INSTITUTE	**FACULTY OF PHYSIOTHERAPY**
PROGRAM	**MASTER OF PHYSIOTHERAPY**
SEMESTER	**1**
COURSE TITLE	**CLINICAL, PHYSICAL AND FUNCTIONAL DIAGNOSIS IN NEURO-PHYSIOTHERAPY**
COURSE CODE	**MPT (N)-104**
COURSE CREDITS	**9**

Objective:

1 Elicit and interpret clinical signs and symptoms of diseases commonly seen in Neurology medicine & interpret clinical tests and special investigations commonly used in the diagnosis of these conditions.

2 Generate a primary physical diagnosis and a list of differential diagnoses consistent with typical presentations.

3 Identify normal & pathological anatomy on diagnostic images.

4 Discuss how the serious and common disorders and the specialized areas of medical practice may impact on Neurological physiotherapy practice.

5 Demonstrate a broad range of technical skill in diagnosing the physiotherapy related neurology conditions.

Course Outcomes: After completion of this course, student will be able to:

1 Elicit and interpret clinical signs and symptoms of diseases commonly seen in Neurology medicine & interpret clinical tests and special investigations commonly used in the diagnosis of these conditions.

2 Generate a primary physical diagnosis and a list of differential diagnoses consistent with typical presentations.

3 Identify normal & pathological anatomy on diagnostic images.

4 Discuss how the serious and common disorders and the specialized areas of medical practice may impact on Neurological physiotherapy practice.

5 Demonstrate a broad range of technical skill in diagnosing the physiotherapy related neurology conditions.

Pre-requisite of course: Students entering this course should have a foundational understanding of neuroanatomy, neurophysiology, motor control, pathology of neurological conditions, and basic neurological examination skills acquired during the undergraduate physiotherapy program. They should also possess essential knowledge of communication skills, clinical reasoning, and the ability to interpret basic neurological findings relevant to physiotherapy practice.

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
120	0	120	100	0	0	0	0

DR. ASHISH DHIRAJLAL KAKKAD (PT)
Digitally signed by (Name of HOD)

DR. ASHISH DHIRAJLAL KAKKAD (PT)
Digitally signed by (Name of Dean/ Principal)

Contents : Unit	Topics	Contact Hours
1	**Part I** ICF conceptual frame work, Importance of assessment & evaluation, Outlines of principles and Methods of evaluation, Need and types of Documentation, Critical decision making and selection of outcome measures in Musculoskeletal Physiotherapy , Assessment, differential diagnosis and diagnosis of various Neurology conditions , Associated functional disturbances of higher function and their testing , Outcome measures used in Neuro-physiotherapy-for Cognitive impairment and disability, Focal disabilities, Global measures of disability, Motor impairment, ADL and extended ADL tests, Person with Disabilities and quality of life, Multiple Sclerosis, Parkinson 's disease, Stroke, Head injury, Spinal cord injury, Pain scales , Clinical analysis of posture, movement and gait, use of gait analyzer, Principles, Techniques and interpretation of Pathological investigations and diagnostic imaging (CT, MRI, Ultra sound, PET, fMRI, bone scan and other diagnostic imaging) for diagnosis of neurological conditions. , Clinical examination and detection of movement dysfunction, Evaluation of ANS dysfunction with reference to Psycho physiological testing, Motor control assessment, reflexes and automatic reactions, Neurodevelopment assessment	60
2	**Part II** Assessment of Hand Function, Voluntary control assessment , Neuropsychological tests, Electrophysiological assessment devices – Instrumentation, Characteristics and components EMG (Qualitative and Quantitative EMG), NCV, Conventional Methods, RNS, EPS, EEG related to neurological disorders with interpretation., Physical disability evaluation and disability diagnosis , Assessment of progressive locomotor disorder-Neuropathic, myopathic and NMJ conditions , Assessment and scales for diagnosis of pain , Biomarkers specific to neurological disorders, Assessment of Emotional Intelligence , Assessment of Peripheral nerve injuries and Cranial nerve disorders. , Assessment of Physical and Neurological Functions of Patients in ICU.	60
Total Hours		**120**

Suggested List of Experiments:

Contents : Unit	Topics	Contact Hours
1	**Practical demonstration for applicable topics** Practical demonstration for applicable topics	120
Total Hours		**120**

Textbook :

1 Human Neuroanatomy, Carpenter M.B. , Williams & Wilkins, 1991

2 Clinical Neuroanatomy , Richard S. Snell , Lippincott Williams & Wilkins, 2010

DR. ASHISH DHIRAJLAL KAKKAD (PT)
Digitally signed by (Name of HOD)

DR. ASHISH DHIRAJLAL KAKKAD (PT)
Digitally signed by (Name of Dean/ Principal)

Textbook :

3 Physical Rehabilitation: Assessment and Treatment , Susan B. O'Sullivan & Thomas J. Schmitz , F.A. Davis , 2019

4 Physical Management in Neurological Rehabilitation, Maria Stokes , Elsevier / Mosby, 2011

5 Clinical Neurophysiology: NCV, EMG & EP , Misra U.K. & Kalita J. , Elsevier, 2014

6 lectrodiagnosis in Diseases of Nerve and Muscle , Jun Kimura , F.A. Davis, 2013

7 Neurological Rehabilitation , Darcy A. Umphred , Mosby / Elsevier, 2013

8 Motor Relearning Programme for Stroke, Carr J.H. & Shepherd R.B. , Aspen Publication, 1987

Suggested Theory Distribution:

The suggested theory distribution as per Bloom's taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery					
Remember / Knowledge	**Understand**	**Apply**	**Analyze**	**Evaluate**	**Higher order Thinking / Creative**
0.00	0.00	35.00	35.00	30.00	0.00

Instructional Method:

1 Clinical Demonstrations

2 Simulation & Standardized Patient Training

3 Case-Based Learning (CBL)

4 Interactive lectures

DR. ASHISH DHIRAJLAL KAKKAD (PT)
Digitally signed by (Name of HOD)

DR. ASHISH DHIRAJLAL KAKKAD (PT)
Digitally signed by (Name of Dean/ Principal)