12-2022 To 06-12-2022	28-01-2023 To 31-01-2023	13-03-2023 To 19-03-2023	06-05-2023 To 09-05-2023	23-07-2023 To 29-07-2023	05-09-2023 To 10-09-2023
RS	10-12-2022 To 14-12-2022	04-02-2022 To 11-02-2023	20-03-2023 To 26-03-2023	13-05-2023 To 16-05-2023	30-07-2023 To 05-08-2023	11-09-2023 To 17-09-2023
CVS	17-12-2022 To 24-12-2022	12-02-2023 To 18-02-2023	27-03-2023 To 09-04-2023	20-05-2023 To 23-05-2023	06-08-2023 To 14-08-2023	18-09-2023 To 25-09-2023
CNS	02-01-2023 To	19-02-2023 To	10-04-2023 To	27-05-2023 To	15-08-2023 To	26-09-2023 To

	09-01-2023	25-02-2023	17-04-2023	03-06-2023	21-08-2023	07-10-2023
CNS	10-01-2023 To 16-01-2023	26-02-2023 To 04-03-2023	18-04-2023 To 24-04-2023	04-06-2023 To 12-06-2023	22-08-2023 To 27-08-2023	08-10-2023 To 14-10-2023
Ward Test + 10 Completed Histories	17-01-2023	05-03-2023	25-04-2023	13-06-2023	28-08-2023	15-10-2023

IMPORTANT: THE DETAILED PLAN OF THE LECTURES IS PROPOSED AND IS EXPECTED TO BE CHANGED, TIME TO TIME AND ACCORDING TO THE REQUIREMENTS. THIS IS JUST TO GIVE YOU A BROADER OVERVIEW.

Tutor:

- Associate Professor Dr. Aftab Rabani

THE LOG BOOK/CLINICAL CARD RECORD:

The log book is a collection of evidence that learning has taken place, it is a reflective record of achievements. The students are expected to make a record of his/her achievements in the log book. The log book shall also contain a record of the procedures which student would have performed in 4th year.

FEEDBACK:

The teaching faculty will give constructive feedback on the performance of the students. This will be individual in clinical classes and collective in class tests and mega tests (however students who fail to perform well in tests or those who want to know about their performance may be given individual feedback). Students should take all the feedbacks in positive spirit & attitude to find out the level of their performance, areas where they need improvements and suggestions and guidance from the teachers, how to improve the weaknesses etc. the sole purpose of feedbacks is to improve the learning of students.

ATTENDANCE:

- Students are required to ensure maximum attendance in all sections including lectures and clinical classes.
- Minimum attendance to qualify for appearing in final professional examination is 75% of lectures and clinical classes. But this is not the desired level. All students should make sure that they attend the classes 100%, except some unavoidable circumstances. Because missing

one lecture or clinical class means one has missed a topic, a disease or a very important aspect of the subject.

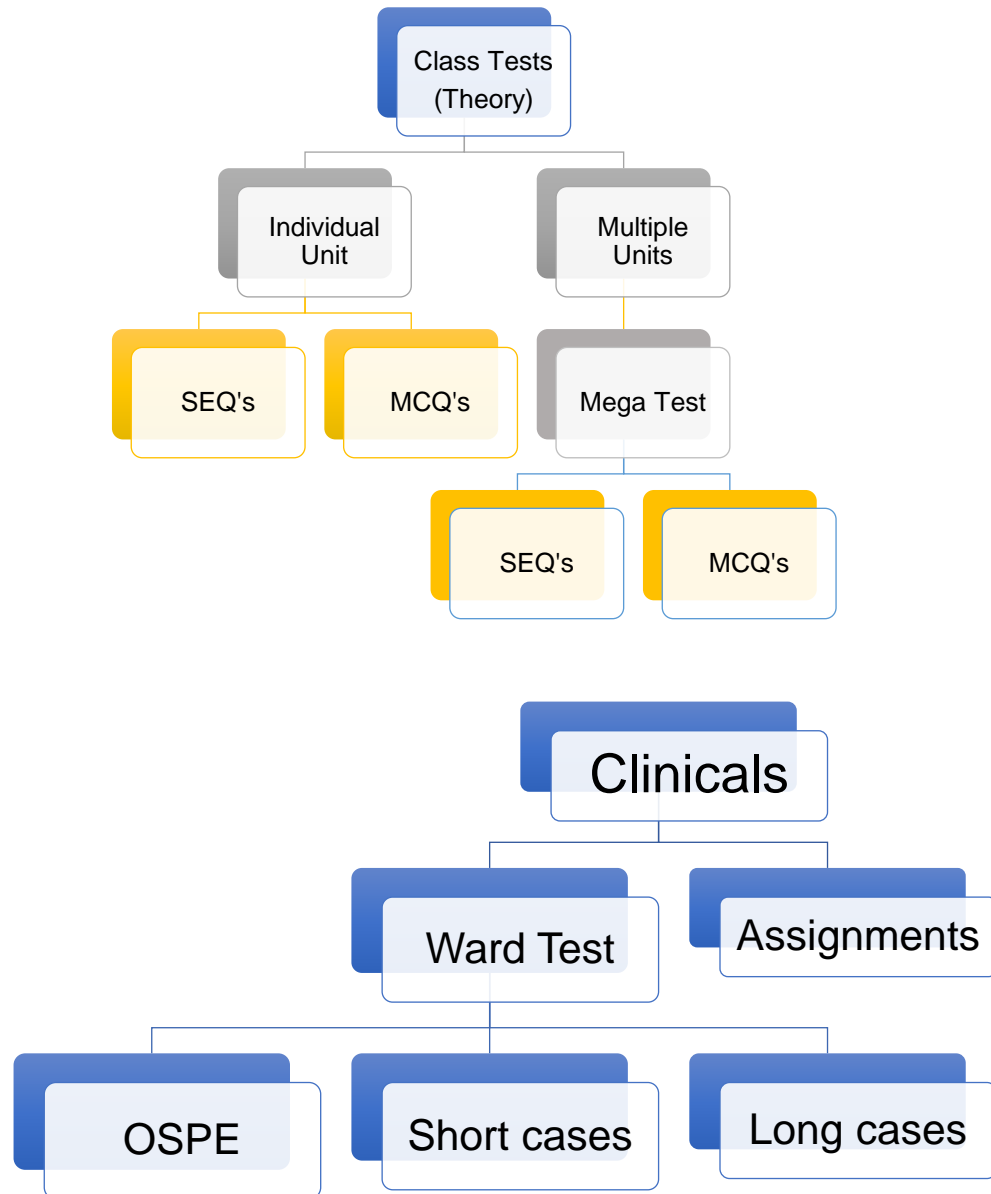
- If a student is continuously absent for 07 days or more, his /her name will be stuck off from the college, and he /she will have to get re-admission after consideration by the administration.

ASSESSMENT:

Internal assessment carries 10% weightage in final professional examination, meaning that out of 500 marks of Medicine 50 marks are decided by the performance of student in the whole academic year. This will comprise of marks in;

- Class tests
- Mega tests
- Ward test
- Clinical assignment
- Send up examination.

Note: Mapping of Lecture Breakup with Course Learning Outcomes and assessment methods is available at the end of the handbook.



Class Tests:

There will be class tests after completion of a system in lectures. This will be a written test comprising of Short Essay Questions (SEQs) and/or Multiple Choice Questions (MCQs). As mentioned earlier, number of lectures allocated to each system is given, and includes total lectures plus one last lecture is for a test on that system. So one week time will be available for the preparation.

Note: there will be 3-4 revision tests in September/October 2019

Ward/Clinical Test:

At the end of your ward/clinical rotation, there will be one test which will consist of all components of final professional examination, i.e. OSCE, long case, short case, viva, instruments, investigations etc.

Send Up Examination:

There will be a written send up examination at the end of the session, on the same pattern as will be followed in the final professional examination conducted by University of Health Sciences i.e. 02 written papers consisting of MCQs and SEQs.

Mapping of Lecture Breakup with Course Learning Outcomes and assessment methods:

Course learning outcomes

At the end of the session / section; the student will be able to

1. Diagnose a case scenario
2. Devise an investigation plan
3. Write down a comprehensive management plan
4. Describe the common complications and their management
5. Knows the follow up & rehabilitation plan of the common as well as important diseases of a particular system.

RECOMMENDED BOOKS:

1. **Davidson's Principles and Practice of Medicine** by Davidson. 23rd edition.
2. **Kumar & Clark's Clinical Medicine** by Parveen J Kumar & Michael Clark. 9th Edition
3. **Hutchison's Clinical Methods** by Michael Swash. 21st edition
4. **Basic psychiatry** by Myre Sim, e. B.Gordon
5. **Oxford Text Book of Psychiatry**
6. **ABC of Dermatology**. Latest Edition.
7. **Smith's General Urology** by Emil A. Tanagho and Jack W. McAninch 15th edition.2007
8. **Online Journals and Reading Materials** through HEC Digital Library Facility.

RESOURCE PERSONS:

1. **Professor Ayub Latif Khawaja (Head of Department of Medicine)**
2. **Professor Taj Jamshad (Professor of Medicine)**

Department of Surgery

GENERAL STUDENT LEARNING OBJECTIVES:

The MBBS medical students at the end of the undergraduate training program in the subject of General Surgery should be able to demonstrate the following outcomes:

- Skillful
- Knowledgeable
- Community health promoter
- Critical thinker
- Professional and role model
- Researcher
- Leader

Course Objectives: At the end of undergraduate training program in the subject of General Surgery, the graduate should possess essential knowledge, skills and attitude in order to enable them to:

- Take comprehensive history, perform detailed physical examination and make a probable diagnosis with a list of differential diagnoses.
- Devise an investigation plan, interpret the information and apply his knowledge.
- Suggest a treatment plan for patients.
- Apprehend and diagnose possible complications.
- Document all aspects properly and timely.
- Write and present the cases.
- Identify medical diseases presenting in out-patients, in-patients and emergency departments.
- Provide primary health care, at the community level.
- Perform essential medical emergency and planned procedures.
- Communicate and counsel effectively with the patient, their families and the community, regarding disease and its relevant issues.
- Understand medical ethical issues and their application in reference to General Surgery.
- Maintain the confidentiality of the patient.
- Counsel patients and families regarding common medical problems.
- Guide the patients and families regarding rehabilitation.
- Understand the prevalence and prevention of the common Public Health Problems related to General Surgery in the community.
- Understand the principles of medical research including medical writing.
- Understand the fundamentals of Information Technology and basic computer software.
- Understands the principles of sterilization and disinfection techniques to prevent infections to the patients and save himself or herself from patients.
- Be a life-long self-directed learner.
- Exhibit Professionalism.
- Competent in Preventive Medicine.

COURSE OUTLINE FOURTH YEAR MBBS:

The teaching & learning in Surgery will be continued with addition of teaching actual textbook Surgery in lectures. Lectures of Orthopedics, Urology, Radiology and Anesthesia will be part of the lecture schedule. In clinical classes students will rotate in General Surgery, Orthopedics, Neuro-Surgery, Anesthesia and Urology expected to perform history taking, documentation, presentation and examination under supervision, to pick up the abnormal findings.

MODES OF INFORMATION TRANSFER:

LECTURES:

Lectures are planned to give the theoretical knowledge of the course contents. The main purpose of the lectures is to broadly introduce the topic or disease. The lecture schedule with the name of the tutor is mentioned below in the tabulated form. The lectures are taken at the lecture halls of main college building according to the annual devised schedule or academic calendar. Due to COVID-19 pandemic and lockdown with closure of colleges and universities, the classes were interrupted. Online classes through ZOOM meetings, Google classrooms and other online teaching modes were also started.

CLINICAL TEACHING:

Clinical teaching of students of final year MBBS is done at the affiliated hospitals.

1. Sharif Medical City Hospital, Raiwind Road, Lahore.
2. Ittefaq Hospital, Ferozpur road, Lahore.

Clinical Teaching Strategies:

- Out Door Teaching
- Ward Teaching
 - History taking
 - Clinical methods
 - Bedside teaching
 - Ward rounds
 - Case based learning
- Small group discussions
- Clinical Tutorials
- Clinico-pathological Conference
- Individual presentations and assignments
- Skill lab activities
- OSCE Examination Practice
- Clinical Cards/Log book, to document and monitor clinical training.

Objectives of Clinical Classes / Training:

Clinical classes are meant to develop clinical orientation, and approach in a medical student to make him, knowledgeable and expert in dealing with patients in all aspects including, history taking, general & systematic physical examinations, investigations, treatment, rehabilitations, counseling, follow-ups, and possible complications. Students are taught how to manage a patient as a whole, not the concerned disease only

CURRICULUM OF 4TH YEAR MBBS
Department of Surgery Session 2023

TOPICS	LEARNING OUTCOMES	Assessment Tools	Mode of Instruction or Method
Arterial Disease 1. Clinical Features and Investigation 2. Treatment 3. Gangrene & Amputation 4. Acute Limb Ischemia 5. Aneurysm 6. Arteritis & Vasospastic Condition	1. Able to identify different clinical features & investigations 2. Able to treat arterial disease 3. Should diagnose gangrene & different levels of amputations 4. Able to diagnose aneurysm and different types of arteritis & their management	MCQs SEQs Short Case Long Case OSCE	<ul style="list-style-type: none"> • Lectures • Bed Side Teaching in Surgery Ward & OPD • Small Group Discussion
Venous Disorder 1. Anatomy of lower limb vein, Varicose Vein (signs and symptoms) 2. Clinical features and investigations 3. Management 4. Deep vein thrombosis (DVT) 5. Leg ulcers, venous injury & Tumors	1. Able to identify different sign & symptoms of varicose veins 2. Able to investigate and manage varicose veins 3. Should know deep vein thrombosis and its management 4. Able to manage leg ulcers & venous injury, tumours	MCQs SEQs Short Case Long Case OSCE	<ul style="list-style-type: none"> • Lectures • Bed Side Teaching in Surgery Ward & OPD • Small Group Discussion
Lymphatics 1. Anatomy, physiology of lymphatic systems and acute inflammation 2. Lymphoedema, primary and secondary 3. Investigations and management	1. Able to recall anatomy & physiology of lymphatic system & diagnose acute inflammation 2. Should know primary & secondary lymphedema 3. Able to do investigations & management	MCQs SEQs Shot Case Long Case	<ul style="list-style-type: none"> • Lectures • Bed Side Teaching in Surgery Ward & OPD • Small Group Discussion

<p>Early Assessment and Management of Trauma</p> <ol style="list-style-type: none"> 1. Primary survey 2. Secondary survey 3. Maxillofacial injury 	<ol style="list-style-type: none"> 1. Should be able to do Primary survey 2. Able to perform Secondary survey 3. Should know how to manage Maxillofacial injury 	<p>MCQs SEQs OSCE</p>	<ul style="list-style-type: none"> • Lectures • Bed Side Teaching in Surgery Ward & OPD
<p>Thyroid and Parathyroid</p> <ol style="list-style-type: none"> 1. Anatomy, physiology and investigations. 2. Hypothyroidism. 3. M N G (simple) 4. Hyperthyroidism 5. Neoplasm of thyroid 6. Primary & Secondary hyperparathyroidism 	<ol style="list-style-type: none"> 1. Should know anatomy, physiology and investigations. 2. Able to define Hypothyroidism, M N G (simple) & Hyperthyroidism with their management 3. Able to diagnose neoplasm of thyroid 4. Should be able to define Primary & Secondary hyperparathyroidism 	<p>MCQs SEQs Short Case Long Case OSCE</p>	<ul style="list-style-type: none"> • Lectures • Bed Side Teaching in Surgery Ward & OPD • Small Group Discussion
<p>Perioperative Care</p> <ol style="list-style-type: none"> 1. Pre-operative Care 2. Care in O.T and High Risk Patient 3. Post-operative Care 	<ol style="list-style-type: none"> 1. Should be able to know Pre-operative Care 2. Able to understand Care in O.T and High Risk Patient 3. Able to know Post-operative Care & its management 	<p>MCQs SEQs</p>	<ul style="list-style-type: none"> • Lectures • Bed Side Teaching in Surgery Ward



SHARIF MEDICAL & DENTAL COLLEGE
4th YEAR MBBS CLINICAL ROTATION TIME TABLE
CLASS IS DIVIDED INTO 6 BATCHES (Session 2022 - 2023)
 S.M&D.C No/ /Patb/334E-24/2023 Dated: 12-03-2023



Subbatches	Roll Numbers
I	20001 - 20017
II	20018 - 20029, 20031 - 20035
III	20036 - 20045, 20047 - 20053
IV	20054, 20056 - 20058, 20060, 20062 - 20065, 20067 - 20074
V	20075 - 20090
VI	20091 - 20101, 19023, 19024, 19096, 19090, 16050

Batch & Period of Posting	General Medicine & Dermatology*	General Surgery & Urology**	Paediatrics / Gynaec & Obs.***	Cardiology & Nephrology****	Eye	ENT
21st March, 2023 - 10th May, 2023	I	II	III	IV	V	VI
11th May, 2023 - 21st July, 2023	II	III	IV	V	VI	I
22nd July, 2023 - 3rd September, 2023	III	IV	V	VI	I	II
4th September, 2023 - 15th October, 2023	IV	V	VI	I	II	III
16th October, 2023 - 26th November, 2023	V	VI	I	II	III	IV
27th November, 2023 - 15th January, 2024	VI	I	II	III	IV	V

Batch & Period of Posting	General Medicine & Dermatology*	General Surgery & Urology**	Paediatrics / Gynaec & Obs.***	Cardiology & Nephrology****	Eye	ENT	
21st Mar - 19th Apr	General Medicine	20th Apr - 10th May	Dermatology	21st Mar - 19th Apr	Cardiology	20th Apr - 10th May	Nephrology
11th May - 31st May	General Medicine	1st Jun - 21st Jul	Dermatology	11th May - 31st May	Cardiology	1st Jun - 21st Jul	Nephrology
22nd Jul - 11th Aug	General Medicine	12th Aug - 3rd Sep	Dermatology	22nd Jul - 11th Aug	Cardiology	12th Aug - 3rd Sep	Nephrology
4th Sep - 24th Sep	General Medicine	25th Sep - 15th Oct	Dermatology	4th Sep - 24th Sep	Cardiology	25th Sep - 15th Oct	Nephrology
16th Oct - 5th Nov	General Medicine	6th Nov - 26th Nov	Dermatology	16th Oct - 5th Nov	Cardiology	6th Nov - 26th Nov	Nephrology
27th Nov - 17th Dec	General Medicine	18th Dec - 15th Jan	Dermatology	27th Nov - 17th Dec	Cardiology	18th Dec - 15th Jan	Nephrology

Batch & Period of Posting	General Medicine & Dermatology*	General Surgery & Urology**	Paediatrics / Gynaec & Obs.***	Cardiology & Nephrology****	Eye	ENT	
21st Mar - 19th Apr	Paediatric	20th Apr - 10th May	Gynaec & Obs.	21st Mar - 19th Apr	Cardiology	20th Apr - 10th May	Nephrology
11th May - 31st May	Paediatric	1st Jun - 21st Jul	Gynaec & Obs.	11th May - 31st May	Cardiology	1st Jun - 21st Jul	Nephrology
22nd Jul - 11th Aug	Paediatric	12th Aug - 3rd Sep	Gynaec & Obs.	22nd Jul - 11th Aug	Cardiology	12th Aug - 3rd Sep	Nephrology
4th Sep - 24th Sep	Paediatric	25th Sep - 15th Oct	Gynaec & Obs.	4th Sep - 24th Sep	Cardiology	25th Sep - 15th Oct	Nephrology
16th Oct - 5th Nov	Paediatric	6th Nov - 26th Nov	Gynaec & Obs.	16th Oct - 5th Nov	Cardiology	6th Nov - 26th Nov	Nephrology
27th Nov - 17th Dec	Paediatric	18th Dec - 15th Jan	Gynaec & Obs.	27th Nov - 17th Dec	Cardiology	18th Dec - 15th Jan	Nephrology

Copy Forwarded To:
 1. Dr. Mohammad Ahsan Khan Chief Executive SMDC
 2. Principal SMDC
 3. Principal, College of Dentistry

4. Heads of all concerned Departments
 5. Director Administration
 6. Notice Boards

Prof. Dr. Marat Asham
 Head Deptt. of Pathology
 Chairperson Time Table Committee



Department of Medical Education and Clinical Skills

Sharif Medical & Dental College, Lahore

Tel: (0423) 786 0101-04, Fax: (0423) 786 0123

Web: www.sharifmedicalcity.com.pak

Ref: SMDC/DMECS/135/23

Dated: 16/03/2023

To,

The Head of Concerned Department SMDC.

Subject: **Skills labs activity for 4th year MBBS (2023)**

The following Departments are requested to nominate a focal person to organize the activity in skills lab/marked area as under and coordinate with Prof. Maria Aslam Department of Pathology in this regard:-

Skill no	Skill	Department	Venue	Batch & Timings	Days & Dates
1	Venous cannulation	Medicine	Skills Lab	Batch I (12:45-1:30pm) Batch II (1:30-2:30pm) Batch III (12:45-1:30pm) Batch IV (1:30-2:30pm) Batch V (12:00-12:45pm) Batch VI (12:45-1:30pm)	Mon: 27 th March & 10 th April 23 Mon: 27 th March & 10 th April 23 Wed: 29 th March & 12 th April 23 Wed: 29 th March & 12 th April 23 Thu: 30 th March & 13 th April 23 Thu: 30 th March & 13 th April 23
2	FNAC & Handling of specimen	Pathology	Skills Lab	Batch I (12:45-1:30pm) Batch II (1:30-2:30pm) Batch III (12:45-1:30pm) Batch IV (1:30-2:30pm) Batch V (12:00-12:45pm) Batch VI (12:45-1:30pm)	Mon: 17 th April & 24 th April 23 Mon: 17 th April & 24 th April 23 Wed: 19 th April & 26 th April 23 Wed: 19 th April & 26 th April 23 Thu: 20 th April & 27 th April 23 Thu: 20 th April & 27 th April 23
3	True Cut Biopsy	Surgery	OT	Batch I (12:45-1:30pm) Batch II (1:30-2:30pm) Batch III (12:45-1:30pm) Batch IV (1:30-2:30pm) Batch V (12:00-12:45pm) Batch VI (12:45-1:30pm)	Mon: 01 st May & 08 th May 23 Mon: 01 st May & 08 th May 23 Wed: 03 rd May & 10 th May 23 Wed: 03 rd May & 10 th May 23 Thurs: 4 th May & 11 th May 23 Thurs: 4 th May & 11 th May 23



4	Endotracheal Intubation	Anesthesia	Skills Lab	Batch I (12:45-1:30pm) Batch II (1:30-2:30pm) Batch III (12:45-1:30pm) Batch IV (1:30-2:30pm) Batch V (12:00-12:45pm) Batch VI (12:45-1:30pm)	Mon: 15 th May & 22 nd May 23 Mon: 15 th May & 22 nd May 23 Wed: 17 th May & 24 th May 23 Wed: 17 th May & 24 th May 23 Thurs: 18 th May & 25 th May 23 Thurs: 18 th May & 25 th May 23
5	Tracheostomy	ENT	OT	Batch I (12:45-1:30pm) Batch II (1:30-2:30pm) Batch III (12:45-1:30pm) Batch IV (1:30-2:30pm) Batch V (12:00-12:45pm) Batch VI (12:45-1:30pm)	Mon: 29 th May & 5 th June 23 Mon: 29 th May & 5 th June 23 Wed: 31 st May & 07 th June 23 Wed: 31 st May & 07 th June 23 Thurs: 01 st June & 08 th June 23 Thurs: 01 st June & 08 th June 23

Skills lab time table will continue till 08th June 2023. After that students will continue attending their hospital work as per notified time table.

Prof. Uzma Ahsan
Head Department of Medical Education



THE LOG BOOK/ CLINICAL CARD RECORD:

The log book is a collection of evidence that learning has taken place, it is a reflective record of achievements. The students are expected to make a record of his/her achievements in the log book. The log book shall also contain a record of the procedures which student would have performed in final year.

FEEDBACK:

The teaching faculty will give constructive feedback on the performance of the students. This will be individual in clinical classes and collective in class tests and mega tests (however students who fail to perform good in tests or those who want to know about their performance may be given individual feedback). Students should take all the feedbacks in positive spirit & attitude to find out the level of their performance, areas where they need improvements and suggestions and guidance from the teachers, how to improve the weaknesses etc. the sole purpose of feedbacks is to improve the learning of students.

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- Minimum attendance to qualify for appearing in final professional examination is 75% of lectures and clinical classes. But this is not the desired level. All students should make sure that they attend the classes 100%, except some unavoidable circumstances. Because missing one lecture or clinical class means one has missed a topic, a disease or a very important aspect of the subject.
- If a student is continuously absent for 07 days or more, his /her name will be stuck off from the college, and he /she will have to get re-admission after consideration by the administration.



Continuous Internal Assessment:

Course Learning Outcomes and assessment methods:

At the end of the session / section; the student will be able to

1. Diagnose a case scenario
2. Devise an investigation plan
3. Write down a comprehensive management plan
4. Describe the common complications and their management
5. Knows the follow up & rehabilitation plan of the common as well as important diseases of a particular system.

FORMATIVE ASSESSMENT (MCQ/SEQ TEST);

There is continuous internal assessment in the form of MCQ's SAQ's, OSPE and Viva.

Subject		Marks	Evaluation Tool
Surgery	Class test	30 each test	MCQ's, SAQ's MCQ's, SAQ's MCQ's, SAQ's MCQ's, SAQ's
	1		
	2		
	3		
	4		
Ward test		100	OSPE & Viva

ASSESSMENT	TOOLS	WEIGHTAGE
Formative	D During CBL, MCQs, SAQs. By taking feedback from students.	25



ASSESSMENT

Student's knowledge as about the subject is assessed at various levels.

1. **Class Tests** are held after the completion of each topic in class lecture hall which includes
 - (a) Multiple choice question (MCQ's)
 - (b) Short Assay question (SAQ's)
2. **Ward Tests** it has two parts
 - (a) OSPE
 - (b) Long case and Viva

Each student is required to pass in the ward test.

Skill Demonstration Student's knowledge and its effectiveness are checked by skill demonstration on mannequin.

Communication Skills Communication skills of student are polished and assessed in counseling sessions on patients.



INTERNAL ASSESSMENT POLICY

DEPARTMENT OF SURGERY

- 10% of total marks of Final Professional exam (50 marks) are from internal assessment.
- These marks are evaluated as follow:
 - Total Attendance of Students in 3rd, 4th, 5th year M.B.B.S ----- 20% (10Marks).
 - Total marks in all class tests in 3rd, 4th, 5th year M.B.B.S ----- 20% (10Marks).
 - Total Attendance in ward in 3rd, 4th, 5th year M.B.B.S----- 20% (10Marks).
 - Total marks in ward test in 3rd, 4th, 5th year M.B.B.S----- 20% (10Marks).
 - Send-up exam----- 20% (10Marks).



STAFF CONTACTS GENERAL SURGERY DEPARTMENT

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4	Dr Imran Abbas	narmi251@gmail.com
5	Dr. Rida Fatima	ridafatima3969@gmail.com



RECOMMENDED BOOKS

- Bailey & Love's Short Practice of Surgery 27th Edition
- The Washington Manual of Surgery, 8th Edition
- Netter's surgical anatomy review

LEARNING RESOURCES

- Lectures
- Small group demonstrations and discussion
- Outpatient department clinical evaluation as short cases
- Causality and Emergency room clinical examination and management logarithm learning ATLS
- Ward rounds / bedside teaching and skills training of pre and post operative care as long cases
- Operation room observations and assistance
- Post emergency morning meetings
- Morbidity committee meeting
- Mortality committee meeting
- Journal club
- CPC in collaboration with other specialties including Department of Radiology and Pathology etc.
- Videos on clinical signs and operative procedures
- Skill labs/models
- Seminars
- Study Guide

RESOURCE PERSON

- **Prof Muhammad Mohsin Gillani (HOD General Surgery)**
- **Dr Salman Akhtar (Assistant professor General Surgery)**
- **Dr. Hassan Taqi (SR)**



Department of Pediatrics



COURSE OUTLINE

FOURTH YEAR MBBS

In fourth year, there will be one lecture every week and we will cover your syllabus of infectious diseases, development, immunizations and vaccinations. During your clinical classes, you will be exposed to the patients in the ward and OPD, where you will develop your clinical competence like history taking, physical examination, investigations planning, management, communication skills, and professionalism.

Learning strategy 4th Year MBBS

Topic	Learning Objective	Learning Strategy
Introduction to Pediatrics, Measles	Definition Different Terminologies Course Details	Power Point Presentations including videos & images
Tuberculosis	Introduction vaccines Types Mode of administration & Doses Side effects	Power Point Presentations including videos & images
Chicken Pox	Definition Etiology Clinical feature Diagnosis Treatment complications	Power Point Presentations including videos & images



Polio	Definition Etiology Clinical Feature Diagnosis Treatment Complications	Power Point Presentations including videos & images
Tetanus	Definition Etiology Clinical feature Diagnosis Treatment Complications	Power Point Presentations including videos & images
Diphtheria	Definition Etiology Clinical feature Diagnosis Treatment Complications	Power Point Presentations including videos & images
Pertusis	Definition Etiology Clinical feature Diagnosis Treatment Complications	Power Point Presentations including videos & images
Malaria, Dengue	Definition Etiology Clinical feature Diagnosis Treatment Complications	Power Point Presentations including videos & images
Enteric Fever	Definition Etiology Clinical feature Diagnosis Treatment Complications	Power Point Presentations including videos & images



Growth & Development	Definition Patterns of Normal growth Red flags in development	Power Point Presentations including videos & images
IMNCI	Definition Importance of IMNCI Implications Advantages	Power Point Presentations including videos & images
Malnutrition	Definition Etiology Clinical feature Diagnosis Treatment Complications	Power Point Presentations including videos & images
Malnutrition-II	Definition Etiology Clinical feature Diagnosis Treatment Complications	Power Point Presentations including videos & images
Rheumatic Fever	Definition Etiology Clinical feature Diagnosis Treatment Complications	Power Point Presentations including videos & images
Acute Diarrhoea	Definition Etiology Clinical feature Diagnosis Treatment Complications	Power Point Presentations including videos & images
Worm Infestation	Definition Etiology Clinical feature Diagnosis Treatment	Power Point Presentations including videos & images



	Complications	
Worm Infestation- 2	Definition Etiology Clinical feature Diagnosis Treatment Complications	Power Point Presentations including videos & images

UHS Curriculum for PAEDIATRICS

List of suggested topics for teaching the undergraduates is given below:

- Common problems of children in Pakistan and statistics of Pakistani children.
- Clinical methods in Paediatrics.
- Nutrition (breast feeding, infant feeding, weaning) and nutritional disorders: (PEM, rickets, vitamin A deficiency, iodine deficiency, iron deficiency)
- Growth and development.
- Common pediatric infections: Measles, tetanus, polio, diphtheria, whooping cough, AIDS, malaria, enteric fever, tuberculosis, chicken pox, common skin infections.
- Expanded Program on Immunization (EPI).
- Diarrheal diseases.
- Acute respiratory infections (ARI).
- IMNCI (integrated management of neonatal and childhood illness).
- Neonatology: Resuscitation of new born, care of normal new born, birth asphyxia, premature and low birth weight babies, neonatal jaundice, neonatal sepsis, neonatal fits, respiratory distress of newborn, common skin conditions of neonates, pyloric stenosis, myelomeningocele, hydrocephalus, common congenital abnormalities and birth trauma.
- Neurology: Meningitis, febrile convulsions, epilepsy, cerebral palsy, mental handicap, cerebral malaria, encephalitis
- Cardiology: Congenital heart diseases (cyanotic and acyanotic), rheumatic fever, congestive cardiac failure, clinical assessment of acyanotic neonate/infant.
- Haematology: Anaemias, thalassemia, leukemias, bleeding disorders.



- Nephrology: Nephrotic syndrome, urinary tract infections, acute glomerulonephritis
- Endocrinology: Hypothyroidism, short stature, diabetes mellitus
- Pulmonology: Croup, asthma, tuberculosis, pneumonia, pleural effusions, bronchiolitis.
- Gastroenterology: Abdominal pain, malabsorption, hepatitis, cirrhosis, acute liver failure
- Diarrhea[acute/ chronic],dysentery, worm infestations, giardiasis, amoebiasis, rectal polyp.
- Genetics: Patterns of inheritance, Down's syndrome.
- Social pediatrics: Right of child, child abuse, enuresis, encoparesis, hyperactivity, dyslexia, attention deficit disorder, child safety
- Miscellaneous: Poisoning, prevention of home accidents, behavioral disorders.
- Pediatric surgery: Hernia, intussusceptions, intestinal obstruction, talipes, congenital dislocation of hip, vesicoureteral reflux.

SKILLS:

1. Student will demonstrate his/her ability to obtain a relevant clinical history from a parent or an older child.
2. Student will demonstrate his/her ability to perform adequate clinical examination of a child of any age (including newborn).
3. Student will be able to interpret clinical and laboratory data to arrive at a diagnosis.
4. Student will be able to advise appropriate nutritional measures for healthy and sick children (breast feeding, avoidance of bottle, proper weaning)
5. Student will be able to counsel the parents on health promotive and disease preventive strategies for the child (e.g. immunization procedures; hand washing)
6. Student will be able to recognize and manage common health problems of children.
7. Student will recognize the danger signs of disease in children and be able to appropriately refer children with severe disease to appropriate specialists/hospitals.
8. Student will demonstrate his ability to perform essential clinical procedures relevant to children e.g,
 1. Resuscitation of newborn.
 2. Basic cardio-pulmonary resuscitation.
 3. Anthropometric measurements.
 4. Measuring blood pressure.
 5. Starting intravenous lines/ draw blood sample.
 6. Administration of oxygen.
 7. Giving nebulizer therapy [bronchodilator].
 8. Use of growth charts.



OBSERVE THE FOLLOWING SKILLS:

1. Lumbar puncture
2. Bone marrow aspiration
3. Supra pubic puncture
4. Subdural tap
5. Thoracocentesis
6. Liver biopsy
7. Renal biopsy
8. Observe passing of foleys catheter
9. Observe pericardial tap

RECOMMENDED BOOKS:

1. **Text book of Paediatrics** by Pervaiz Akbar Khan
2. **Essentials of Paediatrics** by Nelson. Latest Edition.
3. **Online Journals and Reading Materials** through HEC Digital Library Facility
4. **Pediatric Clinical Methods** by Prof. Humayun Iqbal Khan
5. **Handbook of Hospital Management of Pediatric Patients** by Prof. Humayun Iqbal Khan
6. **Pediatric Clinical Methods** – Practical Manual for Undergraduate Pediatric Rotation
7. **Macleods Clinical Examinations.**



CLINICAL TEACHING:

Clinical teaching of students of 4th & final year MBBS is done at the affiliated hospitals.

3. Sharif Medical City Hospital, Raiwind Road, Lahore.
4. Ittefaq Teaching Hospital, Model Town Lahore.

Clinical Teaching Strategies:

- **Out Patient department Teaching**
- **Ward Teaching**
 - History taking
 - Clinical methods
 - Bedside teaching
 - Ward rounds
 - Case presentation by the students
 - Case discussions
- **Clinical Tutorials**
- **Clinico-pathological Conference**
- **OSCE/OSPE Examination Practice**
- **Clinical Cards/Log book**, to document and monitor clinical training.

Clinical Classes:

Clinical classes are meant to develop clinical orientation, and approach in a medical student to make him knowledgeable and expert in dealing with patients in all aspects including, history taking general & systematic physical examinations, investigations, treatment, rehabilitations, counseling, follow-ups, and possible complications. Students are taught how to manage a patient as a whole, not the concerned disease only.

In department of Pediatrics and Neonatology, students will visit the hospital five days a week on a specified time for approximately 07 weeks. The details of important topics to be covered in these classes are given below:

- History taking (already taught in 4th year) will be revised and polished almost daily.



- General physical examination
- Examination of the Abdomen
- Examination of the Chest
- Examination of the CVS
- Examination of the Nervous system
- Examination of the locomotor system
- Case presentations/ discussions as long case
- Common investigations
- Medical instruments
- Medical procedures
- OSCE
- Format of final Clinical Examination



INTERNAL ASSESSMENT

Internal assessment carries 10% weightage in final professional examination, meaning that out of 200 marks of Paediatrics Medicine 20 marks are decided by the performance of student in the whole academic year. This will comprise of marks in;

- Class tests
- Ward test
- Send up examination
- Class attendance
- Ward attendance

FORMAT OF PAEDIATRICS EXAMINATION & TABLE OF SPECIFICATIONS IN FINAL PROFESSIONAL EXAMS

Total marks = 200

- ⊙ Theory=90
 - 45 MCQs (45 marks) and 9 SEQs(45 marks)
 - ⊙ Clinical examination = 90
 - OSCE will be of 40 marks
 - One Long case 18 marks
 - Two Short cases 32 marks
 - ⊙ Internal assessment = 20
-



Department of Gynecology and Obstetrics



PLANNED TEACHING ACTIVITIES FOR FOURTH YEAR MBBS

DEPARTMENT OF OBSTETRICS & GYNAECOLOGY

To complete the allocated teaching hours in the subject of Obstetrics and Gynaecology for MBBS Course, teaching has been divided in fourth year and final year. A total of 136 hours teaching will be done in fourth year. Following teaching module has been carefully planned to impart essential knowledge, skill and attitude training so that our students are adequately prepared for university examinations as well as their future medical practice.

Lectures:

A total of 47 lectures are planned for the entire year. These lectures will be delivered by the Professor, Associate Professor or Assistant Professor. All of these have completed their post graduation and have adequate experience after that. These lectures will be interactive and student will encouraged to actively participate.

Small Group discussion / Case base learning/ Practical skills/ Seminar:

These will be conducted 5 times a week. On different days, different duration is allocated as is mentioned on page 3. A senior instructor or faculty member will be facilitating these activities.



TOPICS TO BE DISCUSSED IN LECTURES
DEPARTMENTS OF OBSTETRICS AND GYNAECOLOGY
FOURTH YEAR MBBS CLASS

OBSTETRICS

Sr. #	TOPIC	TUTOR	Venue
1	Introduction to Obs and Gynae	Prof Dr Maimoona Hafeez	Lecture Hall 3
2	Conception and implantation	Prof Dr Fauzia Butt	Lecture Hall 3
3	Physiological changes of pregnancy	Dr Nishat Akram	Lecture Hall 3
4	Diagnosis of pregnancy	Dr Rukhsana Zafar	Lecture Hall 3
5	Hyperemesis gravidarum	Dr ShaziaTazion	Lecture Hall 3
6	Physiology of labour	Dr Anees Fatima	Lecture Hall 3
7	Mechanism of labour	Dr Salma Sadia	Lecture Hall 3
8	Fetal skull and bonny pelvis	Prof Dr Maimoona Hafeez	Lecture Hall 3
9	Stages of labour	Prof Dr Fauzia Butt	Lecture Hall 3
10	Management of first, second and third stage of labour	Dr Nishat Akram	Lecture Hall 3
11	Puerperium	Dr Rukhsana Zafar	Lecture Hall 3
12	Obstetrical procedure	Dr ShaziaTazion	Lecture Hall 3
13	Antepartum Haemorrhage	Dr Anees Fatima	Lecture Hall 3



GYNAECOLGY LECTURES

1	Anatomy of female genital tract	Dr Salma Sadia	Lecture Hall 3
2	Puberty and adolescence	Prof Dr Maimoona Hafeez	Lecture Hall 3
3	Menstrual cycle	Prof Dr Fauzia Butt	Lecture Hall 3
4	Primary and secondary amenorrhoea	Dr Nishat Akram	Lecture Hall 3
5	Surgical procedure	Dr Rukhsana Zafar	Lecture Hall 3
6	Abnormal uterine bleeding	Dr Shazia Tazion	Lecture Hall 3
7	Ectopic pregnancy	Dr Anees Fatima	Lecture Hall 3
8	Miscarriage	Dr Salma Sadia	Lecture Hall 3
9	Menopause	Prof Maimoona Hafeez	Lecture Hall 3



LEARNING OBJECTIVE OF DIFFERENT TOPICS IN OBSTETRICS AND GYNAECOLOGY

FOURTH YEAR MBBS CLASS

OBSTETRICS LECTURES

At the end of session, the students will be able to:

Serial number	Topic	Learning Objective
1	Introduction to Obs and Gynae	<ul style="list-style-type: none">• Understand and differentiate between Obstetrical & Gynaecological Cases.• Get Introduction to Department & teaching curriculum.
2	Conception and implantation	<ul style="list-style-type: none">• Define fertilization & pathophysiology of implantation which will help them in learning the basics of Obstetrics & part of Gynaecology.
3	Physiological changes of pregnancy	<ul style="list-style-type: none">• Understand the normal physiological changes occurring during pregnancy and differentiate between normal and abnormal symptoms and signs during pregnancy course.
4	Diagnosis of pregnancy	<ul style="list-style-type: none">• Diagnose pregnancy using symptoms, signs and investigation.
5	Hyperemesis gravidarum	<ul style="list-style-type: none">• Understand the causes, diagnosis and management of Hyperemesis Gravidarum.
6	Physiology of labour	<ul style="list-style-type: none">• Understand the normal physiology of labour



7	Mechanism of labour	<ul style="list-style-type: none">• Be familiar to the series of changes in position and attitude that the fetus undergoes during passage through birth canal. (for vertex presentation & gynaecoid pelvis)
8	Fetal skull and bony pelvis	<ul style="list-style-type: none">• Understand the anatomy of maternal pelvis and fetal skull
9	Stages of labour	<ul style="list-style-type: none">• Understand the normal physiology of labour
10	Management of first, second and third stage of labour	<ul style="list-style-type: none">• Understand how to ensure the safe delivery of healthy baby to a fit and satisfied mother using minimum interference.• Provide appropriate choice for analgesia, position in labour and a pleasant environment to give birth.
11	Puerperium	Understand how to <ul style="list-style-type: none">• Monitor the physiological changes of puerperium.• Diagnose and treat any postnatal complication.• Establish infant feeding.• Give emotional support to mother.• Advise about contraception.
12	Obstetrical procedure	<ul style="list-style-type: none">• Understand different procedures used in obstetrics, indications, requisites & complications of these procedures.
13	Antepartum Haemorrhage	Understand how to <ul style="list-style-type: none">• Provide initial management to the patient and the necessity to deliver the fetus as soon as possible to save the life of mother or infant



LEARNING OBJECTIVE OF DIFFERENT TOPICS IN OBSTETRICS AND GYNAECOLOGY

FOURTH YEAR MBBS CLASS

GYNAECOLOGY LECTURES

At the end of session, the students will be able to:

Serial number	Topic	Learning Objective
1	Anatomy of female genital tract	<ul style="list-style-type: none">• Understand names and anatomy of female external & internal genitalia.
2	Puberty and adolescence	<ul style="list-style-type: none">• Emphasize the physical, social and emotional changes of puberty.
3	Menstrual cycle	<ul style="list-style-type: none">• Enumerate different structures and factors required in the establishment and periodic occurrence of menstrual cycles.
4	Primary and secondary amenorrhoea	<ul style="list-style-type: none">• Determine the prevalence & etiologic causes of primary and secondary amenorrhoea
5	Surgical procedure	<ul style="list-style-type: none">• Understand the indications and limitations of various surgical procedures
6	Abnormal uterine bleeding	<ul style="list-style-type: none">• Evaluate the patho-physiology of various types of abnormal uterine bleeding and their appropriate treatment
7	Ectopic pregnancy	<ul style="list-style-type: none">• To define and know different types of ectopic pregnancy and how to diagnose and manage its different presentations.
8	Miscarriage	<ul style="list-style-type: none">• Enumerate various types of



		miscarriages and how to diagnose and treat them.
9	Menopause	<ul style="list-style-type: none">• Define menopause• Understand pathophysiology of menopause• Enumerate changes and causes of menopause• Recognize symptoms of menopause <p>Understand mechanism, route of administration and side effect of HRT</p>

LIST OF WARD WORK

Fourth year (ward classes and clinical work)

In Fourth year clinical classes in Obstetrics & Gynaecology are conducted 5days/ week .

i. Obstetrics

1. Obstetrical history taking and examination
 2. Fetal skull/ skull demonstration
 3. Bony pelvis/ Bony skull & Pelvis
 4. Monitoring of labour CTG/ partogram
 5. Mechanism of normal labour (Skill demonstration on mannequin & patients)
 6. Antenatal care
 - a) Categorization of patients
 - b) Antenatal visits
 - c) Management guidelines
-



- d) Antenatal cards
- e) Investigation list
- f) Referral system

7. Medicines used in labour

8. Speculum examination/ Bishops assessment (In the form of hands-on practice on patients or mannequin)

9. Resuscitation of new born (Skill demonstration)

10. Post op and post natal follow up

11. Forceps and vacuum delivery (Introduction, Types, Demonstration on mannequin and patients)

Assessment is done at the end of ward rotation in the form of OSPE.

ii. Gynaecology

Similarly Gynae ward schedule in 4th year MBBS includes

1. Gynecological History

2. Gynae Examination

- a) GPE
- b) Speculum Examination
- c) Pelvic Examination
- d) Abdominal Examination

3. Examination of masses Inspection, palpation, percussion, auscultation will be performed on patients

4. contraception- Device, methods, practical demonstration

5. History of special problems like infertility, abnormal uterine bleeding vaginal discharge.

6. Pap smear/ High vaginal swab

7. Surgery i.e D&C, E&C, biopsy, Hysterectomy, Myomectomy, Cystectomy

8. Preoperative preparation



9. Post operative care

- ✓ Each student must have an examination tool kit including stethoscope, thermometer, BP apparatus, measuring tap, clinical hammer & fetoscope.
- ✓ Students should complete history note books by history taking during ward station
- ✓ Students are directed to see the clinical work being conducted

Assessment will be at the end of Obstetrics as well as Gynaecology sessions in the form of OSPE



ASSESSMENT PLAN

Students' knowledge about the subject is assessed at various levels.

Class Tests are held after the completion of each topic in class lecture hall which includes (a) MCQs (Multiple Choice Questions)

(b) SBAs (Single Best Answer)

(b) SAQs (Short Answer Questions)

Ward tests held in ward of the respectable ward batch. It has two parts

(a) OSPE

(b) Long case and VIVA

Every student is mandatory to pass in the ward test.

Skill Demonstration

Student's knowledge & its effectiveness are checked by skill demonstration on mannequin.

Communication skills

Communication skills of students are polished and assessed in counseling session with patients.



FACULTY MEMBERS

- **HOD & Prof. Dr. Maimoona Hafeez** (maimoonahafeez@gmail.com)
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- **Associate Prof. Dr. Nishat Akram** (nishatakram0@gmail.com)
- **Associate Prof. Dr. Rukhsana Zafar** (rukhsanaz@hotmail.com)
- **Associate Prof. Dr. ShaziaTazion** (drtazion@yahoo.com)
- **Assistant Prof. Dr.Anees Fatima** (Fatima.tabjeel@gmail.com)
- **Assistant Prof Dr.Salma Sadia** (Ssadia116@gmail.com)
- **Senior Registrar Dr.Seemal Tajassar** (tajasarseemal@gmail.com)
- **Senior Registrar Dr.Samara Kaleem** (samarakaleem@hotmail.com)

RECOMMENDED TEXT BOOKS

- 1) **Obstetrics & Gynaecology by Ten Teachers by Stuart Campbell and Christoph Lees, 20th**
 - 2) **Obstetrics & Gynaecology** by Dr.Arshad Chohan
 - 3) **Online Journals and Reading Materials** through HEC Digital Library Facility.
 - 4) **Illustrated Obstetrics & Gynaecology** by Hanretty 6th Ed.
 - 5) **Dew Hurst's Obstetrics & Gynaecology**
-



Department of Orthopedic Surgery



GENERAL STUDENT LEARNING OBJECTIVES:

The MBBS medical students at the end of the undergraduate training program in the subject of Orthopedic Surgery should be able to demonstrate the following outcomes:

- Skillful
- Knowledgeable
- Community health promoter
- Critical thinker
- Professional and role model
- Researcher
- Leader

Course Objectives: At the end of undergraduate training program in the subject of Orthopedic Surgery, the graduate should possess essential knowledge, skills and attitude in order to enable them to:

- Take comprehensive history, perform detailed physical examination and make a probable diagnosis with a list of differential diagnoses.
 - Devise an investigation plan, interpret the information and apply his knowledge.
 - Suggest a treatment plan for patients.
 - Apprehend and diagnose possible complications.
 - Document all aspects properly and timely.
 - Write and present the cases.
 - Identify medical diseases presenting in out-patients, in-patients and emergency departments.
 - Provide primary health care, at the community level.
 - Perform essential medical emergency and planned procedures.
 - Communicate and counsel effectively with the patient, their families and the community, regarding disease and its relevant issues.
 - Understand medical ethical issues and their application in reference to Orthopedic Surgery.
 - Maintain the confidentiality of the patient.
 - Counsel patients and families regarding common medical problems.
 - Guide the patients and families regarding rehabilitation.
 - Understand the prevalence and prevention of the common Public Health Problems related to Orthopedic Surgery in the community.
 - Understand the principles of medical research including medical writing.
 - Understand the fundamentals of Information Technology and basic computer software.
 - Understands the principles of sterilization and disinfection techniques to prevent infections to the patients and save himself or herself from patients.
 - Be a life-long self-directed learner.
-



➤ Exhibit Professionalism.

➤ **COURSE OUTLINE:**

Fourth Year MBBS:

The teaching & learning in Surgery will be continued with addition of teaching actual textbook in lectures. In clinical classes students will rotate in OPD, wards and operation theatres expected to perform history taking, documentation, presentation and examination under supervision, to pick up the abnormal findings.

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MODES OF INFORMATION TRANSFER:

LECTURES:

Lectures are planned to give the theoretical knowledge of the course contents. The main purpose of the lectures is to broadly introduce the topic or disease. The lecture schedule with the name of the tutor is mentioned below in the tabulated form. The lectures are taken at the lecture halls of main college building according to the annual devised schedule or academic calendar. Due to COVID-19 pandemic and lockdown with closure of colleges and universities, the classes were interrupted. Online classes through ZOOM meetings, Google classrooms and other online teaching modes were also started.

CLINICAL TEACHING:

Clinical teaching of students of final year MBBS is done at the affiliated hospitals.

3. Sharif Medical City Hospital, Raiwind Road, Lahore.

Clinical Teaching Strategies:

- Out Door Teaching
- Ward Teaching
 - History taking
 - Clinical methods
 - Bedside teaching
 - Ward rounds
 - Case based learning
- Small group discussions
- Clinical Tutorials
- Clinico-pathological Conference
- Individual presentations and assignments
- Skill lab activities
- OSCE Examination Practice
- Clinical Cards/Log book, to document and monitor clinical training.

Objectives of Clinical Classes / Training:

Clinical classes are meant to develop clinical orientation, and approach in a medical student to make him, knowledgeable and expert in dealing with patients in all aspects including, history taking, general & systematic physical examinations, investigations, treatment, rehabilitations, counseling, follow-ups, and possible complications. Students are taught how to manage a patient as a whole, not the concerned disease only.



List of topics 4TH YEAR MBBS Department of Orthopedic Surgery Session 2023

- Pathogenesis and clinical features of ; *f*
 - Achondroplasia. *f*
 - Osteogenesis imperfecta. *f*
 - Osteoporosis. *f*
 - Acute and chronic osteomyelitis *f*
 - Common causative micro-organism *f*
 - Common routes of spread *f*
 - Complications. *f*
 - Common sites involved in tuberculous osteomyelitis *f*
 - Pathogenesis, morphological and clinical features of Paget's disease (osteitis deformans). *f*
 - Benign and malignant bone forming tumours. *f*
 - Common sites, morphological and clinical features of osteogenic sarcoma. *f*
 - Benign and malignant cartilaginous tumours. *f*
 - Chondrosarcoma *f*
 - Peak incidence *f*
 - Common sites of origin *f*
 - Morphological and clinical features. *f*
 - Most frequent sites, clinical and morphological features of giant cell tumours of bone. *f*
 - Ewing's sarcoma *f*
 - Peak incidence *f*
 - Common sites of origin *f*
 - Chromosomal abnormality *f*
 - Morphological and clinical features. *f*
 - Pathogenesis, morphological and clinical features of osteoarthritis *f*
 - Rheumatoid arthritis *f*
 - Pathogenesis *f*
 - Morphological and clinical features *f*
 - Lab Diagnosis *f*
 - Gout. *f*
 - Classification *f*
 - Pathogenesis *f*
 - Morphological and clinical features *f*
 - Lab Diagnosis *f*
 - Pathogenesis, morphological and clinical features of; *f*
 - Duchenne muscular dystrophy *f*
 - Myotonic dystrophy *f*
 - Congenital myopathies *f*
 - Inflammatory myopathies *f*
 - Myasthenia gravis. *f*
 - Lipoma and liposarcoma. *f*
-



- Rhabdomyosarcoma *f*
 - Peak incidence *f*
 - Histological variants *f*
 - Frequent sites
-



THE LOG BOOK/ CLINICAL CARD RECORD:

The log book is a collection of evidence that learning has taken place, it is a reflective record of achievements.

The students are expected to make a record of his/her achievements in the log book. The log book shall also contain a record of the procedures which student would have performed in final year.

FEEDBACK:

The teaching faculty will give constructive feedback on the performance of the students. This will be individual

in clinical classes and collective in class tests and mega tests (however students who fail to perform good in

tests or those who want to know about their performance may be given individual feedback). Students should

take all the feedbacks in positive spirit & attitude to find out the level of their performance, areas where they

need improvements and suggestions and guidance from the teachers, how to improve the weaknesses etc. the

sole purpose of feedbacks is to improve the learning of students.

ATTENDANCE:

- Students are required to ensure maximum attendance in all sections including lectures and clinical classes.
 - Minimum attendance to qualify for appearing in final professional examination is 75% of lectures and clinical classes. But this is not the desired level. All students should make sure that they attend the classes 100%, except some unavoidable circumstances. Because missing one lecture or clinical class means one has missed a topic, a disease or a very important aspect of the subject.
 - If a student is continuously absent for 07 days or more, his /her name will be struck off from the college, and he /she will have to get re-admission after consideration by the administration.
-



Continuous Internal Assessment:

Course Learning Outcomes and assessment methods:

At the end of the session / section; the student will be able to

1. Diagnose a case scenario
2. Devise an investigation plan
3. Write down a comprehensive management plan
4. Describe the common complications and their management
5. Knows the follow up & rehabilitation plan of the common as well as important diseases of a particular system.

FORMATIVE ASSESSMENT (MCQ/SEQ TEST);

There is continuous internal assessment in the form of MCQ's SAQ's, OSPE and Viva.

Subject		Marks	Evaluation Tool
Surgery	Class test	30 each test	MCQ's, SAQ's MCQ's, SAQ's MCQ's, SAQ's MCQ's, SAQ's
	1		
	2		
	3		
	4		
	Ward test	100	OSPE & Viva

ASSESSMENT	TOOLS	WEIGHTAGE
Formative	D During CBL, MCQs, SAQs. By taking feedback from students.	25



ASSESSMENT

Student's knowledge as about the subject is assessed at various levels.

3. **Class Tests** are held after the completion of each topic in class lecture hall which includes
 - (c) Multiple choice question (MCQ's)
 - (d) Short Assay question (SAQ's)
4. **Ward Tests** it has two parts
 - (c) OSPE
 - (d) Long case and Viva

Each student is required to pass in the ward test.

Skill Demonstration Student's knowledge and its effectiveness are checked by skill demonstration on mannequin.

Communication Skills Communication skills of student are polished and assessed in counseling sessions on patients.



INTERNAL ASSESSMENT POLICY
DEPARTMENT OF ORTHOPEDIC SURGERY

- 10% of total marks of Final Professional exam (50 marks) are from internal assessment.
 - These marks are evaluated as follow:
 - Total Attendance of Students in 3rd, 4th, 5th year M.B.B.S ----- 20% (10Marks).
 - Total marks in all class tests in 3rd, 4th, 5th year M.B.B.S ----- 20% (10Marks).
 - Total Attendance in ward in 3rd, 4th, 5th year M.B.B.S----- 20% (10Marks).
 - Total marks in ward test in 3rd, 4th, 5th year M.B.B.S----- 20% (10Marks).
 - Send-up exam----- 20% (10Marks).
-



STAFF CONTACTS ORTHOPEDIC SURGERY DEPARTMENT

Sr. No.	NAME	EMAIL ADDRESS
1	Prof. Farooq Azam	Dr.farooq224@hotmail.com
2	Dr Bilal Ahmed Abbas	bilalabbas@hotmail.com



RECOMMENDED BOOKS

- Bailey & Love's Short Practice of Surgery 27th Edition
- Apley and Solomon's Concise System of Orthopaedics
- Netter's surgical anatomy review

LEARNING RESOURCES

- Lectures
- Small group demonstrations and discussion
- Outpatient department clinical evaluation as short cases
- Causality and Emergency room clinical examination and management logarithm learning ATLS
- Ward rounds / bedside teaching and skills training of pre and post operative care as long cases
- Operation room observations and assistance
- Post emergency morning meetings
- Morbidity committee meeting
- Mortality committee meeting
- Journal club
- CPC in collaboration with other specialties including Department of Radiology and Pathology etc.
- Videos on clinical signs and operative procedures
- Skill labs/models
- Seminars
- Study Guide

RESOURCE PERSON

- **Prof. Farooq Azam (HOD Orthopedic Surgery)**
 - **Dr Bilal Ahmed Abbas (Assistant professor Orthopedic Surgery)**
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Department of Neurosurgery



PLANNED TEACHING ACTIVITIES FOR FOURTH YEAR MBBS DEPARTMENT OF NEUROSCIENCES

PMC has allocated hours of teaching in the subject of Neurosurgery MBBS course. In order to meet this requirement following teaching modules have been planned. These modules have been carefully designed to impact core knowledge of Neurosurgery in a manner that an undergraduate student can grasp the subject fully and is adequately prepared for university examinations & clinical care of patients.

Lectures:

a total of 07 lectures are planned for the entire year. The lectures will be conducted by faculty who have completed their post-graduation in the subject of neurosurgery, the lectures will be interactive and

students should actively participate in them to clear their doubts. The students are required to take notes of the lecture and study the topic with the help of prescribed text books in light of learning objectives of the topic enunciated by the teacher at the beginning of each lecture.

Clinical rotations

One practical class has been planned per week. It will comprise of neurological clinical clerkship in order to enhance clinical skills, based on history taking ,neurological clinical methods ,short cases, long cases , labs interpretation (CSF analysis, CT scan brain , MRI brain, operating procedures demonstration in operation theatre. At the end of clinical rotation, evaluation of students through OSPE & table viva.



DEPARTMENT OF NEUROSCIENCES
STUDENT GUIDE FOR FOURTH YEAR MBBS
DIVISION OF NEUROSURGERY

General Neurosciences

Sr. No	Title of Lecture
1	Neurosurgery
2	Neuro- anatomy (where is the lesion)
3	Neuro-patho physiology (what is the lesion)

CEREBRO-VASCULAR ACCIDENT (STROKE INTRACEREBRAL HEMORRHAGE)

Sr. No	Title of Lecture
1	CLASSIFICATION <ul style="list-style-type: none">• lobar• basal• IVH• cerebellar• brain stem
2	CAUSES <ul style="list-style-type: none">• hypertension• amyloid angiopathy• antipeltlets therapy• Anticoagulants• Thrombo Cytopenia• AV malformation / cavernoma• Vascular tumors
3	INVESTIGATION
4	MANAGEMENT <ul style="list-style-type: none">• Medical• Surgical
5	PROGNOSIS <ul style="list-style-type: none">• ICH severity score

MOVEMENT DISORDERS

Sr. No	Title of Lecture
1	INTRODUCTION
2	CLASSIFICATION <ul style="list-style-type: none">• HYPERKINETIC• Akinetic
3	CAUSES <ul style="list-style-type: none">• PD• HD• Wilson• Miscellaneous



4	INVESTIGATION CBC with peripheral film copper study, ECHO, ANA, TSH MRI brain. Genetic testing Trinucleotide Repeats
5	Management <ul style="list-style-type: none"> • Dopomericic • Anti psychotics • Anti Epileptic Drugs
6	Prognosis

Cranial Trauma

Sr. No	Title of Lecture	Instructors
1	Scalp Injury	• Dr. Farhan Fateh Jang
2	Cranial Fractures	
3	Epidural Hematoma	
4	Subdural Hematoma	
5	Subarachnoid Hemorrhage	
6	Spontaneous Intracranial hemorrhage	

Hydrocephalus

Sr. No	Title of Lecture	Instructors
1	Congenital Hydrocephalus	• Dr. Farhan Fateh Jang
2	Obstructive Hydrocephalus	
3	Normal Pressure Hydrocephalus	

Brain Infection

Sr. No	Title of Lecture	Instructors
1	Brain Abscess	• Dr. Farhan Fateh Jang

Brain Tumors

Sr. No	Title of Lecture	Instructors
1	Brain Tumor Presentation	• Dr. Farhan Fateh Jang
2	Brain Tumor Types	

Spinal Trauma

Sr. No	Title of Lecture	Instructors
1	Acute Spinal Cord Injury	• Dr. Farhan Fateh Jang
2	Chronic Spinal Cord Injury	

Spinal Disorders

Sr. No	Title of Lecture	Instructors
1	Spinal Bifida Defects	• Dr. Farhan Fateh Jang



NEUROLOGIC EXAM CHECKLIST

I. Mental Status (Screening)

- Orientation
- Registration / recall
- Serial 7's or WORLD backward
- Repeat "No ifs, ands, or buts"
- 3-step command
- Drawing clock

II. Cranial Nerves

- Visual acuity (each eye separately)
- Visual fields (each eye separately)
- Pupillary reaction to light
- Extraocular movements
- Optic discs
- Temp and light touch in 3 areas of face
- Eyebrow raising, eye closing, smile (show teeth)
- Hearing to finger rub
- Palate elevation
- Trapezius and SCM strength
- Tongue inspection, strength

III. Motor

- Pronator drift
- Upper extremity strength
 - Tone
 - Proximal (deltoid muscle)
 - Distal (hand grip)
- Lower extremity strength
 - Tone
 - Proximal (iliopsoas muscle)
 - Distal (foot dorsiflexion and plantar-flexion)

IV. Sensory

- Upper extremity - pinprick or temp
 - Compare sides
 - Compare distal to proximal on same side
- Upper extremity – vibration (DIP joint of both index fingers)
- Upper extremity – proprioception (index finger on both hands)
- Lower extremity - pinprick or temp
 - Compare sides
 - Compare distal to proximal on same side
- Lower extremity – vibration (distal interphalangeal joint of great toes)
- Lower extremity– proprioception (great toe on both feet)
- Romberg (proprioception-may be combined with gait tests)

V. Reflexes

- Biceps
- Brachioradialis
- Triceps
- Patellar
- Achilles
- Plantar response (report as extensor or flexor)

VI. Coordination and Gait

- Rapid alternating movements (RAM)
- Coordination in limbs
 - Finger-to-nose (FTN)
 - Heel-to-shin (HTS)
- Casual gait
- Tandem walking
- Heel and toe walking



GADGETS REQUIRED FOR NEUROLOGICAL EXAMINATION

- JAGUAR' & ISCHARA CHARTS
 - FUNDOSCOPE
 - CLINICAL HAMMER
 - TUNING FORKS 128HZ & 512HZ
 - EXAMINATION TORCH
 - MEASURING TAPE
 - NEUROFILAMENTS
 - TONGUE DEPRESSOR
-



ASSESSMENT PLAN
DEPARTMENT OF NEUROSCIENCES
SHARIF MEDICAL DENTAL COLLEGE LAHORE

Following modes of assessment are planned for fourth year MBBS class in the subject of Neurology. This plan has been designed keeping in view the university curriculum and hopefully will facilitate the student in preparing for professional examination in the subject.

Pre-annual Exam

This will be undertaken in coordination with other departments, exactly following the format of university professional examinations. It will comprise of MCQs, SEQs, OSPE and Viva voce.



DISTRIBUTION OF MARKS IN THE SUBJECT OF NEUROSURGERY

Theory:

Internal assessment	MCQs	SEQs	Total
	60	20	80

Practical and Viva Voce:

Internal assessment	Viva Voce	OSPE	Total
	10	10	20

OSPE: 1 - 2 stations of 05 marks each



**CONSULTANTS CONTACTS
NEUROSURGERY DEPARTMENT
SMDC, LAHORE**

Sr. #	Name	Email Address
1	Dr. Farhan Fateh Jang	farhanfatehjang77@gmail.com

Recommended text Books

Neurological Surgery Youmans

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Reference Books

Human Brain Anatomy	Damasio
Brain Tumor Surgery	Tetsu Kanno
Rhoton/Cranial Anatomy & Surgical Approaches	
Pediatrics Neurosurgery	Albright Pollack, Adelson
Pediatrics Neurosurgery	Albright Pollack, Adelson

Bed side examination books

- Bed side technique 4th edition by Muhammad inayatullah, Shabbier ahmad nasir
 - Macleod's clinical examination 14th edition by J. Alastair Innes, Anna R Dover
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Department of Urology



PLANNED TEACHING ACTIVITIES

PMC allocated 34 hours to teach the curriculum of urology for MBBS session. In order to meet this requirement following teaching modules have been planned. These modules have been carefully designed to impart core knowledge of Urology in a manner that an undergraduate student can retain the subject of Urology and is adequately prepared for university examinations.

LECTURES:

The lectures will be conducted by the Professor, associate and assistant professors or by senior registrar that have completed their post-graduation in the subject of Urology. The lectures will be interactive and students should actively participate to clear their doubts. The students can accompany their reference books are required to take notes of the lectures in light of the learning objectives of the topic.

WARD CLASSES:

The class will be divided into batches to conduct the ward classes effectively and one batch will be entertained for 6-7 weeks. It will comprise of history taking, clinical methods, and case presentations. Ward classes will be conducted by senior registrar under an active supervision of Assistant Professor. Students are required to enter their ward work in their log books provided to them and get them signed after the completion of task.

CLINICAL EXAMINATION

Examination will be taught by the instructor on the patients. Instructor will perform it himself on the patient and demonstrate it to the students. After thorough observation instructor will ask each student to perform it and he will assess it and point out mistakes so students can completely understand the steps.

SMALL GROUP DISCUSSIONS

Topics for the small group discussions will be given to the students to discuss and if any query is pointed out will be discussed with the instructor.

CASE BASED LEARNING:

Case based learning classes will be conducted during the ward classes. A clinical case is identified and discussed with the students in detail. A brief history is taken by the students and clinical examination is performed under supervision. Diagnosis is made after detailed discussion and management plan is prepared of the case under consideration. The learning objectives and suggested reading material will be notified to the students. Students are required to generate the discussion amongst them to maximize the learning objectives of the topic discussed.

SEMINARS AND WALKS

Departmental seminars and walk to create community awareness among the students, Clinical topics will be allocated to students and they will present a very short case history with ongoing treatment of the patient along without her available treatment. Each presentation will be of 10-15 minutes' duration with question and answer session after it.



TRAINING PROGRAM FOR LECTURE
DEPARTMENT OF Urology
4th YEAR MBBS CLASS

Date	Day	Time	Topic	Tutor	Book
UROLOGY					
October and Novemeber					
28-10-23	Saturday	12:45pm to 01:45pm	Urological history and examination	Prof. Muhammad Rafiq zaki	-Bailey & Love -Campbell's Urology
04-11-23	Saturday	12:45pm to 01:45pm	Management of urolithiasis	Prof. Muhammad Rafiq zaki	-Bailey & Love -Campbell's Urology
11-11-23	Saturday	12:45pm to 01:45pm	Renal carcinoma	Prof. Muhammad Rafiq zaki	-Bailey & Love -Campbell's Urology
18-11-23	Saturday	12:45pm to 01:45pm	Bladder carcinoma	Prof. Muhammad Rafiq zaki	-Bailey & Love -Campbell's Urology
25-11-23	Saturday	12:45pm to 01:45pm	Prostate cancer	Prof. Muhammad Rafiq zaki	-Bailey & Love -Campbell's Urology

LIST OF LECTURES AND LEARNING OBJECTIVES

SR. NO.	TOPICS	LEARNING OBJECTIVES
1.	Congenital anomalies of urinary tract	<ul style="list-style-type: none">• Important congenital abnormalities of kidney, ureter, urinary bladder, penis and testis• Clinical presentation• Investigations• Treatment
2.	Renal Tumors	<ul style="list-style-type: none">• Causes• Clinical presentation• Staging• Investigations• Treatment
3.	Carcinoma Prostate	<ul style="list-style-type: none">• Epidemiology• Causes• Clinical presentation• Investigations



		<ul style="list-style-type: none">• Treatment
4.	Urinary Bladder Neoplasm	<ul style="list-style-type: none">• Epidemiology• Causes• Clinical presentation• Investigations• Treatment

4th YEAR MBBS

Total teaching Hours	12 Hours/year
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LEARNING RESOURCES

- Lectures
- Small group demonstrations and discussion
- Outpatient department clinical evaluation as short cases
- Causality and Emergency room clinical examination and management logarithm learning ATLS
- Ward rounds / bedside teaching and skills training of pre and post operative care as long cases
- Operation room observations and assistance
- Post emergency morning meetings
- Morbidity committee meeting
- Mortality committee meeting
- Journal club
- CPC in collaboration with other specialties including Department of Radiology and Pathology etc.
- Videos on clinical signs and operative procedures
- Skill labs/models
- Seminars

RECOMMENDED BOOKS

- Bailey & Love's Short Practice of Surgery 27th Edition
 - The Washington Manual of Surgery, 8th Edition
 - Netter's surgical anatomy review
 - Campbell-walsh-wein urology(Reference book)
-



Faculty DETAILS of UROLOGY & Renal Transplant (SMDC)

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01	Prof Muhammad Rafiq Zaki	<u>drmrzaki@hotmail.com</u>
02	Dr Mujahid Hussain Bhatti	<u>drmujahidh@gmail.com</u>
03	Dr Muhammad Jawad	<u>drjawadakbar@gmail.com</u>
04	Dr Ahmed Bashir	<u>Ahmadbashir.ab@gmail.com</u>



Department of Anesthesia





Competencies to achieve

- ❖ Critical thinking
- ❖ Problem solving
- ❖ Examination skills
- ❖ Procedural skills
- ❖ Clinical decision making
- ❖ Communication skills
- ❖ Professionalism
- ❖ Leadership and role modeling
- ❖ Research Orientation

Expectations from Students:

- ❖ Be professional in behaviour and dress code when communicating with patient and her family.
- ❖ Respect patient and their family's wishes along with social and cultural norms
- ❖ Examine patients with their permission in the presence of chaperon
- ❖ Inculcate behaviour of regular self-learning for academic sessions & clinical problem encounters.
- ❖ Keep yourself abreast with current relevant information about your patients
- ❖ Understand medical ethics and its application pertaining to Anaesthesia and critical care and confidentiality of the patient.

Terminal Learning Outcomes for Fourth Year in Anaesthesia:

- ❖ Introduction to anaesthesia: - Developing an understanding of the role of the anaesthesiologist in supporting surgical patients.
 - ❖ Pre-operative assessment and preparation of a range of patients for surgery.
 - ❖ Types of Anaesthesia; GA & Regional.
 - ❖ Physiological changes caused by surgery, anaesthetic agents, IPPV and disease states.
 - ❖ Airway management skills.
 - ❖ Crisis management; an introduction to ICU.
 - ❖ Principles of post-operative pain management.
 - ❖ Developing an understanding of the pharmacology of common anaesthetic agents.
 - ❖ Complications of Anaesthesia.
-



At the end of 4th year the students should be able to

1. Introduction To Anaesthesia: Role Of The Anaesthesiologist and Scope:

- ❖ What is Anaesthesia & Role of Anaesthesiologist?
- ❖ History.
- ❖ Types of Anaesthesia.
- ❖ Subspecialties of Anaesthesia.
- ❖ Why should we study anaesthesia?
- ❖ Scope of Anaesthesia.

2. Pre-Operative Assessment And Preparation Of A Range Of Patients For Surgery:

- ❖ Enumerates the steps in pre-operative preparation.
- ❖ Important points in history that can have an impact on the patient during the operation.
- ❖ Important points to look for in physical examination during pre-operative preparation
- ❖ Justify investigations for pre-operative preparation.
- ❖ Identify the cases of difficult airway management.
- ❖ Classify the patients according to ASA status.

3. Types of Anaesthesia & Physiological Changes Caused By Surgery, Anaesthetic Agents, IPPV And Disease States:

- ❖ General Anaesthesia
- ❖ Regional Anaesthesia

4. Airway Management Skills.

- ❖ The principles of establishing and securing an airway.
- ❖ Techniques of airway maintenance
- ❖ Endotracheal intubation,

5. Crisis management; an introduction to ICU:

- ❖ What is critical Care Management?
- ❖ Who may need ICU care / indications of ICU Care?
- ❖ Monitoring in ICU

6. Principles Of Post-Operative Pain Management:

- ❖ Concepts of Pain Management.
- ❖ WHO pain ladder in Cancer pain
- ❖ Methods of Postoperative pain relieve; Drugs, Wound Infiltration of local anesthetics, Nerve blocks, Patient Controlled Analgesia, Continuous Epidural Analgesia
- ❖ Alternate methods of pain relief; Acupuncture / Acupressure, TENS, Physiotherapy

7. Pharmacology of Common Anaesthetic Agents:

- ❖ Intravenous anesthetics; mechanism of action of barbiturates, propofol, ketamine, etomidate.
- ❖ Inhalational Anaesthetics.
- ❖ Various stages of anesthesia.
- ❖ Minimum alveolar anesthetic conc. (MAC)
- ❖ Identify different drugs which interact with anesthetics

8. Complications of Anaesthesia:

- ❖ Enlist common complications of anesthesia.
- ❖ Outline management of complication of anesthesia.
- ❖ Cardiovascular; Arrhythmias, Hypotension, Hypertension, Myocardial Infarction, Cardiac Arrest
- ❖ Respiratory Obstruction.
- ❖ Atelectasis, pneumonia, Cyanosis.
- ❖ Hypoxaemia, Hypercapnia, Hypocapnia.
- ❖ Interpret the X-ray findings of post-operative pneumonia.
- ❖ Pneumothorax.
- ❖ Aspiration of Gastric contents; Acid aspiration syndrome.
- ❖ Paralytic ileus
- ❖ Urinary retention
- ❖ Hematoma, Wound Dehiscence
- ❖ Awareness.



Teaching and Learning Strategies

A variety of pedagogies are used in this course, including didactic teaching, team-based and evidence-based learning in class rooms and patient side environment. Students are encouraged to adopt and inculcate self-learning strategies during the course.

Mode of information transfer

- Lectures
- Hands on Teaching & Learning in Operation Theatres.
- Tutorial or small group discussions in theaters.
- Interactive sessions in operation Theatres
- Skill labs/models
- Videos (operative procedures, obstetrical emergencies)
- Meetings (journal club, CPC, morning meetings)
- Self-learning
- Online zoom meeting with small and large group

Lectures 04th Year MBBS 2023

Topics

1. Introduction to Anaesthesia (Basics)
2. Introduction to Anaesthesia (Instruments)
3. Perioperative care and monitoring
4. General Anaesthesia Pharmacology and Anaesthesia Drugs
5. Opioids Pharmacology
6. Regional Anaesthesia & Nerve Blocks

Delivered By

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