

<b>COURSE</b>	<b>FACULTY OF PHYSIOTHERAPY</b>
<b>PROGRAM</b>	<b>BACHELOR OF PHYSIOTHERAPY</b>
<b>SEMESTER</b>	<b>3</b>
<b>COURSE TITLE</b>	<b>NEUROLOGY &amp; PEDIATRICS</b>
<b>COURSE CODE</b>	<b>17PT0302</b>
<b>COURSE CREDITS</b>	<b>5</b>

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

- 1 Understand the basic neurological conditions which commonly cause disability and their management.
- 2 Know the etiology, Classification, Pathology, Clinical Features, Relevant Investigations, Complications, Surgical & Non-Surgical Management of various Neurological Conditions.
- 3 Understand the importance of various investigations like haematological, biochemical, electrophysiological & radio imaging investigations in diagnosis as well as in the management of neuro conditions
- 4 Describe the normal development and growth of a child
- 5 Describe neuromuscular, Musculoskeletal and cardiopulmonary conditions in children and also acquire the skill of clinical examination of a child concerning neurological musculoskeletal and respiratory functions.

**Pre-requisite of course:** To learn Neurology and Paediatric conditions in details.

#### Teaching and Examination Scheme

<b>Theory Hours</b>	<b>Tutorial Hours</b>	<b>Practical Hours</b>	<b>ESE</b>	<b>IA</b>	<b>CSE</b>	<b>Viva</b>	<b>Term Work</b>
100	0	0	50	30	20	0	0

<b>Contents : Unit</b>	<b>Topics</b>	<b>Tutorial Hours</b>
1	<b>Lesions and diseases of various areas of the brain</b> Pyramidal system, , Extra-pyramidal system, , Cerebellar system, , Spinal cord, , Upper and lower motor neuron, , Cranial nerves, , Brachial plexus, , Lumbosacral plexus and peripheral nerves.	10
2	<b>Causes, Clinical features, management of various conditions:</b> Unconscious patient, , Hemiplegia, , Paraplegia, Quadriplegia, , Cerebral diplegia, Spastic child, , Foot drop and wrist drop.	10
3	<b>Disorders of cerebral circulation.</b> Disorders of cerebral circulation	10
4	<b>Infections</b> Encephalitis, , Meningitis, , Poliomyelitis, , Transverse myelitis, , Slow viral diseases.	10
5	<b>Diseases of Peripheral nerves</b> Peripheral neuropathy, , Other neuropathies.	5
6	<b>Muscle disorders:</b> Myopathy, polymyositis, , Muscular dystrophies., Muscular dystrophies.	10
7	<b>Degenerative diseases</b>	10

	Parkinsonism, , Myasthenia gravis,, Motor neuron diseases, , Spinocerebellar degenerations and diseases of anterior horn cell,, Dementia.	
8	<b>Costo-clavicular syndrome</b> Costo-clavicular syndrome	2
9	<b>Demyelinating disorders including multiple sclerosis</b> Multiple sclerosis, Other diseases	5
10	<b>The basic concept of electrophysiology and electromyography</b> The basic concept of electrophysiology and electromyography	5
11	<b>Giddiness and vertigo</b> Giddiness and vertigo	3
12	<b>Growth and development of a child</b> Growth and development of a child from birth to 12 years, including physical, social, adaptive development.	1
13	<b>The maternal and neonatal factors contributing to high-risk pregnancy</b> The maternal and neonatal factors contributing to high-risk pregnancy, the neonate, inherited diseases, maternal infections - viral and bacterial, maternal diseases incidental to pregnancy, induced hypertension, chronic maternal diseases such as heart diseases, renal failure, tuberculosis, diabetes, epilepsy, bleeding in the mother at any trimester.	1
14	<b>Community programs</b> Community programs: International (WHO), national and local, for prevention of poliomyelitis, blindness, deafness, mental retardation and hypothyroidism, the immunization schedule for children.	1
15	<b>Cerebral Palsy</b> Etiology - prenatal, perinatal and postnatal causes, pathogenesis, types of cerebral palsy (classification), findings on examination, general examination, examination of C.N.S., musculoskeletal system, respiratory system, G.I. Tract and nutritional status.	2
16	<b>Downs syndrome, Mental retardation, microcephaly, blindness, hearing and speech impairment, squint and convulsions.</b> Downs syndrome, Mental retardation, microcephaly, blindness, hearing and speech impairment, squint and convulsions	2
17	<b>Prevention: Appropriate management of high-risk pregnancies, prevention of neonatal and postnatal infections, metabolic problems.</b> Prevention: Appropriate management of high-risk pregnancies, prevention of neonatal and postnatal infections, metabolic problems.	1
18	<b>Muscular Dystrophy</b> Various forms, modes of inheritance and clinical manifestation, physical findings concerning disabilities, progression of various forms and prognosis, treatment goals in forms that are not fatal.	2
19	<b>Spina Bifida</b> Meningomyelocele: Development, clinical features - lower limbs, Bladder and bowel complications – Urinary Tract Infection (UTI), Hydrocephalus, medical management.	2
20	<b>Still's Disease</b> Classification, pathology, in brief, physical findings, course and prognosis, treatment, prevention and correction of the deformity.	2
21	<b>Acute C.N.S. infections</b> Classification (Bacterial and Viral), the acute illness, C.N.S. sequelae leading to mental retardation, blindness, deafness, speech defect, motor paralysis, bladder and bowel problems, seizure disorder and	2

	specific problems such as subdural effusion, hydrocephalus, pressure sores, feeding difficulties.	
22	<b>Arnold Chiari Malformation, Basilar Impression, Klippel-Feil Syndrome, Achondroplasia, Cerebral Malformation, Autism, Dandi Walker Syndrome</b> Arnold Chiari Malformation, Basilar Impression, Klippel-Feil Syndrome, Achondroplasia, Cerebral Malformation, Autism, Dandi Walker Syndrome	2
23	<b>Normal diet of newborn and child</b> List dietary calorie, fat, protein, mineral and vitamin requirement in normal child and a child with malnutrition. childhood obesity. Etiology, findings, and treatment of rickets, vitamin D deficiency and resistant rickets.	1
24	<b>Lung infections</b> Clinical findings, complications and medical treatment of bronchiectasis	1
<b>Total Hours</b>		<b>100</b>

**References:**

- 1 Neurology and neurosurgery illustrated, Lindsay
- 2 Textbook of medicine by Golwala, 18th edition
- 3 Practical Medicine by P J Mehta
- 4 Physical rehabilitation, Susan B. O'Sullivan
- 5 Clinical Neuroanatomy by Vishram Singh, Latest Edition, Elsevier
- 6 Cash's Textbook of Neurology for Physiotherapists by Patricia A. Downie, Latest Edition, Jaypee Publication
- 7 Physiotherapy in Neuro-conditions by Glady Samuel Raj, Latest edition, Jaypee Publication