Program Structure Template

School of Allied Health Sciences
Master of Physiotherapy
(Neurology)

Batch – (2021-23)

Program Code – SAH0112

1. Standard Structure of the Program at University Level

1.1 Vision, Mission and Core Values of the University

Vision of the University

To serve the society by being a global University of higher learning in pursuit of academic excellence, innovation and nurturing entrepreneurship.

Mission of the University

1. **Transformative educational experience**
2. **Enrichment by educational initiatives that encourage global outlook**
3. **Develop research, support disruptive innovations and accelerate entrepreneurship**
4. **Seeking beyond boundaries**

Core Values

- **Integrity**
- **Leadership**
- **Diversity**
- **Community**

Vision of the School

To steer the School of Allied Health Sciences towards excellence in academics, innovation and entrepreneurship by constant endeavors

Mission of the School

1. **1. To create the state of the art facility for quality teaching learning, research & innovation**
2. **To incorporate the contemporary standards in teaching & learning**
3. **To inculcate in the students values of integrity and compassion towards the care of patients and society.**

Core Values

1.Critical Thinking and Observation
2. Analytical Skills
3. Creativity
4. Skilled professional
5. Multidimensional
6. Compassion
7. Management

1.3 Programme Educational Objectives (PEO)

PEO1: To gain knowledge of the human body related basic medical and physiotherapeutic Sciences.

PEO 2: To acquire the knowledge of movement dysfunction of human body and evidence based Physiotherapeutic management for the same.

PEO 3: To develop skills in physiotherapy assessment by current physiotherapeutic concepts.

PEO4: To plan and implement appropriate interventions for different conditions in acute and chronic phases, critical care, indoor and outdoor institutional care and independent practice.

PEO 5: To develop skills as a self-directed learner, recognize continuous education needs, select and use appropriate learning resources.

PEO 6: To develop ability to undertake research and teach undergraduate physiotherapy students.

1.3.2 Map PEOs with Mission Statements:

PEO Statements	School Mission 1	School Mission 2	School Mission 3
PEO1:	**3**	**2**	**2**
PEO2:	**2**	**2**	**2**
PEO3:	**2**	**2**	**2**
PEO4:	**3**	**3**	**3**
PEO5:	**3**	**3**	**2**
PEO6:	**2**	**3**	**2**

1. Slight (Low) 2. Moderate (Medium) 3. Substantial (High)

1.3.3 Program Outcomes (PO's)

PO1. **Physiotherapy Knowledge:** The students will be able to possess knowledge and comprehension of the basic medicine and physiotherapeutic sciences.

PO2. **Understanding**: Students will be able to understand the core concepts in Physiotherapy techniques.

PO3. **Thinking ability:** Students will be able to develop the skills for assessment in order to identify, examine and distinguish between various conditions.

PO4. **Application:** Students will be able to demonstrate and apply the technical skills to integrate the core areas of physiotherapy practice.

PO5. **Planning:** Students will be able to design and formulate the treatment plan to address to the needs of patients safely and with appropriate regard to professional and ethical guidelines.

PO6. **Research:** Students will be able to formulate and test a hypothesis.

PO7. **Communication:** Graduates will have good leadership qualities and entrepreneur skills by working and communicating effectively in interdisciplinary environment, either independently or with a team.

Program Specific Outcomes (PSo's):

PSO1: Students will be able to assess and design a treatment plan for patients with different conditions.

PSO2: Students will be able to identify, select and apply advanced physiotherapy techniques for treatment purpose**.**

PSO3: Students will be able to design and formulate research which will be beneficial for the advancement in higher studies.

1.3.4 Mapping of Program Outcome Vs Program Educational Objectives

	PEO1	PEO2	PEO3	PEO4	PEO5	PEO6
PO1	3	3	3	3	3	3
PO2	3	3	3	3	3	3
PO3	3	3	3	3	2	2
PO4	3	3	3	3	2	3
PO5	2	3	3	3	2	2
PO6	3	3	3	2	3	3
PO7	2	2	2	3	3	2
PSO1	2	3	3	3	3	3
PSO2	3	3	3	3	3	3
PSO3	3	3	3	3	3	3

1. Slight (Low) ***2. Moderate (Medium)*** ***3. Substantial (High)***

1.3.5 Program Outcome Vs Courses Mapping Table[1]:

Program Outcome Courses	Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
1st Year											
Course 1.1	Research Methodology and Evidence Based Practice	2	2	2	2	2	3	2	2	2	3
Course 1.2	Basic Sciences and Biomechanics	3	3	2	2	2	2	2	2	2	2
Course 1.3	Physiotherapy Assessment and Clinical Decision Making (Theory)	3	3	3	3	2	2	3	3	2	3
Course 1.4	Advanced Physiotherapeutics (Theory)	3	3	3	3	3	2	3	2	3	3
Course 1.5	Physiotherapy Assessment and Clinical Decision Making (Practical)	3	3	3	3	2	2	3	3	2	3
Course 1.6	Advanced Physiotherapeutics (Practical)	3	3	3	3	3	2	3	2	3	3
Course 1.7	Journal Club and Clinical Case Presentation	3	2	2	3	2	3	2	2	2	3
2ND Year											

Course 2.1	Pedagogy in Physiotherapy Education	2	2	2	2	1	2	3	2	2	2
Course 2.2	Administration, Management and Ethical Issues	1	1	2	2	2	3	3	2	2	3
Course 2.3	Neurological Physiotherapy I (Medical) Theory	3	3	2	2	3	2	3	2	3	3
Course 2.4	NeurologicalPhysiotherapy II (Surgical) Theory	3	3	2	2	3	2	3	2	2	2
Course 2.5	Neurological Physiotherapy I (Medical) Practical	3	3	2	2	3	2	3	2	3	3
Course 2.6	NeurologicalPhysiotherapy II (Surgical) Practical	3	3	2	2	3	2	3	2	2	2
Course 2.7	Journal Club and Clinical Case Presentation	3	2	2	3	2	3	2	2	2	3
Course 2.8	Dissertation	3	3	3	3	3	3	3	3	3	3

1.3.5.2COURSE ARTICULATION MATRIX

Program Outcome Courses	Course code	Course Name		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO 3
Year-1													
Theory													
Course 1.1	MPT 111	Research Methodology and Evidence Based Practice	CO1	3	3	3	3	3	3	3	3	3	3
			CO2	2	3	3	3	3	3	2	2	3	2
			CO3	2	2	3	3	3	3	3	3	3	3
			CO4	2	1	2	2	2	3	2	2	1	3
			CO5	1	2	2	2	2	3	3	1	2	3
Course 1.2	MPT 102	Basic Sciences and Biomechanics	CO1	3	3	3	3	3	2	3	3	3	2
			CO2	3	3	3	2	3	3	3	3	2	3
			CO3	3	3	3	3	3	3	3	3	3	3
			CO4	3	2	3	3	3	2	2	3	2	2
			CO5	2	3	2	3	3	2	2	3	2	1
Course 1.3	MPT 103	Physiotherapy Assessment and Clinical Decision Making (Theory)	CO1	3	3	2	3	3	3	2	3	3	3
			CO2	2	3	2	3	2	3	2	2	3	2
			CO3	2	2	3	3	2	3	2	3	3	2
			CO4	3	3	2	3	3	2	3	3	3	2
			CO5	3	3	3	3	3	2	3	3	3	2
Course 1.4	MPT 104	Advanced Physiotherapeutics	CO1	3	3	3	3	3	3	3	2	3	2
			CO2	3	3	3	3	3	3	3	3	3	3
			CO3	2	3	2	3	3	2	3	3	3	2
			CO4	3	2	3	3	3	2	2	3	3	2

			CO5	2	2	2	2	3	1	3	3	3	2
Practical													
Course 2.1	MPT 107	Advanced Physiotherapeutics	CO1	3	3	3	3	3	3	3	2	3	2
			CO2	3	3	3	3	3	3	3	3	3	3
			CO3	2	3	2	3	3	2	3	3	3	2
			CO4	3	2	3	3	3	2	2	3	3	2
			CO5	2	2	2	2	3	1	3	3	3	2
Course 2.2	MPT 106	Physiotherapy assessment and clinical decision making	CO1	3	3	2	3	3	3	2	3	3	3
			CO2	2	3	2	3	2	3	2	2	3	2
			CO3	2	2	3	3	2	3	2	3	3	2
			CO4	3	3	2	3	3	2	3	3	3	2
			CO5	3	3	3	3	3	2	3	3	3	2
Course 2.3	MPT 105	Journal Club and Clinical Case Presentation	CO1	3	3	3	3	3	3	3	3	3	3
			CO2	3	3	3	3	3	3	3	3	3	3
			CO3	3	3	3	3	3	3	3	3	3	3
			CO4	3	3	3	3	3	3	3	3	3	3
			CO5	3	3	3	3	3	3	3	3	3	3
Year 2													
Theory													
Course 3.1	MPT 221	Pedagogy in Physiotherapy Education	CO1	2	3	3	3	3	2	2	2	3	2
			CO2	3	3	3	3	3	2	2	3	3	3
			CO3	1	1	2	2	2	1	3	1	1	2
			CO4	1	1	2	2	2	1	3	1	1	2
			CO5	1	1	2	2	2	1	3	1	1	2

Course 3.2	MPT 202	Administration, Management and Ethical Issues	CO1	3	3	3	3	2	2	3	2	3	3
			CO2	3	3	3	2	3	3	3	3	3	3
			CO3	2	2	3	2	2	2	3	2	1	2
			CO4	2	2	3	2	2	2	3	2	1	3
			CO5	2	2	3	2	2	2	3	2	1	3
Course 3.3	MPT 223	Neurological Physiotherapy I (Medical)	CO1	3	3	3	3	3	3	3	2	3	2
			CO2	3	3	3	3	3	3	2	3	3	3
			CO3	3	3	2	3	3	3	3	3	3	3
			CO4	2	2	3	3	3	2	3	3	3	2
			CO5	3	1	3	3	2	2	2	3	3	2
Course 3.4	MPT 224	Neurological Physiotherapy II (Surgical)	CO1	3	3	3	3	3	3	3	2	3	2
			CO2	3	3	3	3	3	3	2	3	3	3
			CO3	3	3	2	3	3	2	3	3	3	2
			CO4	3	3	2	3	3	2	3	3	3	2
			CO5	3	3	2	3	3	2	3	3	3	2
Practical													
Course 4.1	MPT 205	Journal Club and Clinical Case Presentation	CO1	3	3	3	3	3	3	3	3	3	3
			CO2	3	3	3	3	3	3	3	3	3	3
			CO3	3	3	3	3	3	3	3	3	3	3
			CO4	3	3	3	3	3	3	3	3	3	3
			CO5	3	3	3	3	3	3	3	3	3	3
Course 4.2	MPT 206	Dissertation	CO1	3	3	3	3	3	3	3	3	3	3
			CO2	3	3	3	3	3	3	3	3	3	3

			CO3	3	3	3	3	3	3	3	3	3	3
			CO4	3	3	3	3	3	3	3	3	3	3
			CO5	3	3	3	3	3	3	3	3	3	3
Course 4.3	MPT 225	Neurological Physiotherapy I (Medical)	CO1	3	3	3	3	3	3	3	2	3	2
			CO2	3	3	3	3	3	3	2	3	3	3
			CO3	3	3	2	3	3	3	3	3	3	3
			CO4	2	2	3	3	3	2	3	3	3	2
			CO5	3	1	3	3	2	2	2	3	3	2
Course 4.4	MPT 226	Neurological Physiotherapy II (Surgical)	CO1	3	3	3	3	3	3	3	2	3	2
			CO2	3	3	3	3	3	3	2	3	3	3
			CO3	3	3	2	3	3	2	3	3	3	2
			CO4	3	3	2	3	3	2	3	3	3	2
			CO5	3	3	2	3	3	2	3	3	3	2

1. Slight (Low) ***2. Moderate (Medium)*** ***3. Substantial (High)***

Program Structure Template
School of Allied Health Sciences
MPT(Neurology)
Batch: 2021-2023
YEAR: I Year

S. No.	Paper ID	Subject Code	Subjects	Teaching Load			Hours/ Week	Core/Elective Pre-Requisite/ Co Requisite	Type of Course[2]: 1. CC 2. AECC 3. SEC 4. DSE
				L	T	P			
THEORY SUBJECTS									
1.	35395	MPT 111	Research Methodology and Evidence Based Practice	2	0	0	2	Core	CC
2.	7926	MPT 102	Basic Sciences and Biomechanics	2	0	0	2	Core	CC
3.	7928	MPT 103	Physiotherapy Assessment and Clinical Decision Making	2	0	0	2	Core	CC
4.	7929	MPT 104	Advanced Physiotherapeutics	2	0	0	2	Core	CC
5.		OPE	Open elective	2	0	0	2	Elective	SEC
Practical/Viva-Voce/Jury									
1.	7930	MPT 105	Journal Club and Clinical Case Presentation	0	0	4	4	Co-requisite	AECC
2.	35396	MPT 106	Physiotherapy Assessment and Clinical Decision Making	0	0	2	2	Core	CC
3.	35397	MPT 107	Advanced Physiotherapeutics	0	0	2	2	Core	CC

[2] CC: Core Course, AECC: Ability Enhancement Compulsory Courses, SEC: Skill Enhancement Courses, DSE: Discipline Specific Courses

4.	35398	MPT 108	Clinical Training	0	0	24	24	Core	CC
TOTAL HOURS/WEEK							**42**		

Program Structure Template
School of Allied Health Sciences
MPT(Neurology)
Batch: 2021-2023
YEAR: II Year

S. No.	Paper ID	Subject Code	Subjects	Teaching Load			Hours/ Week	Core/Elective Pre-Requisite/ Co Requisite	Type of Course[3]: 1. CC 2. AECC 3. SEC 4. DSE
				L	T	P			
THEORY SUBJECTS									
1.	35399	MPT 221	Pedagogy in Physiotherapy Education	1	0	0	1	Core	CC
2.	35400	MPT 202	Administration, Management and Ethical Issues	1	0	0	1	Co-requisite	AEC
3.	35412	MPT 223	Neurological Physiotherapy I (Medical)	3	0	0	3	Core	CC
4.	35413	MPT 224	Neurological Physiotherapy II (Surgical)	3	0	0	3	Core	CC
5.		OPE	Open elective*	2	0	0	2	Elective	SEC
Practical/Viva-Voce/Jury									
1.	35414	MPT 225	Neurological Physiotherapy I (Medical)	0	0	2	2	Core	CC
2.	35415	MPT 226	Neurological Physiotherapy II (Surgical)	0	0	2	2	Core	CC
3.	7939	MPT 205	Journal Club and Clinical case Presentation	0	0	4	4	Co-requisite	AECC

[3] CC: Core Course, AECC: Ability Enhancement Compulsory Courses, SEC: Skill Enhancement Courses, DSE: Discipline Specific Courses

4.	7940	MPT 206	Dissertation	0	0	4	4	Co-requisite	DSE
5.	35407	MPT 230	Clinical Training	0	0	20	20	Core	CC
TOTAL HOURS/WEEK							**42**		

Table 1. Evaluation Scheme for MPT (Neurology)-I year University examination

S. No.	Paper ID	Subject Code	Subjects	Internal Assessment	Oral (Viva voce)	University examination	Total marks
THEORY SUBJECTS							
1	35395	MPT 111	Research Methodology and Evidence Based Practice	20	N/A	80	100
2	7926	MPT 102	Basic Sciences and Biomechanics	20	N/A	80	100
3	7928	MPT 103	Physiotherapy Assessment and Clinical Decision Making	20	N/A	80	100
4	7929	MPT 104	Advanced Physiotherapeutics	20	N/A	80	100
5		OPE	Open Elective*	-	-	-	-
PRACTICAL SUBJECTS							
1	7930	MPT 105	Journal Club and Clinical Case Presentation	50	N/A	N/A	50
2	35396	MPT 106	Physiotherapy Assessment and Clinical Decision Making	20	N/A	80	100
3	35397	MPT 107	Advanced Physiotherapeutics	20	N/A	80	100
4	35398	MPT 108	Clinical Training	N/A	N/A	N/A	N/A
*Open elective course will be in audit mode and student will have to pass it							

Table 2. Evaluation Scheme for MPT (Neurology)-II year University examination

S. No.	Paper ID	Subject Code	Subjects	Internal Assessment	Oral (Viva voce)	University examination	Total marks
THEORY SUBJECTS							
1	35399	MPT 221	Pedagogy in Physiotherapy Education	20	N/A	80	100
2	35400	MPT 202	Administration, Management and Ethical Issues	20	N/A	80	100
3	35412	MPT 223	Neurological Physiotherapy I (Medical)	20	N/A	80	100
4	35413	MPT 224	Neurological Physiotherapy II (Surgical)	20	N/A	80	100
5		OPE	Open Elective*	-	-	-	-
PRACTICAL SUBJECTS							
1	35414	MPT 225	Neurological Physiotherapy I (Medical)	20	N/A	80	100
2	35415	MPT 226	Neurological Physiotherapy II (Surgical)	20	N/A	80	100
3	7939	MPT 205	Journal Club and Clinical case Presentation	50	N/A	N/A	50
4	7940	MPT 206	Dissertation	30	N/A	70	100
5	35407	MPT 230	Clinical Training	N/A	N/A	N/A	N/A
*Open elective course will be in audit mode and student will have to pass it							

NOTE:

1. **Open elective course is mandatory for each student (list of approved open elective courses offered by the university as enclosed in Annexure). The course will be run in audit mode and students will have to pass it.**

C. Course Templates

2.1 Template A1: Syllabus for Theory Subjects

School: SAHS		**Batch : 2021-2023**	
Program: MPT(Neurology)		**Current Academic Year: 2021-22**	
Branch:		**I Year**	
1	Course Code	MPT 111	
2	Course Title	Research Methodology and Evidence Based Practice	
3	Hours/Week	2	
4	Contact Hours (L-T-P)	2-0-0	
	Course Type	Compulsory	
5	Course Objective	1. To explain the basic concepts, terms and definitions used in health research. 2. To understand various types of research and formulate a research question, hypothesis and related objectives. 3. To understand the concepts of Biostatistics and its use in Physiotherapy research and select best sampling method for the chosen design and estimate sample size. 4. Carry out simple analysis of collected data and interpret findings Appropriately.	
6	Course Outcomes	The student will be able to: CO1. Understand the basic concepts, terms and definitions used in health research methodology CO2. To acquire the skills of reviewing literature, formulate a hypothesis, collecting data, writing research proposal. CO3. Describe the importance and use of Biostatistics for research work. CO4: To identify different scales of measurement used in research CO5: To read published research critically and to know how to publish a paper	
7	Course Description	This course is designed to develop the basic knowledge of research, biostatistics which can be used to understand its special needs in relation to interventions in physiotherapy. The course will provide a comprehensive introduction to research proposal writing, research methodologies, and foundational research theories and protocols	
8	Outline syllabus		CO Mapping
	Unit 1	**Introduction to research methodology**	
	A	Research in physiotherapy – Introduction, Research for Physiotherapist: Why? How? And When?, Research – Definition, concept, purpose, approaches, Internet sites for Physiotherapist	CO1, CO2

	B	Research Fundamentals, Define measurement, Measurement framework, Scales of measurement, Pilot Study, Types of variables, Reliability & Validity, Drawing Tables, graphs, master chartetc	CO1, CO2,CO4
	C	Writing a Research Proposal, Critiquing a research article, Defining aproblem	CO1, CO2, CO5
	Unit 2	**Fundamentals of research**	
	A	Review of Literature, formulating a question, Operational Definition, Inclusion & Exclusion criteria, Forming groups, Data collection & analysis, Results, Interpretation, conclusion, discussion, Informed Consent, Limitations	CO1, CO2
	B	Research Design- Principle of Designing, Design, instrumentation & analysis for qualitativeresearch, Design, instrumentation & analysis for quantitative research Design, instrumentation & analysis for quasi-experimental research, Design models utilized inPhysiotherapy	CO1,CO2,CO3,CO4
	C	Research Ethics- Importance of Ethics in Research, Main ethical issues in human subjects'research,Main ethical principles that govern research with human subjects Components of an ethically valid informed consent for research	CO1,CO2
	Unit 3	**Fundamentals of Biostatistics**	
	A	Biostatistics- Introduction, Definition, Types, Application inPhysiotherapy; Data –Definition, Types, Presentation, Collectionmethods	CO1, CO3,CO4
	B	Measures of central value- Arithmetic mean, median, mode. Relationship between them, Partitioned values-	CO1, CO3,CO4

		Quatertiles, Deciles, Percentiles, Graphicaldetermination	
	C	Measures of Dispersion- Range, Mean Deviation, StandardDeviation, Normal Distribution Curve, Properties of normal distribution, Standard normal distribution,Transformation of normal random variables. Inverse transformation, Normal approximation ofBioaxial distribution.	CO1,CO2,CO3,CO4
	Unit 4	**Statistical Analysis**	
	A	Correlation analysis- Bivariate distribution: Scatter Diagram, Coefficient of correlation, Calculation & interpretation of correlational coefficient, T-test, Z-test,P-value; Regression analysis- Lines of regression, Calculation of Regressioncoefficient	CO1, CO3,CO4
	B	Sampling- Methods of Sampling, Sampling distribution, Standard error, Types I & IIerror, Probability (inBrief),Hypothesis Testing, Null Hypothesis, Alternative hypothesis, Acceptance & rejection of nullHypothesis, Level ofsignificance	CO1, CO3,CO4
	C	Parametric & non parametric tests- Chi square test, Mann-Whitney U test, Wilcoxon Signed test, Kruskal-Wallis test, Friednam test, T-test/student T test, Analysis ofvariance	CO1, CO3,CO4
	Unit 5	**Introduction to evidence based practice**	
	A	Evidence–based health care, evidence–based practices	CO1, CO2
	B	evidence–based decision making and management	CO1, CO2
	C	Types of evidence - Definition of evidence, Forms of evidence, randomized controlled trials, Case–control studies, Cohort studies	CO1, CO2
	Mode of examination	Theory	
	Weightage Distribution	CA | ETE	
		20% | 80%	
	Text book/s*	1. Recent Methods for Clinical Therapists: applied Project Design and analysis by Carolyn Hicks	

		2. Elements of Research in Physical Therapy: Dean P. Currier 3. Physical therapy Research: Principles and Applications- Elizabeth Domholdt 4. Research Methology: Kothari, C.P. 5. Methods in Biostatistics: Mahajan B.K. 6. Martin Dawes, Philip Davies, and Alistair Gray, Evidence–Based Practice: A Primer for Health Care Professionals. Elsevier Publication	
	Other References	1. Albert R. Roberts and Kenneth R. Yeager, Evidence–Based Practice Manual: Research and Outcome Measures in Health and Human Services, Oxford University Press 2. Allen Rubin, Practitioner's Guide to Using Research for Evidence–Based Practice. John Willey & Sons Publication	

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	3	3	3	3	3
CO2	2	3	3	3	3	3	2	2	3	2
CO3	2	2	3	3	3	3	3	3	3	3
CO4	2	1	2	2	2	3	2	2	1	3
CO5	1	2	2	2	2	3	3	1	2	3

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

School: SAHS		**Batch : 2021-2023**	
Program: MPT(Neurology)		**Current Academic Year: 2021-22**	
Branch:		**I Year**	
1	Course Code	MPT 102	
2	Course Title	Basic Sciences and Biomechanics	
3	Hours/Week	2	
4	Contact Hours (L-T-P)	2-0-0	
	Course Type	Compulsory	
5	Course Objective	1.To providea detailed introduction on basic anatomy, physiology, structure and function of the musculoskeletal system. 2. To educate the students about the concept of exercise physiology and its applications. 3. To encourage the students to apply the exercise physiology concepts in training and Physiotherapy. 4. To educate the students about the concepts of Biomechanics and its use in Physiotherapy.	
6	Course Outcomes	The student will be able to: CO1:Knowledge on basic anatomy, physiology, structure and function of the Neurological systems. CO2:Better understanding of physiology of exercise and energy transfer that allows humans to engage in physical activity. CO3:Knowledge about basic concepts of biomechanics of Human body, Connective and Contractile structures with respect to physiotherapy CO4: To understand the physiological needs of training and conditioning**.** CO5: Assessment of biomechanical aspect of various dysfunctions	
7	Course Description	This course is designed to develop an anatomical knowledge and clinical application of Neuroanatomy& Neurophysiology in Physiotherapy treatment. It also enables the student to have a better understanding of the principles of biomechanics and their application in Neurological and various other dysfunctions as well as knowledge of basic and applied exercise physiology	
8	Outline syllabus		CO Mapping
	Unit 1	**Structure & function of the various components of musculoskeletal system**	
	A	Basic concepts definition, description, classification, practical application of force, equilibrium friction, levers, springs and pulleys. Mechanical properties of connective tissue viscoelasticity, creep and stress relaxation, rate dependent properties, stress and strain curves. Brief mention of specialized tissues Bone, Ligament, Tendon, Cartilage, Nerves	CO1

	B	Mech. properties of Contractile Tissue, - length tension relationship, MB contraction types factor affecting MS function, Active & Passive Insufficiency	CO1
	C	Biomechanics & Pathomechanics of Spine – Vertebral column development, structure, joints, muscles of back, applied and functional anatomy, Cervical, Thoracic, Lumbosacral & pelvis Kinetics and kinematic analysis- Gait, posture & Pathological Gait	CO1
	Unit 2	**Introduction to exercise physiology**	
	A	Introduction to exercisephysiology, Nutrition andPerformance	CO2
	B	Energytransfer, Measurement of human energyexpenditure	CO2
	C	Systems of energy delivery andutilization in Pulmonarysystem, Cardiovascularsystem, Musculoskeletal, NervousSystem and Endocrinesystem	CO2
	Unit 3	**Applied Exercise Physiology**	CO2
	A	Aerobic powertraining, Anaerobic powertraining, Special aids in performance andconditioning	CO2
	B	Exercise at differentaltitudes, Exercise at various climaticconditions, Sport diving	CO2
	C	Obesity and weightcontrol, Exercise andaging, Clinical exercisephysiology	CO2
	Unit 4	**Basic Sciences**	
	A	Introduction to nervous system, Anatomy, Physiology, & functions of Nervous System – Central Nervous System Brain (Cerebral Cortex, Basal Ganglia, Cerebellum & Thalamus) Spinal Cord (Ascending & Descending (Pyramidal and Extra Pyramidal system) Tracts), Meninges and Ventricular system of C.N.S., Cerebrospinal fluid & Blood supply to C.N.S. Anatomy, Physiology, & functions Somatic Nervous System Cranial NervesSpinal Nerves, Neuromuscular Junction,Autonomic Nervous System	CO3
	B	Basic Neurophysiology- Synapse- definition, properties, Electrical signals & its transmission- Ion channels, resting membrane potential, graded potential, Generation of action Potential, Propagation of nerve impulses.	CO3
	C	Nerve fibre- Definition & properties, types, myelination, Reaction of degeneration & its clinical application. Formation of spinal nerve, peripheral nerve, dermatomes, myotomes, sclerotomes & its clinical application.	CO3
	Unit 5	**Neurophysiology**	
	A	Regeneration & repair of nervous tissue. Concept of Neural Plasticity. Clinical symptomatology and pathophysiology of the neurological disorders	CO3
	B	Neurophysiology of balance, coordination and locomotion.	CO3
	C	Embryonic development of Nervous System	CO3

		Normal sequential behavioural and Physiological changes throughout the developmental arc			
	Mode of examination	Theory			
	Weightage Distribution	CA		ETE	
		20%		80%	
	Text book/s*	1. Clinical Bimechanics of the spine: White, Augustus 2. Exercise Physiology by Mc Ardle, Katch & Katch (Lippincott Williams and Wilkins, 3. Exercise Physiology:Exercise, Performance and clinical Applications by A Roberts 4. Human Anatomy by B.D. Chaurasia, Vol. 1,2nd edition; CBS publications. 5. Textbook of Anatomy by Inderbir Singh; 4th edition; Jaypee Publications. 6. Guyton : Textbook of physiology 7. Chatterjee: Textbook of physiology.			
	Other References	1. Principles of anatomy and physiology by Tortora; 8th edition; Harper & Row Pub. 2. Cunningham's Manual of Practical Anatomy; 15th edition, Vol: 1, 2, 3; Oxford Pub. 3. Clinical Anatomy for Medical Students by Richard Snell, 6th edition, Lippin Cott, Williams & Wilkins. 4. Anatomy & Physiology by Ross & Wilson's, 8th edition, Churchill Livingston. 5. Robert: Fundamentals of sensory physiology.			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	2	3	3	3	2
CO2	3	3	3	2	3	3	3	3	2	3
CO3	3	3	3	3	3	3	3	3	3	3
CO4	3	2	3	3	3	2	2	3	2	2
CO5	2	3	2	3	3	2	2	3	2	1

1-Slight (Low)
2-Moderate (Medium)
3-Substantial (High)

School: SAHS		**Batch : 2021-2023**	
Program: MPT(Neurology)		**Current Academic Year: 2021-22**	
Branch:		**I Year**	
1	Course Code	MPT 103	
2	Course Title	Physiotherapy Assessment and Clinical Decision Making (Theory)	
3	Hours/Week	2	
4	Contact Hours (L-T-P)	2-0-0	
	Course Type	Compulsory	
5	Course Objective	1. To provide the knowledge and skills about neurological system assessment and evaluation of patients. 2. To provide skills to develop clinical decision making for Neurological conditions. 3. To provide knowledge and skills to rationalise the outcomes of assessment. 4. To train the students to accurately record the assessment and design individualized goals for patient.	
6	Course Outcomes	CO1.Perform thorough physiotherapy assessment and list deficiencies CO2. Design individualized goal for patients CO3. Rationalize the outcome of assessment CO4. Document systematic, meaningful, accurate written records of patients CO5: To use assessment methods in designing treatment.	
7	Course Description	This Course Supplements the Knowledge of assessment and diagnosis in Neurological conditions. This will help form base of professional practice with the evidence-based practice and enables the student to have a better understanding of the subject along with their application in Neurological and various other dysfunctions.	
8	Outline syllabus		CO Mapping
	Unit 1	Neurological assessment	
	A	Demonstration of Review of General assessment, Assessment of Higher mental functions, Cranial nerve testing, Neurodevelopment assessment,	CO1,CO2
	B	Demonstration of Motor Sensory, Balance & Coordination & Gait assessment,	CO1,CO4

	C	Demonstration of Functional assessment, Environmental assessment, Physical disability evaluation (ICF),			CO1,CO2,CO3
	Unit 2				
	A	Demonstration of Pain, Postural, & Nerve Tension testing Examination			CO1,CO2
	B	Able to use Various Evaluation Scales and Assessment methods used in neurological rehabilitation.			CO3
	C	Demonstration of Physiotherapy assessment in Neuro Intensive care unit			CO1,CO4
	Unit 3	Interpretation of			
	A	Nerve Conduction studies (MNCS, SNCS & Late Responses)			CO1,CO2,CO3
	B	Electromyography			CO1,CO2,CO3
	C	Evoked potentials (SSEP, MEP, BAERA, and VER)			CO1,CO2,CO3
	Unit 4				
	A	Assessment of new born and child			CO1, CO3
	B	Neurodevelopmental milestone and screening			CO1, CO3
	C	Paediatric neurological examination.			CO2
	Unit 5				
	A	Interpretation of Investigations: -Basic Principles, Procedure, Indication, Contraindication & Interpretation (Normal & Abnormal) (in brief)- Skull X ray, Common Laboratory tests in Neurological disorders			CO1, CO2
	B	Interpretation of Computerized Tomography, Magnetic Resonance Imaging & Co-relation with Cl inical Diagnosis			CO1
	C	Interpretation & Co-relation with Clinical Diagnosis Intracranial Pressure monitoring, Lumbar puncture,			CO1, CO3
	Mode of examination				
	Weightage Distribution	CA		ETE	
		20%		80%	
	Text book/s*	1. Melzack and Wall: Text book of pain. 2. Physical rehabilitation by Susan B, O' Sullivan, Thomas J. Schmitz. 3. Electrodiagnosis in disease of nerve and muscles by Kimuraj J, F A Davis, Philadelphia. 4. Bickerstaff's neurological examination in clinical practice.			

	Other References	1. Neurological differential diagnosis – John Patten. 2. Dejong's the neurologic examination 3. Technique of the neurological examination: De Meyer,William E.	

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO1	3	3	2	3	3	3	2	3	3	3
CO2	2	3	2	3	2	3	2	2	3	2
CO3	2	2	3	3	2	3	2	3	3	2
CO4	3	3	2	3	3	2	3	3	3	2
CO5	3	3	3	3	3	2	3	3	3	2

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

School: SAHS		**Batch : 2021-2023**	
Program: MPT(Neurology)		**Current Academic Year: 2021-22**	
Branch:		**I Year**	
1	Course Code	MPT 106	
2	Course Title	Physiotherapy Assessment and Clinical Decision Making (Practical)	
3	Hours/Week	2	
4	ContactHours (L-T-P)	0-0-2	
	Course Type	Compulsory	
5	Course Objective	1. To provide the knowledge and skills about Nervous system assessment and evaluation of patients. 2. To provide skills to develop clinical decision making for Neurological conditions. 3. To provide knowledge and skills to rationalise the outcomes of assessment. 4. To train the students to accurately record the assessment and design individualized goals for patient.	
6	Course Outcomes	CO1. Perform thorough physiotherapy assessment and list deficiencies CO2. Design individualized goal for patients CO3. Rationalize the outcome of assessment CO4. Document systematic, meaningful, accurate written records of patients CO5: To use assessment methods in designing treatment.	
7	Course Description	This Course Supplements the Knowledge of assessment and diagnosis in Neurological conditions. This will help form base of professional practice with the evidence-based practice and enables the student to have a better understanding of the subject along with their application in Neurological and various other dysfunctions.	
8	Outline syllabus		CO Mapping
	Unit 1	Neurological assessment	
	A	Demonstration of Review of General assessment, Assessment of Higher mental functions, Cranial nerve testing, Neurodevelopment assessment,	CO1,CO2
	B	Demonstration of Motor Sensory, Balance & Coordination & Gait assessment,	CO1,CO4
	C	Demonstration of Functional assessment, Environmental assessment, Physical disability evaluation (ICF),	CO1,CO2,CO3
	Unit 2		
	A	Demonstration of Pain, Postural, & Nerve Tension testing Examination	CO1,CO2
	B	Able to use Various Evaluation Scales and Assessment methods used in neurological rehabilitation.	CO3
	C	Demonstration of Physiotherapy assessment in Neuro Intensive care unit	CO1,CO4

	Unit 3	Interpretation of			
	A	Nerve Conduction studies (MNCS, SNCS & Late Responses)			CO1,CO2,CO3
	B	Electromyography			CO1, CO2,CO3
	C	Evoked potentials (SSEP, MEP, BAERA, and VER)			CO1, CO2,CO3
	Unit 4				
	A	Assessment of new born and child			CO1, CO3
	B	Neurodevelopmental milestone and screening			CO1, CO3
	C	Paediatric neurological examination.			CO2
	Unit 5				
	A	Interpretation of Investigations: -Basic Principles, Procedure, Indication, Contraindication & Interpretation (Normal & Abnormal) (in brief)- Skull X ray, Common Laboratory tests in Neurological disorders			CO1, CO2
	B	Interpretation of Computerized Tomography, Magnetic Resonance Imaging & Co-relation with Clinical Diagnosis			CO1
	C	Interpretation & Co-relation with Clinical Diagnosis Intracranial Pressure monitoring, Lumbar puncture,			CO1,CO3
	Mode of examination	Practical			
	Weightage Distribution	CA		ETE	
		20%		80%	
	Text book/s*	1. Dejong's the neurologic examination 2. Technique of the neurological examination: De Meyer, William E. 3. Bickerstaff's neurological examination in clinical practice.			
	Other References				

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	3	3	2	3	2
CO2	3	3	3	3	3	3	3	3	3	3
CO3	2	3	2	3	3	2	3	3	3	2
CO4	3	2	3	3	3	2	2	3	3	2

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

School: SAHS		**Batch : 2021-2023**	
Program: MPT(Neurology)		**Current Academic Year: 2021-22**	
Branch:		**I Year**	
1	Course Code	MPT 104	
2	Course Title	Advanced Physiotherapeutics (Theory)	
3	Hours/Week	2	
4	Contact Hours (L-T-P)	2-0-0	
	Course Type	Compulsory	
5	Course Objective	1. To provide knowledge about various techniques used in NeurologicalPhysiotherapy. 2. To analyse and classify various Neurological Disorders and its management. 3. Compare & contrast the outcome of various physiotherapy treatment approaches.	
6	Course Outcomes	CO1. Learn various techniques of Physiotherapy. CO2. To formulate a rationalized physiotherapy treatment plan for the Patient. CO3. Use various skills for rehabilitation of the individuals. CO4: Compare & contrast the outcome of various physiotherapy treatment approaches CO5: Use methods for pain management	
7	Course Description	The course will enable the students to learn skills and techniques to be used in Physiotherapy management of Neurological conditions	
8	Outline syllabus		CO Mapping
	Unit 1		
	A	Theories of Motor Control	CO1,CO2,CO3,CO4
	B	Theories of Motor learning,	CO1,CO2,CO3
	C	Theories of aging.	CO1,CO2,CO3
	Unit 2		
	A	Bobath & Neurodevelopment technique, Brunnstrom, PNF & BiofeedbackRood's Approach, Functional Electrical Stimulation Neural mobilization technique, MFR,Motor Relearning Program, Task Oriented Training, Constrained Induced Therapy, MET,	CO1,CO2,CO3, CO4
	B	Pain management (various theories, modulation and management of pain)	CO1,CO2,CO3,CO4
	C	Assessment of fitness and exercise prescription for special neurological population	CO1,CO2,CO3,CO4
	Unit 3		
	A	Physiotherapy Management in Neuro-ICU	CO2,CO3
	B	Basic knowledge of drugs used for neurological conditions.	CO2,CO3

	C	Pathophysiology and Management of tonal abnormalities (Spasticity, Rigidity, Hypotonia and Dystonia).			CO2,CO3
	Unit 4				
	A	Prosthetics, Orthotics & Assistive Technologies, Wheelchair Prescription & Wheelchair skills- Basic & Advanced, Environmental modifications			CO2
	B	Balance, Gait, Coordination & Vestibular training			CO2,CO3
	C	Physiotherapy in Cognitive and Perceptual disorders and other psychiatric conditions.			CO2
	Unit 5				
	A	Yogasana - Concept of Yogic Practices, Kinds of Yogic Practices, Meaning & concept of Meditation.			CO1,CO2,CO3
	B	Recent Advances in Neurological Rehabilitation.			CO2,CO3
	C	Community based rehabilitation for neurological dysfunction			CO2,CO3
	Mode of examination	Theory			
	Weightage Distribution	CA		ETE	
		20%		80%	
	Text book/s*	1. Neurological Rehabilitation: Taly, A.B. 2. Proprioceptive Neuromuscular Facilitation Knott M & Voss, Harper & Row. 3. Clinical neurophysiology: U.K.Misra, J.Kalita. 4. Motor control Theory and practice: Shumway-cook & Anne. 5. Neurological Rehabilitation: Umphred, Darcy, A. 6. Melzack and Wall: Text book of pain.			
	Other References	1. Catherine A Trombly. Occupational Therapy for physical dysfunction, Williams & Wilkins.4Ed, 1998 2. Brain and Bannister's Clinical Neurology, Sir Ruger Bannister, Oxford.7Ed, 1992 3. Introduction to nervous System – Hokmes Bullock, WH Freeman and company.			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	3	3	2	3	2
CO2	3	3	3	3	3	3	3	3	3	3
CO3	2	3	2	3	3	2	3	3	3	2
CO4	3	2	3	3	3	2	2	3	3	2
CO5	2	2	2	2	3	1	3	3	3	2

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

School: SAHS		**Batch: 2021-2023**	
Program: MPT(Neurology)		**Current Academic Year: 2021-22**	
Branch:		I Year	
1	Course Code	MPT 107	
2	Course Title	Advanced Physiotherapeutics (Practical)	
3	Hours/Week	2	
4	Contact Hours (L-T-P)	0-0-2	
	Course Type	Compulsory	
5	Course Objective	1. To provide knowledge about various techniques used in Neurological Physiotherapy. 2. To analyse, diagnose and classify various Neurological dysfunction and their management. 3. Compare & contrast the outcome of various Neurophysiological physiotherapy treatment approaches.	
6	Course Outcomes	CO1. Learn various techniques of Physiotherapy. CO2. To formulate a rationalized physiotherapy treatment plan for the patient. CO3. Use various skills for rehabilitation of the individuals. CO4: Compare & contrast the outcome of various physiotherapy treatment approaches CO5: Use methods for pain management	
7	Course Description	The course will enable the students to learn skills and techniques to be used in Physiotherapy management of Neurological conditions	
8	Outline syllabus		CO Mapping
	Unit 1		
	A	Theories of Motor Control	CO1,CO2,CO3,CO4
	B	Theories of Motor learning,	CO1,CO2,CO3
	C	Theories of aging.	CO1,CO2,CO3
	Unit 2		
	A	Bobath & Neurodevelopment technique, Brunnstrom, PNF & BiofeedbackRood's Approach, Functional Electrical Stimulation Neural mobilization technique, MFR,Motor Relearning Program, Task Oriented Training, Constrained Induced Therapy, MET,	CO1,CO2,CO3, CO4

	B	Pain management (various theories, modulation and management of pain)	CO1,CO2,CO3,CO4
	C	Assessment of fitness and exercise prescription for special neurological population	CO1,CO2,CO3,CO4
	Unit 3		
	A	Physiotherapy Management in Neuro-ICU	CO2,CO3
	B	Basic knowledge of drugs used for neurological conditions.	CO2,CO3
	C	Pathophysiology and Management of tonal abnormalities (Spasticity, Rigidity, Hypotonia and Dystonia).	CO2,CO3
	Unit 4		
	A	Prosthetics, Orthotics & Assistive Technologies, Wheelchair Prescription & Wheelchair skills- Basic & Advanced, Environmental modifications	CO2
	B	Balance, Gait, Coordination & Vestibular training	CO2,CO3
	C	Physiotherapy in Cognitive and Perceptual disorders and other psychiatric conditions.	CO2
	Unit 5		
	A	Yogasana - Concept of Yogic Practices, Kinds of Yogic Practices, Meaning & concept of Meditation.	CO1,CO2,CO3
	B	Recent Advances in Neurological Rehabilitation.	CO2,CO3
	C	Community based rehabilitation for neurological dysfunction	CO2,CO3
	Mode of examination	Practical	
	Weightage Distribution	CA: 20% — ETE: 80%	
	Text book/s*	1. Carpenter, Mental Health & Learning disability — EURETT. 2 Ed, 1998 2. Ropper, principles of Neurology, JP, 10 Ed, 2014 3. Catherine A Trombly. Occupational Therapy for physical dysfunction –, Williams & Wilkins.4Ed, 1998 71	
	Other References	1. Brain and Bannister's Clinical Neurology, Sir Ruger Bannister, Oxford.7Ed, 1992 2. Introduction to nervous System – Hokmes Bullock, WH Freeman and company,1st Ed,2000	

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	3	3	2	3	2
CO2	3	3	3	3	3	3	3	3	3	3
CO3	2	3	2	3	3	2	3	3	3	2
CO4	3	2	3	3	3	2	2	3	3	2

CO5	2	2	2	2	3	1	3	3	3	2

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

School: SAHS		**Batch :2021-2023**
Program: MPT(Neurology)		**Current Academic Year: 2021-22**
Branch:		**I Year**
1	Course Code	MPT 105
2	Course Title	Journal Club and Clinical Case Presentation
3	Hours/Week	4
4	Contact Hours (L-T-P)	0-0-4
	Course Type	Compulsory
5	Course Objective	The objective of the course is that, the student will be able to 1. To develop confidence and presentation skill. 2. To develop decision making and reasoning skills in patient management. 3. To develop efficient methods of study of research journals.
6	Course Outcomes	After completion of the course, the students will be able to; CO1: Assess the patient and document their records. CO2. Present the latest research in journal presentation. CO3. Present the various cases and design the treatment programme for the patients CO4. Understand Evidence based implementation of various research protocols. CO5.Reasoning and decision-making regarding diagnosis, treatment and follow-up of patients
7	Course Description	This course is to design and develop the in-depth thinking ability, presentation skill, reasoning and decision making, analytical skills and deep

		exploration of various topics and cases among the students. It will enhance the research ability of the students hence will help in uplifting the new rays of therapeutic skills.			
	Mode of examination	Practical			
	Weightage Distribution	CA			
		50			50

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	3	3	3	3	3
CO2	3	3	3	3	3	3	3	3	3	3
CO3	2	2	3	3	3	3	3	3	3	3
CO4	3	3	3	3	3	3	3	3	3	3
CO5	3	3	3	3	3	3	3	3	3	3

1-Slight (Low)
2-Moderate (Medium)
3-Substantial (High)

School: SAHS		**Batch :2021-2023**	
Program: MPT(Neurology)		**Current Academic Year: 2022-23**	
Branch:		**II Year**	
1	Course Code	MPT 221	
2	Course Title	Pedagogy in Physiotherapy Education	
3	Hours/Week	1	
4	Contact Hours (L-T-P)	1-0-0	
	Course Type	Compulsory	
5	Course Objective	1. To educate the students about the concepts of teaching and learning. 2. To enable them to learn about the philosophies of education. 3. To provide knowledge about curriculum, techniques, and methods of teaching.	
6	Course Outcomes	CO1. Understand the dynamics of teaching and learning. CO2. Plan effective teaching sessions in Physiotherapy. CO3: Learn method and techniques of teaching CO4: Learn meaning and concept, basis of curriculum formulation CO5: To know the use of various teaching aids	
7	Course Description	This course presents knowledge and application of different teaching methodology to the students. The course begins with core topics ofConcepts of Teaching and learning,Curriculum, various teaching methods and concept of guidance and counselling etc	
:8	Outline syllabus		CO Mapping
	Unit 1	**Introduction to Education**	
	A	Education: - Introduction, Educational Philosophy- Idealism Naturalism, Pragmatism	CO1,CO2
	B	Aims of Education, Functions of Education, Formal, informal and non-formalEducation,Agencies of Education	CO1,CO2
	C	Current issues and Trends in Higher Education, Issue of quality in Higher Education	CO1,CO2
	Unit 2	**Teaching and Learning**	
	A	Meaning and scope of Educational Psychology	CO1,CO2
	B	Dynamics of behavior, Individualdifferences	CO1,CO2
	C	Method and techniques of teaching: - Lecture, Demonstration, Discussion, Seminar, Assignment, Project, CaseStudy	CO1,CO2,CO3
	Unit 3	**Curriculum**	
	A	Curriculum: - Meaning and concept, Basis of curriculum formulation, Process of curriculum development and factors involved, Evaluation ofcurriculum	CO1,CO2,CO4
	B	Framing objectivesfor curriculum, Bloom's taxonomy of instructional objectives,Writinginstructionalobjectives in behavioral terms	CO1,CO2,CO3,CO4
	C	Unit planning, Lesson planning	CO1,CO2,CO3

	Unit 4	**Basics of teaching and evaluation**	
	A	Teaching aids, Types of teaching aids, Principles of selection, preparation and use of audio- visualaides,	CO1,CO2, CO4,CO5
	B	Measurement and Evaluation, Nature of educational measurement: meaning, process, types of tests, Construction of an achievement test and its analysis,	CO1,CO2,CO3
	C	Standardized test, Introduction ofsome standardized tools, important tests of intelligence, aptitude, and personality. Continuous and comprehensiveevaluation	CO1,CO2
	Unit 5	**Counselling and awareness**	
	A	Guidance and counseling, Meaning & concepts of guidance and counseling, Principles of guidance andcounseling	CO1,CO2
	B	Awareness Programme, awareness and guidance to the common people about health and disease	CO1,CO2
	C	Autonomy and Accountability, Privatization of Education	CO1,CO2
	Mode of examination	Theory	
	Weightage Distribution	CA / ETE	
		20 / 80	100
	Text book/s*	Educational Technology: A Primer for the 21st Centuryby Ronghuai Huang & J. Michael Spector & Junfeng Yang) Pedagogy and Practice: Teaching and Learningby Jo Ace	
	Other References		

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO1	2	3	3	3	3	2	2	2	3	2
CO2	3	3	3	3	3	2	2	3	3	3
CO3	1	1	2	2	2	1	3	1	1	2
CO4	1	1	2	2	2	1	3	1	1	2
CO5	1	1	2	2	2	1	3	1	1	2

1-Slight (Low)
2-Moderate (Medium)
3-Substantial (High)

School: SAHS		**Batch : 2021-2023**	
Program: MPT(Neurology)		**Current Academic Year: 2022-23**	
Branch:		**II Year**	
1	Course Code	MPT 202	
2	Course Title	Administration, Management and Ethical Issues	
3	Hours/Week	1	
4	Contact Hours (L-T-P)	1-0-0	
	Course Type	Compulsory	
5	Course Objective	1. To provide knowledge about the management process and its functions. 2. To educate about the marketing and total quality management. 3. To educate the students about the role of hospital as an organisation 4. To educate about the rules of professional conduct, code of ethics and legal ethical issues in Physiotherapy and the standards of practice for physiotherapists.	
6	Course Outcomes	CO1. Understand the basic issues of management and administration. CO2. Practice as an informed professional on legal and ethical issues in Physiotherapy. CO3 To understand the basic principle of Management and its importance. CO4: To understand the importance of hospital and how it works in different departments. CO5:To understand the role of Physiotherapy and its benefits to the society.	
7	Course Description	The course will enable the students about the rules of professional conduct, code of ethics and legal ethical issues in Physiotherapy and the standards of practice for physiotherapists. It will help them to Practice as an informed professional on management process and its functions.	
8	Outline syllabus		CO Mapping
	Unit 1	**Introduction to management**	
	A	Management: Introduction, Evolution of management, Functions of management	CO1,CO3
	B	Management process – planning, organization, direction, controlling,Decision-making.	CO1,CO3
	C	Personnel management: Staffing, Recruitment selection, Performance appraisal, Collective bargaining, Jobsatisfaction.	CO1,CO3
	Unit 2	**Quality control and Quality assurance**	
	A	Marketing: Market segmentation, Channels of distribution, Promotion, Consumerbehaviour	CO1,CO2,CO3
	B	Total Quality Management: Basics of quality management, Quality control, Quality assurance Programme in hospitals	CO1,CO2,CO3
	C	Medical audit, International qualitysystem.	CO1,CO2
	Unit 3	**Role of hospital and physiotherapists**	
	A	Hospital as an organization - Functions and types of hospitals	CO1,CO2,CO4
	B	Roles of Physical therapist, Physical therapy Director, Physiotherapy supervisor,	CO1,CO2,C5

		Physiotherapy assistant,Physiotherapy aide, Home health aide, Volunteer.			
	C	Rules of Professional Conduct.			CO1,CO2
	Unit 4	**Ethical issues**			
	A	Legal responsibility, Code of ethics			CO1,CO2
	B	Functions of Physiotherapy associations			CO1,CO2
	C	Role of the International Health Agencies			CO1,CO2
	Unit 5	**Standards of practice**			
	A	Standards of practice for physiotherapists			CO1,CO2
	B	Liability and obligations in the case of medical legal action, Law of disability & discrimination			CO1,CO2
	C	Confidentially of the Patient's status, Consumer protection law, health law, MCI, DCP			CO1,CO2
	Mode of examination	Theory			
	Weightage Distribution	CA		ETE	
		20%		80%	
	Text book/s*	1. Healthcare System and management: Goel, S.L. 2. Documenting physical therapy: Baeten, Angla 3. Physical Therapy Administration & Management by Hickik 4. Management Principles for physiotherapists by Nosse Lorry J. 5. Textbook of Healthcare ethics: Loeuy, Erich H			
	Other References				

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO1	3	3	3	3	2	2	3	2	3	3
CO2	3	3	3	2	3	3	3	3	3	3
CO3	2	2	3	2	2	2	3	2	1	2
CO4	2	2	3	2	2	2	3	2	1	3
CO5	2	2	3	2	2	2	3	2	1	3

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

School: SAHS		**Batch : 2021-2023**	
Program: MPT(Neurology)		**Current Academic Year: 2022-23**	
Branch:		**II Year**	
1	Course Code	MPT 223	
2	Course Title	Neurological Physiotherapy I (Medical) Theory	
3	Hours/Week	3	
4	Contact Hours (L-T-P)	3-0-0	
	Course Type	Compulsory	
5	Course Objective	1. To educate students about etiology, pathophysiology, clinical presentation and physiotherapy management of general Neurological disorders. 2. To provide knowledge about epidemiology, Patho-physiology and clinical conditions affectingNervous system. 3. To educate students about physiotherapy management for various Neurological disorders.	
6	Course Outcomes	CO1. Understand about etiology, pathophysiology, clinical presentation and physiotherapy management of general Neurologicaldisorders. CO2. Understand about epidemiology, Patho physiology and clinical conditions affecting Nervous system. CO3. Plan physiotherapy management for various Neurological disorders. CO4: To learn about various regional Neurological conditions CO5: To learn about various investigative procedures used in Neurological Disorders.	
7	Course Description	This course is designed to develop and enhance the knowledge of Medical management for various Neurological disorders and Physiotherapy for the same.	
8	Outline syllabus		CO Mapping
	Unit 1	Introduction, etiology, Path physiology, Clinical presentation, conservative management & complications of the following clinical conditions	
	A	Disorders of cerebral circulation – i) Epidemiology of the Stoke ii) Causes, Types, Pathophysiology iii) Clinical Features and Investigation iv) Treatment of Different Type of Stroke v) Recovery and Rehabilitation vi) Stroke Prevention	CO1, CO2, CO5
	B	Head Injury- Epidemiology, Pathology, Symptoms, Signs, Investigation, Management, Pre and Post-Operative	CO1, CO2, CO5

		Physiotherapy, Complication of Cranial Cerebral Injury (Head & Brain Injury) i) Comatose Patient ii) Closed Skull Fractures iii) Hematomas, Subdural, Epidural and Intracerebral iv) Open Cranio-cerebral Injuries v) Reconstruction Operations in Head injuries	
	C	Disorders of Higher Cerebral Cortical Function and its rehabilitation Disorders of Different Lobes i) Frontal lobes ii) Temporal lobes iii) Parietal lobes iv) Occipital lobes v) Sub Cortical lesions	CO1, CO2, CO5
	Unit 2		
	A	Spinal Cord Injury- i)Types, Classifications ii) Pathology iii) Level iv) Examination v) Management &Rehabilitation vi) Bladder and Bowel dysfunction and its rehabilitation vii) Bio Engineering Appliances &Support Devices	CO1,CO2, CO5
	B	Disorders of spine & spinal cord, - i) Acute Traumatic Injuries ii) Haematomyelia and Acute Central Cervical Cord Injuries iii) Slow Progressive Compression of the Spinal Cord iv) Syringomyelia v) Ischemia and Infarction of the Spinal Cord and Cauda Equina vi) Spina-Bifida vii) Disorders of Autonomic Function after Lesions of the Spinal Cord. vii) Tumors of Spinal cord	CO1, CO2, CO5
	C	Infectious disorders of nervous system i) Meningitis ii) Encephalitis iii) Brain Abscess iv) Syphilis	CO1, CO2, CO5

		v) Herpes Simplex vi) Chorea vii) Poliomyelitis viii) Tuberculosis ix) Transverse Myelitis	
	Unit 3		
	A	Epilepsy/ Seizures – i) Epidemiology, Classification, Causes, Precipitating factors, Diagnosis, ii) Myoclonus. Demyelinating Disorders of CNS- Multiple Sclerosis Brain Tumors	CO1, CO2, CO5
	B	Degenerative disorders- Alzheimer's' Disease , Huntington's Disease , Motor Neuron Disease	CO1, CO2 CO5
	C	Movement disorders- Parkinson's Disease, Cerebellar Ataxia, Sensory Ataxia, Chorea, Athetosis, Tics, Dystonia	CO1, CO2, CO5
	Unit 4		
	A	Disorders of cranial nerves i) Testing of Cranial Nerves ii) Disorders of Cranial Nerves, Cranial Neuropathy iii) Rehabilitation Protocol	CO1, CO2,CO3,CO4
	B	Disorders of Peripheral nerves- Peripheral Neuropathies Acute Demyelinating polyneuropathy- GB Syndrome Causalgia Reflex Sympathetic Dystrophy Irradiation Neuropathy Peripheral Nerves Tumors Traumatic, Compressive and ischemic Neuropathy Spinal Radiculitis and Radiculopathy Hereditary Motor and Sensory Neuropathy Acute Idiopathic Polyneuritis/Chronic Neuropathy due to Infections Vasculomotor Neuropathy Neuropathy due to Systemic Medical Disorders Drug Induced Neuropathy	CO1, CO2, CO4
	C	Disorders of muscles & Neuromuscular Junction- i) The Myotonic Disorders ii) Inflammatory Disorders of the Muscle iii) Myasthenia Gravis iv) Endocrine Dystrophy v) Muscular Dystrophy	CO1, CO2,CO3, CO4

	Unit 5				
	A	Common Paediatrics Condition & Its Rehabilitation -Paediatrics neurology (Cerebral Palsy, Developmental disorders, neuropsychiatric disorders, learning difficulties, ADHD, Autism, ASD)			CO1, CO2, CO4
	B	Congenital & hereditary Disorders-Congenital structural defects-Neural tube defect, vertebral anomalies and posterior fossa malformation-Spina bifida, Hydrocephalous, Syringomyelia, Arnold-Chiari malformation, Dandy-Walker syndrome			CO1, CO2, CO4
	C	Vestibular disorders and its rehabilitation.			CO1, CO2, CO4
	Mode of examination	Theory			
	Weightage Distribution	CA		ETE	
		20%		80%	
	Text book/s*	1. Physical Rehabilitation Assessment and Treatment by O'Sullivan, F.A. Davis, Philadelphia, 2. Neurological Rehabilitation: Umphred, Darcy, A. 3. Adams & victor's manual of Neurology, Victor Morris 4. Brain & Bannister's clinical Neurology Brannister Roger 5. Spinal cord diseases: diagnosis 6. Management of Peripheral Nerve Problems: Allan H O, George E. 7. Functional neuro rehabilitation: Berner, Julie. 8. Stroke Therapy: Fisher, Marc. 9. Patricia Davies – Right in the middle (trunk activity in hemi).			
	Other References	1. Advances in Neurology: Gordin, Ariel 2. Neurology in Clinical Practices Vol. I & II			

POs Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	3	3	2	3	2
CO2	3	3	3	3	3	3	2	3	3	3
CO3	3	3	2	3	3	3	3	3	3	3
CO4	2	2	3	3	3	2	3	3	3	2
CO5	3	1	3	3	2	2	2	3	3	2

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

School: SAHS		**Batch :2021-2023**	
Program: MPT (Neurology)		**Current Academic Year: 2022-23**	
Branch:		**II Year**	
1	Course Code	MPT 225	
2	Course Title	Neurological Physiotherapy I (Medical) Practical	
3	Hours/Week	2	
4	Contact Hours (L-T-P)	0-0-2	
	Course Type	Compulsory	
5	Course Objective	1. To educate students about etiology, pathophysiology, clinical presentation and physiotherapy managements of general Neurological disorders. 2. To provide knowledge about epidemiology, Patho physiology and clinical conditions affectingNervous system. 3. To educate students about physiotherapy management for various Neurological disorders.	
6	Course Outcomes	CO1. Understand about etiology, pathophysiology, clinical presentation and physiotherapy management of general Neurological disorders. CO2. Understand about epidemiology, Patho physiology and clinical conditions affecting various joints of body CO3. Plan physiotherapy management for various Neurological disorders. CO4: To learn about various Adult & PaediatricNeurological conditions CO5: To learn about various investigative procedures used in Neurological disorders	
7	Course Description	This course is designed to develop and enhance the knowledge of Medical management for various Neurological disorders and Physiotherapy for the same.	
8	Outline syllabus		CO Mapping
	Unit 1		
	A	Demonstration of physiotherapy management for Disorders of cerebral circulation	CO1,CO2,CO5
	B	Demonstration of physiotherapy management in Rheumatic disorders: - Head Injury	CO1,CO2, CO5
	C	Demonstration of physiotherapy management for Higher Cerebral Cortical Function	CO1,CO2, CO5
	Unit 2		
	A	Demonstration of physiotherapy management for Spinal Cord Injury	CO1,CO2, CO5
	B	Demonstration of physiotherapy management in Disorders of spine & spinal cord-) Acute Traumatic Injuries , Haematomyelia and Acute Central Cervical Cord Injuries, Slow Progressive Compression of the Spinal Cord ,	CO1, CO2, CO5

		Syringomyelia , Ischemia and Infarction of the Spinal Cord and Cauda Equina, Spina-Bifida, Disorders of Autonomic Function after Lesions of the Spinal Cord., Tumors of Spinal cord	
	C	Demonstration of physiotherapy management in Infectious disorders of nervous system – Meningitis, Encephalitis, Brain Abscess, Syphilis, Herpes Simplex, Chorea,Poliomyelitis, Tuberculosis, Transverse Myelitis	CO1, CO2, CO5
	Unit 3		
	A	Demonstration of physiotherapy management in Epilepsy/ Seizures, Myoclonus, Demyelinating Disorders of CNS- Multiple Sclerosis Brain Tumors	CO1, CO2, CO5
	B	Demonstration of physiotherapy management in Degenerative disorders- Alzheimer's' Disease, Huntington's Disease, Motor Neuron Disease	CO1, CO2 CO5
	C	Demonstration of physiotherapy management in Movement disorders- Parkinson's Disease, Cerebellar Ataxia, Sensory Ataxia, Chorea, Athetosis, Tics, Dystonia	CO1, CO2, CO5
	Unit 4		
	A	Demonstration of physiotherapy management in Disorders of cranial nerves	CO1, CO2, CO3,CO4
	B	Demonstration of physiotherapy management in Disorders of Peripheral nerves- Peripheral Neuropathies, Acute Demyelinating polyneuropathy- GB Syndrome, Causalgia Reflex Sympathetic Dystrophy,Irradiation Neuropathy Peripheral Nerves Tumors, Traumatic, Compressive and ischemic Neuropathy, Spinal Radiculitis and Radiculopathy Hereditary Motor and Sensory Neuropathy, Acute Idiopathic Polyneuritis/Chronic, Neuropathy due to Infections, Vasculomotor Neuropathy, Neuropathy due to Systemic Medical Disorders, Drug Induced Neuropathy	CO1, CO2, CO4
	C	Demonstration of physiotherapy management in Disorders of muscles & Neuromuscular Junction- The Myotonic Disorders, Inflammatory Disorders of the Muscle, Myasthenia Gravis, Endocrine Dystrophy, Muscular Dystrophy	CO1, CO2,CO3, CO4
	Unit 5		
	A	Common Paediatrics Condition & Its Rehabilitation - Paediatrics neurology (Cerebral Palsy, Developmental disorders, neuropsychiatric disorders, learning difficulties, ADHD, Autism, ASD)	CO1, CO2, CO4
	B	Congenital & hereditary Disorders-Congenital structural defects- Neural tube defect, vertebral anomalies and	CO1, CO2,CO4

		posterior fossa malformation-Spina bifida, Hydrocephalous, Syringomyelia, Arnold-Chiari malformation, Dandy-Walker syndrome			
	C	Vestibular disorders and its rehabilitation.			CO1, CO2,CO4
	Mode of examination	Practical			
	Weightage Distribution	CA		ETE	
		20%		80%	
	Text book/s*	10. Physical Rehabilitation Assessment and Treatment by O'Sullivan, F.A. Davis, Philadelphia, 11. Neurological Rehabilitation: Umphred, Darcy, A. 12. Adams & victor's manual of Neurology, Victor Morris 13. Brain & Bannister's clinical Neurology Brannister Roger 14. Spinal cord diseases: diagnosis 15. Management of Peripheral Nerve Problems: Allan H O, George E. 16. Functional neuro rehabilitation: Berner, Julie. 17. Stroke Therapy: Fisher, Marc. 18. Patricia Davies – Right in the middle (trunk activity in hemi).			
	Other References	3. Advances in Neurology: Gordin, Ariel 4. Neurology in Clinical Practices Vol. I & II			

POs Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	3	3	2	3	2
CO2	3	3	3	3	3	3	2	3	3	3
CO3	3	3	2	3	3	3	3	3	3	3
CO4	2	2	3	3	3	2	3	3	3	2
CO5	3	1	3	3	2	2	2	3	3	2

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

School: SAHS		**Batch : 2021-2023**	
Program: MPT(Neurology)		**Current Academic Year: 2022-23**	
Branch:		**II Year**	
1	Course Code	MPT 224	
2	Course Title	Neurological Physiotherapy II (Surgical) Theory	
3	Hours/Week	3	
4	Contact Hours (L-T-P)	3-0-0	
	Course Type	Compulsory	
5	Course Objective	1. To educate students about orientation and general principles of Neurological surgeries. 2. To provide knowledge about the physiotherapy management following surgical procedures	
6	Course Outcomes	CO1. Understand about the orientation and general principles of Neurological Surgeries. CO2. Assess the patients following surgical procedures. CO3:Provide the physiotherapy management following surgical procedures CO4: Enable the students to gain knowledge aboutNeurological implants. CO5: Enable the students to gain knowledge aboutCNS Surgeries, PNS Surgeries.	
7	Course Description	The course will enable the students to gain knowledge about orientation and general principles of Neurological surgeries. This will help them to formulate and design physiotherapy treatment program following surgical procedures.	
8	Outline syllabus		CO Mapping
	A	General Principles of neurosurgery	CO1, CO2, CO3
	B	Disorders of CSF Fluid & circulation, - Pre &Post-Operative Rehabilitation protocol of Conditions related to Raised Intra Cranial Pressure- Hydrocephalus, Intracranial Abscess, Central Oedema Pathophysiology, Classification, Effects of Mass lesion, Symptoms and Sign, Examination Management, Pre &Post-Operative Rehabilitation protocol	CO1, CO2, CO3
	C	Management of an unconscious Patient –	CO1,CO2, CO3

		The Neural basis of Consciousness, Clinical Terminology, Lesions Responsible for Stupor and Coma, The Assessment and Investigation of the Unconscious Patient., The Diagnosis of Brain Death, The Management of the Unconscious Patient, Total Rehabilitation Protocol.	
	Unit 2		
	A	Cerebral malformations,	CO1,CO2,CO3
	B	Malformations of spine & spinal cord-Surgeries, Pre &Post-Operative Rehabilitation	CO1, CO2, CO3,CO4
	C	Surgeries for Vascular Dysfunction of Brain	CO1, CO2, CO3,CO4
	Unit 3		
	A	Surgeries for disc disorders,	CO1, CO2, CO3
	B	Surgical repair of peripheral Nerves- De-compression Nerve Suture Nerve Grafting	CO1, CO2, CO3,CO4
	C	Decompression surgeries for spinal cord – Disc Operation (Cervical, Lumbar) Stenosis Oedema, Abscess Lumber Puncture	CO1, CO2 CO3,CO5
	Unit 4		
	A	Muscle lengthening/ Release,	CO1, CO2, CO3
	B	Surgeries for Spasticity management	CO1, CO2, CO3
	C	Intensive Care Unit Management of the Neurologically Impaired Patient.	CO1, CO2, CO3
	Unit 5		
	A	Stereotactic surgery	CO1, CO2, CO3
	B	Image guided frameless stereotaxic surgery,	CO1, CO2, CO3
	C	Psychosurgery	CO1, CO2, CO3

	A	General Principles of neurosurgery		CO1, CO2, CO3
	Mode of examination	Theory		
	Weightage Distribution	CA	ETE	
		20%	80%	100
	Text book/s*	1. Neurological Rehabilitation: Umphred, Darcy, A. 2. Motor control Theory and practice: Shumway-cook & Anne. 3. Physical rehabilitation by Susan B, O' Sullivan, Thomas J. Schmitz.		
	Other References	1. Functional neuro rehabilitation: Berner, Julie. 2. Patricia Davies – Right in the middle (trunk activity in hemi). 3. Patricia Davies – Steps to follow (comprehensive treatment for hemi). 4. Carr & Shepherd – Neurological rehabilitation: optimizing motor performance. 5. Sydney Sunderland – Nerves and nerve injuries. Medicine by Garret		

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	3	3	2	3	2
CO2	3	3	3	3	3	3	2	3	3	3
CO3	3	3	2	3	3	2	3	3	3	2
CO4	3	3	2	3	3	2	3	3	3	2
CO5	3	3	2	3	3	2	3	3	3	2

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

School: SAHS		**Batch : 2021-2023**	
Program: MPT(Neurology)		**Current Academic Year: 2022-23**	
Branch:		**II Year**	
1	Course Code	MPT 226	
2	Course Title	Neurological Physiotherapy II (Surgical)Practical	
3	Hours/Week	2	
4	Contact Hours (L-T-P)	0-0-2	
	Course Type	Compulsory	
5	Course Objective	1. To educate students about orientation and general principles of Neurological surgeries. 2. To provide knowledge about the physiotherapy management following surgical procedures	
6	Course Outcomes	CO1. Understand about the orientation and general principles of Neurological surgeries. CO2. Assess the patients following surgical procedures. CO3:Provide the physiotherapy management following surgical procedures CO4: Enable the students to gain knowledge aboutNeurological implants CO5: Enable the students to gain knowledge aboutSurgeries of CNS & PNS in Adults & Paediatrics Neurological condition	
7	Course Description	The course will enable the students to gain knowledge about orientation and general principles of Adults & Paediatrics Neurological surgeries. This will help them to formulate and design physiotherapy treatment program following surgical procedures.	
8	Outline syllabus		CO Mapping
	Unit 1	**Principles of neurosurgery**	
	A	To demonstrate physiotherapy Assessment &management following Neurosurgeries	CO1,CO2,CO3

	B	To demonstrate physiotherapy management in post surgeries Conditions related to Raised Intra Cranial Pressure	CO1,CO2,CO3
	C	To demonstrate physiotherapy management for an unconscious Patient	CO1,CO2, CO3
	Unit 2	**Cerebral and spine malformations**	
	A	To demonstrate physiotherapy management after Cerebral malformations Surgeries.	CO1,CO2,CO3
	B	To demonstrate physiotherapy Assessment & management in Malformations of spine & spinal cord-Surgeries, Pre &Post-Operative Rehabilitation	CO1, CO2, CO3,CO4
	C	To demonstrate physiotherapy Assessment & management in Surgeries for Vascular Dysfunction of Brain	CO1, CO2, CO3,CO4
	Unit 3	**Surgeries for spinal cord**	
	A	To demonstrate physiotherapy Assessment & management in Surgeries for disc disorders,	CO1, CO2, CO3
	B	To demonstrate physiotherapy Assessment & management in Surgical repair of peripheral Nerves- i) De-compression ii) Nerve Suture iii) Nerve Grafting	CO1, CO2, CO3,CO4
	C	To demonstrate physiotherapy Assessment & management in Decompression surgeries for spinal cord – i) Disc Operation (Cervical, Lumbar) ii) Stenosis iii) Oedema, Abscess iv) Lumber Puncture	CO1, CO2 CO3,CO5
	Unit 4	**Neuro Surgical techniques-I**	
	A	To demonstrate physiotherapy Assessment & management in Muscle lengthening/ Release,	CO1, CO2, CO3
	B	To demonstrate physiotherapy Assessment & management in Surgeries for Spasticity management	CO1, CO2, CO3
	C	To demonstrate physiotherapy Assessment & management in Intensive Care Unit for Neurologically Impaired Patient.	CO1, CO2, CO3
	Unit 5	**Neuro Surgical techniques-II**	
	A	To demonstrate physiotherapy Assessment & management Stereotactic surgery	CO1, CO2, CO3

	B	To demonstrate physiotherapy Assessment & management in Image guided frameless stereotaxic surgery,		CO1, CO2, CO3
	C	To demonstrate physiotherapy Assessment & management in Psychosurgery		CO1, CO2, CO3
	Mode of examination	Practical		
	Weightage Distribution	CA	ETE	
		20%	80%	100
	Text book/s*	1. Neurological Rehabilitation: Umphred, Darcy, A. 2. Motor control Theory and practice: Shumway-cook & Anne. 3. Physical rehabilitation by Susan B, O' Sullivan, Thomas J. Schmitz.		
	Other References	1. Functional neuro rehabilitation: Berner, Julie. 2. Patricia Davies – Right in the middle (trunk activity in hemi). 3. Patricia Davies – Steps to follow (comprehensive treatment for hemi). 4. Carr & Shepherd – Neurological rehabilitation: optimizing motor performance. 5. Sydney Sunderland – Nerves and nerve injuries. Medicine by Garret		

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	3	3	2	3	2
CO2	3	3	3	3	3	3	2	3	3	3
CO3	3	3	2	3	3	2	3	3	3	2
CO4	3	3	2	3	3	2	3	3	3	2
CO5	3	3	2	3	3	2	3	3	3	2

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

School: SAHS		**Batch :2021-2023**			
Program: MPT(Neurology)		**Current Academic Year: 2022-23**			
Branch:		**II Year**			
1	Course Code	MPT 205			
2	Course Title	Journal Club and Clinical Case Presentation			
3	Hours/Week	4			
4	Contact Hours (L-T-P)	0-0-4			
	Course Type	Compulsory			
5	Course Objective	The objective of the course is that, the student will be able to 1. To develop confidence and presentation skill. 2. To develop decision making and reasoning skills in patient management. 3. To develop efficient methods of study of research journals.			
6	Course Outcomes	After completion of the course, the students will be able to; CO1: Assess the patient and document their records. CO2. Present the latest research in journal presentation. CO3. Present the various cases and design the treatment programme for the patients CO4. Understand Evidence based implementation of various research protocols. CO5.Reasoning and decision-making regarding diagnosis, treatment and follow-up of patients			
7	Course Description	This course is to design and develop the in-depth thinking ability, presentation skill, reasoning and decision making, analytical skills and deep exploration of various topics and cases among the students. It will enhance the research ability of the students hence will help in uplifting the new rays of therapeutic skills.			
	Mode of examination	Practical			
		CA			

	Weightage Distribution	50			50

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	3	3	3	3	3
CO2	3	3	3	3	3	3	3	3	3	3
CO3	2	2	3	3	3	3	3	3	3	3
CO4	3	3	3	3	3	3	3	3	3	3
CO5	3	3	3	3	3	3	3	3	3	3

1-Slight (Low)
2-Moderate (Medium)
3-Substantial (High)

School: SAHS		**Batch : 2021-2023**		
Program: MPT(Neurology)		**Current Academic Year: 2022-23**		
Branch:		**II Year**		
1	Course Code	MPT 206		
2	Course Title	Dissertation		
3	Hours/Week	4		
4	Contact Hours (L-T-P)	0-0-4		
	Course Type	Practical		
5	Course Objective	The objective of the course is that, the student will be able to 1. 2Apply the evidences for the search of new knowledge. 2. To develop efficient research methodology. 3. To improve the scientific literature writing.		
6	Course Outcomes	After completion of the course, the students will be able to; CO1: Gain knowledge about formulation of research protocol CO2: Apply research Methodology and skills to complete the research dissertation CO3: Develop the skill to publish and present the research CO4: Methods of scientific literature review and writing. CO5: Evidence based implementation of various research protocols.		
7	Course Description	This course is to design and develop the in-depth thinking ability, presentation skill, reasoning and decision making, analytical skills and deep exploration of various topics and cases among the students. It will enhance the research ability of the students hence will help in uplifting the new rays of therapeutic skills.		
	Mode of examination	Practical		
	Weightage Distribution	CA	ETE	
		30%	70%	

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	3	3	3	3	3
CO2	3	3	3	3	3	3	3	3	3	3
CO3	3	3	3	3	3	3	3	3	3	3
CO4	3	3	3	3	3	3	3	3	3	3
CO5	3	3	3	3	3	3	3	3	3	3

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)