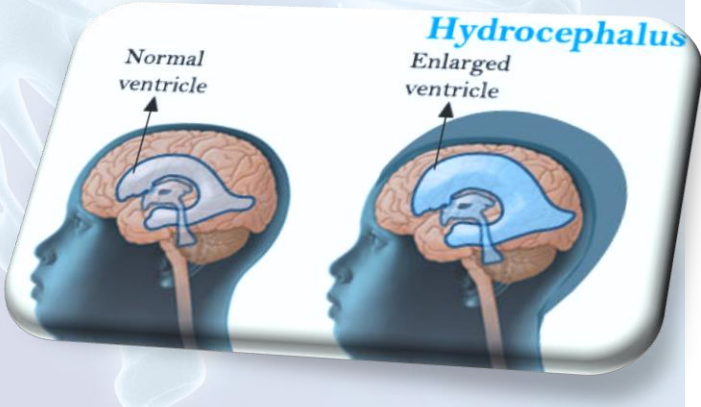
Study Guide- Fourth Year MBBS

- 05 Jan – 25 Feb 2026
- Duration 8 weeks

NERVOUS SYSTEM 2 & PSYCHIATRY MODULE



STUDY GUIDE FOR NERVOUS SYSTEM 2 & PSYCHIATRY MODULE

Module name: **Nervous System 2 & Psychiatry** *Year:* ***Four*** *Duration:* ***8 weeks (05 Jan-25 Feb 2026)***

MODULE INTEGRATED COMMITTEE

MODULE COORDINATOR:	• Dr. Rajesh Kumar (**Neurology**)
CO-COORDINATOR:	• Dr. Afifa Tabassum **(DHPE**)

DEPARTMENTS & RESOURCE PERSONS FACILITATING LEARNING

BASIC HEALTH SCIENCES	CLINICAL AND ANCILLARY DEPARTMENTS
COMMUNITY MEDICINE Professor Saima Zainab	***NEUROLOGY*** Dr. Syed Ahmed Asif
MICROBIOLOGY Professor Shaheen Sharafat	***NEUROSURGERY*** Professor Salman Yousuf Sharif
PATHOLOGY Professor Naveen Faridi	***PEDIATRICS*** Dr. Atika Sher
PHARMACOLOGY Professor Tabassum Zehra	***PSYCHIATRY*** Dr. Iqtidar Taufiq
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DEPARTMENT of HEALTH PROFESSIONS EDUCATION • Professor Nighat Huda • Professor Sobia Ali • Dr. Afifa Tabassum • Dr. Yusra Nasir • Dr. Asra Zia	
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STUDY GUIDE COMPILED BY: Department of Health Professions Education	

INTRODUCTION

WHAT IS A STUDY GUIDE?

It is an aid to:

- Inform students how student learning program of the module has been organized
- Help students organize and manage their studies throughout the module
- Guide students on assessment methods, rules and regulations

THE STUDY GUIDE:

- Communicates information on organization and management of the module. This will help the student to contact the right person in case of any difficulty.
- defines the objectives which are expected to be achieved at the end of the module.
- Identifies the learning strategies such as lectures, small group teachings, clinical skills, demonstration, tutorial and case based learning that will be implemented to achieve the module objectives.
- provides a list of learning resources such as books, computer assisted learning programs, web- links, and journals, for students to consult in order to maximize their learning.
- Highlights information on the contribution of continuous on the student's overall performance.
- Includes information on the assessment methods that will be held to determine every student's Achievement of objectives.
- focuses on information pertaining to examination policy, rules and regulations.

CURRICULUM FRAMEWORK

Students will experience integrated curriculum similar to previous modules**.**

INTEGRATED CURRICULUM comprises system-based modules such as Eye/ENT, dermatology, genetics, rehabilitation, reproductive system-II and neurosciences-II modules which links basic science knowledge to clinical problems. Integrated teaching means that subjects are presented as a meaningful whole. Students will be able to have better understanding of basic sciences when they repeatedly learn in relation to clinical examples.

LEARNING EXPERIENCES: Case based integrated discussions, Task oriented learning followed by task presentation, skills acquisition in skills lab, computer-based assignments, learning experiences in clinics, wards.

LEARNING METHODOLOGIES

The following teaching / learning methods are used to promote better understanding:

- Interactive Lectures
- Small Group Discussion
- Case- Based Discussion (CBD)
- Clinical Experiences
  - Clinical Rotations
- Simulation Based Learning
- Self-Study

INTERACTIVE LECTURES: In large group, the lecturer introduces a topic or common clinical conditions and explains the underlying phenomena through questions, pictures, videos of patients' interviews, exercises, etc. Students are actively involved in the learning process.

SMALL GROUP SESSION: This format helps students to clarify concepts, acquire skills or desired attitudes. Sessions are structured with the help of specific exercises such as patient case, interviews or discussion topics. Students exchange opinions and apply knowledge gained from lectures, tutorials and self-study. The facilitator role is to ask probing questions, summarize, or rephrase to help clarify concepts.

CASE-BASED DISUCSSION (CBD): A small group discussion format where learning is focused around a series of questions based on a clinical scenario. Students' discuss and answer the questions applying relevant knowledge gained previously in clinical and basic health sciences during the module and construct new knowledge. The CBD will be provided by the concern department.

CLINICAL LEARNING EXPERIENCES: In small groups, students observe patients with signs and symptoms in hospital wards, clinics and outreach centers. This helps students to relate knowledge of basic and clinical sciences of the module and prepare for future practice.

- **CLINICAL ROTATIONS:** In small groups, students rotate in different wards like Medicine, Pediatrics, Surgery, Obs & Gynae, ENT, Eye, Family Medicine clinics, outreach centers & Community Medicine experiences. Here students observe patients, take histories and perform supervised clinical examinations in outpatient and inpatient settings. They also get an opportunity to observe medical personnel working as a team. These rotations help students relate basic medical and clinical knowledge in diverse clinical areas.

SIMULATION BASED LEARNING: Skills relevant to respective module are observed and practiced where applicable in skills laboratory.

SELF STUDY: Students' assume responsibilities of their own learning through individual study, sharing and discussing with peers, seeking information from Learning Resource Center, teachers and resource persons within and outside the college. Students can utilize the time within the college scheduled hours of self-study.

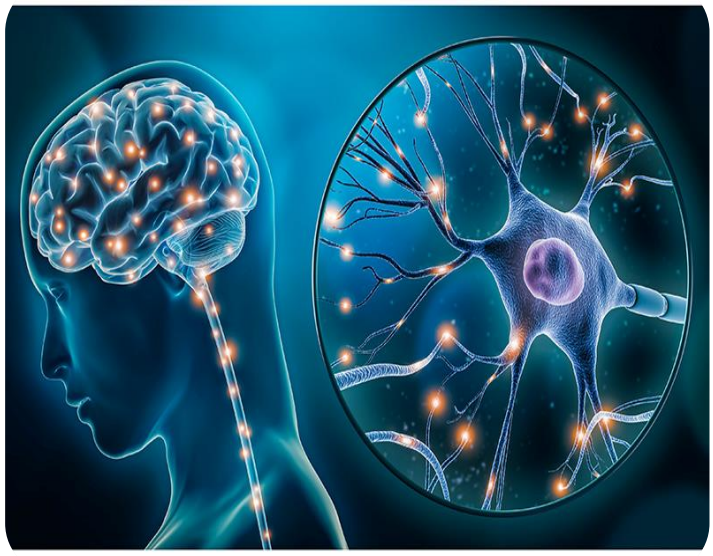
MODULE: NERVOUS SYSTEM 2 & PSYCHIATRY

INTRODUCTION

Neurological disorders are diseases of the central and peripheral nervous system. The jurisdiction starts from Cerebral cortex and moves down through brain stem, spinal cord, cranial nerves, peripheral nerves, nerve roots, autonomic nervous system, neuromuscular junction, and finally involves muscles.

This module will provide students with a multidisciplinary approach to understanding the etiology of neurological and mental disorders. Neurological problems are the leading cause for disability globally. An estimated 1-billion people around the world have a neurological disorder or disease, which is almost 15-percent of the world's population. According to WHO more than 6 million people die because of stroke each year; over 80% of these deaths take place in low- and middle-income countries. Psychiatric disorders are also major human toll of ill health. According to 2012 WHO data, Neuro-Psychiatric disorders are among 12 leading causes of disability and death in Pakistan.

In this module students will learn about the etiology of common disorders encountered by neurologists and psychiatrists and develop comprehensive understanding of the biological, pathological, psychological and social factors behind these disorders. The basis for pharmacological treatments for these conditions.



COURSE OBJECTIVES AND TEACHING STRATEGIES

At the end of the module the students will be able to:

COMMUNITY MEDICINE

OBJECTIVES	LEARNING STRATEGY
1. Poliomyelitis & Prevention	CBIL/ Tutoriral
• Describe poliomyelitis and its epidemiology	
• Classify different types of poliomyelitis	
• Discuss its control & prevention	
• Explain Global Polio Eradication Initiative	
2. Tetanus & Prevention	CBIL
• Describe Tetanus & its Epidemiology	
• Classify its types	
• Explain its control & prevention	
3. Leprosy & Prevention	CBIL/ Visit to marie adelaide leprosy centre (FIELD VISIT)
• Describe Leprosy & its Epidemiology	
• Classify the different types of Leprosy	
• Discuss its control & prevention	
• Explain the national Leprosy Control Program	
4. Stroke & Prevention	Tutorial
• Describe Stroke & its epidemiology	
• Explain the risk factors of Stroke	
• Discuss its control & prevention	
5. Rabies & Prevention	CBIL
• Describe Rabies & its epidemiology	
• Discuss its control & prevention	
6. Snake bite & prevention	Tutorial
• Classify Snakes	
• Identify the clinical features associated with different types of Snake Venom	
• Discuss epidemiology of snake bite	
• Explain the management of snake bite	
• Discuss the preventive measures of snake bite	
7. Introduction to mental health	Interactive lecture
• Describe Mental Health	
• List mental health problems	
• Discuss recommendations by World Health Report 2001 for Mental Health.	
• Explain prevention and control of mental health problems	
8. Substance Abuse	Tutorial
• Describe Substance abuse & its epidemiology	
• Identify the criteria of drug addiction	
• Classify psycho-active drugs	
• Describe the phases of Drug addiction	
• Explain the control & Prevention of substance abuse	

9. Global Burden of Neurological Disorder	Interactive lecture/ Tutorial
• Describe the global, regional and national burden of neurological disorders, with emphasis on disability-adjusted life years (DALYs) and mortality rates along with their prevalence and incidence rates	
• Explain the economic burden of neurological disorders on healthcare systems and societies globally	
• Explain the role of global organizations (e.g., WHO, Global Burden of Disease Study) in addressing neurological disorders.	
• Discuss: - the healthcare infrastructure challenges and opportunities in Pakistan for addressing neurological disease burden. - the impact of aging populations and demographic changes on the burden of neurological conditions	

PHARMACOLOGY

OBJECTIVES	LEARNING STRATEGY
1. Sedatives & hypnotics: I & II	Interactive lecture
• Classify the drugs used as Sedatives & Hypnotics	
• Discuss their basic & clinical pharmacology of those Sedatives & Hypnotics drugs	
2. Drug used in Migraine	CBL
• List the drugs used in migraine	
• Discuss their basic & clinical pharmacology of those drugs	
3. Drugs used in General anesthesia: I & II	Interactive lecture
• Discuss the drugs used as pre-anesthetic medications	
• Classify the drugs used as General anesthetics	
• Discuss their basic & clinical pharmacology of those drugs	
4. Local anesthetics	Tutorial
• List the drugs used in local anesthetics	
• Classify the drugs used as local anesthetics	
• Discuss their basic & clinical pharmacology of those drugs and their differences	
5. Anti-epileptic drugs I & II	CBIL
• Classify the drugs used in epilepsy	
• Discuss their basic & clinical pharmacology of those drugs	
6. Anti-psychotic drugs I &II	Interactive lecture
• Classify antipsychotic drugs according to different aspect	
• Discuss their basic & clinical pharmacology of those drugs	
7. Antidepressant drugs	CBIL
• Classify the Antidepressant drugs	
• Discuss their basic & clinical pharmacology of those drugs	
8. CNS Stimulants and Hallucinogens	Tutorial
• List different classes of CNS stimulants and hallucinogens	
• Discuss their basic & clinical pharmacology of those drugs	
9. Anti-Parkinson drugs I & II	Interactive lecture
• Classify the anti-Parkinson's drugs	

• Discuss their basic & clinical pharmacology of those drugs	
10. Drugs of Abuse & Alcohol	Tutorial
• List the drugs of abuse	
• Discuss their basic & clinical pharmacology of those drugs	
11. Serotonin agonist and antagonist	Tutorial
• List the serotonin agonist and antagonist drugs	
• Discuss the basic and clinical pharmacology of those drugs	
12. Sedatives & Hypnotics: Benzodiazepines	Tutorial
Classify Sedatives & Hypnotics drugs.	
Discuss basic & clinical pharmacology of Sedatives & Hypnotics drugs.	
13. Drugs of General anesthetics & Local anesthetics	Tutorial
Discuss basic & clinical pharmacology of general and local anesthetic and their clinical role.	

PATHOLOGY & MICROBIOLOGY

OBJECTIVES	LEARNING STRATEGY
1. Patterns of nerve injury, Cerebral Edema & Raised ICP	Interactive lecture/ Tutorial
• Define cerebral edema	
• List different types of brain herniation	
• Discuss: ✓ Types and etiological factors of cerebral edema ✓ The pathophysiology of reactions of Neurons, Glial tissue, Astrocytes, and Microglia to injury ✓ The pathogenesis, morphology and clinical presentation of cerebral edema, hydrocephalus and raised intracranial pressure The pathogenesis and morphology of different types of brain herniation	
2. Traumatic injuries to CNS	Interactive lecture
• Define ✓ Traumatic vascular injury ✓ Epidural and subdural hematoma	
• Discuss ✓ The patterns of vascular injury in the CNS ✓ Discuss the etiology, pathogenesis, and clinical presentation of epidural and subdural hematoma	
3. Cerebrovascular Diseases: (Hypoxia, Ischemia, Infarction)	Interactive lecture
• Define cerebrovascular diseases	
• Classify types of ischemic and vascular injury to brain	
• Discuss ✓ The risk factors, pathogenesis, localization, morphology and clinical course of global and focal cerebral ischemia ✓ The pathogenesis and morphology of various infarcts in the brain and spinal cord	
4. Hypertensive Cerebrovascular disease (CVD), intracranial hemorrhage and malformations	Interactive lecture
• Classify CVD associated with hypertension	

• Discuss the effects of hypertension on CNS	
• Discuss the etiology, pathogenesis and clinical features of: ✓ Hypertensive intra-parenchymal hemorrhage ✓ Intracranial hemorrhages (Cerebral amyloid angiopathy, Subarachnoid Hemorrhage and Ruptured Saccular Aneurysms) ✓ Vascular malformations (AV malformations, Cavernous malformations and Capillary telangiectasia) ✓ Hypertensive cerebrovascular disease & ✓ Hypertensive encephalopathy	
5. Meningitis & Brain Abscess	Interactive lecture
• Define meningitis and brain abscess.	
• List pathogens of meningitis and brain abscess	
• Discuss: ✓ Clinical features of Common Central Nervous System infections including acute (pyogenic) bacterial infections, acute aseptic viral infections, chronic bacterial meningitis, and fungal meningitis ✓ The transmission, pathogenesis, clinical features & laboratory diagnosis of Neisseria meningitides, Mycobacterium tuberculosis, Toxoplasma, Naegleria, Listeria & Cryptococcus	
6. Encephalitis	Interactive lecture
• Define encephalitis	
• List pathogens of encephalitis	
• Discuss in detail the transmission, pathogenesis, clinical features & laboratory diagnosis of Herpes, Varicella, Rabies & Polio virus	
7. Neurodegenerative Diseases	Interactive lecture
• Define neurodegenerative diseases	
• List the important neurodegenerative diseases	
• Discuss: ✓ Relationship between proteins and neurodegenerative diseases ✓ The molecular genetics and pathogenesis of Alzheimer disease ✓ Important morphologic features, clinical presentation and diagnostic criteria of Alzheimer disease ✓ The molecular genetics and pathogenesis of Parkinson disease ✓ Important morphologic features and clinical presentation and diagnostic criteria of Parkinson disease	
8. Brain tumors I & II	Interactive lecture
• Classify CNS tumors according to WHO classification	
• Discuss genetic mutations, pathogenesis, morphology and clinical features of brain tumors including all types of Glioma, Ependymoma, Medulloblastoma, Meningioma and metastatic tumors of brain	
9. Diseases of skeletal muscles –I	Interactive lecture/ Tutorial
• Define Skeletal Muscle Atrophy	
• Discuss: ✓ Pathophysiology and clinical features of Myasthenia gravis, Lambert-Eaton Myasthenic Syndrome & Botulism ✓ Features of Type I & II muscle fiber types ✓ The pathogenesis and diagnostic profile of inflammatory neuropathies (dermatomyositis and Polymyositis) and inherited diseases of skeletal muscle (X-	

linked muscular dystrophy with dystrophic mutation/ Duchenne and Becker Muscular Dystrophy)	
10. Diseases of skeletal muscles-II	Interactive lecture/ Tutorial
• Discuss pathophysiology and clinical features of Inflammatory Neuropathy i.e. Guillain-Barre Syndrome (Acute Inflammatory Demyelinating Polyneuropathy), Poliomyelitis and Prion diseases.	
11. Infection of Brain & Meninges & CSF interpretation	Tutorial
• List the most common organisms that cause CNS infection in different age groups	
• Discuss CSF findings of bacterial meningitis, tuberculous meningitis, viral and fungal meningoencephalitis	
12. Brain Tumors	Tutorial
• Discuss morphological and molecular aspects of various brain tumors.	

NEUROLOGY

OBJECTIVES	LEARNING STRATEGY
1. Lesion localization	Interactive lecture
• List the differential diagnosis based on detailed history, clinical presentation and complete examination findings	
• Localize the likely site/s of a lesion in the nervous system based on patient's symptoms and signs	
2. Lesions of cranial nerve	Tutorial
• List the causes of cranial nerve pathologies	
• Describe the clinical features, etiology, pathophysiology, investigations and outline of management plan of common cranial nerve lesions (esp. Optic, Oculomotor, Trigeminal, Facial and Glossopharyngeal nerves.)	
3. Cerebro-Vascular Accident (CVA)	Interactive lecture
• Define CVA and its types	
• Discuss the risk factors, etiology, pathophysiology, clinical features	
• Explain the outline of management plan for CVA	
4. Epilepsy and status epilepticus	Interactive lecture
• Define Epilepsy & Status Epileptics	
• Classify types of seizures clinically	
• List most common causes of seizures	
• Discuss: ✓ Pathophysiology of seizures ✓ Pharmacological treatment of epilepsy and the management of status epilepticus	
5. Meningitis	Interactive lecture
• Classify Meningitis	
• List the causative organisms	
• Discuss the possible complications of Meningitis	
• Interpret the CSF studies in patients with various types of meningitis	
• Differentiate among the various types of meningitis based on their clinical features, investigation findings and treatment options	

6. Encephalitis	Interactive lecture
• Define Encephalitis	
• List the causative organisms	
• Differentiate among the various types based on their clinical features, investigation findings and treatment options	
• Discuss the possible complications of Encephalitis	
7. Parkinson's Disease	Interactive lecture
• Discuss the clinical features, pathogenesis & differential diagnosis of Parkinson's disease (PD)	
• Explain the investigations and management plan for PD	
8. Multiple sclerosis (MS) and other demyelinate diseases	Interactive lecture
• List the common CNS and PNS demyelinating diseases	
• Discuss the epidemiology, pathogenesis, clinical presentation, investigations, differential diagnosis and management of MS.	
9. Myasthenia Gravis	Interactive lecture
• Describe the pathophysiology of Myasthenia Gravis	
• Explain its clinical features & investigations	
• Discuss the management of Myasthenia Gravis and its complications	
10. Rabies, Tetanus and Botulism	Interactive lecture
• Discuss the etiology, clinical features, investigations, prophylaxis and treatment of each of the conditions	
11. Higher Mental Functions	Tutorial
• Discuss level of consciousness, behavior, speech & memory	
• Identify their abnormalities and impairment	
12. Approach to headache & Primary headaches (Trigeminal autonomic cephalalgias)	Interactive lecture
• Classify headaches	
• Define primary headache syndrome	
• Differentiate among different patterns of headache	
• Describe the process of history taking of a patient with headache	
13. Secondary headaches	Interactive lecture
• List differential diagnosis of secondary headache	
• Assist common causes of secondary headache	
• List the red flag signs of secondary headache	
• Diagnose Trigeminal neuralgia on the bases of clinical signs & symptoms	
• Differentiate between common clinical findings seen in Trigeminal neuralgia and other facial pain syndromes	
14. Dementia	Interactive lecture
• State the causes, clinical presentation and investigations of dementia	
• List the differential diagnosis of dementia	
• Describe the principles of its management	
15. Approach to neuropathies and Guillain-Barre syndrome (GBS)	Interactive lecture
• Name the laboratory studies that are useful in the diagnosis of peripheral neuropathy (at least two)	

• List the most common inherited neuropathies	
• Differentiate between axonal and de-myelinated neuropathy	
• State the most common cause of neuropathy	
• Diagnose hereditary peripheral neuropathies based on pathological findings	
• Formulate an approach to the evaluation and differential diagnosis of a patient with peripheral neuropathy	
• Describe the clinical presentation and pathological findings of the GBS	
• Discuss its pathogenesis	
• Describe two of its key laboratory abnormalities	
• Interpret the CSF analysis in GBS	
• Discuss the management and complications of GBS	

NEUROSURGERY

OBJECTIVES	LEARNING STRATEGY
1. Hydrocephalus	Interactive lecture
• Define Hydrocephalus, communicating and non-communicating hydrocephalus	
• List common symptoms & signs of acute hydrocephalus in children and normal pressure hydrocephalus in adults	
• Describe the difference in the treatments of these conditions	
• Classify Headaches	
• Discuss the differential diagnosis of headaches	
• Discuss the clinical features, diagnostic criteria and outlines of treatment for each type.	
2. Back Pain, Sciatica, Neck pain, Brachialgia	Interactive lecture
• Discuss the etiology, clinical features, investigation findings and outlines of treatment plans for Back pain, Sciatica, Neck pain and Brachialgia	
3. Brain Trauma and Management (ATLS)	Tutorial
• Classify head injuries (severity/morphology) and describe specific lesions (EDH, SDH, Contusion).	
• Apply the ATLS Primary and Secondary Surveys to brain trauma patients.	
• Formulate initial management for mild, moderate, and severe Head Injury.	
4. Spinal Trauma and Management (ATLS)	Tutorial
• Describe the common patterns of cervical, thoracic, and lumbar spine fractures.	
• Determine the indications for and interpret findings from X-rays and CT scans for spinal trauma.	
• Apply principles of general management, including Spinal Motion Restriction and safe transfer.	
5. Traumatic brain injury	Interactive lecture
• Describe the initial assessment of a patient with head injury	

RADIOLOGY

OBJECTIVES	LEARNING STRATEGY
1. CT Scan Brain	Interactive lecture/ Tutorial
• Describe the role of radiographic imaging studies in diagnosis and management of stroke patients	
• Identify the following on a CT film:	
i. Normal cranial and neurological anatomy	
ii. Skull fracture	
iii. Extra-cerebral blood	
iv. Intracranial blood	
v. Appearance of both hemorrhagic and ischemic strokes	
2. MRI Brain	
• List the indications and contraindications of MRI Brain	
• Discuss the radiological features of normal and diseased MRI Brain	

PSYCHIATRY

OBJECTIVES	LEARNING STRATEGY
1. Introduction to Mental Health, and Bio psychosocial model & Non-pharmacological intervention	Interactive lecture
• Define: ✓ The concept of health and mental health ✓ The role of biological, psychological and social factors in custom continuation and healing of illness	
• Describe: ✓ Positive mental health ✓ The role of personality, attitudes, attributes, impact of family society, social factors and cultures on the etiology, presentation and the management of illness	
• Discuss the management of illness	
• Differentiate between Psychiatry and Psychology	
2. Counseling & Psychotherapy	Interactive lecture
• Define counseling	
• Enumerate some basics dos and don'ts of counseling	
• Discuss: ✓ Attending and listening, verbal techniques and role of empathy in healing of illness ✓ The role of counseling, informational care and handling difficult patients and their families	
• Describe: ✓ The prerequisites of counseling/ psychotherapy ✓ The basic rules of counseling	
• Explain rules and boundaries setting of counseling	

• Differentiate among ✓ Counseling, Psychotherapy & Active listening ✓ Various types of psychotherapies/counseling ✓ Boundary and barrier ✓ Empathy, sympathy and apathy	
3. Breaking bad news	Tutorial
• List the application of bio psychosocial model in communicating with patient & his family	
• Discuss: ✓ The methods to address the concerns and emotional reactions of patients ✓ Disclosure models of breaking bad news and management of the related issues	
4. Anxiety disorders- I; Introduction, types & etiology	Interactive lecture
• Define normal and abnormal anxiety	
• Describe the presentation of anxiety disorders	
• Discuss their etiological theories	
• Distinguish the essential features of ✓ Generalized anxiety disorder (GAD) ✓ Panic attacks and panic disorder ✓ Phobias (Specific, Agoraphobia and Social Phobia) ✓ Obsessive compulsive disorder (OCD) ✓ Acute stress reaction and ✓ Post-traumatic stress disorder (PTSD)	
5. Anxiety disorders- II; differentiating points, diagnosis & management	Interactive lecture
• Discuss the clinical features and etiology of PTSD and Acute stress reaction	
• Explain the causes of PTSD, Acute Stress Disorder and Obsessive Compulsive Disorder	
• Describe the management of these disorders	
6. Depressive disorders	Interactive lecture
• List the common risk factors for mood and depressive disorders	
• Discuss their management	
• Describe the diagnostic criteria for mood disorders (Depressive disorder)	
7. Self-harm, and Suicide	Tutorial
• Define Self-harm, and Suicide	
• List: - The risk factor of self-harm and suicide - The common causes of self-harm and suicide	
• Discuss suicide risk assessment, prevention and management plan	
8. Bipolar Affective disorder	Interactive lecture
• List the common risk factors and co-morbids for bipolar affective disorder	
• Discuss the management of bipolar affective disorder	
• Describe the diagnostic criteria and types of bipolar affective disorder	
9. Somatic and Medically Unexplained Symptoms	Interactive lecture
• Discuss: ✓ The assessment of medically unexplained symptoms according to their severity ✓ The management of these condition including a stepped approach	
• Describe the diagnostic approach for patients with fits/attack (Epilepsy vs Convulsion disorder)	
• Explain the approach for establishing an appropriate diagnosis	

10. Schizophrenia and related disorders	Interactive lecture
• Explain the concept of Psychosis and its presentation, and prevalence of various psychotic disorders	
• Diagnose Acute Psychotic disorders, schizophrenia, and Delusional disorders based on given criteria	
• Discuss the principles of treatment of schizophrenia and other psychotic disorders	
• Describe their etiological factors and prevalence	
11. Disorders of Addictive Behavior / Alcohol & Other Substance use	Tutorial
• Define Addiction	
• Classify drugs of addiction	
• Discuss: ✓ The behavioral issues related to addiction ✓ The effects of alcohol and other illicit drugs on the body (cannabis, opioids, cocaine, amphetamines and LSD)	
• Describe: ✓ The modes of action of alcohol and other illicit drugs ✓ Delirium tremens ✓ The impact of suddenly stopping the use of addictive drugs	
• Explain the psychological, emotional, physical and social insults of these drugs	
• Differentiate among ✓ Harm minimization and drug eradication ✓ Tolerance, excessive use, abuse/misuse, dependence, withdrawal and intoxication	
12. Psychosexual disorders	Interactive lecture
• Discuss different types of psychosexual disorders	
• Describe their characteristic features, etiology and prevalence	
• Explain principles of management of these conditions	
13. Introduction to childhood psychiatric disorders	Interactive lecture
• Categorize mental health disorders (such as emotional disorders, behavior disorders) in children and adolescents	
• Discuss: ✓ The presentation of various childhood psychiatric disorders, i.e. Attention deficit hyperactive disorder (ADHD), Autism Spectrum Disorder, Depressive disorder and Mental Retardation ✓ The factors impacting childhood mental and emotional health	
• Describe the use of multimodal treatment	
14. Introduction to old age psychiatric disorders, Delirium and Dementia	Interactive lecture
• Name standardized assessment tools and their use in measuring cognitive impairment	
• Describe: ✓ The variations in presenting psychiatric symptoms in this age group ✓ The use of multimodal treatment in old age patients	
• Discuss: ✓ The use of assessment tool in measuring cognitive impairment ✓ The clinical assessment and differential diagnosis of an elderly patient with delirium ✓ The differential diagnosis of a patient presenting with cognitive impairment suggestive of dementia	
• Explain:	

✓ The high likelihood of co-morbidity in this age group ✓ The salient features of delirium and dementia	
• Diagnose common psychiatric illnesses in the geriatric group	
• Compare features of dementia versus delirium	

PAEDIATRICS

OBJECTIVES	LEARNING STRATEGY
1. Cerebral Palsy and mental retardation	Interactive lecture
• Define cerebral palsy	
• List causes of cerebral palsy	
• Classify cerebral palsy	
• Explain the management of cerebral palsy	
2. Common CNS infections in children	Interactive lecture
• List the common pathogens of CNS infections in various ages	
• Discuss the common signs and symptoms, complications and management of CNS infections	
• Interpret the CSF reports of cases with CNS infections	
3. Upper and lower motor neuron lesions with Acute Flaccid Paralysis (AFP)	Tutorial
• Define upper and lower motor neuron lesions	
• Name the Differentiating features of upper and lower motor neuron lesions	
• List the common conditions associated with upper motor neuron lesions	
• Discuss: ✓ The common conditions associated with Acute flaccid paralysis (AFP) [Polio, GBS, transverse myelitis and traumatic neuritis] ✓ The importance of Polio eradication program in Pakistan	
4. Seizures in Children	Interactive lecture
• Define seizures, Febrile seizures & childhood epilepsy	
• List causes of seizures in children	
• Classify seizures	
• Discuss the complications and management of seizures	
6. Poliomyelitis	Interactive lecture
• Discuss the etiology, clinical features, investigations and management plan for Poliomyelitis	

RESEARCH & SKILLS DEVELOPMENT CENTER

OBJECTIVES	LEARNING STRATEGY
1. Lumbar puncture	Small Group session
Perform lumbar puncture with proper steps on mannequin.	

PROFESSIONAL BEHAVIOR

OBJECTIVES	LEARNING STRATEGY
• Communicate professionally with patients, their attendants, health care team members, senior physicians and peers • Demonstrate punctuality and regularity in all academic sessions • Follow institutional policies	Small Group session

LONGITUDINAL THEMES
Leadership, Professionalism and BioEthics (LeaPE), Patient Safety and Research

OBJECTIVES	LEARNING STRATEGY
• Objectives and reading material are uploaded on Moodle for each longitudinal theme	Interactive lectures/ Small Group sessions

LEARNING RESOURCES

SUBJECT	RESOURCES
COMMUNITY MEDICINE	**TEXTBOOKS** 1. Preventive and Social Medicine by K Park 2. Community Medicine by M. Ilyas 3. Basic *Statistics* for the Health Sciences by Jan W Kuzma 4. Textbook of Community Medicine and Public Health, 2018. Saira Afzal, Sabeena Jalal
NEUROLOGY	**TEXTBOOKS** 1. Davidson's Principles and Practice of Medicine 2. Kumar and Clark's Clinical Medicine, Edited by Parveen Kumar, 9th Edition
NEUROSURGERY	**TEXTBOOK** 1. Bailey & Love's Short Practice of Surgery , 26th Edition
PATHOLOGY	**TEXTBOOKS** 1. Robbins & Cotran, Pathologic Basis of Disease, 9th edition. 2. Rapid Review Pathology,4th edition by Edward F. Goljan MD
	WEBSITES: http://library.med.utah.edu/WebPath/webpath.html http://www.pathologyatlas.ro/
PEDIATRICS	**TEXTBOOKS** 1. Nelson Textbook of Pediatrics, 19th Edition 2. Textbook of Pediatrics by PPA, preface written by S. M. Haneef 3. Clinical Pediatrics by Lakshmanaswamy Aruchamy, 3rd Edition
PHARMACOLOGY	**TEXT BOOKS** 1. Lippincot Illustrated Pharmacology 2. Basic and Clinical Pharmacology by Katzung
PSYCHIATRY	**TEXT BOOK** 1. Oxford textbook of psychiatry by Michael G. Gelder, 2nd Edition 2. Handbook of Behavioural Sciences, by Mowadat H. Rana 3. Drugs used in Psychiatry, by Prof. Muhammad Iqbal Afridi 4. Kaplan Series, Behavioural Sciences, Psychiatry

ASSESSMENT METHODS:

- **Best Choice Questions(BCQs)** also known as MCQs (Multiple Choice Questions)
- **Objective Structured Practical/Clinical Examination (OSPE or OSCE)**

Internal Evaluation

- Students will be assessed comprehensively through multiple methods.
- 20% marks of internal evaluation will be added to JSMU final exam. That 20% may include class tests, assignment, practical and the internal exam which will all have specific marks allocation.

Formative Assessment

Individual department may hold quiz or short answer questions to help students assess their own learning.

The marks obtained are not included in the internal evaluation

For JSMU Examination Policy, please consult JSMU website!

More than 75% attendance is needed to sit for the internal and final examinations

LNH&MC EXAMINATION RULES & REGULATIONS

- Student must report to examination hall/venue, 30 minutes before the exam.
- **Exam will begin sharp at the given time.**
- No student will be allowed to enter the examination hall after 15 minutes of scheduled examination time.
- Students must sit according to their roll numbers mentioned on the seats.
- **Cell phones are strictly not allowed in examination hall.**
- If any student is found with cell phone in any mode (silent, switched off or on) he/she will be not be allowed to continue their exam.
- No students will be allowed to sit in exam without University Admit Card, LNMC College ID Card and Lab Coat
- Student must bring the following stationary items for the exam: Pen, Pencil, Eraser, and Sharpener.
- Indiscipline in the exam hall/venue is not acceptable. Students must not possess any written material or communicate with their fellow students.

SCHEDULE:

WEEKS	4TH YEAR	MONTH
8 WEEKS	NERVOUS SYSTEM 2 & PSYCHIATRY MODULE	January 05, 2026
		February 25, 2026
7 WEEKS	REPRODUCTIVE II MODULE	March 02 , 2026
		April, 2026
Mid-Term Examination*		

Final dates will be announced later