

Subject Title:	PHYSIOTHERAPY IN NEUROLOGICAL CONDITIONS
Subject Code:	1PT1010402
Year:	Final Year
Pre-requisite Subject	- NONE -

Objectives of Course:

At the end of the course the candidate will be able to:

1. Acquire the knowledge of normal neurodevelopment with specific reference to locomotion.
2. Assess, identify and analyze neuro motor and psychosomatic dysfunction in terms of alteration in the muscle tone, power, coordination, involuntary movements, sensations, perceptions etc.
3. Correlate the assessment findings with provisional diagnosis and investigations such as EMG/NCS and arrive at Physical and functional diagnosis with clinical reasoning in various neuromuscular disorders.
4. Plan, prescribe and execute short term and long term treatment with special reference to relief of neuropathic and psychosomatic pain and use of various physiotherapeutic techniques/ modalities, including ergonomic advice and parent education in neuro pediatric cases.
5. Prescribe appropriate orthoses/splints and fabricate temporary protective and functional splints.

SYLLABUS: -

- Review of basic neuro anatomy and physiology.
- Physiotherapy techniques to improve tone, voluntary control, co-ordination.
- Neuro physiotherapeutic Techniques:
Concepts, principles, techniques and effects of: NDT, PNF, Brunnstorm movement therapy, Vojta therapy, Rood's sensory motor approach, Contemporary task oriented approach.
- Application of skills as PNF, co-ordination, functional re- education, balancing exercise by using techniques based on neuro physiological principles.
- Tools used for neuro rehabilitation like vestibular balls, tilt board etc.
- Application of transfer, functional re-education exercises & gait training.
- Bladder training.
- Developing a philosophy for caring.
- Prescription of appropriate orthotic devices & fabrication of temporary splints.
- Lifting techniques, wheel chair modifications, adaptive devices.
- Ergonomic advice for prevention/rehabilitation to the patients / parents /caregivers.
- Education about handling of a patient.

Teaching Scheme (Hours)			Evaluation Scheme (Marks)					
Lecture	Practical	Total	Theory(T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
60	60	120	80	20	80	20	100	100

Subject Contents				
Sr. No.	Topic	Total Hours	Weight (%)	
1	Pediatric Neuro-physiotherapy Use of various Neurophysiological approaches & modalities in high risk babies, minimum brain damage, developmental disorders, Cerebral palsy, Down's syndrome, Hydrocephalus, Spina bifida			
2	Assessment & management of brain Disorders Stroke, Meningitis, Encephalitis, Head Injury, Parkinson's disease, parkinsonism syndromes, Multiple sclerosis Brain tumors			
3	Assessment & management of spinal cord lesions and bladder dysfunction Multiple sclerosis, transverse myelitis, Poliomyelitis/PPRP, syringomyelia, spinal cord injury and sub acute combined degeneration of spinal cord, Motor neuron disease (ALS, SMA and other types), spinal tumors			
4	Assessment & Management of Co-ordination Disorders Ataxia, Friedreich's ataxia, Cerebellar ataxia, Sensory ataxia			
5	Assessment & Management of Muscle Disorders Muscular dystrophy (DMD) & other myopathies			
6	Assessment & Management of disorders of neuromuscular junction Myasthenia Gravis			
7	Assessment & management of neuropathies and nerve injuries Emphasis on 5th, 7th and 8th cranial nerves, Peripheral nerves, Polyneuropathy – Classification of Polyneuropathies			
8	Pre-andpost-surgical assessment & management in neuro surgery Hydrocephalus and myelomeningocele, C.V. junction anomalies, syringomyelia			
9	Electro diagnostic procedures and prognosis in neurological disorders SD curves , EMG & NCS			