

CURRICULUM DESIGN AND DEVELOPMENT



PROCESS OF CURRICULUM DESIGNING

**Requirements of Regulatory
Bodies**

**Designing of Syllabus
(According to Guidelines and
Syllabus Given by Council)**

Feedback on Existing Curriculum

Department Level Brainstorming

**Discussion in BOS Meetings in
Presence of External Clinical Expert
and External Subject Expert**

**Academic Council Discussion and
Decision Making**



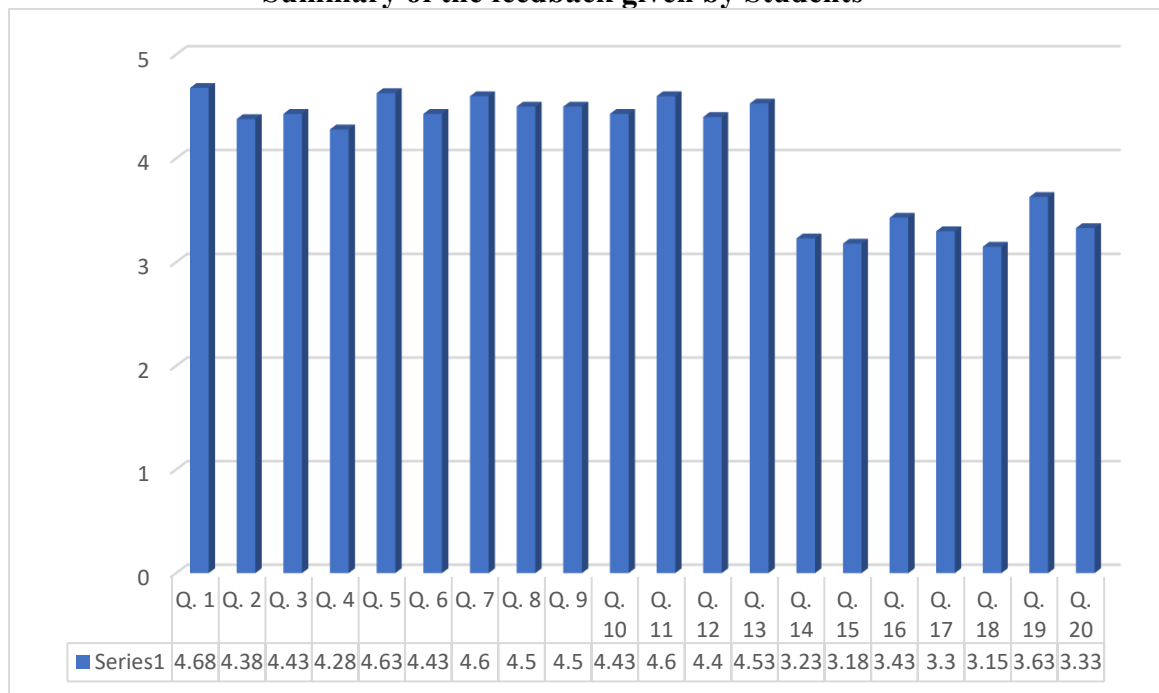
FEEDBACK ON CURRICULUM



Shree

Action Taken Report on the Student Feedback on
Curriculum
(2022 – 23)

Summary of the feedback given by Students



1. OBSERVATIONS BASED ON THE STUDENTS' FEEDBACK QUESTIONNAIRE RESPONSES:

- Need to Introduce New Syllabus of Neurological Sciences (MPT):
 - Students pursuing **Master of Physiotherapy (MPT)** expressed and suggested some topics to be covered for Master Programme in **neurological sciences**. Many students felt that the sample curriculum does not fully equip them with the latest advancements and clinical skills required in this rapidly evolving field.
- Lack of Sports-Specific Education:
 - Several students highlighted the need for more focus on **sports physiotherapy**. They felt that additional lectures or modules related to sports would help them gain a deeper understanding of injury prevention, rehabilitation, and performance enhancement in athletes,



Shree

growing area of interest among students.

- Limited Exposure to Conferences and Presentations:
 - Students pointed out the lack of opportunities to participate in **conferences** and present research through **paper and poster presentations**. They expressed that exposure to such academic platforms is crucial for building their research skills, networking, and staying updated with the latest developments in their field of study.

2. SUGGESTIONS RECEIVED FROM STUDENTS:

- **Introduction of New Syllabus for Neurological Sciences:**
 - Students strongly suggested the introduction of a **new and updated syllabus** for the MPT specialization in neurological sciences. They emphasized the need for a curriculum that includes the latest research, treatment techniques, and case studies to better prepare them for clinical practice.
- **Incorporate Sports Physiotherapy Lectures:**
 - Students recommended adding more lectures on **sports physiotherapy** within the curriculum. These lectures should cover topics like injury prevention, rehabilitation techniques, and athletic performance management, which are becoming increasingly important for those interested in working with athletes.
- **Increase Exposure to Academic Conferences and Presentations:**
 - Students proposed more opportunities for **participating in conferences, workshops, and paper/poster presentations**. They believe this will allow them to showcase their research, enhance their presentation skills, and engage with current trends and innovations in physiotherapy.

3. SUGGESTED ACTIONS FOR 2023-2024 ACADEMIC YEAR:

1. Implication of the Syllabus for Neurological Sciences (MPT):

- Introduce a **new and comprehensive syllabus** for MPT students specializing in neurological sciences. The updated curriculum should include recent advancements in the field, practical case studies, and evidence-based practices to equip students with the necessary clinical



Shree

and theoretical knowledge.

2. Add Sports Physiotherapy Lectures:

- Incorporate **sports physiotherapy** as a key module within the curriculum. These lectures should cover essential topics related to sports injury management, rehabilitation, and athlete care. Including this specialization will not only cater to student interest but also provide them with the skills needed to work in sports and fitness settings.

3. Provide More Opportunities for Conferences and Presentations:

- Facilitate greater student participation in **conferences, seminars, and research presentations** by establishing partnerships with relevant academic and professional bodies. Offer students more opportunities to present papers and posters at regional, national, and international forums, fostering a culture of research and innovation.



BOARD OF STUDIES **(BOS)** **COMPOSITION**



(2022 – 23)

Sr. No.	Name	Designation
1	Dr. Arvind Kumar Principal Venus Institute of Physiotherapy	Chairman
2	Dr. Sohel Quadri Associate Professor Venus Institute of Physiotherapy	Member Secretary
3	Prof Hiren Kadikar Academic Director Swarnnim Institute of Health Sciences	V.C. Nominee
4	Dr. Prem Narayan Khichi Principal Ananya Institute of Physiotherapy	External Subject Expert
5	Dr. J.B. Mishra Shraddha Physiotherapy Clinic & Research Rehabilitation Centre, Ahmedabad	External Clinical Expert
6	Dr. Jaynesh Vandra Assistant Professor Venus Institute of Physiotherapy	Internal Subject Expert
7	Dr. Niharika Soni Assistant Professor Venus Institute of Physiotherapy	Internal Subject Expert



Shree

BOARD OF STUDIES **(BOS)**

- 1. Terms of References (Agenda Points)**
- 2. Meeting Attendance**
- 3. Minutes of Meeting**



SWARRNIM STARTUP & INNOVATION UNIVERSITY
VENUS INSTITUTE OF PHYSIOTHERAPY

Terms of References (Agenda Points): Board of Studies






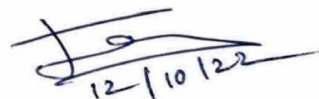
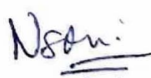
Proposed curriculum of 2022-23 admitted 'Bachelors of Physiotherapy', 'Master of Physiotherapy' & Ph.D Students.

1. For opening New Courses (Master of Physiotherapy in Neurological Sciences.)
2. To Appoint atleast one more Ph.D guide. To increase Ph.D Seats.
3. To Consider schemes for the advancement of the standards of teaching and Research / OR any amendment / advancement in existing syllabus.
4. Consider and approve subjects for research for various degrees and other requirements.
5. To frame general rules and guidelines for the evaluation of University Examination.
6. To recommend to the Academic Council for the creation or abolition of teaching posts.
7. To consider and act on any proposal regarding welfare of the students.
8. Course structures (Including Choice Based Credit System).
9. Proposed teaching pedagogies.
10. Open electives offered by other departments.
11. Faculty Skill Enhancement Programmes.
12. Skilling in professional domains and branch specific areas to promote industry ready competency among learners.



Board of Studies Meeting's Attendance

Date:-12/10/2022

Sr. No.	Name	Designation	Signature
1	Dr. Arvind Kumar Principal Venus Institute of Physiotherapy	Chairman	
2	Dr. Sohel Quadri Associate Professor Venus Institute of Physiotherapy	Member Secretary	
3	Prof Hiren Kadikar Academic Director Swarnim Institute of Health Sciences	V.C. Nominee	
4	Dr. Prem Narayan Khichi Principal Ananya Institute of Physiotherapy	External Subject Expert	
5	Dr. J.B. Mishra Shraddha Physiotherapy Clinic & Research Rehabilitation Centre, Ahmedabad	External Clinical Expert	
6	Dr. Jaynesh Vandra Assistant Professor Venus Institute of Physiotherapy	Internal Subject Expert	 12/10/22
7	Dr. Niharika Soni Assistant Professor Venus Institute of Physiotherapy	Internal Subject Expert	

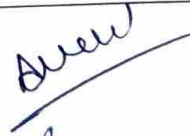
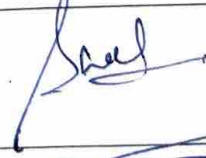




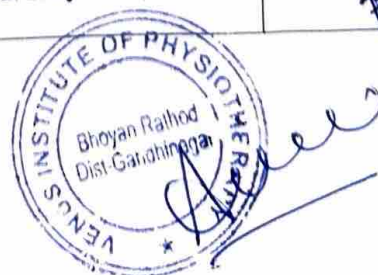
MOM for Board of Studies
Date:-12/10/2022

A Board of studies meeting was held on 12/10/2022 through offline mode at Seminar Hall, Swarnnim Startup & Innovation University, Gandhinagar which was sharply started at 10:30 AM. The Venus Institute of Physiotherapy has invited Dr. Prem Narayan Khichi (I/C Principal, Ananya Institute of Physiotherapy) and Dr. J.B. Mishra (Shraddha Physiotherapy Clinic & Research Rehabilitation Centre). The meeting was started by Dr. Jaynesh Vandra by welcoming the guest, meeting was further continued by Dr. Arvind Chauhan (Principal, Venus Institute of Physiotherapy). The Agenda of Meeting was:-

1. For opening New Courses (Master of Physiotherapy in Neurological Sciences)
2. To Appoint atleast one more Ph.D guide. To increase Ph.D Seats.
3. To Consider schemes for the advancement of the standards of teaching and Research / OR any amendment / advancement in existing syllabus.
4. Consider and approve subjects for research for various degrees and other requirements.
5. To frame general rules and guidelines for the evaluation of University Examination.
6. To recommend to the Academic Council for the creation or abolition of teaching posts.
7. To consider and act on any proposal regarding welfare of the students.
8. Course structures (Including Choice Based Credit System).
9. Proposed teaching pedagogies.
10. Open electives offered by other departments.
11. Faculty Skill Enhancement Programmes.
12. Skilling in professional domains and branch specific areas to promote industry ready competency among learners.

The Members who were present in meeting were as follows:-

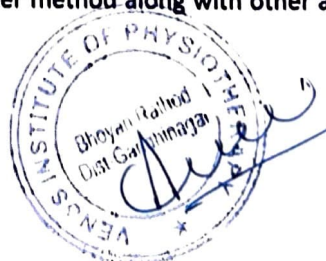
Sr. No.	Name	Designation	Signature
1	Dr. Arvind Kumar Principal Venus Institute of Physiotherapy	Chairman	
2	Dr. Sohel Quadri Associate Professor Venus Institute of Physiotherapy	Member Secretary	
3	Prof Hiren Kadikar Academic Director Swarnnim Institute of Health Sciences	V.C. Nominee	
4	Dr. Prem Narayan Khichi Principal	External Subject Expert	



	Ananya Institute of Physiotherapy		
5	Dr. J.B. Mishra Shraddha Physiotherapy Clinic & Research Rehabilitation Centre, Ahmedabad	External Clinical Expert	<i>S. Mishra</i>
6	Dr. Jaynesh Vandra Assistant Professor Venus Institute of Physiotherapy	Internal Subject Expert	<i>[Signature]</i> 12/10/22
7	Dr. Niharika Soni Assistant Professor Venus Institute of Physiotherapy	Internal Subject Expert	<i>Nsoni</i>

Points discussed

1. As Per discussion, we need to introduce the new course : Masters of Physiotherapy in Neurological Conditions (agenda 1).
2. As Per discussion, We need to increase the Seats for Ph.D in Physiotherapy, so we want to appoint one more Ph.D Guide for the same (agenda 2).
3. Well structures research syllabus should be included in final year and it is recommended that the management should provide necessary research fund and facilities to execute research in a proper manner (agenda 3).
4. For betterment of students the committee agreed to include assignments, unit test and practical based internal evaluation along with preexisting internal examination. The university internal marks should be based on aforementioned criteria (agenda 4).
5. It was recommended, to conduct Remedial Exam after declaration of Final University Examination result for the Students who got fail in concern subject and if they would not pass the Remedial Exam then they have to attain Supplementary Examination after Five to Six Months of Main Examination. (agenda 5).
6. The committee recommended filling the vacant post for the smooth functioning of institute as per the GSCPT Guidelines (agenda 6).
7. The Committee member suggested to make a "student welfare committee" which works to provide scholarship to toppers and to economically backward students. Anti ragging cell, placement cell, student's safety insurance scheme, student related seminar, conferences, workshop should be made which work towards improving the welfare of students (agenda 7).
8. All were agreed to add the choice based credit system from next session as per the recommendation of UGC (agenda 8).
9. The suggestions were made by all the committee members to include live demonstration on patients and to include traditional board and marker method along with other audio visual aids (agenda 9).



10. The committee recommended to include multidisciplinary subjects under choice based credit system from next session as per the recommendation (agenda 10).
11. The committee recommended for faculty to attend Conferences, Workshops and Participate in paper Publications , etc. (agenda 11).
12. It is mandatory that all faculties should attend Teacher's Training workshop and Research Methodology workshop proposed by Gujarat Physiotherapy Teacher's Association, every 2-3 years (agenda 12).

The important discussed points were noted and will consider the points while planning the syllabus. By this the meeting came to an end by vote of thanks proposed by Dr. Rima Pandya.





APPROVED SYLLABUS
OF
M.P.T IN
NEUROLOGICAL
SCIENCES



Master of Physiotherapy Neurological Sciences

Paper-VI

Elective-I: Basics, Assessment and Evaluation

NEUROANATOMY, NEUROPHYSIOLOGY AND PATHOMECHANICS

Teaching Scheme			Evaluation Scheme				
Theory	Practical	Total	Internal		External		Total
			Th	Pr	Th	Pr	
4	4	8	30	-	70	-	100

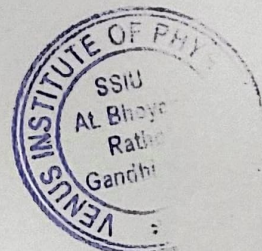
NEUROANATOMY

1	Embryological development, growth & maturation of nervous system.	2
2	Normal Sequential behavior and physiological changes throughout the developmental arc.	2
3	Introduction and organization of nervous system, normal development of brain and spinal cord.	2
4	Neuro biology of neurons and Neuroglia	2
5	Coverings of the nervous system	2
6	Nerve fibres	2
7	Dermatomes and myotomes	2
8	Cerebrum and cerebral hemispheres, Cerebral cortex	5
9	Cerebellum and its connections	5
10	Brain stem, Midbrain, Pons, Medulla	5
11	Thalamus, hypothalamus and their connections	5
12	Limbic system, reticular formation	3
13	Internal capsule, corpus straitum	3
14	Basal ganglia and its connections	5
15	Ventricular system and CSF	3
16	Blood brain barrier	2
17	Spinal cord, tracts ascending & descending	6
18	Blood supply of CNS and peripheral nervous system, venous drainage of CNS	3
19	Peripheral nervous system	2
20	Autonomic nervous system	2
21	Cranial nerves and their nuclei	4

NEUROPHYSIOLOGY

Functions of all the organs including:

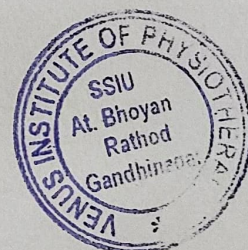
1	Nerve fibers & Coverings of the nervous system	2
---	------------------------------------------------	---



2	Dermatomes and myotomes.	2
3	Cerebrum and cerebral hemispheres, Cerebral cortex	3
4	Cerebellum and its connections	3
5	Brain stem, Midbrain, Pons & medulla	4
6	Thalamus, hypothalamus and its connections	2
7	Limbic system, reticular formation	2
8	Special senses	2
9	Internal capsule, corpus striatum	2
10	Basal ganglia and its connections	2
11	Ventricular system and CSF	2
12	Blood brain barrier	2
13	Spinal cord, tracts ascending & descending	2
14	Blood supply of CNS and peripheral nervous system, venous drainage of CNS	2
15	Peripheral nervous system	2
16	Autonomic nervous system	2
17	Neurophysiology of balance, co-ordination & locomotion	2
18	Cranial nerves and their nuclei	2
19	Motor control	4
20	Neural development of posture and gait	5
21	Physiology of pain	2
22	Physiology of reflexes – normal and abnormal	2
23	Physiological basis of motor learning and recovery of functional motor control	2
	Total Hours	152

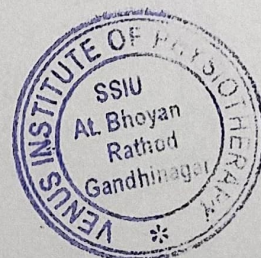
PATHOMECHANICS

1.	Pathophysiology of Pain	2
2.	Intracranial neoplasms, Gliomas, Meningiomas, Neuromas, Angiomas, Cranio, Pharyngiomas, Pituitary adenomas, Medical and surgical management.	3
3.	Pyogenic infections of CNS: Meningitis, Brain abscess, Tuberculosis, Neurosyphilis.	2
4.	Viral infections of CNS: Poliomyelitis, Viral encephalitis, Substance sclerosing encephalitis, AIDS	2
5	Cerebro vascular disease: Stroke syndrome, Ischaemic stroke infarction,	2

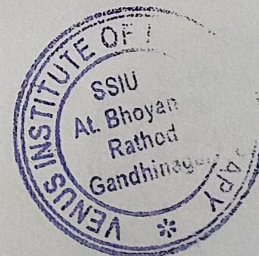


	Thrombo- embolic stroke, Hemorrhagic stroke, Transient ischaemic attack, Arterio- venous malformation of the brain, Intracranial hemorrhage	
6.	Metabolic disorders of brain: Hypoencephalopathy, Hypoglycemic encephalopathy, Hepatic encephalopathy	2
7.	Degenerative disease of the brain: Parkinson's disease, Motor neurone disease, Amyotrophic lateral sclerosis, Progressive bulbar palsy, Alzheimer's disease.	3
8.	Cerebral palsy	2
9.	Spina bifida	1
10	Polyneuropathy: Post infective Polyneuropathy (gullian bare syndrome) diabetic neuropathy, Hereditary sensory neuropathy.	1
11.	Disorders of spinal cord: Compression of spinal cord, Neoplasm of the vertebral column, Inter vertebral disc prolapsed, Extra dural or epidural abscess.	2
12.	Syringomyelia, Multiple sclerosis, Myasthenia gravis	1
13.	Peripheral nerve and plexus lesions	1
14	Cervicovertebral junction abnormalities	1
15.	Hydrocephalus	1
16.	Cerebral lesions	2
	Total Hours	152

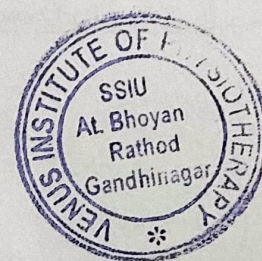
Practical's of Elective-I Physiotherapy in Neurological Sciences: Assessment and Evaluation		
1	Measures of cognitive impairment and disability; a. Glasgow coma scales b. Children's coma scales c. Edinburgh – 2 coma scale d. Blessed dementia rating scales; information concentration – memory test; dementia scale	10
2	Measure of motor impairment; a. Motor club assessment b. Rivermead motor assessment c. Motricity index d. Trunk control test e. Motor assessment scale	12



	f. Modified ashworth scale for spasticity g. Isometric muscle strength h. Motor neuron disease/ amyotrophic lateral sclerosis i. Dynamometer	
3	Measures of focal disability; a. Standing balance b. Functional ambulation categories c. Hauser ambulation index d. Timed walking test e. Rivermead mobility index f. Nine hole peg test g. Action research arm test h. Franchay arm test	10
4	Activities of daily living and extended ADL tests; a. Barthel ADL index b. Katz ADL index c. Nottingham ten point ADL index d. Rivermaid ADL scale e. Northwick park index of independence in ADL f. Kenny self care evaluation g. Nottingham extended ADL index h. Frenchay activity index	15
5	Global measures of disability; a. OPCS disability scale: severity categories b. functional independence measure c. PULSES profile	10
6	Measures of handicap and quality of life; a. WHO handicap scale b. Rankin scale c. Glasgow outcome scale d. Quality of life : a measure e. Environmental assessment – non standard	10
7	Multiple sclerosis; a. Kurtzke multiple sclerosis rating scale b. An illness severity for multiple sclerosis	10
8	Stroke scales; a. Mathew stroke scale b. National institute of health stroke scale c. Canadian neurological scale d. Orgogozo score e. hemispheric stroke scale f. clinical classification of scale g. Clinical classification of stroke (Bamford) h. Allen score for prognosis of stroke i. Guy's hospital score for haemorrhage	15
9	Head injury; a. Galveston orientation and amnesia test b. Rappaport disability rating scale	10



10	Parkinson's disease; a. Parkinson's disease impairment index, disability index b. Hoehn and Yahr grades c. Unified Parkinson's diseases rating scale version 3	10
11	Spinal cord injury; a. Frankel's scale b. Motor index and sensory indices c. American spinal cord injury association assessment chart d. Pain assessment and evaluation	10
12	Basic elements of Neuro Diagnostic Tests; a. CT scan b. MRI c. Carotid Angiography d. Myelography e. X- ray f. Nuclear imaging g. Electroencephalogram h. Electromyography i. Nerve Conduction Velocity j. Evoked potential tests k. Muscle and Nerve Biopsy l. CSF examination	20
13	Assessment of posture, gait, coordination, voluntary control	10
	Total Hours	152

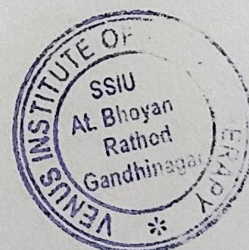


Paper-VII Elective-II: Physiotherapy in Neurological Sciences
CLINICAL NEUROLOGICAL CONDITIONS and
Physiotherapeutics intervention

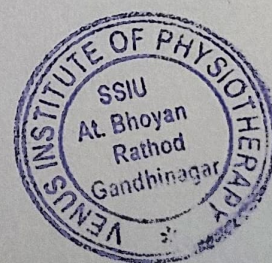
Teaching Scheme			Evaluation Scheme				
Theory	Practical	Total	Internal		External		Total
			Th	Pr	Th	Pr	
4	4	8	30	-	70	-	100

Causes, clinical features, pathophysiology, general investigation, medical and surgical management of the below-mentioned conditions:

1.	Intracranial neoplasms, Gliomas, Meningiomas, Neuromas, Angiomas, Cranio, Pharyngiomas, Pituitary adenomas, Medical and surgical management.	8
2.	Pyogenic infections of CNS: Meningitis, Brain abscess, Tuberculosis, Neurosyphilis.	8
3	Viral infections of CNS: Poliomyelitis, Viral encephalitis, Substance sclerosing encephalitis, AIDS	7
4	Cerebro vascular disease: Stroke syndrome, Ischaemic stroke infarction, Thrombo- embolic stroke, Hemorrhagic stroke, Transient ischaemic attack, Arterio- venous malformation of the brain, Intracranial hemorrhage	8
5	Metabolic disorders of brain: Hypoencephalopathy, Hypoglycemic encephalopathy, Hepatic encephalopathy	6
6	Degenerative disease of the brain: Parkinson's disease,	10



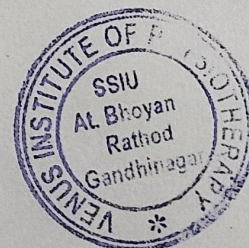
	Motor neurone disease, Amyotrophic lateral sclerosis, Progressive bulbar palsy, Alzheimer's disease.	
		5
7	Cerebral palsy	5
8	Spina bifida	6
9	Polyneuropathy: Post infective Polyneuropathy (gullian bare syndrome) diabetic neuropathy, Hereditary sensory neuropathy.	8
10	Disorders of spinal cord: Compression of spinal cord, Neoplasm of the vertebral column, Inter vertebral disc prolapsed, Extra dural or epidural abscess.	8
11	Syringomyelia, Multiple sclerosis, Myasthenia gravis	5
12	Peripheral nerve and plexus lesions	5
13	Cervicovertebral junction abnormalities	3
14	Hydrocephalus	5
15	Cerebral lesions	12
16	Disorders of motor unit (Neuromuscular disease) a. Muscle pain and tenderness b. Muscle weakness c. Changes in muscle mass d. Muscle hyperactivity states e. Muscle fatigability f. Abnormal muscle tone (Hypotonic) g. Abnormalities of sensation h. Reduced or absent stretch reflexes	10
17	Disorders of muscle (Myopathies) a. Myasthenia gravis and other disorders of neuromuscular transmission b. Disorders of the peripheral nervous system c. Disorders of the anterior horn cells (Neuronopathies)	15
18	Disorders of central motor control a. Abnormal muscle tone b. Muscle weakness c. Loss of muscular endurance d. Altered muscle activation patterns e. Involuntary movements f. Associated reactions g. Abnormalities of coordination h. Apraxia i. Hypokinesia j. Abnormal skeletal muscle reflexes k. Abnormal balance l. Abnormalities of sensation	18
19	Other associated manifestations a. Abnormalities in communications b. Abnormalities in swallowing	



	c. Abnormalities of bladder and bowel functions d. Learning disorders e. Visual dysfunction f. Cognitive and perceptual dysfunction	
	Total Hours	152

PHYSIOTHERAPY INTERVENTIONS IN NEUROLOGICAL CONDITIONS

Practicals of Elective-II Physiotherapy in Neurological Sciences CLINICAL CONDITIONS & PHYSIOTHERAPY INTERVENTIONS		
1.	Physiotherapeutic interventions for relief of pain	8
2.	Physiotherapy management of patients with postural control, mobility control disorders	7
3.	Neurological Rehabilitation – Neuro facilitation Approach	10
4.	Intracranial neoplasms, Gliomas, Meningiomas, Neuromas, Angiomas, Cranio, Pharyngiomas, Pituitary adenomas, Medical and surgical management.	8
5.	Pyogenic infections of CNS: Meningitis, Brain abscess, Tuberculosis, Neurosyphilis.	8
6.	Viral infections of CNS: Poliomyelitis, Viral encephalitis, Substance sclerosing encephalitis, AIDS	8
7.	Cerebro vascular disease: Stroke syndrome, Ischaemic stroke infarction, Thrombo- embolic stroke, Hemorrhagic stroke, Transient ischaemic attack, Arterio- venous malformation of the brain, Intracranial hemorrhage	15
8.	Metabolic disorders of brain: Hypoencephalopathy, Hypoglycemic encephalopathy, Hepatic encephalopathy	8
9.	Degenerative disease of the brain: Parkinson's disease,	15



	Motor neurone disease, Amyotrophic lateral sclerosis, Progressive bulbar palsy, Alzheimer's disease.	
10.	Cerebral palsy	8
11.	Spina bifida	6
12.	Polyneuropathy: Post infective Polyneuropathy (gullian bare syndrome) diabetic neuropathy, Hereditary sensory neuropathy.	8
13.	Disorders of spinal cord: Compression of spinal cord, Neoplasm of the vertebral column, Inter vertebral disc prolapsed, Extra dural or epidural abscess.	8
14.	Syringomyelia, Multiple sclerosis, Myasthenia gravis	10
15.	Peripheral nerve and plexus lesions	5
16.	Cervicovertebral junction abnormalities	5
17.	Hydrocephalus	5
18.	Cerebral lesions	10
	Total Hours	152

