

COURSE	FACULTY OF PHYSIOTHERAPY
PROGRAM	BACHELOR OF PHYSIOTHERAPY
YEAR	4
COURSE TITLE	PHYSIOTHERAPY IN NEUROLOGICAL CONDITIONS
COURSE CODE	17PT0402
COURSE CREDITS	5

Pre-requisite of course: Students must have knowledge about 1. Basic Neuroanatomy and Neurophysiology 2. Pathology, clinical features, diagnosis and medical management of neurological conditions 3. Basic neurological assessment.

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
80	0	40	50	30	20	50	50

Contents : Unit	Topics	Contact Hours
1	Review of basic Neuro anatomy and physiology. Review of basic Neuro anatomy and physiology.	3
2	Physiotherapy techniques to improve tone, voluntary control, co-ordination Physiotherapy techniques to improve tone, voluntary control, co-ordination	3
3	Neuro physiotherapeutic Techniques: Concepts, principles, techniques and effects NDT & PNF, Brunnstrom movement therapy, Vojta therapy, Rood's sensory motor approach & Contemporary task oriented approach	2
4	Application of skills as PNF, co-ordination, functional re-education, balancing exercise by using techniques based on neuro physiological principles Application of skills as PNF, co-ordination, functional re-education, balancing exercise by using techniques based on neuro physiological principles	2
5	Tools used for neuro rehabilitation like vestibular balls, tilt board etc. Tools used for neuro rehabilitation like vestibular balls, tilt board etc.	1
6	Application of transfer, functional re-education exercises & gait training Application of transfer, functional re-education exercises & gait training	2
7	Bladder training Bladder training	1
8	Developing a philosophy for caring Developing a philosophy for caring	1
9	Prescription of appropriate orthotic devices & fabrication of	1

	temporary splints Prescription of appropriate orthotic devices & fabrication of temporary splints	
10	Lifting techniques, wheel chair modifications, adaptive devices Lifting techniques, wheel chair modifications, adaptive devices	2
11	Ergonomic advice for prevention/rehabilitation to the patients / parents /caregivers Ergonomic advice for prevention/rehabilitation to the patients / parents /caregivers	2
12	Education about handling of a patient Education about handling of a patient	2
13	Pediatric Neuro-physiotherapy Use of various Neurophysiologic approaches & modalities in high risk babies and minimum brain damage, Use of various Neurophysiologic approaches & modalities in cerebral palsy and developmental disorders , Use of various Neurophysiologic approaches & modalities in Down’s syndrome, Hydrocephalus and Spina bifida	9
14	Assessment & management of brain Disorders Stroke and Head Injury, Meningitis and Encephalitis, Parkinson’s disease and parkinsonism syndromes, Multiple sclerosis and Brain tumors	18
15	Assessment & management of spinal cord lesions and bladder dysfunction Multiple sclerosis, transverse myelitis and Poliomyelitis/PPRP,, Syringomyelia, spinal cord injury and sub-acute combined degeneration of spinal cord, Motor neuron disease (ALS, SMA and other types) and spinal tumors	10
16	Assessment & Management of Co-ordination Disorders Ataxia and Friedriech’s ataxia, Cerebellar ataxia and Sensory ataxia.	4
17	Assessment & Management of Muscle Disorders Muscular dystrophy (DMD) & other myopathies	2
18	Assessment & Management of disorders of neuromuscular junction Myasthenia Gravis	2
19	Assessment & management of neuropathies and nerve injuries Cranial nerves and Peripheral nerves, Polyneuropathy – Classification of Polyneuropathies	4
20	Pre and post-surgical assessment & management in neuro surgery Hydrocephalus and myelomeningocele, C.V. junction anomalies, syringomyelia	4
21	Electro diagnostic procedures and prognosis in neurological disorders SD curves, EMG & NCS	5
Total Hours		80

Suggested List of Experiments:

Contents : Unit	Topics	Contact Hours
1	Practicals/OPD/Case Presentation Practicals/OPD/Case Presentation	40
Total Hours		40

Textbook :

- 1 Physical Rehabilitation- 7th edition, Susan B. O'Sullivan, F A Davis;, 2019
- 2 Cash's textbook of Neurology for Physiotherapists, Cash Joan E., Elsevier Health Sciences, 1993
- 3 Physiotherapy in Neuro Conditions, Glady Samuel Raj, Jaypee Brothers Medical Publishers, 2006
- 4 Neurological Rehabilitation, D Umphred, Mosby, 2012
- 5 Paediatric developmental therapy, Sophie Levitt, Wiley-Blackwell, 2018

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 and evaluation

Remember / Knowledge	Understand	Apply	Analyze	Evaluate	Higher order Thinking
20.00	20.00	30.00	10.00	10.00	10.00