

Program Structure Template

School of Allied Health Sciences Master of Physiotherapy (Neurology, Sports, Cardiology, Orthopaedics)

Batch - (2020-22)

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



Note: Detailed Mission Statements of University can be used for developing Mission Statements of Schools/ Departments.

1.2 Vision and Mission of the School

Vision of the School

To produce skilled man power in different areas of biomedical science for better

healthcare delivery

Mission of the School

1. To strengthen the main line medical and health services.

2. To become effective assisting and support system to medical and health

personnel.

Core Values

1. Skilled professional

2. Multidimensional

3. Compassion

4. Management



1.3 Programme Educational Objectives (PEO)

PEO1: To gain knowledge of the human body related basic medical and physiotherapeutic sciences relevant to Neurology.

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 Neurological physiotherapy assessment by relevant and current physiotherapeutic concepts.

PEO4: To plan and implement appropriate Physiotherapeutic interventions for Neurological 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	School
	Mission 1	Mission 2
PEO1:	3	3
PEO2:	2	3
PEO3:	3	3
PEO4:	3	3
PEO5:	3	3
PEO6:	2	2

1. Slight (Low) 2. Moderate (Medium)

te (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 relevant to Neurology.

PO2. Understanding: Students will be able to understand the coreconcepts in Physiotherapy techniques.

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



	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	3	3
	3	3	3	3	3	3
PO4						
PO5	3	3	3	3	3	3
PO6	3	3	3	3	3	3
PO7	3	3	3	3	3	3
PSO1	3	3	3	3	3	3
PSO2	3	3	3	3	3	3
PSO3	3	3	3	3	3	3

1.3.4 Mapping of Program Outcome Vs Program Educational Objectives

1. Slight (Low)

2. Moderate (Medium)

3. Substantial (High)



1.3.5 Program Outcome Vs Courses Mapping Table¹:

Program											
Outcome	Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
Courses											
	1 st Year										
Course	Research Methodology										
1 1	and Evidence Based	2	2	2	2	2	3	2	2	2	3
1.1	Practice										
Course	Basic Sciences and	3									
1.2	Biomechanics	3	3	2	2	2	2	2	2	2	2
Course	Physiotherapy Assessment										
	and Clinical Decision	3	2	2	2	2	2	2	2	2	2
1.5	Making (Theory)		5	5	3	2	2	5	5	2	3
Course	Advanced										
	Physiotherapeutics	3	3	3	3	2	2	2	2	2	2
1.4	(Theory)					5	2	5	2	5	3
Course	Physiotherapy Assessment										
	and Clinical Decision	3	2	2	2	2	2	2	2	2	2
1.5	Making (Practical)		5	3	3	2	2	3	3	Ζ	3
Course	Advanced										
	Physiotherapeutics	3	2	2	2	2	2	2	2	2	2
1.0	(Practical)		5	3	3	3	2	3		3	3
Course	Journal Club and Clinical	2	2	2	3	2	3		2	2	3
1.7	Case	3	2	2	3	2	5	2			3

¹ Cel value will contain the correlation value of respective course with PO.

								*	SHA	RDA	l (
	Presentation								beyond		3
	2 ND Year										
Course	Pedagogy in Physiotherapy	2									
2.1	Education	2	2	2	2	1	2	3	2	2	2
Course	Administration,										
2.2	Management and Ethical	1	1	2	2	2	3	3	2	2	3
2.2	Issues		1	2	2	2	5	5	2	2	5
Course	Neurological										
2.3	Physiotherapy I (Medical)	3	3	2	2	3	2	3	2	3	3
2.3	Theory		5	2	2	5	2	5	2	5	5
Course	NeurologicalPhysiotherapy	3									
2.4	II (Surgical) Theory	5	3	2	2	3	2	3	2	2	2
Course	Neurological										
2 5	Physiotherapy I (Medical)	3	3	2	2	3	2	3	2	3	3
2.5	Practical					5	2	5	2	5	5
Course	NeurologicalPhysiotherapy	3	3	2	2	3	2	3	2	2	2
2.6	II (Surgical) Practical	5	5	2	2	5	2	5	-	2	2
Course	Journal Club and Clinical										
27	Case	3	2	2	3	2	3	2	2	2	3
2.1	Presentation										
Course	Dissertation	3	3	3	3	3	3	3	3	3	3
2.8	Dissertation	5		5	5	5	5	5	5	5	5



1.3.5.2COURSE ARTICULATION MATRIX²

Program													
	Course	Course Name		PO1	PO2	PO3	PO4	PO5	P06	P07	PSO1	PSO2	PSO3
Courses	course	Course Manie		101	102	105	104	105	100	107	1501	1502	1505
Courses	code												-
Year-1													
Theory													
G 11		Research Methodology and	001	-					-		-		
Course 1.1	MPT III	Evidence Based Practice	COI	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	C01	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											
		&Clinical Decision Making	CO1	3	3	2	3	3	3	2	3	3	3
		(Theory)											
			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

² Each course outcome (Based on Blooms Taxanomy-CO1, CO2, CO3, CO4, CO5, and CO6) of the course needs to map with PO. This table evolves once faculty has mapped each course outcomes of their respective course with PO's.

											SHA	RDA	
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
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
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

											SHA	RDA ersity	
			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	NeurologicalPhysiotherapy 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	NeurologicalPhysiotherapy 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	C01	3	3	3	3	3	3	3	3	3	3

											SHA	RDA	
			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	NeurologicalPhysiotherapy 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	NeurologicalPhysiotherapy 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: 2020-2022 TERM: I Year

S.	Paper ID	Subject	Subjects	Т	eaching	Load		Core/Elective	Type of
No.		Code		L	T	Р	Credits	Pre-Requisite/ Co Requisite	Course ³ : 1. CC 2. AECC 3. SEC 4. DSE
THE	ORY SUBJ	ECTS							
	35395	MPT 111	Research Methodology and Evidence Based Practice					Core	CC
,	7926	MPT 102	Basic Sciences and Biomechanics					Core	CC
3.	7928	MPT 103	Physiotherapy Assessment and Clinical Decision Making					Core	CC
4.	7929	MPT 104	Advanced Physiotherapeutics					Core	SEC
Practi	ical/Viva-V	oce/Jury							
5.	7930	MPT 105	Journal Club and Clinical Case Presentation					Core	DSC
6.	35396	MPT 106	Physiotherapy Assessment and Clinical Decision Making					Core	SEC
7.	35397	MPT 107	Advanced Physiotherapeutics					Core	SEC
8.	35398	MPT 108	Clinical Training					Co-requisite	SEC
			TOTAL CREDITS						

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



Program Structure Template School of Allied Health Sciences MPT(Neurology) Batch: 2020-2022 TERM: II Year

S.	Paper	Subject	Subjects	Т	eaching	Load		Core/Elective	Type of Course ⁴ :
No.	ID	Code		L	Τ	Р	Credits	Pre-Requisite/ Co Requisite	1. CC 2. AECC 3. SEC 4. DSE
THEOR	Y SUBJE	CTS	1					1	
8.	35399	MPT 221	Pedagogy in Physiotherapy Education					Core	CC
9.	35400	MPT 202	Administration, Management and Ethical Issues					Core	DSC
10.	35412	MPT 223	Neurological Physiotherapy I (Medical)					Core	CC
11.	35413	MPT 224	Neurological Physiotherapy II (Surgical)					Core	CC
Practica	l/Viva-Vo	ce/Jury							
12.	35414	MPT 225	Neurological Physiotherapy I (Medical)					Core	DSC
13.	35415	MPT 226	Neurological Physiotherapy II (Surgical)					Core	DSC
14.	7939	MPT 205	Journal Club and Clinical case Presentation					Core	DSC
15.	7940	MPT 206	Dissertation					Core	DSC
16.	35407	MPT 230	Clinical Training					Co-requisite	SEC
			TOTAL CREDITS						

⁴ CC: Core Course, AECC: Ability Enhancement Compulsory Courses, SEC: Skill Enhancement Courses, DSE: Discipline Specific Courses



C. Course Templates



Sch	ool: SAHS	Batch : 2020-2022							
Pro	gram:	Current Academic Year: 2020-21							
MP	T(Neurology)								
Bra	nch:	I Year							
1	Course Code	MPT 111							
2	Course Title	Research Methodology and Evidence Based Practice							
3	Credits								
4	Contact								
	Hours								
	(L-T-P)								
	Course Type	Compulsory							
5	Course	1. To explain the basic concepts, terms and definitions use	ed in health						
	Objective	arch.							
		2. To understand various types of research and formulate	a research						
		question, hypothesis and related objectives.							
		o understand the concepts of Biostatistics and its use in							
		Physiotherapy research and select best sampling method f	or the						
		chosen design and estimate sample size							
		4. Carry out simple analysis of collected data and interpr	et findings						
6	C	appropriately ·							
6	Course	The student will be able to:	1 . 1 1/1						
	Outcomes	CO1. Understand the basic concepts, terms and definition	s used in health						
		research methodology							
		CO2. To acquire the skins of reviewing interature, formula	ate a						
		CO2 Describe the importance and use of Piostatistics for	r racaarah						
		work	TESEALCH						
		VOIK.	research						
		CO5: To read published research critically and to know h	ow to publish a						
		naner	ow to publish a						
7	Course	pupor							
,	Description	This course is designed to develop the basic knowledge of rese	arch. biostatistics						
	P	which can be used to understand its special needs in relation to	interventions in						
		physiotherapy. The course will provide a comprehensive intra	roduction to research						
		proposal writing, research methodologies, and foundation	al research theories						
		and protocols							
8	Outline syllabu	15	CO Mapping						
	Unit 1								
	А	Research in physiotherapy – Introduction	CO1, CO2						
		Research for Physiotherapist, Why? Low?							
		And When? Descends Definition convert							
		Anuwhen?, Kesearch – Definition, concept,							
		purpose, approaches, Internet sites							
		forPhysiotherapist							

2.1 Template A1: Syllabus for Theory Subjects



В	Research Fundamentals, Define measurement, Measurement framework, Scales of measurement, Pilot Study, Types of variables, Reliability & Validity, Drawing Tables, graphs, master chartetc	CO1, CO2,CO4
С	Writing a Research Proposal, Critiquing a research article, Defining aproblem	CO1, CO2,CO5
Unit 2		
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
В	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
С	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 A	Biostatistics- Introduction, Definition, Types, Application inPhysiotherapy; Data –Definition, Types, Presentation, Collectionmethods	CO1, CO3,CO4
В	Measures of central value- Arithmetic mean, median, mode. Relationship between them, Partitioned values-	CO1, CO3,CO4

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		S 🖉 Beyond Boundaries
	Quatertiles, Deciles, Percentiles	,
	Graphicaldetermination	
С	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 of Bioaxial distribution.	CO1,CO2,CO3,CO4
Unit 4		
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
В	Sampling- Methods of Sampling, Sampling distribution, Standard error, Types I & Ilerror, Probability (inBrief),Hypothesis Testing, Null Hypothesis, Alternative hypothesis, Acceptance &	CO1, CO3,CO4
0	rejection of nullHypothesis, Level of significance	
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		
А	Evidence-based health care, evidence-based practices	CO1, CO2
В	evidence-based decision making and management	CO1, CO2
С	Types of evidence - Definition of evidence, Forms of	f CO1, CO2
	evidence, randomized controlled trials, Case–contro studies, Cohort studies	1
Mode of	Theory	
examination		
Weightage	CA ETE	
Distribution	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	1. Albert R. Roberts and Kenneth R. Yeager, Evidence–	
References	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	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
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)



Sch	nool: SAHS	Batch : 2020-2022					
Pro	ogram:	Current Academic Year: 2020-21					
MF	PT(Neurology)						
Bra	anch:	I Year					
1	Course Code	MPT 102					
2	Course Title	Basic Sciences and Biomechanics					
3	Credits						
4	Contact Hours						
	(L-T-P)						
	Course Type	Compulsory					
5	Course	1.To providea detailed introduction on basic anatomy, physiology,					
	Objective	structure and function of the musculoskeletal system.					
		2. To educate the students about the concept of exercise physiologyand					
		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	The student will be able to:					
	Outcomes	CO1:Knowledge on basic anatomy, physiology, structure and functi	ion 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				
		& Contractile structures with respect to physiotherapy					
		CO4: To understand the physiological needs of training and					
		conditioning.					
	0	CO5: Assessment of biomechanical aspect of various dysfunctions	1				
/	Course	This course is designed to develop ananatomical knowledge and clinical	application				
	Description	of Neuroanatomy& Neurophysiology in Physiotherapy treatment. It also	enables the				
		student to have a better understanding of the principles of biomechanic	s and their				
		application in Neurological and various other dysfunctions well as kills	Swiedge of				
0	Outling gyllabug	basic and applied exercise physiology	CO				
0	Outille syllabus		Monning				
	Unit 1	Structure & function of the various components of musculoskeletal	Wapping				
		sureture & function of the various components of musculoskeletal					
	Δ	Basic concepts definition description classification practical	CO1				
		application of force equilibrium friction levers springs and					
		nulleys Mechanical properties of connective tissue viscoelasticity creep					
		and stress relaxation rate dependent properties stress and strain curves					
		Brief mention of specialized tissues Rone Ligament Tendon Cartilage					
		Dhei menuon of specialized ussues Dolle, Ligament, Tendon, Carthage,					



т		NT Beyond Bo	undaries
ŀ	D	Nerves	001
	В	Mech. properties of Contractile Tissue, - length tension relationship,	COI
		MB contraction types factor affecting MS function, Active & Passive	
ŀ	C	Insufficiency Discussion & Dethemaskaning of Spins Vertebrah salaran	CO1
	C	Biomechanics & Pathomechanics of Spine – Vertebral column	COI
		development, structure, joints, muscles of back, applied and functional	
		anatomy, Cervical, Thoracic, Lumbosacral & pelvis	
		Kinetics and kinematic analysis- Gait, posture & Pathological Gait	
	Unit 2		
	А	Introduction to exercisephysiology, Nutrition and Performance	CO2
	В	Energytransfer, Measurement of human energyexpenditure	CO2
	С	Systems of energy delivery andutilization in Pulmonarysystem,	CO2
		Cardiovascularsystem, Musculoskeletal, NervousSystem and	
		Endocrinesystem	
	Unit 3	Applied Exercise Physiology	CO2
F	A	Aerobic powertraining. Anaerobic powertraining. Special aids in	CO2
		performance and conditioning	002
-	В	Exercise at differentaltitudes. Exercise at various climaticconditions.	CO2
	_	Sport diving	
-	С	Obesity and weightcontrol. Exercise andaging. Clinical	CO2
		exercisephysiology	
	Unit 4	Basic Sciences	
Ī	А	Introduction to nervous system, Anatomy, Physiology, & functions of	CO3
		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	~~~
	В	Basic Neurophysiology- Synapse- definition, properties, Electrical	CO3
		signals & its transmission- lon channels, resting membrane	
		potential, graded potential, Generation of action Potential, Propagation	
-	C	Of herve impulses. Norve fibre Definition & properties types myslingtion Desction of	<u>CO2</u>
	C	degeneration & its clinical application	005
		Formation of spinal nerve peripheral nerve dermatomes myotomes	
		sclerotomes & its clinical application	
	Unit 5	seletotomes & its ennieur uppreuton.	
F	A	Regeneration & repair of nervous tissue. Concept of Neural Plasticity	CO3
		Clinical symptomatology and pathophysiology of the neurological	200
		disorders	
ļ	D		G Q Q



		seyond Bo	undaries				
C	Embryonic developm	Embryonic development of Nervous System					
	Normal sequential be	Normal sequential behavioural and Physiological changes throughout					
	the developmental are	с					
Mode of	f Theory						
examina	tion						
Weighta	ige CA	ETE					
Distribu	tion 20%	80%					
Text bo	ok/s* 1. Clinical Bimechan	ics of the spine: White, Augustus					
	2. Exercise Physiol	ogy by Mc Ardle, Katch & Katch (Lippincott					
	Williams and Wilkins	s,					
	3. Exercise Physiolog	gy:Exercise, Performance and clinical Applications					
	by A Roberts						
	4. Human Anatomy by	B.D. Chaurasia, Vol. 1,2nd edition; CBS publications.					
	5. Textbook of Anatom	y by Inderbir Singh; 4th edition; Jaypee Publications.					
	6. Guyton : Textbook o	f physiology					
	7. Chatterjee: Textbook	c of physiology.					
Othor	1 Principles of anotom	y and physiclogy by Tortora, & adition, Harper & Dow					
Duller	Pub	y and physiology by Tonora, 8th edition, Harper & Row					
Keleleli	2. Cunningham's Manu	al of Practical Anatomy: 15th edition, Vol: 1, 2, 3:					
	Oxford Pub.	······································					
	3. Clinical Anatomy for	r Medical Students by Richard Snell, 6th edition, Lippin					
	Cott,	Cott,					
	Williams & Wilkins.						
	4. Anatomy & Physiolo	ogy by Ross & Wilson's, 8th edition, Churchill					
	Livingston.						
	5. Robert: Fundamenta	is of sensory physiology.					

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
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)



Scho	ool: SAHS	Batch : 2020-2022				
Prog	gram:	Current Academic Year: 2020-21				
MPT(Neurology)						
Brai	nch:	I Year				
1	Course Code	MPT 103				
2	Course Title	Physiotherapy Assessment and Clinical Decision Making (The	ory)			
3	Credits					
4	Contact Hours					
	(L-T-P)					
	Course Type	Compulsory				
5	Course	1. To provide the knowledge and skills about neurological syste	m			
	Objective	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	CO1.Perform thorough physiotherapy assessment and list defici	encies			
	Outcomes	CO2. Design individualized goal for patients				
		CO3. Rationalize the outcome of assessment				
		CO4. Document systematic, meaningful, accurate written record	ls of			
		patients				
		CO5: To use assessment methods in designing treatment.				
7	Course					
	Description	This Course Supplements the Knowledge of assessment and dia	gnosis in			
		Neurological conditions. This will help form base of profession	al practice with			
		the evidence-based practice and enables the student to have a be	etter			
		understanding of the subject along with their application in Neu	rological and			
		various other dysfunctions.				
8	Outline syllabus		CO Mapping			
	Unit 1	Neurological assessment				
	А	Review of General assessment,	CO1,CO2			
		Assessment of Higher mental functions,				
		Cranial nerve testing,				
		Neurodevelopment assessment,				

		SHARDA UNIVERSITY
В	Motor Sensory,	CO1,CO4
	Balance & Coordination & Gait assessment,	
С	Functional assessment,	CO1,CO2,CO3
	Environmental assessment,	
	Physical disability evaluation (ICF),	
Unit 2		
А	Pain,	CO1,CO2
	Postural, &	
	Nerve Tension testing Examination	
В	Various Evaluation Scales and Assessment methods used in	CO3
	neurological rehabilitation.	
С	Physiotherapy assessment in Neuro Intensive care unit	CO1,CO4
Unit 3	Electro-diagnosis:	,
A	Neurophysiology, Instrumentation, Procedure, Indication	CO1,CO2,CO3
	contraindication & Interpretations of	, ,
	Nerve Conduction studies (MNCS, SNCS & Late Responses)	
В	Electromyography	CO1.CO2.CO3
C	Evoked potentials (SSEP, MEP, BAERA, and VER)	C01.C02.C03
Unit 4		
A	Advanced Electrotherapeutics & Clinical decision making in	CO1 CO3
	electrotherapeutics	001,005
В	Neuro-psychological functions	CO1 CO3
D	Perception testing and training	001,005
C	Principles of clinical neuro diagnosis and investigation	CO2
C	Therpies of enhieur neuro diagnosis and investigation.	002
Unit 5		
А	Investigations: -Basic Principles, Procedure, Indication,	CO1,CO2
	Contraindication & Interpretation (Normal & Abnormal) (in	
	brief)-	
	Skull X ray,	
	Common Laboratory tests in Neurological disorders	
В	Computerized Tomography,	CO1
	Magnetic Resonance Imaging,	
С	Intracranial Pressure monitoring,	CO1,CO3
	Lumbar puncture,	
Mode of		
examination		
Weightage	CA	
Distribution	20% 80%	
Text book/s*	1. Melzack and Wall: Text book of pain	



		🥆 🥕 B	eyond Boundaries
	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	1.	Neurological differential diagnosis – John Patten.	
References	2.	Dejong's the neurologic examination	
	3.	Technique of the neurological examination: De	
		Meyer,William E.	
		•	

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
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)



S	chool: SAHS	Batch :2020-22							
P	ogram:	Current Academic Year: 2020							
Μ	PT(Neurology)								
B	ranch:	I Year							
1	Course Code	MPT 106							
2	Course Title	Physiotherapy Assessment and Clinical Decision Making (Practical)	Physiotherapy Assessment and Clinical Decision Making (Practical)						
3	Credits								
4	ContactHours								
	(L-T-P)								
_	Course Type	Compulsory							
5	Course	1. To provide the knowledge and skills about Nervous system							
	Objective	assessment and evaluation of patients.							
		2. To provide skills to develop clinical decision making for							
		Neurological conditions.							
		5. To provide knowledge and skins to rationalise the outcomes of							
		A To train the students to accurately record the assessment and design							
		individualized goals for natient							
6	Course	CO1 Perform thorough physiotherapy assessment and list deficiencies							
U	Outcomes	CO2 Design individualized goal for nations							
	outcomes	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	This Course Supplements the Knowledge of assessment and diagnosis in	Neurological						
	Description	conditions. This will help form base of professional practice with the evi	dence-based						
		practice and enables the student to have a better understanding of the sub	oject along						
		with their application in Neurological and various other dysfunctions.							
0			<u> </u>						
8	Outline syllabus		CO Mapping						
	Unit 1	Neurological assessment							
	А	Demonstration of Review of General assessment, Assessment of	CO1,CO2						
		Higher mental functions, Cranial nerve testing, Neurodevelopment							
		assessment,							
	В	Demonstration of Motor Sensory, Balance & Coordination & Gait	CO1,CO4						
		assessment,							
	С	Demonstration of Functional assessment. Environmental assessment.	CO1.CO2.C						
	C	Physical disability evaluation (ICF)	03						
	Unit 2								
		Demonstration of Pain Postural & Nerve Tension testing Evamination	CO1CO2						
	R	Able to use Various Evaluation Scales and Assessment methods used	CO1, CO2						
	U	in neurological rehabilitation							
	С	Demonstration of Physiotherapy assessment in Neuro Intensive care	CO1 CO4						
	\sim	Demonstration of Environmentary assessment in recurs intensive care	01,004						



UnitUnit 3Interpretation ofANerve Conduction studies (MNCS, SNCS & Late Responses)CO1,CO2 O3BElectromyographyCO1,CO2 O3CEvoked potentials (SSEP, MEP, BAERA, and VER)CO1,CO2 O3Unit 4	—			•						5	🥟 Beyond	d Boundaries
$\begin{tabular}{ c c c c c c } \hline Unit 3 & Interpretation of the eurological studies (MNCS, SNCS & Late Responses) & CO1, CO2 O3 O3 C & Electromyography & CO1, CO2 O3 C & Evoked potentials (SSEP, MEP, BAERA, and VER) & CO1, CO2 O3 & CO1, CO3 & CO1, CO3$	-			unit								
A Nerve Conduction studies (MNCS, SNCS & Late Responses) CO1,CO2 O3 B Electromyography CO1,CO2 O3 C Evoked potentials (SSEP, MEP, BAERA, and VER) CO1,CO2 O3 Unit 4 A Able to perform / take Clinical decision making in electrotherapeutics. CO1,CO3 B Interpretation of Neuro-psychological functions. Perception testing and training. CO2 CO1 C Application of Principles of clinical neuro diagnosis and investigation CO2 CO2 Unit 5 Interpretation of Investigations: Basic Principles, Procedure, Indication, Contraindication & Interpretation (Normal & Abnormal) (in brief) - Skull X ray, Common Laboratory tests in Neurological disorders CO1 B Interpretation of Computerized Tomography, Magnetic Resonance Imaging & Co-relation with Clinical Diagnosis CO1 Mode of examination Practical ETE CO1 S Ionterpretation of the neurological examination: De Meyer, William E. S Bickerstaff's neurological examination in clinical practice. Other PO1 PO2 PO3 PO4 PO5 PO6 PO7 PS01 PS02 PS03 S s FO1 PO2 PO3 PO4 <td>U</td> <td>nit 3</td> <td></td> <td>Inter</td> <td>pretation</td> <td>of</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	U	nit 3		Inter	pretation	of						
BElectromyographyCO1,CO2 O3CEvoked potentials (SSEP, MEP, BAERA, and VER)CO1,CO2 O3Unit 4AAble to perform / take Clinical decision making in electrotherapeutics.CO1,CO3 O3BInterpretation of Neuro-psychological functions. Perception testing and training.CO1,CO3CApplication of Principles of clinical neuro diagnosis and investigation training.CO2MatterInterpretation of Investigations: -Basic Principles, Procedure, Indication, Contraindication & Interpretation (Normal & Abnormal) (in brief) - Skull X ray, Common Laboratory tests in Neurological disordersCO1BInterpretation of Computerized Tomography, Magnetic Resonance Imaging & Co-relation with Clinical DiagnosisCO1Mode of examinationPracticalETEMode of examinationPracticalETEOther ReferencesI. Dejong's the neurological examination 2. Technique of the neurological examination in clinical practice.PSO2PSO3Other ReferencesPO1PO2PO3PO4PO5PO6PO7PSO1PSO2PSO31333333333333133333333333323333333333323333333333320%PO3PO4PO5	A	L		Nerv	ve Condu	ction stud	ies (MNC	CS, SNCS	& Late Resp	ponses)		CO1,CO2 O3
CEvoked potentials (SSEP, MEP, BAERA, and VER) $0.03 \\ CO1, CO2 \\ O3 \\ $	В			Elect	romyogra	phy						CO1,CO2
Unit 4OUTAAble to perform / take Clinical decision making in electrotherapeutics.CO1,CO3BInterpretation of Neuro-psychological functions. Perception testing and training.CO1,CO3CApplication of Principles of clinical neuro diagnosis and investigationCO2Unit 5CO1,CO3AInterpretation of Principles of clinical neuro diagnosis and investigationCO2Unit 5CO1AInterpretation of Investigations: -Basic Principles, Procedure, Indication, Contraindication & Interpretation (Normal & Abnormal) (in brief) - Skull X ray, Common Laboratory tests in Neurological disordersCO1BInterpretation of Computerized Tomography, 	С	1		Evol	ked poter	tials (SSE	EP, MEP,	BAERA, a	and VER)			C01,C02
AAble to perform / take Clinical decision making in electrotherapeutics.CO1,CO3BInterpretation of Neuro-psychological functions. Perception testing and training.CO1,CO3CApplication of Principles of clinical neuro diagnosis and investigationCO2Unit 5Interpretation of Investigations: -Basic Principles, Procedure, Indication, Contraindication & Interpretation (Normal & Abnormal) (in brief) - Skull X ray, Common Laboratory tests in Neurological disordersCO1BInterpretation of Computerized Tomography, Magnetic Resonance Imaging & Co-relation with Clinical DiagnosisCO1CInterpretation & Co-relation with Clinical Diagnosis Intracranial Pressure monitoring, Lumbar puncture,CO1,CO3Mode of examinationPracticalETE20%Veightage DistributionCAETE20%20%80%1.Dejong's the neurological examination2.2.Technique of the neurological examination in clinical practice.PSO2PSO3133333332333333233333323333332333333	T	Init 4									03	
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CApplication of Principles of clinical neuro diagnosis and investigationCO2Unit 5Interpretation of Investigations: -Basic Principles, Procedure, Indication, Contraindication & Interpretation (Normal & Abnormal) (in brief) - Skull X ray, Common Laboratory tests in Neurological disordersCO1,CO2BInterpretation of Computerized Tomography, Magnetic Resonance Imaging & Co-relation with Clinical DiagnosisCO1CInterpretation & Co-relation with Clinical Diagnosis Intracranial Pressure monitoring, Lumbar puncture,CO1Mode of examinationCAETEDistribution20%80%Text book/s*1. Dejong's the neurologic examination 2. Technique of the neurological examination 3. Bickerstaff's neurological examination in clinical practice.PSO2Other ReferencesPO1PO2PO3PO4PO5PO6PO7PSO1PSO2PSO31333333333333323333333333323333333333343233333233233243233333333323324323333333332 <t< td=""><td>B</td><td><u> </u></td><td></td><td>Inter train</td><td colspan="8">Interpretation of Neuro-psychological functions. Perception testing and training.</td></t<>	B	<u> </u>		Inter train	Interpretation of Neuro-psychological functions. Perception testing and training.							
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AInterpretation of Investigations: -Basic Principles, Procedure, Indication, Contraindication & Interpretation (Normal & Abnormal) (in brief) - Skull X ray, Common Laboratory tests in Neurological disordersCO1,CO2BInterpretation of Computerized Tomography, 	U	Init 5										
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C Interpretation & Co-relation with Clinical Diagnosis CO1,CO3 Mode of examination Practical ETE CO1,CO3 Weightage CA ETE CO1,CO3 Distribution 20% 80% CO1,CO3 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 PO1 PO2 PO3 PO4 PO5 PO6 PO7 PS01 PS02 PS03 1 3 3 3 3 3 3 3 3 3 3 3 2 3	В			Interpretation of Computerized Tomography, Magnetic Resonance Imaging & Correlation with Clinical Diagnosis								CO1
Mode of examinationPracticalETE PracticalWeightage Distribution CA ETE 20% 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 ReferencesPO1PO2PO3PO4PO5PO6PO7PS01PS02PS0313333333333332333333333332333333333333233333333333432333323323324323333233233243233333333233 <td>C</td> <td>1</td> <td></td> <td colspan="8">Interpretation & Co-relation with Clinical Diagnosis</td> <td>CO1 CO3</td>	C	1		Interpretation & Co-relation with Clinical Diagnosis								CO1 CO3
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3. Bickerstaff's neurological examination in clinical practice.Other ReferencessPO1PO2PO3PO4PO5PO6PO7PS01PS02PS0313333332322333333333233333333323333333323323324323332233				2. 7	Fechniqu	e of the ne	eurologica	al examina	tion: De Me	eyer, Willi	am E.	
Other References PO1 PO2 PO3 PO4 PO5 PO6 PO7 PS01 PS02 PS03 1 3 3 3 3 3 3 3 2 3 2 3 2 3 2				3. I	Bickerstaf	f's neurolo	gical exan	nination in o	clinical pract	ice.		
Seferences PO1 PO2 PO3 PO4 PO5 PO6 PO7 PS01 PS02 PS03 1 3 3 3 3 3 3 2 3 2 3 2 3 2 3		4h a.r.										
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L-Slight (Low)		J 1_Slight	(I	<u>~</u> v)	5	5	J	۷.	۷.	5	ر ا	Ζ

2-Moderate (Medium)

3-Substantial (High)



School: SAHS		Batch : 2020-2022							
Pro	gram:	Current Academic Year: 2020-21							
MP	T(Neurology)								
Bra	nch:	I Year							
1	Course Code	MPT 104							
2	Course Title	Advanced Physiotherapeutics (Theory)							
3	Credits								
4	Contact Hours (L-T-P)								
	Course Type	Compulsory							
5	Course	1. To provide knowledge about various techniques used in	1						
	Objective	NeurologicalPhysiotherapy.							
	5	2. To analyse and classify various Neurological Disorders	and its management.						
		3. Compare & contrast the outcome of various p	hysiotherapytreatment						
		approaches.							
6	Course	CO1. Learn various techniques of Physiotherapy.							
	Outcomes	CO2. To formulate a rationalized physiotherapy treatment	plan for the Patient.						
		CO3. Use various skills for rehabilitation of the individua	CO3. Use various skills for rehabilitation of the individuals.						
		CO4: Compare & contrast the outcome of various physiotherapy treatment							
		approaches							
7	Course	The course will enable the students to learn skills and tech	iniques to be used in						
	Description	Physiotherapy management of Neurological conditions							
8	Outline syllabus	8	CO Mapping						
	Unit 1								
	А	Theories of Motor Control	CO1,CO2,CO3,CO4						
	В	Theories of Motor learning,	CO1,CO2,CO3						
	С	Theories of aging.	CO1,CO2,CO3						
	Unit 2								
	А	Bobath & Neurodevelopment technique, Brunnstrom, PNF &	CO1,CO2,CO3,						
		BiofeedbackRood's Approach, Functional Electrical	CO4						
		Stimulation							
		Neural mobilization technique, MFR,Motor Relearning							
		Program, Task Oriented Training, Constrained Induced							
		I nerapy,							
	B	ME1, Dain management (neuropiology, various theories	CO1 CO2 CO3 CO4						
	D	modulation and management of pain)	01,002,003,004						
	C	Assessment of fitness and exercise prescription for special	CO1 CO2 CO3 CO4						
		neurological population	01,002,003,004						
	Unit 3								
	A	Physiotherapy Management in Neuro-ICU	CO2,CO3						
	В	Basic knowledge of drugs used for neurological conditions.	CO2,CO3						
	С	Pathophysiology and Management of tonal	CO2,CO3						
		abnormalities (Spasticity, Rigidity, Hypotonia and	,						



r			- Beyond Boundarres
		Dystonia).	
	Unit 4		
	A	Prosthetics, Orthotics & Assistive Technologies, Wheelchair Prescription & Wheelchair skills- Basic & Advanced, Environmental modifications	CO2
	В	Balance, Gait, Coordination & Vestibular training	CO2,CO3
	С	Physiotherapy in Cognitive and Perceptual disorders and other psychiatric conditions.	CO2
	Unit 5		
	А	Yogasana - Concept of Yogic Practices, Kinds of Yogic Practices, Meaning & concept of Meditation.	C01,C02,C03
	В	Recent Advances in Neurological Rehabilitation.	CO2,CO3
	С	Community based rehabilitation for neurological dysfunction	CO2,CO3
	Mode of examination	Theory	
	Weightage	CA ETE	
	Distribution	20% 80%	
	Text book/s*	 Neurological Rehabilitation: Taly, A.B. Proprioceptive Neuromuscular Facilitation Knott M & Voss, Harper & Row. Clinical neurophysiology: U.K.Misra, J.Kalita. Motor control Theory and practice: Shumway-cook & Anne. Neurological Rehabilitation: Umphred, Darcy, A. Melzack and Wall: Text book of pain. 	
	Other References	 Catherine A Trombly. Occupational Therapy for physical dysfunction, Williams & Wilkins.4Ed, 1998 Brain and Bannister's Clinical Neurology, Sir Ruger Bannister, Oxford.7Ed, 1992 Introduction to nervous System – Hokmes Bullock, WH Freeman and company. 	

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
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: 2020-22								
Pro	ogram:	Current Academic Year: 2020-21								
M	PT(Neurology)									
Bra	unch:	I Year								
1	Course Code	MPT 107								
2	Course Title	Advanced Physiotherapeutics (Practical)								
3	Credits									
4	Contact Hours									
	(L-T-P)									
	Course Type	Compulsory								
5	Course	1. To provide knowledge about various techniques used in								
	Objective	Neurological Physiotherapy.								
	-	2. To analyse, diagnose and classify various Neurological dysfunction	and their							
		management.								
		3. Compare & contrast the outcome of various Neurophysiological phy	ysiotherapy							
		treatment approaches.								
6	Course	CO1. Learn various techniques of Physiotherapy.								
	Outcomes	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								
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									
	А	Theories of Motor Control	CO1, CO2,							
			CO3,CO4							
	В	Theories of Motor learning,	CO1, CO2,							
			CO3							
	С	Theories of aging.	CO1, CO2,							
			CO3							
	Unit 2									
	А	Able to perform & utilize Bobath & Neurodevelopment technique,	CO1, CO2,							
		Brunnstrom, PNF & BiofeedbackRood's Approach, Functional Electrical	CO3, CO4							
		Sumulation Neural mobilization technique, MFR, Motor Relearning								
		MET								
	В	Implementation of Pain management (neurobiology various theories	CO1. CO2							
	~	modulation and management of pain)	CO3, CO4							
	С	Assessment of fitness and exercise prescription for special neurological	CO1, CO2							
	~	population	CO3, CO4							
	Unit 3									
	A	Implement Physiotherapy Management in Neuro-ICU	CO2 CO3							
L	11	Improment i mystothorupy trunusomont in routo-100	0.02, 0.05							

				RDA ERSITY		
В	Basic knowle	dge of	drugs used for neurological conditions.	CO2,CO3		
С	Demonstrati abnormalitie	on& u s (Spa	ttilization of Physiotherapy techniques for tonal asticity, Rigidity, Hypotonia and Dystonia).	CO2,CO3		
Unit 4						
А	Able to identi Technologies Advanced,En	CO2				
В	Demonstrati	CO2,CO3				
C Demonstration of Physiotherapy in Cognitive, Perceptual and other psychiatric conditions.						
Unit 5						
А	Demonstrati	CO1,CO2,C O3				
В	Recent Advar	nces in	Neurological Rehabilitation.	CO2,CO3		
С	Able to imple dysfunction	Able to implement Community based rehabilitation for neurological dysfunction				
Mode of examination	Practical					
Weightage	CA		ETE			
Distribution	20%		80%			
Text book/s*	 Carpente Ed, 1998 Ropper, Catherin dysfunct 	er, Me princi e A Tr ion –,	ntal Health & Learning disability — EURETT. 2 ples of Neurology, JP, 10 Ed, 2014 rombly. Occupational Therapy for physical Williams & Wilkins.4Ed, 1998 71			
Other References	 Brain an Oxford.7 Introduct and com 	d Ban ⁷ Ed, 1 tion to pany,1	nister's Clinical Neurology, Sir Ruger Bannister, 992 9 nervous System – Hokmes Bullock, WH Freeman 1st Ed,2000			

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)



Scho	ool: SAHS	Batch :2020-22					
Prog	gram:	Current Aca	demic Year:	2020-21			
MP	Г(Neurology)						
Brai	nch:	I Year					
1	Course Code	MPT 105					
2	Course Title	Journal Club	and Clinical	Case Presentation			
3	Credits						
4	Contact Hours						
	(L-T-P)						
	Course Type	Compulsory					
5	Course Objective	The objective	of the course	is that, the student will be a	able to		
		1. To de	velop confider	nce and presentation skill.			
		2. To de	velop decision	making and reasoning skill	ls in patient		
		manag	management.				
		3. To develop efficient methods of study of research journals.					
6			. 6.1				
0	Course Outcomes	After comple	tion of the cou	lise, the students will be abl	e to;		
		CO1: Assess	the patient and	a document their records.			
		CO2. Present	the latest rese	arch in journal presentation			
		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	s to design and	l develop the in-depth think	ing ability.		
	I I I I I I I I I I I I I I I I I I I	presentation skill, reasoning and decision making, analytical skills and deep					
		exploration o	f various topic	s and cases among the stud	ents. It will enhance		
		the research ability of the students hence will help in uplifting the new rays of					
		therapeutic skills.					
	Mode of	Practical					
	examination						
	Weightage	CA					
	Distribution	50			50		

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	
COs											
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	1-Slight (Low)										

2-Moderate (Medium) 3-Substantial (High)



Scho	ool: SAHS	Batch :2020-22							
Prog	gram:	Current Academic Year: 2021-22							
MP	Γ(Neurology)								
Brar	nch:	II Year							
1	Course Code	MPT 221							
2	Course Title	Pedagogy in Physiotherapy Education							
3	Credits								
4	Contact Hours								
	(L-T-P)								
	Course Type	Compulsory							
5	Course	1. To educate the students about the concepts of teaching an	d learning.						
	Objective	2. To enable them to learn about the philosophies of educati	on.						
		3. To provide knowledge about curriculum, techniques, and	methods of teaching.						
6	Course	CO1. Understand the dynamics of teaching and learning.							
	Outcomes	CO2. Plan effective teaching sessions in Physiotherapy.							
		CO3: Learn method and techniques of teaching							
		CO4: Learn meaning and concept, basis of curriculum form	ulation						
		CO5: To know the use of various teaching aids							
7	Course	This course presents knowledge and application of different teaching							
	Description	methodology to the students. The course begins with core topics of Concepts of							
		Teaching and learning, Curriculum, various teaching methods and concept of							
		guidance and counselling etc							
:8	Outline syllabus		CO Mapping						
	Unit 1								
	А	Education: - Introduction, Educational Philosophy-	CO1.CO2						
		Idealism Naturalism, Pragmatism	001,002						
	В	Aims of Education, Functions of Education, Formal,	CO1.CO2						
		informal and non-formalEducation,Agencies of Education	001,002						
	С	Current issues and Trends in Higher Education, Issue of	CO1.CO2						
		quality in Higher Education							
	Unit 2								
	А	Meaning and scope of Educational Psychology	CO1,CO2						
	В	Dynamics of behavior, Individual differences	CO1,CO2						
	С	Method and techniques of teaching: - Lecture,							
		Demonstration, Discussion, Seminar, Assignment, Project,	CO1,CO2,CO3						
		CaseStudy							
	Unit 3								
	А	Curriculum: - Meaning and concept, Basis of							
		curriculum formulation, Process of curriculum							
		development and factors involved. Evaluation	CO1,CO2,CO4						
		of curriculum							
	B	Framing objectives for curriculum Bloom's taxonomy							
	ע	af							
		oi instructional	C01,C02,C03,C04						
		objectives, Writinginstructional objectives in behavioral							



9		I		
C	Unit planning, Lesson planning		CO1,CO2,CO3	
Unit 4				
A	Teaching aids, Types of teaching aids, F selection, preparation and use of audio- visua	Principles of alaides,	CO1,CO2, CO4,CO5	
В	Measurement and Evaluation, Nature measurement: meaning, process, types of te of an achievement test and its analysis,	of educational ests, Construction	CO1,CO2,CO3	
C	Standardized test, Introduction of some star important tests of intelligence, aptitude, a Continuous and comprehensiveevaluation	ndardized tools, nd personality.	CO1,CO2	
Unit 5				
A	Guidance and counseling, Meaning & con- guidance and counseling, Principles of andcounseling	ncepts of guidance	CO1,CO2	
В	Awareness Programme, awareness and gu common people about health and disea	idance to the use	CO1,CO2	
С	Autonomy and Accountability, Privatization	of Education	CO1,CO2	
Mode of examination	Theory			
Weightage	CA ETE			
Distribution	20 80		100	
Text book/s*	Educational Technology: A Primer for the 2 Centuryby Ronghuai Huang & J. Michael Sp Yang) Pedagogy and Practice: Teaching and Learni	lst bector & Junfeng ingby 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)

Soh	J-Substantial (Rotah + 2020 2022								
Scile Drod		Datch : 2020-2022								
MD	gram: F (Nourology)	Current Academic Year: 2021-22								
Brai	nch.	II Voor								
1	Course Code	MPT 202								
2	Course Title	Administration Management and Ethical Issues								
2	Credits	Administration, Management and Educal Issues								
1	Contact Hours									
4	(L-T-P)									
	Course Type	Compulsory								
5	Course	1. To provide knowledge about the management process and its func	ctions.							
	Objective	2. To educate about the marketing and total quality management.								
		3. To educate the students about the role of hospital as an organisation	on							
		4. To educate about the rules of professional conduct, code of ethics	and legal ethical							
		issues in Physiotherapy and the standards of practice for physiothera	pists.							
6	Course	CO1. Understand the basic issues of management and administration	1.							
	Outcomes	CO2. Practice as an informed professional on legal and e	thical issues in							
		Physiotherapy.								
		CO3 To understand the basic principle of Management and its import	rtance.							
		CO4: To understand the importance of hospital and how it we	orks in different							
		departments.								
		CO5:To understand the role of Physiotherapy and its benefits to the	society.							
7	Course	The course will enable the students about the rules of professional	conduct, code of							
	Description	ethics and legal ethical issues in Physiotherapy and the standard	s 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									
	A	Management: Introduction, Evolution of management, Functions	CO1,CO3							
		of management								
	В	Management process – planning, organization, direction,	CO1,CO3							
	C	Controlling, Decision-making.	CO1 CO2							
	C	Personner management: Starting, Recruitment selection,	01,005							
	Unit 2	Performance appraisar, conective barganning, jobsatisfaction.								
		Markating Markat accountation Channels of distribution	CO1 CO2 CO2							
	A	Promotion Consumerbahaviour	01,002,005							
	D	Total Quality Management: Region of quality management. Quality	CO1CO2CO2							
	D	control. Quality assurance Programma in hearitale	01,002,003							
	C	Modical audit International quality	CO1 CO2							
	Unit 2		01,002							
		Hognital on an arganization Experience and transport hognital.								
	A	Hospital as an organization - Functions and types of nospitals	C01,C02,C04							
1	В	Koles of Physical therapist, Physical therapy Director,	CO1,CO2,C5							
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	Physiotherapy sup	ervisor,		
	Physiotherapy a	issistant,Physic	otherapy aide, Home health aide,	
	Volunteer.			
 С	CO1,CO2			
Unit 4				
А	Legal responsibilit	ty, Code of eth	nics	CO1,CO2
В	Functions of Physi	iotherapy asso	ciations	CO1,CO2
С	Role of the Interna	ational Health	Agencies	CO1,CO2
Unit 5				
А	Standards of practi	ice for physiot	herapists	CO1,CO2
В	Liability and oblig	ations in the c	ase of medical legal action, Law	CO1,CO2
	of disability & di	scrimination	-	
С	Confidentially of t	the Patient's st	atus, Consumer protection law,	CO1,CO2
	health law, MCI, I	DCP	-	
Mode of	Theory			
examination				
Weightage	СА		ETE	
Distribution	20%		80%	
Text book/s*	1. Healthcare System	em and manag	gement: Goel, S.L.	
	2. Documenting pl	hysical therapy	v: Baeten, Angla	
	3 Physical Therap	v Administrat	ion & Management by Hickik	
	4 Monogoment Dr			
	4. Wanagement Pr			
	Nosse Lorry J.			
	5. Textbook of He	althcare ethics	: Loeuy, Erich H	
Other				
References				

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
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

2-Moderate (Medium)

3-Substantial (High)



School: SAHS		Batch : 2020-2022					
Pro	ogram:	Current Academic Year: 2021-22					
MI	PT(Neurology)						
Bra	anch:	II Year					
1	Course Code	MPT 223					
2	Course Title	Neurological Physiotherapy I (Medical) Theory					
3	Credits						
4	Contact Hours (L-T-P)						
	Course Type	Compulsory					
5	Course	1. To educate students about etiology, pathophysiology, clinical	presentation and				
	Objective	physiotherapy management of general Neurological disorders.					
		2. To provide knowledge about epidemiology, Patho-physiolo	gy and clinical				
		conditions affectingNervous system.					
		3. To educate students about physiotherapy management for vario	ous Neurological				
		disorders.	C				
6	Course	CO1. Understand about etiology, pathophysiology, clinical presentation	tion				
	Outcomes	and physiotherapy management of general Neurological disorders.					
		CO2. Understand about epidemiology, Patho physiology and clinica	1				
		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 Neurologic	al				
		Disorders.					
7	Course	This course is designed to develop and enhance the knowledge of Medical					
	Description	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					
	А	Disorders of cerebral circulation –	CO1, CO2,				
		i) Epidemiology of the Stoke	CO5				
		ii) Causes, Types, Pathophysiology					
		iii) Clinical Features and Investigation					
		iv) Treatment of Different Type of Stroke					
		v) Recovery and Rehabilitation					
		vi) Stroke Prevention					
	В	Head Injury- Epidemiology, Pathology, Symptoms, Signs,	CO1, CO2,				

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	Investigation, Management, Pre and Post-Operative	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	
С	Disorders of Higher Cerebral Cortical Function and its	CO1, CO2,
	rehabilitation	CO5
	Disorders of Different Lobes	
	i) Frontal lobes	
	ii) Temporal lobes	
	iii) Parietal lobes	
	iv) Occipital lobes	
	v) Sub Cortical lesions	
Unit 2		
А	Spinal Cord Injury-	CO1,CO2,
	i)Types, Classifications	CO5
	ii) Pathology	
	iii) Level	
	iv) Examination	
	v) Management & Rehabilitation	
	vi) Bladder and Bowel dysfunction and its rehabilitation	
	vii) Bio Engineering Appliances &Support Devices	
В	Disorders of spine & spinal cord, -	CO1, CO2,
	i) Acute Traumatic Injuries	CO5
	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	
С	Infectious disorders of nervous system	CO1, CO2,
	i) Meningitis	CO5
	ii) Encephalitis	
	iii) Brain Abscess	



-		yond Boundaries
	iv) Syphilis	
	v) Herpes Simplex	
	vi) Chorea	
	vii) Poliomyelitis	
	viii) Tuberculosis	
	ix) Transverse Myelitis	
Unit 3		
Α	Epilepsy/ Seizures – i) Epidemiology, Classification, Causes,	CO1, CO2,
	Precipitating factors, Diagnosis, ii) Myoclonus.	CO5
	Demyelinating Disorders of CNS- Multiple Sclerosis	
	Brain Tumors	
В	Degenerative disorders- Alzheimer's' Disease, Huntington's	CO1, CO2
	Disease, Motor Neuron Disease	CO5
С	Movement disorders- Parkinson's Disease, Cerebellar Ataxia,	CO1, CO2,
	Sensory Ataxia, Chorea, Athetosis, Tics, Dystonia	CO5
Unit 4		
Α	Disorders of cranial nerves	CO1.
	i) Testing of Cranial Nerves	CO2,CO3,CO4
	ii) Disorders of Cranial Nerves, Cranial Neuropathy	
	iii) Rehabilitation Protocol	
В	Disorders of Peripheral nerves-	CO1, CO2,
	Peripheral Neuropathies	CO4
	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	
С	Disorders of muscles & Neuromuscular Junction-	CO1,
	i) The Myotonic Disorders	CO2,CO3,
	ii) Inflammatory Disorders of the Muscle	CO4
	iii) Myasthenia Gravis	
	iv) Endocrine Dystrophy	
 1		1

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	v) Muscular Dystrop	hy		yon'd boandarres	
 Unit 5					
A	Common Paediatrics neurology (Cerebral Neuropsychiatric dis & metabolic disorde	Common Paediatrics Condition & Its Rehabilitation -Paediatrics neurology (Cerebral Palsy, Developmental disorders, Neuropsychiatric disorders, Cerebral & Craniovertebral anomalies & metabolic disorders of nervous system).			
В	Congenital & hereditary Disorders-Hydrocephalous, Spina bifida, Syringomyelia,Arnold-Chiari malformation, Dandy-Walker syndrome				
С	Vestibular disorders	CO1, CO2,CO4			
Mode of examination	Theory				
Weightage	СА		ETE		
Distribution	20%		80%		
Text book/s*	 Physical Rehabil O'Sullivan, F.A. Neurological Rel Adams & victor' Brain & Banniste Spinal cord disea Management of I George E. Functional neuro r Stroke Therapy: F Patricia Davies – I 	itation A Davis, P nabilitatio s manual er's clinio ses: diag Periphera ehabilitati isher, Mar Right in th	ssessment and Treatment by hiladelphia, on: Umphred, Darcy, A. of Neurology, Victor Morris cal Neurology Brannister Roger nosis I Nerve Problems: Allan H O, ion: Berner, Julie. c.		
Other References	 Advances in Neu Neurology in Cli 	rology: (nical Pra	Gordin, Ariel ctices Vol. I & II		

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
Cos										
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

2-Moderate (Medium)



3-Substantial (High)

Scł	nool: SAHS	Batch :2020-22				
Pro	ogram: MPT	Current Academic Year: 2021-22				
(Ne	eurology)					
Bra	anch:	II Year				
1	Course Code	MPT 225				
2	Course Title	Neurological Physiotherapy I (Medical) Practical				
3	Credits					
4	Contact Hours					
	(L-T-P)					
	Course Type	Compulsory				
5	Course Objective	 To educate students about etiology, pathophysiology, clinical presentation and physiotherapy managements of general Neurological disorders. To provide knowledge about epidemiology, Patho physiology and clinical conditions affectingNervous system. To educate students about physiotherapy management for various 				
6	Course	Neurological disorders.				
0	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 				
7	Course Description	This course is designed to develop and enhance the knowled management for various Neurological disorders and Physiot same	lge of Medical therapy for the			
8	Outline syllabus		CO Mapping			
<u> </u>	Unit 1		······································			
	A	Demonstration of physiotherapy management for Disorders of cerebral circulation	CO1,CO2,CO5			
	В	Demonstration of physiotherapy management in Rheumatic disorders: - Head Injury	CO1,CO2, CO5			
	С	Demonstration of physiotherapy management for Higher Cerebral Cortical Function	CO1,CO2, CO5			
	Unit 2					
	А	Demonstration of physiotherapy management for Spinal Cord Injury	CO1,CO2, CO5			
	В	Demonstration of physiotherapy management in Disorders of spine & spinal cord-) Acute Traumatic Injuries ,	CO1, CO2, CO5			

		SHARD
	 Haematomyelia and Acute Central Cervical Cord Injuries, Slow Progressive Compression of the Spinal Cord , 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 	
С	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
В	Demonstration of physiotherapy management in Degenerative disorders- Alzheimer's' Disease, Huntington's Disease, Motor Neuron Disease	CO1, CO2 CO5
С	Demonstration of physiotherapy management in Movement disorders- Parkinson's Disease, Cerebellar Ataxia, Sensory Ataxia, Chorea, Athetosis, Tics, Dystonia	CO1, CO2, CO5
Unit 4		
А	Demonstration of physiotherapy management in Disorders of cranial nerves	CO1, CO2, CO3,CO4
В	 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	Demonstration of physiotherapy management in Common Pediatrics Condition & Its Rehabilitation -Pediatrics neurology (Cerebral Palsy, Developmental disorders, Neuropsychiatric disorders, Cerebral & Craniovertebral	CO1, CO2, CO4



	anomalies & metabolic disorders of nervous system).					
В	Demonstration of physiotherapy manager	ment i	n	CO1,		
	Congenital & hereditary Disorders-Hydro	ocepha	alous, Spina	CO2,CO4		
	bifida, Syringomyelia, Arnold-Chiari ma	lforma	ation,			
	Dandy-Walker syndrome					
С	Demonstration of physiotherapy manager	ment i	n	CO1,		
	Vestibular disorders and its rehabilitation			CO2,CO4		
Mode of	Practical					
examination						
Weightage	CA		ETE			
Distribution	20%		80%			
Text book/s*	10. Physical Rehabilitation Assessment a	nd Tr	eatment by			
	O'Sullivan, F.A. Davis, Philadelphia,					
	11. Neurological Rehabilitation: Umphre	d, Dai	rcy, A.			
	12. Adams & victor's manual of Neurolo	gy, V	ictor Morris			
	13. Brain & Bannister's clinical Neurolog	gy Bra	annister			
	Roger					
	14. Spinal cord diseases: diagnosis					
	15. Management of Peripheral Nerve Pro	blems	s: Allan H			
	O, George E.					
	16. Functional neuro rehabilitation: Berner, 3					
	17. Stroke Therapy: Fisher, Marc.					
	18. Patricia Davies – Right in the middle (tru					
	hemi).					
Other	3. Advances in Neurology: Gordin, Arie	el				
References	4. Neurology in Clinical Practices Vol.	[& II				

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
Cos										
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

2-Moderate (Medium)

3-Substantial (High)



Sch	nool: SAHS	Batch : 2020-2022							
Pro	gram:	Current Academic Year: 2021-22							
MF	PT(Neurology)								
Bra	anch:	II Year							
1	Course Code	MPT 224							
2	Course Title	NeurologicalPhysiotherapy II (Surgical) Theory							
3	Credits								
4	Contact Hours								
	(L-T-P)								
	Course Type	Compulsory							
5	Course	1. To educate students about orientation and general principles of							
	Objective	Neurological surgeries.							
		2. To provide knowledge about the physiotherapy management							
		following surgical procedures							
6	Course	CO1. Understand about the orientation and general principles of Neuro	logical						
	Outcomes	Surgeries.							
		CO2. Assess the patients following surgical procedures.							
		CO3:Provide the physiotherapy management following surgical proced	lures						
		CO4: Enable the students to gain knowledge aboutNeurological implan	its.						
		CO5: Enable the students to gain knowledge aboutCNS Surgeries, PNS	Surgeries.						
7	Course	The course will enable the students to gain knowledge about orientati	on and general						
	Description	principles of Neurological surgeries. This will help them to formul	ate and design						
		physiotherapy treatment program following surgical procedures.							
8	Outline syllabus		CO Mapping						
	Unit 1								
	А	General Principles of neurosurgery	CO1, CO2,						
		General Timelples of neurosurgery	CO3						
	В	Disorders of CSF Fluid & circulation, - Pre &Post-Operative	CO1, CO2,						
		Rehabilitation protocol of Conditions related to Raised Intra Cranial	CO3						
		Pressure-							
		Hydrocephalus,							
		Intracranial Abscess,							
	Central Oedema								
		and Sign, Examination Management,							
		Pre &Post-Operative							
		Rehabilitation protocol							
	С	Management of an unconscious Patient –	CO1,CO2,						
		The Neural basis of Consciousness, Clinical Terminology, Lesions	CO3						

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	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 C
11		03
B	Malformations of spine & spinal cord-Surgeries	
D	Pre & Post-Operative Rehabilitation	CO3 CO4
C	Surgeries for Vescular Disfunction of Brain	
C	Surgenes for Vascular Dystunction of Brain	CO1, CO2,
N N N		05,004
Unit 3		
А	Surgeries for disc disorders,	CO1, CO2,
		CO3
В	Surgical repair of peripheral Nerves-	CO1, CO2,
	De-compression	CO3,CO4
	Nerve Suture	
	Nerve Grafting	
С	Decompression surgeries for spinal cord –	CO1, CO2
	Disc Operation (Cervical, Lumbar)	CO3,CO5
	Stenosis	
	Oedema, Abscess	
	Lumber Puncture	
Unit 4		
A	Muscle lengthening/ Release	CO1 CO2
11	Wusere rengulenning, release,	CO3
D	Surgarias for Specificity management	
D	Surgenes for Spasticity management	CO1, CO2,
C	Intensive Care Unit Management of the Neurologically Impaired	CO1, CO2,
.	Patient.	03
Unit 5		
A	Stereotactic surgery	CO1, CO2,
		CO3
В	Image guided frameless stereotaxic surgery,	CO1, CO2,
		CO3
С	Psychosurgery	CO1, CO2,
		CO3
Mode of	Theory	
examination		
 I		1



		i i i i i i i i i i i i i i i i i i i	d Boundaries
Weightage	CA	ETE	
Distribution	20%	80%	100
Text book/s*	 Neurological Rehabilitation: Ump Motor control Theory and practice Physical rehabilitation by Susan E 	bhred, Darcy, A. e: Shumway-cook & Anne. 3, O' Sullivan, Thomas J. Schmitz.	
Other References	 Functional neuro rehabilitation: B Patricia Davies – Right in the mid Patricia Davies – Steps to follow Carr & Shepherd – Neurological n performance. Sydney Sunderland – Nerves and 	Gerner, Julie. Idle (trunk activity in hemi). (comprehensive treatment for hemi). rehabilitation: optimizing motor 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

2-Moderate (Medium)

3-Substantial (High)



Scho	ool: SAHS	Batch : 2020-2022						
Prog	gram:	Current Academic Year: 2021-22						
MP	Γ(Neurology)							
Bra	nch:	II Year						
1	Course Code	MPT 226						
2	Course Title	Neurological Physiotherapy II (Surgical)Practical						
3	Credits							
4	Contact Hours							
	(L-T-P)							
	Course Type	Compulsory						
5	Course	1. To educate students about orientation and general p	rinciples of					
	Objective	Neurological surgeries.						
		2. To provide knowledge about the physiotherapy mar	agement					
		following surgical procedures						
	0							
6	Course	COI. Understand about the orientation and general pri	inciples of					
	Outcomes	Neurological surgeries.						
		CO2. Assess the patients following surgical procedure	S.					
		CO3:Provide the physiotherapy management fol	lowing surgical					
		procedures						
		cO4: Enable the students to gain knowledge at	boutineurological					
		Implants $CO5$: Enable the students to gain knowledge about Surgeries of CNS &						
		CO3. Enable the students to gain knowledge about Surgeries of CNS & PNS in Adults & Paediatrics Neurological condition						
		PNS in Adults & Paediatrics Neurological condition						
7	Course	The course will enable the students to gain k	nowledge about					
	Description	orientation and general principles of Adults	& Paediatrics					
	-	Neurological surgeries. This will help them to form	ulate and design					
		physiotherapy treatment program following surgical p	rocedures.					
8	Outline syllabus		CO Mapping					
	Unit 1							
	•	To demonstrate physiotherapy Assessment	CO1,CO2,CO3					
	A	&management following Neurosurgeries						
		To demonstrate physiotherapy management in post	CO1,CO2,CO3					
	В	surgeries Conditions related to Raised Intra Cranial						
		Pressure						
		To demonstrate physiotherapy management for an	CO1,CO2,					
		unconscious Patient	CO3					



	Unit 2		
	٨	To demonstrate physiotherapy management after	CO1,CO2,CO3
	A	Cerebral malformations Surgeries.	
		To demonstrate physiotherapy Assessment &	CO1, CO2,
	В	management in Malformations of spine & spinal	CO3,CO4
		cord-Surgeries, Pre &Post-Operative Rehabilitation	
		To demonstrate physiotherapy Assessment &	CO1, CO2,
	С	management in Surgeries for Vascular Dysfunction	CO3,CO4
		of Brain	
	Unit 3		
		To demonstrate physiotherapy Assessment &	CO1, CO2,
	A	management in Surgeries for disc disorders,	CO3
		To demonstrate physiotherapy Assessment &	CO1, CO2,
		management in Surgical repair of peripheral	CO3,CO4
	В	Nerves-	
		i) De-compression ii) Nerve Suture iii) Nerve	
		Grafting	
		To demonstrate physiotherapy Assessment &	CO1, CO2
		management in Decompression surgeries for spinal	CO3,CO5
	С	cord – i) Disc Operation (Cervical, Lumbar)	
		ii) Stenosis	
		iii) Oedema, Abscess	
		iv) Lumber Puncture	
	Unit 4		
		To demonstrate physiotherapy Assessment &	CO1, CO2,
	A	management in Muscle lengthening/ Release,	CO3
	D	To demonstrate physiotherapy Assessment &	CO1, CO2,
	В	management in Surgeries for Spasticity management	CO3
		To demonstrate physiotherapy Assessment &	CO1, CO2,
	С	management in Intensive Care Unit for	CO3
		Neurologically Impaired Patient.	
	Unit 5		
	•	To demonstrate physiotherapy Assessment &	CO1, CO2,
	А	management Stereotactic surgery	CO3
		To demonstrate physiotherapy Assessment &	CO1, CO2,
	В	management in Image guided frameless stereotaxic	CO3
		surgery,	
	C	To demonstrate physiotherapy Assessment &	CO1, CO2,
	C	management in Psychosurgery	CO3
	Mode of	Practical	



examination			
Weightage	CA ETE		
Distribution	20% 80%		100
Text book/s*	 Neurological Rehabilitation: Ump Motor control Theory and practic & Anne. Physical rehabilitation by Susan I Thomas J. Schmitz. 		
Other References	 Functional neuro rehabilitation: H Patricia Davies – Right in the mid in hemi). Patricia Davies – Steps to follow treatment for hemi). Carr & Shepherd – Neurological optimizing motor performance. Sydney Sunderland – Nerves and Medicine by Garret 	Berner, Julie. Idle (trunk activity (comprehensive rehabilitation: nerve injuries.	

	DO 1	DOO	DOO	DO 1	D 05	DOC	D 07	DCO1	DCOO	DCOO
POs	POI	PO2	PO3	PO4	POS	PO6	PO/	PSOI	PSO2	PSO3
COs										
CO1										
	3	3	3	3	3	3	3	2	3	2
CO2										
	3	3	3	3	3	3	2	3	3	3
CO3										2
	3	3	2	3	3	2	3	3	3	
CO4										2
	3	3	2	3	3	2	3	3	3	_
CO5										
	3	3	2	3	3	2	3	3	3	2

2-Moderate (Medium)

3-Substantial (High)



Sch	ool: SAHS	5	Batch :20	020-22									
Prog	gram:		Current A	Current Academic Year: 2021-22									
MP	Γ(Neurolo	gy)											
Bra	nch:		II Year										
1	Course C	Code	MPT 205										
2	Course T	Title	Journal C	lub and C	linical Ca	ise Present	ation						
3	Credits												
4	Contact I (L-T-P)	Hours											
	Course T	ype	Compulso	ory									
5	Course		The object	tive of the	course is	that, the s	tudent will	be able to					
	Objective	e	1. To	develop c	confidenc	e and prese	entation skil	1.					
			2. To	develop o	lecision n	naking and	l reasoning s	skills in pa	tient mana	gement.			
			3. To	develop e	efficient n	nethods of	study of res	search jour	mals.				
6	Course		Δfter.com	nletion of	the cours	e the stud	ents will be	able to:					
0	Outcome	S	$CO1 \cdot Asse$	ess the nat	the cours	locument t	heir records						
	outcome		CO2 Pres	ent the lat	est resear	ch in jourr	al presentat	tion					
			CO3. Pres	ent the va	rious case	es and desi	gn the treat	ment progr	amme for				
			the patient	ts			0	1.0					
			CO4. Und	erstand Ev	vidence b	ased imple	ementation of	of various i	research				
			protocols.			1							
			CO5.Reas	oning and	decision	-making re	egarding dia	gnosis, tre	atment and	l follow-	up		
			of patients	5		-		-			_		
7	Course		This cours	se is to des	sign and c	levelop the	e in-depth th	inking abi	lity, preser	ntation			
	Descripti	ion	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		Practical										
	examinat	tion	<u></u>										
	Weightag	ge	CA							50			
	Distribut	10n	50							50			
DO	DO1	DO2	DO2	DO 4	DOS	DOC	D07	DCO1	DECO	DCO2	٦		
POs	POI	PO2	P03	P04	P05	PO6	P07	PS01	PS02	PS03			
$\frac{COs}{CO1}$											-		
COI	3	3	3	3	3	3	3	3	3	3			
CO2	2	2	2	2	2	2	2	2	2	3	1		
CO2	3	3	3	3	3	3	3	3	3	2	-		
005	2	2	3	3	3	3	3	3	3	3			
CO4	2	2	2	2	2	2	2	2	2	3]		
CO5	5	5		5		5	5	5	5	3	1		
	3	3	3	3	3	3	3	3	3				



2-Moderate (Medium) 3-Substantial (High)

Scl	hool: SAHS	Batch : 2020-22					
Pre	ogram:	Current Academic Year: 2021-22					
M	PT(Neurology)						
Bra	anch:	II Year					
1	Course Code	MPT 206					
2	Course Title	Dissertation					
3	Credits						
4	Contact Hours						
	(L-T-P)						
	Course Type	Practical					
5	Course Objective	The objective of the course	is that, the student will be a	able to			
		1. Apply the evidence	s for the search of new know	wledge.			
		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	g and decision making, anal	ytical 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	CA	ETE				
	Distribution	20% 80%					

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
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)





Program Structure Template

School of Allied Health Sciences Master of Physiotherapy (Sports)

Batch - (2020-22)

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



Note: Detailed Mission Statements of University can be used for developing Mission Statements of Schools/ Departments.

1.2 Vision and Mission of the School

Vision of the School

To produce skilled man power in different areas of biomedical science for better

healthcare delivery

Mission of the School

1. To strengthen the main line medical and health services.

2. To become effective assisting and support system to medical and health

personnel.

Core Values

1. Skilled professional

2. Multidimensional

3. Compassion

4. 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 sports physiotherapy assessment by relevant and current physiotherapeutic concepts.
- PEO4: To plan and implement appropriate Physiotherapeutic interventions for sports 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	School
	Mission 1	Mission 2
PEO1:	3	3
PEO2:	2	3
PEO3:	3	3
PEO4:	3	3
PEO5:	3	3
PEO6:	2	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 relevant to sports.
- PO2. **Understanding**: Students will be able to understand the core concepts in sports physiotherapy techniques.
- PO3. **Thinking ability:** Students will be able to develop the skills for sports assessment in order to identify, examine and distinguish between various musculoskeletal conditions in sports.
- 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: Students 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 musculoskeletal conditions in sports
- 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	3	3
	3	3	3	3	3	3
PO4						
PO5	3	3	3	3	3	3
PO6	3	3	3	3	3	3
PO7	3	3	3	3	3	3
PSO1	3	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 Table¹:

Progra m Outcom e Courses	Course Name	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PSO 1	PSO 2	PSO 3
1 st Year											
Course 1.1	Research Methodology and Evidence Based Practice	1	1	1	1	1	3	2	2	2	3
Course 1.2	Basic Medical and Paraclinical Sciences	2	2	3	2	2	3	3	3	2	3
Course 1.3	Sports Biomechanics and Kinanthropometry	3	2	3	2	3	2	3	3	2	2
Course 1.4	Assessment and Evaluation in Sports Physiotherapy(Theor y)	3	3	3	3	3	2	3	3	3	3
Course 1.5	Basic and Applied Exercise Physiology	2	2	2	3	3	3	3	3	3	3
Course 1.6	Assessment and Evaluation in Sports Physiotherapy(Practi cal)	2	2	2	3	3	3	3	3	3	3
Course 1.7	Seminars,Journal Club and Clinical Case Presentation	3	2	2	3	2	3	2	2	2	3
2 ND Year											
Course 2.1	Sports psychology	2	2	3	3	3	3	3	3	3	3

¹ Cel value will contain the correlation value of respective course with PO.

Prepared by : SU/SAHS/MPT

									S U	HAR NIVER	A SITY ndaries
Course 2.2	Pedagogy and ethics in physiotherapy	1	1	2	2	2	3	3	2	2	3
Course 2.3	Traumatic and non traumatic conditions of athletes	3	3	3	3	3	3	3	3	3	3
Course 2.4	Medical aspects of sports medicine	3	3	3	3	3	3	3	2	2	3
Course 2.5	Sports physiotherapy methods	3	3	3	3	3	3	3	3	3	3
Course 2.6	Current concepts in sports medicine	3	3	3	3	3	3	3	2	3	3
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 MATRIX²

Program Outcome Courses	Course code	Course Name		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO2	PSO3
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 112	Basic Medical and Paraclinical											
		Sciences	CO1	3	2	3	3	3	2	3	3	3	2
			CO2	3	2	3	2	3	3	3	3	1	2
			CO3	2	2	3	2	2	2	3	2	2	3
			CO4	2	2	3	3	3	2	2	3	2	2
			CO5	2	2	3	3	3	3	2	3	2	1
Course 1.3	MPT 113	Sports Biomechanics and Kinanthropometr											
		у	CO1	3	2	2	3	3	3	2	2	2	3
			CO2	3	2	2	3	3	3	2	2	2	3
			CO3	3	2	3	3	3	3	2	2	2	2
			CO4	2	2	3	3	2	3	2	2	1	2

² Each course outcome (Based on Blooms Taxanomy-CO1, CO2, CO3, CO4, CO5, and CO6) of the course needs to map with PO. This table evolves once faculty has mapped each course outcomes of their respective course with PO's.

											SH UNI	(ARDA VERSITY	
			CO5	1	1	2	3	2	2	3	2	3	2
Course 1.4	MPT 114	Assessment and Evaluation in Sports Physiotherapy											
		(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 1.5	MPT 115	Basic and Applied Exercise	CO1	2		2			2	2			
		Physiology	C01	3	2	3	3	3	3	3	3	3	2
			CO_2	2	2	2	2	2	2	2	2	2	<u> </u>
			C03	3	2	2	3	3	2	3	3	3	2
			C04	2	2	3 1	3 1	2	2	2	2	3 2	2
Practical			0.05	5	2	2	2	5	5	2	5	2	5
Course 2.1	MPT 117	Assessment and Evaluation in Sports Physiotherapy											
		(Practical)	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 2.2	MPT 116	Seminar,Journal Club and Clinical Case					_	_		_	_	_	_
		Presentation	CO1	3	3	3	3	3	3	3	3	3	3

Page 11

												ARDA	7
			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		Sports											
Course 5.1	MPT 231	psychology	CO1	2	2	3	3	3	3	3	3	3	3
			CO2	2	2	2	3	3	3	3	3	3	3
			CO3	2	2	3	3	3	3	3	3	3	3
			CO4	2	2	2	3	3	3	3	3	3	3
			CO5	2	2	2	3	3	3	3	3	3	3
Course 3.2	MPT 232	Pedagogy and ethics in											
		Physiotherapy	CO1	1	2	2	2	2	3	3	1	1	2
			CO2	1	1	1	2	2	3	2	1	2	2
			CO3	1	1	1	2	2	3	2	1	2	2
			CO4	1	1	1	2	3	3	2	1	2	2
			CO5	1	1	1	2	3	3	2	1	2	2
Course 3.3		Traumatic and											
		non traumatic											
	MPT 233	conditions of athletes											
			CO1	3	3	3	3	з	3	3	2	3	2
			$\frac{CO1}{CO2}$	3	3	3	3	3	3	2	3	3	2
			CO3	3	3	2	3	3	3	3	3	3	3
			CO4	3	3	2	3	3	2	3	3	3	2
			CO5	3	2	2	2	2	2	2	3	3	2
Course 3.4	MPT 234	Medical aspects of sports medicine											
			CO1	3	3	3	3	3	3	3	2	3	2

											SH UNI	ARDA VERSITY	s
			CO2	2	2	2	2	2	2	2	2	2	3
			CO3	2	2	2	2	2	2	2	2	2	3
			CO4	3	2	2	3	3	2	3	3	3	2
			CO5	3	2	3	3	2	3	2	3	3	2
Course 3.4	MPT 235	Sports physiotherapy methods	CO1	2	2	2	2	2	2	2	2	2	2
			CO^2	3	3	3	3	3	3	2	2	3	2
			CO3	्र २	2	2	2	2	2	ू २	2	2	2
			CO4	3	3	2	3	3	2	3	3	3	2
			CO5	5	5	-		3	-		5	5	-
				3	3	2	3	3	2	3	3	3	2
Course 3.5	MPT 236	Current concepts in sports medicine											
			CO1	2	3	2	3	3	3	3	3	3	3
			CO2	2	2	3	2	3	3	2	3	3	3
			CO3	2	2	3	2	3	3	3	3	3	2
			CO4	2	2	2	3	3	2	3	3	3	2
			CO5	3	3	3	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
		1 resentation	CO^2	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

Page 13

											SH UNI	ARDA	L 7 5
			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
1			CO5	3	3	3	3	3	3	3	3	3	3
Course 4.3	MPT 239	Sports physiotherapy methods	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(Sports) Batch: 2020-2022 TERM: I Year

S. No.	Paper ID	Subject Code	Subjects	T L	eaching T	Load P	Credits	Core/Elective Pre-Requisite/ Co Requisite	Type of Course ³ : 1. CC 2. AECC 3. SEC 4. DSE
THE	ORY SUBJ	ECTS							
	35395	MPT 111	Research Methodology and Evidence Based Practice					Core	CC
,	35416	MPT 112	Basic Medical and Paraclinical Sciences					Core	CC

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

								SH UNI	ARDA VERSITY
3.	35417	MPT 113	Sports Biomechanics and Kinanthropometry					Core	CC
4.	35418	MPT 114	Assessment and Evaluation in Sports Physiotherapy					Core	SEC
5.	35419	MPT 115	Basic and Applied Exercise Physiology					Core	DSC
ractio	al/Viva-V	oce/Jury			1				
6.	35420	MPT 116	Seminars, Journal Club and Clinical Case Presentation					Core	DSC
7.	35421	MPT 117	Assessment and Evaluation in Sports Physiotherapy					Core	SEC
8.	35398	MPT 108	Clinical Training					Co-requisite	SEC
			TOTAL CREDITS	-	·				
			Program Structu School of Allied H MPT(Sp Batch: 202 TERM: II	ire Ter ealth S orts) 0-2022 Year	nplate Science	S			
S. No.	Paper I	D Subject Code	Subjects	L	Teaching T	Load P	Credits	Core/Elective Pre-Requisite/ Co Requisite	Type of Course ⁴ : 1. CC 2. AECC 3. SEC
	CC: Core Co	urse, AECC: Abi	ity Enhancement Compulsory Courses, SEC: Skill Enha	ncement	Courses, D	DSE: Discip	oline Specific (Courses	Page 16

				SI SI		
					Seyond E	4. DSE
THEORY	Y SUBJE	CTS				
9.	35422	MPT 231	Sports psychology		Core	DSC
10.	35423	MPT 232	Pedagogy and ethics in physiotherapy		Core	DSC
11.	35424	MPT 233	Traumatic and non traumatic conditions of athletes		Core	CC
12.	35425	MPT 234	Medical aspects of sports medicine		Core	CC
13.	35426	MPT 235	Sports physiotherapy methods		Core	DSC
14.	35427	MPT 236	Current concepts in sports medicine		Core	DSC
Practical	/Viva-Voo	e/Jury				
15.	7939	MPT 205	Journal Club and Clinical Case Presentation		Core	DSC
16.	7940	MPT 206	Dissertation		Core	DSC
17.		MPT 239	Sports physiotherapy methods		Core	DSC
18.	35407	MPT 230	Clinical Training		Co-requisite	DSC
			TOTAL CREDITS			





C. Course Templates


School: SAHS		Batch : 2020-22			
Proc	Jui BAIIS	Current A cadamic Vaar	2020-21		
MP	Glam. F(Snorts)	Current Academic Tear.	2020-21		
Brai	nch·	I Vear			
1 1	Course Code	MPT 111			
2	Course Title	Pasaarch Mathodology and Evidence Resed Practice			
3	Credits	Research Methodology and Evidence Dased Tractice			
4	Contact				
-	Hours				
	(L-T-P)				
	Course Type	Compulsory			
5	Course	1. To explain the basic concepts, terms and definitions used	l in health		
	Objective	research.			
	U U	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 \cdot			
		4. Carry out simple analysis of collected data and interpre	t findings		
		appropriately ·			
6	Course	The student will be able to:			
	Outcomes	CO1. Understand the basic concepts, terms and definitions	used in health		
		research methodology			
		CO2. To acquire the skills of reviewing literature, formulat	e a		
		hypothesis, collecting data, writing research proposa	l.		
		CO3. Describe the importance and use of Biostatistics for	research		
		work.			
		CO4: To identify different scales of measurement used in re	esearch		
		CO5: To read published research critically and to know how	w to publish a		
7	Comme	paper			
/	Course	This secures is designed to develop the basis knowledge of respon	ab biostatistics		
	Description	which can be used to understand its special needs in relation to i	interventions in		
		physiotherapy The course will provide a comprehensive int	roduction to		
		research proposal writing research methodologies, and fou	ndational		
		research theories and protocols			
8	Outline syllabu	IS	CO Mapping		
	Unit 1				
	А	Research in physiotherapy – Introduction	CO1, CO2		
		Research for Physiotheranist. Why? How? And			
		When? Research Definition concept purpose			
		when i, Research – Deminion, concept, purpose,			
		approaches, Internet sites for Physiotherapist			

2.1 Template A1: Syllabus for Theory Subjects (SAMPLE)

		SHARDA UNIVERSITY
В	Research Fundamentals, Define measurement, Measurement framework, Scales of measurement, Pilot Study, Types of variables, Reliability & Validity, Drawing Tables, graphs, master chart etc	CO1, CO2,CO4
С	Writing a Research Proposal, Critiquing a research article, Defining a problem	CO1, CO2,CO5
Unit 2		
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
В	Research Design- Principle of Designing, Design, instrumentation & analysis for qualitative research, Design, instrumentation & analysis for quantitative research Design, instrumentation & analysis for quasi-experimental research, Design models utilized in Physiotherapy	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		
A	Biostatistics- Introduction, Definition, Types, Application in Physiotherapy; Data –Definition, Types, Presentation, Collection methods	CO1, CO3,CO4
В	Measures of central value- Arithmetic mean, median, mode. Relationship between them, Partitioned values- Quatertiles, Deciles, Percentiles, Graphical	CO1, CO3,CO4



	1 . 1 . 1	N	Beyond Boundaries
	determination		
С	Measures of Dispersion- Rang Standard Deviation, Normal Properties of normal distribution distribution, Transformation of variables. Inverse transfo approximation of Bioaxial distribution	ge, Mean Deviation, Distribution Curve, on, Standard normal f normal random formation, Normal ibution.	CO1, CO2,CO3,CO4
Unit 4			
A	Correlation analysis- Bivariate Diagram, Coefficient of correla interpretation of correlational co test, P-value; Regression a regression, Calculation of Regres	distribution: Scatter ation, Calculation & oefficient, T-test, Z- analysis- Lines of sssion coefficient	CO1, CO3,CO4
В	Sampling- Methods of Sampling Standard error, Types I & II erro Brief),Hypothesis Testing, Null I hypothesis, Acceptance & reject Level of significance	g, Sampling distribution, or, Probability (in Hypothesis, Alternative ion of null Hypothesis,	CO1, CO3,CO4
С	Parametric & non parametric te test, Mann-Whitney U test, W test, Kruskal-Wallis test, Frie test/student T test, Analysis of va	ests- Chi square Vilcoxon Signed lednam test, T- ariance	CO1, CO3,CO4
Unit 5			
A	Evidence-based health care. evid	dence-based practices	CO1, CO2
В	evidence-based decision making	and management	CO1, CO2
С	Types of evidence - Definition evidence, Randomized controlle studies, Cohort studies	of evidence, Forms of led trials, Case–control	CO1, CO2
Mode of	Theory		
examination			
Weightage	CA ETH	E	
Distribution	20% 80%	<u>/0</u>	
Text book/s*	1. Recent Methods for Clinical The Project Design and analysis by	herapists: applied Carolyn Hicks	
	2. Elements of Research in Physic	cal Therapy: Dean P.	

*	SHARDA
	UNIVERSITY Beyond Boundaries

	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	1. Albert R. Roberts and Kenneth R. Yeager, Evidence-	
References	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	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
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



School: SAHS		Batch : 2020-22	eyona Boundaries	
Pros	gram:	Current Academic Year: 2020-21		
MP	Γ(Sports)			
Bra	nch:	I Year		
1	Course Code	MPT 112		
2	Course Title	Basic Medical and Paraclinical Sciences		
3	Credits	Dusie medical and Faraciment Sciences		
1	Contact Hours			
-	(I T D)			
	(L-1-1)	Compulsory		
5	Course Type	1. To provide a detailed introduction on basic concercl and		
3	Obiostivo	1. To provide a detailed infroduction on basic general analog	omy,	
	Objective	2. The character the standards all part the sum and nerves		
		2. To educate the students about the concept of various phy	/siological	
		systems of the body	c	
		3. To encourage the students to understand the concepts of	[
		Pharmacology and Pathophysiology of certain diseases		
		4. To educate and train the students about the concepts of	radiology	
		and its application		
6	Course	The student will be able to:		
0	Course	The student will be able to:	o f	
	Outcomes	the much sheletel events	01	
		CO2. Better understanding of physical and of various system.	ma of the hody	
		that allows have an analysis of physiology of various system	ins of the body	
		that allows numans to engage in physical activity.	ad ita waa	
		CO3: Knowledge about basic concepts of Pharmacology and CO4. To understand the mathematical and formation disease	na its use	
		CO4: To understand the appoints of Padiala sy and its and	es nlightign in	
		COS: To understand the concepts of Radiology and its ap	plication in	
		assessment process		
7	Carrier			
/	Course	I his course is designed to enable the student to have a bett	er	
	Description	understanding of the anatomy, physiology, pharmacology af	nd radiology	
		of the musculoskeletal system.		
0	O		CO M ·	
8	Outline syllabus		CO Mapping	
	Unit 1			
	А	Anatomy of the Nerve Injuries: Anatomical and		
		Physiological loss resulting from nerve injury, Relaxation		
		ot nerves, Peripheral nerve entrapment		
	В	Anatomical Angles and stiff joints: Anatomical Angles,	CO1	
		Optimal attitude for stiff joints, Snapping joints		
	C	The pathology of bones in terms of anatomy:	CO1	
		Anatomical facts regarding bones, Anatomical		



	disturbances in various bone pathologies	
Unit 2	Applied General Physiology	
A	Blood : The various components of blood, Viscosity correlation,Oxyhemoglobin Dissociation curves,Interrelationship between pressure flow and resistance, Pressure volume curves, Stress relaxation of vessels	CO2
В	Cardiovascular system: Physical characteristics of systemic circulation, Pressure pulses,. Oxygen demand theory of local blood flow circulation, Nervous control of blood circulation,. Humorous control of blood circulation, Mechanisms of arterial pulse regulation,	CO2
C	Hypertension, Cardiac output and its regulation,Methods of measuring cardiac output,Normal coronary blood flow along with variations,Physiological basis of ischemic heart disease,. The cardiac reserve, Physiological causes of shock	CO2
Unit 3	Physiological Systems	CO2
A	Respiratory System: Review of mechanics of respiration, Pulmonary volumes and capacities, Transport of oxygen in blood, Carbon dioxide in blood, Regulation of respiration, Methods of studying respiratory abnormalities	CO2
В	Endocrine System: Pituitary hormones and their functions,Thyroid hormones,. Adrenocortical hormones,Insulin Glucagon hormones,Parathyroid hormones	CO2
C	Pathology: Inflammation and repair, "Failed" healing responses, Regional considerations of Inflammation & repair of soft tissue injuries.,Pathophysiology of certain diseases: Infections of the hand, lesions of supraspinatous, subdeltoid bursae and bicipital tendinitis, low back pain, sciatica, lesions of inter- vertebral disk	CO4
Unit 4	Pharmacology	
А	Principles of drug action	CO3
В	Basic pharmacokinetics and Pharmacodynamics	CO3
С	The use of drugs in various musculoskeletal disorders.	CO3
Unit 5	Radiology	



А	Basics of radiology including ultrasonograph MRI scanning	y CT &	CO5
В	Imaging of the head and neck, spine, (shoulder, elbow, wrist)	upper limb	CO5
С	Imaging of pelvis, hip and thigh, Patello Fer & Knee joint, lower leg, foot and ankle.	noral Joint	CO5
Mode of examination	Theory		
 Weightage	CA		
Distribution	20% 80%		
Text book/s*	 Synopsis of Surgical Anatomy – John Wr Bristol Gray's Anatomy– Williams & Warwick Livingstone. Grants – Methods of Anatomy – B Sloncker – Williams & Wilkins. Clinical Anatomy for Medical Students Lippincott. Textbook of Medical Physiology – Guytom Pathologic Basis of Diseases – Robbins, Kumar – W.B. Saunders. The Pharmacological basis of The Goodman and Gilman – MacMillan. Pharmacology and Pharmacotherapeutics – Bhandarkar – Popular Publications – Bombay Pathology implications for Physical T Goodmann & Boissonnault– W. B. Saunders. Davidsons – Principles and Practice o Edward – Churchill Livingstone. Hutchinsons – Clinical Methods of Medi – Bailliere Tindall. Systems of Orthopedics – Apleys – Heinmann. Outline of Fractures – Adams – Livingstone. Tureks – Orthopedics – Weinsteil & E Lippincott Publications. Text Book of Radiology – Sutton D. Livingstone. 	ight & Sons, – Churchill asmajian & a – Snells – A – Mosby. Kotran and rapeutics – – Satoskar & y. Therapists – f Medicine– icine –Swash Butterworth – Churchill Buckwalter – – Churchill	
Other References			



POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
CO1	2	2	2	2	2	2	2	2	2	2
	3	2	3	3	3	2	3	3	3	2
CO2	2	2	2	2	2	2	2	2	1	2
	5	Z	5	Z	5	5	3	3	1	Z
CO3	2	2	3	2	2	2	3	2	2	3
CO4	2	2	3	3	3	2	2	3	2	2
CO5	2	2	3	3	3	3	2	3	2	1



School: SAHS		Batch : 2020-22			
Program: MPT(Sports)		Current Academic Yea	r: 2020-21		
MP	Γ(Sports)				
Bra	nch:	I Year			
1	Course Code	MPT 113			
2	Course Title	Sports Biomechanics and Kinanthropometry			
3	Credits				
4	Contact Hours				
	(L-T-P)				
	Course Type	Compulsory			
5	Course Objective	 To educate the students about the concepts of Biomecl use in Physiotherapy To educate the students about mechanics of musculosk To develop understanding about the concept of Kinant To develop understanding about the methods of Somat 	nanics and their eletal System hropometry totyping		
6	Course Outcomes	 CO1. The students will learn about kinetics and its use in Physiotherapy CO2. The students will learn about kinematics and its us in Physiotherapy CO3. The students will understand the mechanics of vari body CO4. The students will understand the concept of Kinan CO5: The students will understand the methods of Soma 	e ous joints in thropometry ttotyping		
7	Course Description	The course is designed to enable the students to have known understanding about role of biomechanics and Kinanthro Sports.	owledge and pometry in		
8	Outline syllabus		CO Mapping		
	Unit 1	Introduction to Kinematics			
	A	Definition, aims, objectives and role of Kinesiology in sports physiotherapy.	CO1,CO2		
	В	Review of fundamental concepts (applied aspect), Centre of gravity, Line of gravity, Planes, Lever system in Body. Fundamental starting positions	CO1,CO2		
	C	Baview of linear and angular kinometica	CO1 CO2		
	Unit 2	Mochanics of Musculoskolotal System			
		witchanics of musculoskeletal System			



	•		
	A	Tissue loads, response of tissues to forces- Stress,	C01,C02
		Strain, Stiffness and mechanical strength, visco	
		elasticity	
	В	Physical Properties of bone, cartilage, tendon and	CO1,CO2
		ligaments, functional adaptation under pathological	
		conditions.	
	С	Impaired neuromuscular control, muscular force	CO1.CO2
	C	regulation in Frame work and joints of the	001,002
		body: Influence of trauma and classification of the	
		muscles Polation of structure functions	
		nuscies, Relation of structure, functions,	
		role of muscles, types of Muscle, contractions (Static,	
		Concentric and Eccentric), I wo joint	
		Muscles, Angle of pull, Role of Gravity affecting	
		muscular action.	
	Unit 3	Biomechanics of Joints	
	А	a) Nature and importance of Biomechanics in	CO1,CO2,CO3
		Physiotherapy, Principle of Biomechanics	
	В	Biomechanics of shoulder and shoulder complex,	CO1,CO2,CO3
		elbow complex, wrist and hand complex, pelvic, hip,	
		knee, ankle & foot complex and spine	
	С	Biomechanics in Sports: Biomechanics of running.	CO1.CO2.CO3
	-		, ,
		rowing, throwing, swimming, jumping and cycling	
	Unit 4	rowing, throwing, swimming, jumping and cycling Kinanthropometry	
	Unit 4 A	Kinanthropometry Introduction and significance of kinanthropometric	CO4
	Unit 4 A	Kinanthropometry Introduction and significance of kinanthropometric knowledge in sports medicine Age determination:	CO4
	Unit 4 A	Kinanthropometry Introduction and significance of kinanthropometric knowledge in sports medicine, Age determination: Skeletal age dental age	CO4
	Unit 4 A	rowing, throwing, swimming, jumping and cyclingKinanthropometryIntroduction and significance of kinanthropometricknowledge in sports medicine, Age determination:Skeletal age, dental ageBody measurements: Gross size and mass lengths or	CO4
	Unit 4 A B	rowing, throwing, swimming, jumping and cyclingKinanthropometryIntroduction and significance of kinanthropometricknowledge in sports medicine, Age determination:Skeletal age, dental ageBody measurements: Gross size and mass, lengths orheights of body partscircumferences of body parts	CO4 CO4
	Unit 4 A B	rowing, throwing, swimming, jumping and cyclingKinanthropometryIntroduction and significance of kinanthropometricknowledge in sports medicine, Age determination:Skeletal age, dental ageBody measurements: Gross size and mass, lengths orheights of body parts, circumferences of body parts,skinfold thickness Planes and axes of the body	CO4 CO4
	Unit 4 A B	rowing, throwing, swimming, jumping and cycling Kinanthropometry Introduction and significance of kinanthropometric knowledge in sports medicine, Age determination: Skeletal age, dental age Body measurements: Gross size and mass, lengths or heights of body parts, circumferences of body parts, skinfold thickness, Planes and axes of the body, landmarks on the body.	CO4 CO4
	Unit 4 A B	rowing, throwing, swimming, jumping and cyclingKinanthropometryIntroduction and significance of kinanthropometric knowledge in sports medicine, Age determination: Skeletal age, dental ageBody measurements: Gross size and mass, lengths or heights of body parts, circumferences of body parts, skinfold thickness, Planes and axes of the body, landmarks on the body, Body mass index, phantom	CO4 CO4
	Unit 4 A B	rowing, throwing, swimming, jumping and cyclingKinanthropometryIntroduction and significance of kinanthropometric knowledge in sports medicine, Age determination: Skeletal age, dental ageBody measurements: Gross size and mass, lengths or heights of body parts, circumferences of body parts, skinfold thickness, Planes and axes of the body, landmarks on the body, Body mass index, phantom stratagem, Z – scores, O – scale system	CO4 CO4
	Unit 4 A B C	rowing, throwing, swimming, jumping and cyclingKinanthropometryIntroduction and significance of kinanthropometricknowledge in sports medicine, Age determination:Skeletal age, dental ageBody measurements: Gross size and mass, lengths orheights of body parts, circumferences of body parts,skinfold thickness, Planes and axes of the body,landmarks on the body, Body mass index, phantomstratagem, Z – scores, O – scale systemBody composition : Different Body composition,	CO4 CO4 CO4
	Unit 4 A B C	rowing, throwing, swimming, jumping and cyclingKinanthropometryIntroduction and significance of kinanthropometricknowledge in sports medicine, Age determination:Skeletal age, dental ageBody measurements: Gross size and mass, lengths orheights of body parts, circumferences of body parts,skinfold thickness, Planes and axes of the body,landmarks on the body, Body mass index, phantomstratagem, Z – scores, O – scale systemBody composition : Different Body composition,various methods to estimate body composition	CO4 CO4 CO4
	Unit 4 A B C	rowing, throwing, swimming, jumping and cyclingKinanthropometryIntroduction and significance of kinanthropometricknowledge in sports medicine, Age determination:Skeletal age, dental ageBody measurements: Gross size and mass, lengths orheights of body parts, circumferences of body parts,skinfold thickness, Planes and axes of the body,landmarks on the body, Body mass index, phantomstratagem, Z – scores, O – scale systemBody composition : Different Body composition,various methods to estimate body compositionincluding water displacement method, under water	CO4 CO4 CO4
	Unit 4 A B C	 rowing, throwing, swimming, jumping and cycling Kinanthropometry Introduction and significance of kinanthropometric knowledge in sports medicine, Age determination: Skeletal age, dental age Body measurements: Gross size and mass, lengths or heights of body parts, circumferences of body parts, skinfold thickness, Planes and axes of the body, landmarks on the body, Body mass index, phantom stratagem, Z – scores, O – scale system Body composition : Different Body composition, various methods to estimate body composition including water displacement method, under water weighing methods Kinanthropometric determination of 	CO4 CO4 CO4
	Unit 4 A B C	rowing, throwing, swimming, jumping and cyclingKinanthropometryIntroduction and significance of kinanthropometricknowledge in sports medicine, Age determination:Skeletal age, dental ageBody measurements: Gross size and mass, lengths orheights of body parts, circumferences of body parts,skinfold thickness, Planes and axes of the body,landmarks on the body, Body mass index, phantomstratagem, Z – scores, O – scale systemBody composition : Different Body composition,various methods to estimate body compositionincluding water displacement method, under waterweighing methods Kinanthropometric determination ofthe body composition (skinfold thickness),	CO4 CO4 CO4
	Unit 4 A B C	rowing, throwing, swimming, jumping and cyclingKinanthropometryIntroduction and significance of kinanthropometricknowledge in sports medicine, Age determination:Skeletal age, dental ageBody measurements: Gross size and mass, lengths orheights of body parts, circumferences of body parts,skinfold thickness, Planes and axes of the body,landmarks on the body, Body mass index, phantomstratagem, Z – scores, O – scale systemBody composition : Different Body composition,various methods to estimate body composition,various methods to estimate body compositionincluding water displacement method, under waterweighing methods Kinanthropometric determination ofthe body composition (skinfold thickness),Bioelectrical impedance analysis, Ultrasound	CO4 CO4 CO4
	Unit 4 A B C	 rowing, throwing, swimming, jumping and cycling Kinanthropometry Introduction and significance of kinanthropometric knowledge in sports medicine, Age determination: Skeletal age, dental age Body measurements: Gross size and mass, lengths or heights of body parts, circumferences of body parts, skinfold thickness, Planes and axes of the body, landmarks on the body, Body mass index, phantom stratagem, Z – scores, O – scale system Body composition : Different Body composition, various methods to estimate body composition including water displacement method, under water weighing methods Kinanthropometric determination of the body composition (skinfold thickness), Bioelectrical impedance analysis, Ultrasound assessment of fat, Arm X–ray assessment of fat, 	CO4 CO4 CO4
	Unit 4 A B C	 rowing, throwing, swimming, jumping and cycling Kinanthropometry Introduction and significance of kinanthropometric knowledge in sports medicine, Age determination: Skeletal age, dental age Body measurements: Gross size and mass, lengths or heights of body parts, circumferences of body parts, skinfold thickness, Planes and axes of the body, landmarks on the body, Body mass index, phantom stratagem, Z – scores, O – scale system Body composition : Different Body composition, various methods to estimate body composition including water displacement method, under water weighing methods Kinanthropometric determination of the body composition (skinfold thickness), Bioelectrical impedance analysis, Ultrasound assessment of fat, Arm X–ray assessment of fat, Computed tomography (CT) assessment of fat. 	CO4 CO4 CO4
	Unit 4 A B C	 rowing, throwing, swimming, jumping and cycling Kinanthropometry Introduction and significance of kinanthropometric knowledge in sports medicine, Age determination: Skeletal age, dental age Body measurements: Gross size and mass, lengths or heights of body parts, circumferences of body parts, skinfold thickness, Planes and axes of the body, landmarks on the body, Body mass index, phantom stratagem, Z – scores, O – scale system Body composition : Different Body composition, various methods to estimate body composition including water displacement method, under water weighing methods Kinanthropometric determination of the body composition (skinfold thickness), Bioelectrical impedance analysis, Ultrasound assessment of fat, Arm X–ray assessment of fat, Computed tomography (CT) assessment of fat. 	CO4 CO4 CO4
	Unit 4 A B C	rowing, throwing, swimming, jumping and cyclingKinanthropometryIntroduction and significance of kinanthropometricknowledge in sports medicine, Age determination:Skeletal age, dental ageBody measurements: Gross size and mass, lengths orheights of body parts, circumferences of body parts,skinfold thickness, Planes and axes of the body,landmarks on the body, Body mass index, phantomstratagem, Z – scores, O – scale systemBody composition : Different Body composition,various methods to estimate body composition,various methods to estimate body compositionincluding water displacement method, under waterweighing methods Kinanthropometric determination ofthe body composition (skinfold thickness),Bioelectrical impedance analysis, Ultrasoundassessment of fat, Arm X–ray assessment of fat,Computed tomography (CT) assessment of fat.	CO4 CO4 CO4
	Unit 4 A B C Unit 5	rowing, throwing, swimming, jumping and cycling Kinanthropometry Introduction and significance of kinanthropometric knowledge in sports medicine, Age determination: Skeletal age, dental age Body measurements: Gross size and mass, lengths or heights of body parts, circumferences of body parts, skinfold thickness, Planes and axes of the body, landmarks on the body, Body mass index, phantom stratagem, Z – scores, O – scale system Body composition : Different Body composition, various methods to estimate body composition including water displacement method, under water weighing methods Kinanthropometric determination of the body composition (skinfold thickness), Bioelectrical impedance analysis, Ultrasound assessment of fat, Arm X–ray assessment of fat, Computed tomography (CT) assessment of fat.	CO4 CO4 CO4
	Unit 4 A B C C Unit 5 A	rowing, throwing, swimming, jumping and cycling Kinanthropometry Introduction and significance of kinanthropometric knowledge in sports medicine, Age determination: Skeletal age, dental age Body measurements: Gross size and mass, lengths or heights of body parts, circumferences of body parts, skinfold thickness, Planes and axes of the body, landmarks on the body, Body mass index, phantom stratagem, Z – scores, O – scale system Body composition : Different Body composition, various methods to estimate body composition including water displacement method, under water weighing methods Kinanthropometric determination of the body composition (skinfold thickness), Bioelectrical impedance analysis, Ultrasound assessment of fat, Arm X–ray assessment of fat, Computed tomography (CT) assessment of fat. Somatotyping a. Sheldon's method of somatotyping	CO4 CO4 CO4
	Unit 4 A B C C Unit 5 A B	rowing, throwing, swimming, jumping and cyclingKinanthropometryIntroduction and significance of kinanthropometricknowledge in sports medicine, Age determination:Skeletal age, dental ageBody measurements: Gross size and mass, lengths orheights of body parts, circumferences of body parts,skinfold thickness, Planes and axes of the body,landmarks on the body, Body mass index, phantomstratagem, Z – scores, O – scale systemBody composition : Different Body composition,various methods to estimate body compositionincluding water displacement method, under waterweighing methods Kinanthropometric determination ofthe body composition (skinfold thickness),Bioelectrical impedance analysis, Ultrasoundassessment of fat, Arm X–ray assessment of fat,Computed tomography (CT) assessment of fat.Somatotypinga. Sheldon's method of somatotyping: The rating	CO4 CO4 CO4 CO4 CO5 CO5



	Second and Somatotype	Second and Third Components, Somatotyping, Somatotype distribution					
С	Growth, matu	Growth, maturation and physical performance					
Mode of examination	Theory	Theory					
Weightage	CA	ETE					
Distribution	20%	80%					
Text book/s*	 James G. Ha Techniques, Pi 2. Brunnstrom Luttgens K. Basis of Huma 1997, Brown & 4. Kreighbaum Qualitative app Motion, 2nd E Rasch and E Ee and Fabig White and F Lippincott. Norkin & Lippincott. Norkin & Licomprehensiv Davis. Kapandji: P Saunders. Northrip et. and Biomecha W.C. Brown C Leveac B.I Orthopedic Th De Boer & Press, Florida. Basmajian Nordin & I Skeletal Systm Wilkins. Bartlet – In FN Spon Mada Singh and Mal Publications H.S. Sodhi Kinanthropom Verma and Reduction, Ex. Publication So Ostym, Be University Par 	ay – The Biomechanics of Sports rentice Hall. – Clinical Kinesiology, F.A. Davis. , Hamilton N.: Kinesiology – Scientific in Motion, 9th Ed., & Benchmark. h E., Barthels K.: Biomechanics – A proach for studying Human d. 1985, MacMillan. Burk: Kinesiology and Applied Anatomy, er. Punjabi – Biomechanics of Spine – evangie: Joint Structure and Function – A e Analysis – F.A. hysiology of Joints Vol. I, II & III, W.B. Al.: Analysis of Sports Motion: Anatomic nics Perspectives, Co., IOWA. F.: Basic Biomechanics in Sports and erapy, C.V. Mosby. Groot: Biomechanics of Sports, CRL – Muscle alive – Williams & Wilkins. Frankel – Basic Biomechanics of Muscular a – Williams & hotra: Kinanthropometry, Lunar : Sports Anthropometry (A etric Approach), Anova Publications ! Mokha: Nutrition, Exercise and Weight ercise Science ciety unen and Simons: Kinanthropometry II, k Press, Baltimore					



		Beyond Boundaries
	18. James A.P. Day: Perspectives in Kinanthropometry,	
	Human Kinetics Publishers, Inc.	
	Champaign, Illinois	
	19. L.S. Sidhu et. al: Sports Sciences – Health, Fitness	
	and Performance, IASSPE	
	20. L.S. Sidhu et. al: Trends in Sports Sciences, IASSPE	
Other		
References		

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



Sch	ool: SAHS	Batch : 2020-22							
Pro	gram:	Current Academic Year: 2020-21							
MPT (Sports)									
Bra	nch:	I Year							
1	Course Code	MPT 114							
2	Course Title	Assessment and evaluation in Sports Physiot	herapy(Theory)						
3	Credits								
4	Contact Hours (L-T-P)								
	Course Type	Compulsory							
5	Course	1. To provide the knowledge and skills about m	usculoskeletal system						
	Objective	assessment and evaluation of patients with sp	ports injuries						
		2. To provide skills to develop clinical decision	making for						
		musculoskeletal conditions in sports.							
		3. To provide knowledge and skills to rationalise	e the outcomes of						
		assessment.							
		4. To train the students to accurately record the s	assessment and design						
		individualized goals for patient.							
6	Course	CO1 Perform thorough physiotherapy assessme	ant and list deficiencies						
0	Outcomes	CO2 Design individualized goal for patients	and list deficiencies						
	Outcomes	CO3 Rationalize the outcome of assessment							
		CO4 Document systematic meaningful accura	CO3. Nationalize the outcome of assessmelline of accurate written records of						
		natients							
		CO5: To use assessment methods in designing t	reatment.						
7	Course								
	Description	This Course Supplements the Knowledge of ass	essment and diagnosis in						
	-	Orthopaedic conditions in sports. This will help	form base of professional						
		practice with the evidence based practice and en	ables the student to have a						
		better understanding of the subject along with th	neir application in						
		Orthopaedic and various other dysfunctions in s	ports.						
8	Outline syllabus		CO Mapping						
	Unit I		<u></u>						
	А	Importance of assessment & evaluation	C01,C02						
	В	Methods of evaluation – Interview, Clinical	CO1,CO2,CO3,CO4						
		Examination							
	С	Reliability & Validity of the tests	CO1,CO3,						
	Unit 2	Musculoskeletal screening							
	A	Musculoskeletal screening	CO1,CO2						
	В	Evaluation of Physical Fitness	C01,C03,C05						
	С	. Investigative Procedures, Field Tests	CO1,CO4						
	Unit 3	Assessment of upper and lower limb complex							

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А	Shoulder gird	dle, shoulder, arm, Elbow	C01,C02,C03,C04
В	Forearm, wris	t and hand.	C01,C02,C03,C04
С	Pelvis, hip,thi	CO1,CO2,CO3,CO4	
Unit 4	Assessment of	of spinal column	
А	Cervical spin	e	CO1,CO2,CO3,CO4
В	Thoracic and	lumbosacral spine	CO1,CO2,CO3,CO4
С	Tests of neura	l tension.	C01,C05
Unit 5	Gait Assessme	ent	
А	Assessment of	f Gait deviations	C01,C02,C03,C04,C05
В	EMG evaluat	tion	CO1,CO5
С	Diagnostic ar	nd kinesiological EMG	CO1,CO5
Mode of examination	Practical		
Weightage	CA	ETE	
Distribution	20%	80%	
Text book/s*	 Norkin & Motion – A Davis. Dvir: I Interpretation Saunders. 3: Assessment Saunders. Lillegard, H Sports Medici Approach, I 5. Baker: 7 Medicine Boo 	 White: Measurement of Joint Guide to Goniometry – F.A. Isokinetics: Muscle Testing, and Clinical Applications, W.B. Reed: Sports Injuries – and Rehabilitation, W.B. Butcher & Rucker: Handbook of ine: A symptom – Oriented Butterworth & Heinemann The Hughston Clinic Sports ok, Williams & Wilkins. 	
Other			
References			

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
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



School: SAHS		Batch : 2020-22	Seyond Boundaries					
Prog	gram:	Current Academic	e Year: 2020-21					
MP	Γ(Sports)							
Bra	nch:	I Year						
1	Course Code	MPT 115						
2	Course Title	Basic and applied exercise physiology						
3	Credits							
4	Contact Hours (L-T-P)							
	Course Type	Compulsory						
5	Course	1. To provide a detailed introduction on basic and a	pplied exercise					
	Objective	physiology						
		2. To educate the students about the role of nutrition	n in sports					
		3. To provide knowledge about energy systems and	energy transfer in					
		body.	1.00					
		4. To educate the students about the exercise prescr	iption for different					
		age groups and specific conditions						
6	Course	The student will be able to:						
Ŭ	Outcomes	CO1:Knowledge on basic and applied exercise phy	vsiology					
		CO2:Better understanding of role of nutrition in spo	orts to engage in \					
		physical activity.						
		CO3:Knowledge about various energy systems and	l its transfer in					
		body.						
		CO4: To understand the concept of exercise prescri	ption for different					
		age groups and specific conditions						
		CO5: Develop understanding about conditions affe	ecting athletic					
		performance						
7			1					
/	Course	This course is designed to develop knowledge and a	clinical application of					
	Description	exercise physiology in sports. It also enables the su	lied mothe de te					
		anhance athletic performance	med methods to					
8	Outline syllabus	emance atmetic performance.	CO Manning					
0	Unit 1	Nutrition						
	A	Carbohydrates, Fats, Proteins, Vitamins, Minerals	CO1.CO2					
		and Water	201,002					
	В	Optimal Nutrition for exercise. Nutrition for	CO1,CO2					
		Physical Performance. Pre–Game meal.						
		Carbohydrate loading.						
	С	Alcohol, Mega Vitamin Therapy, Food for	CO1,CO2					
		various athletes of different disciplines, Fluid and						
		energy						



Unit 2	Energy Transfer for Physical Activity	
A	Energy transfer in Body, Energy transfer in exercise, Energy expenditure during various activities, Fatigue,	CO1,CO2,CO3, CO4
В	Cardio Vascular System and Exercise: Athletes Heart, Cardio Vascular adaptations to sustained aerobic exercises, Lipids and sports, protection from coronary heart disease, exercise and optimization of lipid profile, Sudden cardiac death in sports, Regulation of circulation during exercise.	CO1,CO2,CO3
С	Exercise and Respiratory System: Air Conditioning, Second Wind, Oxygen Debt, Breathe Holding, High Pressure Ventilation. Scuba Diving, Athletes Lung, Regulation of Respiration during exercise.	CO1,CO2,CO3
Unit 3	Exercise Physiology in various body systems	
A	Skeletal System: Growth and Exercise, Repair and adaptation during exercise, Exercise prescription for chronic low back pain, Training for Muscular Strength and Endurance	CO1,CO4
В	Gastrointestinal Tract: Effect of Sports on GIT and Liver Hormone	CO1
C	Endocrine system: regulation of fluid and electrolytes during exercise, Exercise and Menstrual Cycle, Stress	CO1,CO4
Unit 4	Exercise prescription	
A	Body Composition: Composition of Human Body, Somatotyping, Techniques of Body Composition Analysis.	C01
В	Aging and Exercise: Aging and Physiological function, Exercise and Longevity, Coronary Heart Disease and	CO1,CO4
С	Exercise, Exercise Stress Testing for Diagnosis of CHD.	CO1,CO4
Unit 5	Miscellaneous conditions	
A	Temperature Regulation: Heat Balance, Methods of Assessing Heat Balance, Effects of Climate, Effects of Exercise on Temperature Regulation, Limit of Tolerance of Heat, Acclimatisation, Avoidance in Heat illness during exercise, Exercises in cold.	CO1,CO5
В	Misc. Topics: High Altitude Training, Sports	C01,C05



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	Diving, Haza Special MORA, Oxy performan tissue fibre t for mood		
С	. Physiologi and Condition i. Principl : Recovery the Manipu sub-phases ii. Funda performance Flexibility Overtraining iii. Analyst	cal Basis and Principles of Training oning es of endurance and strength training raining intensities in heart rate, llation of training principles, Training mentals that aid training and : Warm up and Cool down, and stretching, Missing workouts, is of Training	CO1,CO5
Mode of	Theory		
examination			
Weightage	CA	ETE	
Distribution	20%	80%	
Text book/s*	Mc Ardle, Edition IV. 2. Era V Sports – CR 3. Georg Exercise Phy its appl New York. 4. Astrand Physiology, 5. Fox and of Physical H Saunder 6. Erston a Exercise Phy		
Other			
References			

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	UNIVERSITY Beyond Boundaries

									Beyond Bo	oundaries
POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
CO1	2	2	2	2	2	2	2	2	2	2
	3	2	3	3	3	3	3	3	3	2
CO2	2	2	2	3	3	3	3	3	3	3
~~~	-	-	-		•					
CO3	3	2	2	3	3	2	3	3	3	2
CO4	3	2	3	3	3	2	2	3	3	2
CO5	3	2	2	2	3	3	2	3	2	3



School: SAHS		Batch : 2020-22						
Pro	gram:	Current Academic Year: 2020-21						
MP	T(Sports)							
Bra	nch:	I Year						
1	Course Code	MPT 117						
2	Course Title	Assessment and evaluation in Sports Physiot	herapy(Practical)					
3	Credits							
4	Contact Hours (L-T-P)							
	Course Type	Compulsory						
5	Course	1. To provide the knowledge and skills about m	usculoskeletal system					
	Objective	assessment and evaluation of patients with sp	ports injuries					
		2. To provide skills to develop clinical decision	making for					
		musculoskeletal conditions in sports.						
		3. To provide knowledge and skills to rationalise	e the outcomes of					
		assessment.	assessment and design					
		4. To train the students to accurately record the sindividualized goals for patient	assessment and design					
		individualized goals for patient.						
6	Course	CO1 Perform thorough physiotherapy assessme	ent and list deficiencies					
0	Outcomes	CO2. Design individualized goal for patients	and list deficiencies					
		CO3. Rationalize the outcome of assessment						
		CO4. Document systematic, meaningful, accura	ate written records of					
		patients						
		CO5: To use assessment methods in designing t	reatment.					
7	Course							
	Description	This Course Supplements the Knowledge of ass	essment and diagnosis in					
		Orthopaedic conditions in sports. This will help	form base of professional					
		practice with the evidence based practice and en	ables the student to have a					
		better understanding of the subject along with their application in						
		Orthopaedic and various other dysfunctions in s	ports.					
8	Outline syllabus		CO Mapping					
	Unit 1							
	A	Importance of assessment & evaluation	C01,C02					
	В	Demonstration of methods of evaluation –	CO1,CO2,CO3,CO4					
		Interview, Clinical Examination						
	С	Reliability & Validity of the tests	CO1,CO3,					
	Unit 2	Musculoskeletal screening						
	Α	Musculoskeletal screening	CO1,CO2					
	В	Methods of Evaluation of Physical Fitness	C01,C03,C05					
	С	Demonstration of Investigative Procedures,	CO1,CO4					
		Field Tests						



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Unit 3	Assessment	of upper and lower limb comple	ex	
А	Assessment	-Shoulder girdle, shoulder, ar	m.	CO1,CO2,CO3,CO4
	Elbow	Shoulder graie, shoulder, a	,	
B	Assessment -	Forearm wrist and hand		<u>CO1 CO2 CO3 CO4</u>
C C	Assessment -	Pelvis, hip.thigh. knee, leg. and	kle (	C01.C02.C03.C04
-	and foot	,,,,,,,,,,,,,,,,,		
Unit 4         Assessment of spinal column				
А	Assessment	-Cervical spine	(	CO1,CO2,CO3,CO4
В	Assessment -	e	C01,C02,C03,C04	
С	Tests of neur	al tension.	(	CO1,CO5
Unit 5	Gait Assessn	nent		
A Assessment of Gait deviations			(	C01,C02,C03,C04,C05
В	Demonstrat	on of EMG evaluation	(	CO1,CO5
С	Demonstrat	on Diagnostic and kinesiologic	al	CO1,CO5
 	EMG			
Mode of	Practical			
examination		EWE		
Weightage				
Distribution	20%	80%	int	
Text DOOK/S*	1. Norkin &	Guide to Conjometry E		
	Davis	Guide to Gomometry – F.	.A.	
	2  Dvir [.]	Isokinetics: Muscle Testir	nσ	
	Interpretation	and Clinical Applications W	B	
	Saunders.	3. Reed: Sports Injuries	_	
	Assessment	and Rehabilitation, W.	.В.	
	Saunders.			
	4. Lillegard,	Butcher & Rucker: Handbook	of	
	Sports Medic	cine: A symptom – Oriented		
	Approach,	Butterworth & Heinemann		
	5. Baker:	The Hughston Clinic Spot	orts	
	Medicine Bo	ok, Williams & Wilkins.		
Other				
References				



School: SAHS		Batch : 2020-22					
Pro	gram:	Current Academic Year: 2020-21					
MP	T(Sports)						
Bra	nch:	I Year					
1	Course Cod	MPT 116					
	e						
2	Course Title	Seminars, Journal Club and Clinical Case Presentation					
3	Credits						
4	Contact Hours						
	(L-T-P)						
	Course Type	Compulsory					
5	Course	The objective of the course is that, the student will be able to					
	Objective	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	After completion of the course, the students will be able to:					
0	Outcomes	CO1: Assess the patient and document their records					
	outcomes	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	This course is to design and develop the in-depth thinking ability,					
	Description	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	Practical					
	examination						
	Weightage						
	Distribution	50 50					

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
CO1	3	3	3	3	3	3	3	3	3	3
CO2										3
	3	3	3	3	3	3	3	3	3	5

									SHA UNIVE	RDA RSITY
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
<u> </u>										



Sch	ool: SAHS	Batch : 2020-22	
Pros MP	gram: T(Sports)	Current Academic	Year: 2021-22
Bra	nch:	II Year	
1	Course Cod e	MPT 231	
2	Course Title	Sports Psychology	
3	Credits		
4	Contact Hours (L-T-P)		
	Course Type	Compulsory	
5	Course Objective	<ol> <li>To provide knowledge and application sports psydperformance of players.</li> <li>To educate the student about methods to improve perception in sports</li> <li>To provide knowledge regarding psychological provide about earn various techniques to reliev among players.</li> </ol>	chology to improve attention and reparation of athletes. re anxiety and stress
6	Course Outcomes	<ul> <li>The student will be able to</li> <li>CO1. Learn about application of sports psychology performance of players in various sports.</li> <li>CO2. Use methods to improve attention and perception perception of the perception</li></ul>	to improve ption in sports on of athletes ress among players. emotional health
7	Course Description	This course presents knowledge and application in s improve performance of players. The course allows t improve attention and perception in sports and to pr psychologically for sporting event. The course will be techniques to relieve anxiety and stress among player	ports psychology to the sports therapist to repare the player help to learn various ers.
:8	Outline syllabus		CO Mapping
	Unit 1	Attention and Perception in Sports	
	A	History and current status of Sports Psychology, Personality Assessment and Sports Personality: Theories of personality, Personality assessment,. Attention and Perception in Sports: Attention and Perception	CO1,CO2
	В	Concentration Training in Sports: Basic principles of concentration, Concentration training, Concentration awareness exercises	CO1,CO2

		SHARDA UNIVERSITY					
С	Motivational Orientation in Sports: Athlete's needs of motivation, Motivational inhibitors Motivational techniques	CO1,CO2					
Unit 2	2 Anxiety in Sports						
A	Pre-competitive Anxiety: Source of PCA, Effect of PCA on performance, Relaxation Training: Definition, types of relaxation trainings i) Progressive muscle relaxation ii) Breathing exercises iii) Yognidra iv)Transcendental meditation	CO1,CO4					
В	Aggression in Sports: Theories of aggression, Management of aggression, Role of Psychology in Dealing with Injuries.	CO1,CO4					
С	Eating Disorders: Etiology of eating disorders, Types of eating disorders, Complications of eating disorders, Goal setting.	CO1,CO4					
Unit 3	Psychological Preparation						
Δ	Psychological aspect of doping	CO1CO2					
-		01,003					
B	Psychological preparation of elite athletes : Concept of psychological preparation	C01,C03					
B C	Psychological preparation of elite athletes :         Concept of psychological preparation         Biofeedback training, Mental imagery	C01,C03 C01,C03 C01,C03					
B C Unit 4	Psychological preparation of elite athletes :         Concept of psychological preparation         Biofeedback training, Mental imagery         Group behaviour and stress management	C01,C03 C01,C03					
B C Unit 4 A	Psychological preparation of elite athletes :         Concept of psychological preparation         Biofeedback training, Mental imagery         Group behaviour and stress management         Stress management :       Principles of Stress         Management, Stress Management techniques	C01,C03 C01,C03 C01,C03 C01,C02,C04,C05					
B C Unit 4 A B	Psychological preparation of elite athletes :         Concept of psychological preparation         Biofeedback training, Mental imagery         Group behaviour and stress management         Stress management :       Principles of Stress         Management, Stress Management techniques         Group Behaviour and Leadership:       Nature of group behaviour and group,	C01,C03 C01,C03 C01,C03 C01,C02,C04,C05 C01,C02,C04,C05					
B C Unit 4 A B C	Psychological preparation of elite athletes :         Concept of psychological preparation         Biofeedback training, Mental imagery         Group behaviour and stress management         Stress management :         Principles of Stress         Management, Stress Management techniques         Group Behaviour and Leadership:         Nature of group behaviour and group,         Types of group, Educational implication of group behaviour.	C01,C03 C01,C03 C01,C03 C01,C02,C04,C05 C01,C02,C04,C05 C01,C02,C04,C05					
B C Unit 4 A B C Unit 5	Psychological preparation of elite athletes :         Concept of psychological preparation         Biofeedback training, Mental imagery         Group behaviour and stress management         Stress management :       Principles of Stress         Management, Stress Management techniques         Group Behaviour and Leadership:       Nature of group behaviour and group,         Types of group, Educational implication of group behaviour.         Emotional Health	C01,C03 C01,C03 C01,C03 C01,C02,C04,C05 C01,C02,C04,C05 C01,C02,C04,C05					
A         B         Unit 4         A         B         C         Unit 5         A	Psychological preparation of elite athletes :         Concept of psychological preparation         Biofeedback training, Mental imagery         Group behaviour and stress management         Stress management :       Principles of Stress         Management, Stress Management techniques         Group Behaviour and Leadership:       Nature of group behaviour and group,         Types of group, Educational implication of group behaviour.       Emotional Health         Meaning of leadership: types of leadership quality of leadership, training and functioning of leadership.	C01,C03 C01,C03 C01,C03 C01,C02,C04,C05 C01,C02,C04,C05 C01,C02,C04,C05					
B C Unit 4 A B C Unit 5 A B	Psychological preparation of elite athletes :         Concept of psychological preparation         Biofeedback training, Mental imagery         Group behaviour and stress management         Stress management :         Principles of Stress         Management, Stress Management techniques         Group Behaviour and Leadership:         Nature of group behaviour and group,         Types of group, Educational implication of group behaviour.         Emotional Health         Meaning of leadership: types of leadership quality of leadership, training and functioning of leadership.         Emotion: Meaning of emotion, Characteristics of emotion, Meaning of controlling and training of emotions and its importance	C01,C03 C01,C03 C01,C03 C01,C02,C04,C05 C01,C02,C04,C05 C01,C02,C04,C05 C01,C05 C01,C05					



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	Meaning of	sentiment, i	ts type, importance and	
	formation.			
Mode of	Theory			
examination				
Weightage	CA		ETE	
Distribution	20		80	100
Text book/s*	1. Morgan a	nd King: Intro	oduction to Psychology –	
	Tata McGrav	w Hill.		
	2. Suinn: P	sychology i	n Sports: Methods and	
	Applications	, Surjeet Pub	lications.	
	3. Grafiti: I	Psychology i	n Contemporary Sports,	
	Prentice Hal	1.		
	4. Basmajia	n: Biofeedbao	ck.	
	5. Sanjiv	P. Sahni:	Handbook of Sports	
	Psychology -	- A Compreh	ensive Manual of Mental	
	Training.			
Other				
References				

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
CO1	2	2	3	3	3	3	3	3	3	3
$CO^2$										2
002	2	2	2	3	3	3	3	3	3	5
CO3	2	2	3	3	3	3	3	3	3	3
CO4	2	2	2	3	3	3	3	3	3	3
CO5	2	2	2	3	3	3	3	3	3	3



School: SAHS		Batch : 2020-22	Seyona Boundaries
Prog	gram:	Current Academic Y	'ear: 2021-22
MP	Γ(Sports)		
Bra	nch:	II Year	
1	Course Code	MPT 232	
2	Course Title	Pedagogy and ethics in Physiotherapy	
3	Credits		
4	Contact Hours		
	(L-T-P)		
	Course Type	Compulsory	
5	Course	1. To educate the students about the concepts of teach	ing and learning.
	Objective	2. To provide knowledge about curriculum techniqu	as and methods of
		teaching.	es, and methods of
		4. To provide knowledge about the management, mark	teting and total
		5. To educate the students about the role of hospital, r	ules of professional
		conduct, code of ethics and legal ethical issues in Pl	hysiotherapy and
		the standards of practice for physiotherapists.	5 15
6	Course	CO1. Understand the dynamics, methods & technique	s of teaching and
	Outcomes	learning.	
		CO2. Plan effective teaching sessions in Physiotherap	y and learn
		about the meaning and concept, basis of curricul	um formulation
		and the use of various teaching aids	administration
		CO4 Practice as an informed professional on legal at	administration.
		Physiotherapy.	iu etilicai issues ili
		CO5:To understand the importance of hospital and ho	w it works in
		different departments.	
_			
7	Course	This course presents knowledge and application of dif	terent teaching
	Description	methodology to the students. The course begins with o	core topics of
		Concepts of Teaching and learning, Curriculum, various	teaching methods
		Administration Management & Ethical Issues in Dhy	siothereny
·8	Outline syllabus	Administration, Management & Eulical Issues III Phys	CO Manning
.0	Unit 1	Education	
	A		CO1
		Education:Introduction,	
		Educational Philosophy- Idealism	
		Naturalism, Pragmatism Aims of	
		Education, Functions of	
		Education, Formal, informal and	



	non-formal Education,	
В	Agencies of Education, Current issues and Trends in Higher Education	CO1
С	Issue of quality in Higher Education, Autonomy and Accountability, Privatization of Education	CO1
 Unit 2		
A	a) Concept of Teaching and Learning, Meaning and scope of Educational Psychology.	CO1,CO2
В	Meaning and Relationship between teaching and learning, Learning Theories, Dynamics of behavior, Individual differences	CO1,CO2
С	Curriculum: - Meaning and concept, Basis of curriculum formulation, framing objectives for curriculum, Process of curriculum development and factors involved, Evaluation of curriculum	CO1,CO2,CO3
Unit 3		
A	Method and techniques of teaching: - Lecture, Demonstration, Discussion, Seminar, Assignment, Project, Case Study, Planning for teaching: - Bloom's taxonomy of instructional objectives, Writing instructional objectives in behavioral terms, Unit planning, Lesson planning, Teaching aids, Types of teaching aids, Principles of selection, preparation and use of audio-visual aids	CO1,CO2,CO3
В	Measurement and Evaluation, Nature of educational measurement: meaning, process,types of tests, Construction of an achievement test and its analysis, Standardized test, Introduction of some standardized tools, important tests of intelligence, aptitude, and personality. Continuous and comprehensive	CO1,CO2,CO3



	evaluation	
С	Guidance and counseling, Meaning & concepts of guidance and counseling, Principles of guidance and counseling, Awareness programme, Awareness and guidance to the common people about health and disease.	CO1,CO2,CO3
Unit 4	Administration, Management & Ethical Issues	
A	Management: Introduction, Evolution of management, Functions of management, Management process – planning, organization, direction, controlling, Decision-making.	CO4,CO5
В	Personnelmanagement:Staffing,Recruitmentselection,Performanceappraisal,Collectivebargaining,Jobsatisfaction,Marketing:Marketsegmentation,Channelsofdistribution,Promotion,Consumerbehaviour	CO4,CO5
С	Total Quality Management: Basics of quality management, Quality control, Quality assurance programme in hospitals & medical audit, International quality system.	CO4,CO5
Unit 5	Administration, Legal Ethical Issues	
A	Hospital as an organization - Functions and types of hospitals, Roles of Physical therapist, Physical therapy Director, Physiotherapy supervisor, Physiotherapy assistant, Physiotherapy aide, Home health aide, Volunteer.	CO4,CO5
В	Rules of Professional Conduct. Legal responsibility, Code of ethics, Functions of Physiotherapy associations, Role of the International Health Agencies, Standards of	CO4,CO5
	practice for physiotherapists	

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		legal action, l	aw of disabil	ity & discriminat	tion,					
		Confidenti	ally of t	the Patient's	status,					
		Consumer pro	Consumer protection law, health law, MCI, DCP							
Mod	e of	Theory								
exam	nination			ſ						
Weig	ghtage	CA		ETE						
Distr	ibution	20		80		100				
Text	book/s*	1. Developin	g a Pedagog	gy of Teacher e	education:					
		Understanding	g teaching an	d learning about						
		teaching.								
		2. Handbook	of Technolo	gical pedagogica	al content					
		knowledge, (7	ΓPCK) for ed	lucators						
		3. Healthcare	System and a	management: Go	el, S.L.					
		4. Documenti	ng physical t	herapy: Baeten, A	Angla					
		5. Physical T	herapy Admi	inistration & Ma	nagement					
		by Hickik Ro	bert J							
		6. Manageme	ent Principle	s for physiother	apists by					
		Nosse Lorry J	Nosse Lorry J.							
		7. Textbook o	of Healthcare	ethics: Loeuy, E	rich H					
Othe	r									
Refe	rences									

Pos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
CO1	1	2	2	2	2	2	2	1	1	2
	1	Z	Ζ	Z	2	5	5	1	1	2
CO2	1	1	1	2	2	3	2	1	2	2
CO3	1	1	1	2	2	3	2	1	2	2
CO4	1	1	1	2	3	3	2	1	2	2
CO5	1	1	1	2	3	3	2	1	2	2



Scho	ool: SAHS	Batch : 2020-22	"Beyond Boundaries				
Prog	gram:	Current Academic Yea	r: 2021-22				
MP	Γ(Sports)						
Bra	nch:	II Year					
1	Course Cod e	MPT 233					
2	Course Title	Traumatic and non traumatic conditions of athletes					
3	Credits						
4	Contact Hours (L-T-P)						
	Course Type	Compulsory					
5	Course Objective	<ol> <li>To provide knowledge regarding causes &amp; mechanism injuries and their prevention.</li> <li>To educate students about overuse injuries in sports.</li> <li>To educate students about sports emergencies &amp; speci- sports</li> </ol>	of sports fic injuries in				
6       Course       CO1. Understand about causes & mechanism of sports         0       Outcomes       CO1. Understand about causes & mechanism of sports         0       CO2. Understand about causes & mechanism of overuse injuries in sports affecting various joints of body         CO3.Learn methods and techniques to manage sports emergencies & specific injuries in sports         CO4: Understand about various infections in sports							
7	Course	This course is designed to develop and enhance the knowledge, about					
	Description	various sports injuries and emergencies. The course will student to apply various methods to manage the injuries	enable the				
8	Outline syllabus		CO Mapping				
	Unit 1	Sports Injuries					
	А	Pre-participation examination	CO1				
	В	Causes & Mechanism of Sports Injuries, prevention of sports injuries	CO1,CO2				
	С	Common acute and overuse injuries of Shoulder girdle, Shoulder, Arm, Elbow, Forearm, Wrist & hand	CO1,CO2				
	Unit 2	Overuse injuries in Sports					
	A	Common acute and overuse injuries of Pelvis, hip, thigh, knee, leg, ankle & foot	C01,C02				
	В	Common acute and overuse injuries of Spine	CO1, CO2				

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С	Common acute and overuse injuries of Head	CO1, CO2
Unit 3	Sports emergencies & specific injuries in sports	
A	Sporting emergencies & first aid	CO1, CO2, CO3
В	Cardio pulmonary Resuscitation; Shock management, Internal and External bleeding, Splinting, Stretcher use–Handling and transfer, Management of Cardiac arrest, Acute asthma, epilepsy, drowning, burn, Medical management of mass participation. Heat stroke and Heat illness.	CO1, CO2 CO3
C	<ul> <li>Sports specific injuries, with special emphasis on the specific risk factor, nature of sports, kind of medical intervention anticipated and prevention with respect to individual sports <ol> <li>Individual events: Track &amp; Field</li> <li>Team events: Hockey, Cricket, Football etc.</li> <li>Contact and Non–contact sports</li> </ol> </li> <li>iv.Water Sports</li> </ul>	CO1, CO2, CO3
Unit 4	Infections in Sports	
A	Illness, Infections, Hypertension, Urine abnormalities; Venereal Diseases; Exercise induced Asthma; Anemia, Delayed Onset Muscle Soreness (DOMS), Runner's high & exercise addiction. G.I.T. Diseases, Exercises and congestive heart failure, exercise for post coronary & byepass patients, exercise for diabetics.	CO1, CO4
В	Diagnosis and management of skin conditions of Athletes	CO1, CO4
С	Bacterial infections, Fungal infections, Viral infections, boils and cellulitis.	CO1,CO4
Unit 5	Specfic conditions in Sports	
A	Female Specific Problems: Sports Amenorrhoea, Injury to female reproductive tract, Menstrual Synchrony, sex determination, Exercise and pregnancy, Eating disorders in athletes.	CO1, CO5
В	Common Diseases: Common Cold, Diarrhoea, Dysentery, Typhoid, Cholera, Amoebiasis, Food Poisoning, Tuberculosis, Malaria, Hepatitis etc, AIDS in sports people.	CO1, CO5
С	Rheumatology & Geriatric Disorder: Rheumatoid arthritis, SLE and Juvenile Rheumatoid Arthritis, Ankylosing Spondylitis, Rheumatology out patient clinic, Osteoarthrosis and other geriatric conditions.	CO1, CO5



Mode of	Theory		beyond boundaries
examination			
Weightage	CA	ETE	
Distribution	20%	80%	
Text book/s*	1. Morris B.	Mellion: Office Sports Medicine, Hanley	
	& Belfus.		
	2. Richard B.	Birrer: Sports Medicine for the Primary	
	Care Physicia	n, CRC Press.	
	3. Torg, Wels Medicine III -	h & Shephard: Current Therapy in Sports - Mosby.	
	4. Zulunga et	al: Sports Physiotherapy, W.B. Saunders.	
	5. Brukner	and Khan: Clinical Sports Medicine,	
	McGraw Hill.		
	6. Reed:	Sports Injuries – Assessment and	
	Rehabilitation	, W.B. Saunders.	
	7. Gould: Ort	hopedic Sports Physical Therapy, Mosby.	
	8. C. Norr	is: Sports Injuries – Diagnosis and	
	Management	for Physiotherapists, Heinmann.	
	9. D. Kulund:	Landreich Vol L. The Lange	
	Extremity in S	Sports Medicine.	
	2	Vol. II, The Lower	
	Extremity and	l Spine in Sports Medicine.	
		Vol. III, The Lower	
	Extremity and	l Spine in Sports Medicine.	
		Mosby.	
	11. Lee & Di Saunders.	ress: Orthopedic Sports Medicine – W.B	
	12. K. Park: I	Preventive and Social Medicine – Banarsi	
	Dass Bhanot -	– Jabalpur.	
	13. Fu and	Stone: Sports Injuries: Mechanism,	
	Prevention an Wilkins	d Treatment, Williams and	
	14. Scuderi	McCann Bruno: Sports Medicine –	
	Principles of I	Primary Care. Mosby.	
	15. Lars Pete	rson and Per Renstron: Sports Injuries –	
	Their prevent	ion and treatment, Dunitz.	
Other			
References			
	<u>I</u>		

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
Cos										
CO1										
	3	3	3	3	3	3	3	2	3	2

									SHA UNIVE	RDA RSITY
CO2	3	3	3	3	3	3	2	3	3	3
CO3	3	3	2	3	3	3	3	3	3	3
CO4	3	3	3	3	3	2	3	3	3	2
CO5	3	2	2	2	2	2	2	3	3	2



School: SAHS		Batch : 2020-22					
Prog	gram:	Current Academic Yea	r: 2021-22				
MP	Γ(Sports)						
Bra	nch:	II Year					
1	Course Cod	MPT 234					
2	Course Title	Medical aspects of sports medicine					
3	Credits						
4	Contact Hours						
-	(L-T-P)						
	Course Type	Compulsory					
5	Course	1. To educate students about role of exercise in specific c	onditions				
	Objective	2. To provide knowledge about doping in sports					
	5	3. To educate students about exercise as a method of dial	petes control				
		4. To educate students about role of exercise indifferent a	age groups and				
		specific conditions					
6	Course	CO1. Understand about role of exercise in specific condi	tions				
	Outcomes	CO2. Understand about doping in sports					
		CO3. To use exercise as a method of diabetes control					
		CO4: To understand the role of exercise in different age gr	roups				
		CO5: To understand the role of exercise in miscellaneous of	conditions				
7	Carrier		-11				
/	Course	Medical management for various muculoskeletal disord	ledge of				
	Description	Nedical management for various musculoskeletal disorders and Deviotherany for the same					
8	Outline syllabus	Thysiotherapy for the same.	CO Manning				
0	Unit 1	Exercise in specific conditions					
	A	a) Exercise and Common Pulmonary Conditions :	CO1				
	11	Exercise induced bronchial obstruction. Exercise in	001				
		chronic airway obstruction. Air pollution and exercise					
		r i i i i i i i i i i i i i i i i i i i					
	В	Exercise and Cardiac Conditions : Exercise	CO1				
		prescription for heart disease, Exercise in primary					
		prevention in ischemic heart disease					
	С	Eversion for secondary provention of isohomia	CO1				
		Exercise for secondary prevention of ischemic					
		neart disease					
	Unit 2	Exercise and diabetes					
	А	Doping in Sports: Banned drugs, Procedure of dope	CO1,CO2				
		testing, Control of doping abuse					
	В	Diabates and Eversise: Eversise in diabatic	CO1, CO3				
1	1	Diabetes and Exercise. Exercise III diabete					



	patients	
С	Exercise as a method of control of diabetes	CO1, CO3
Unit 3	Exercise for special categories	
А	Exercises for special categories: Child and adolescent athlete's problems	CO1, CO4
В	Exercises for special categories: Special problems of older athletes	CO1,CO4
С	Exercises for special categories: Special concerns for handicapped athletes	CO1,CO4
Unit 4	Miscellaneous conditions-I	
A	Hazards of cold water	CO1, CO5
В	Exercise for mood enhancement	CO1, CO5
С	Vitamins and exercise	CO1, CO5
Unit 5	Miscellaneous conditions-II	
А	Spinal deformity and sports	CO1, CO5
В	Time zone shift and sleep deprivation problems	CO1, CO5
С	Exercise in pregnancy and post partum	CO1, CO5
Mode of examination	Theory	
Weightage	CA ETE	
Distribution	20% 80%	
Text book/s*	<ol> <li>Morris B. Mellion: Office Sports Medicine, Hanley &amp; Belfus.</li> <li>Richard B. Birrer: Sports Medicine for the Primary Care Physician, CRC Press.</li> <li>Torg, Welsh &amp; Shephard: Current Therapy in Sports Medicine III – Mosby.</li> <li>Zuluaga et al: Sports Physiotherapy, W.B. Saunders.</li> <li>Brukner and Khan: Clinical Sports Medicine, McGraw Hill.</li> <li>Reed: Sports Injuries – Assessment and Rehabilitation, W.B. Saunders.</li> <li>Gould: Orthopedic Sports Physical Therapy, Mosby.</li> <li>C. Norris: Sports Injuries – Diagnosis and Management for Physiotherapists, Heinmann.</li> <li>D. Kulund: The Injured Athlete, Lippincott.</li> <li>Nicholas Hershman: Vol. I, The Upper Extremity in Sports Medicine. Vol. II, The Lower</li> </ol>	



		N 2 2	Beyond Boundaries
		Extremity and Spine in Sports Medicine.	
		Vol. III, The Lower	
		Extremity and Spine in Sports Medicine.	
		Mosby.	
		11. Lee & Dress: Orthopedic Sports Medicine - W.B	
		Saunders.	
		12. K. Park: Preventive and Social Medicine – Banarsi	
		Dass Bhanot – Jabalpur.	
		13. Fu and Stone: Sports Injuries: Mechanism,	
		Prevention and Treatment, Williams and	
		Wilkins.	
		14. Scuderi, McCann, Bruno: Sports Medicine -	
		Principles of Primary Care, Mosby.	
		15. Lars Peterson and Per Renstron: Sports Injuries -	
		Their prevention and treatment, Dunitz.	
(	Other		
I	References		

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


School: SAHS		Batch : 2020-22				
Prog	gram:	Current Academic Year	r: 2021-22			
MP	Γ(Sports)					
Brai	nch:	II Year				
1	Course Cod	MPT235				
	e Course Title	C				
2	Course Little	Sports physiotherapy methods(1 neory)				
3	Contact Hours					
4	(L-T-P)					
	Course Type	Compulsory				
5	Course	1.To provide knowledge about rehabilitation and Therap	eutic Exercises			
-	Objective	2. To educate about effects and uses of therapeutic exerci-	ises.			
		3. To develop skills in mobilization and strengthening $T\epsilon$	echniques			
		4. To provide neuromuscular training and use of various	techniques			
		in sports				
6	Course	CO1. To learn about rehabilitation and Therapeutic Exer	cises			
	Outcomes	CO2. To know about effects and uses of therapeutic exer	cises.			
		CO3: To use techniques of mobilization and strengthenin	ig for			
		rehabilitation				
		training in players	uscular			
		CO5: Enable the students use various techniques in sport	s for			
		rehabilitation of injuries				
7	Course	The course will enable the students to gain knowledge	of rehabilitation			
	Description	and therapeutic exercises in various sports injuries. This	s will help them			
	_	to formulate and design physiotherapy treatment pro	gram following			
		sports injuries.	T			
8	Outline syllabus		CO Mapping			
	Unit 1	Rehabilitation and Therapeutic Exercises				
	Α	Define Rehabilitation, Goals and Objectives of	CO1,CO2,			
		Rehabilitation in Sports, Clinical Evaluation phases of				
	 ת	renabilitation. (multidisciplinary approach)				
	В	Prehabilitation, Modern concepts in rehabilitation	01,002			
	С	Factors affecting the joint range of motion prevention	CO1.CO2			
		of stiffness, methods of joint mobilization, Testing for	,			
		tightness and contracture of soft-tissue structures,				
		Techniques of mobilizing the various joints of the				
		body.				
	Unit 2	Definition, details of effects and uses of therapeutic				
		exercises.				
	Δ	Dynamic Evergises - Divometric Evergises	<u>CO1 CO2</u>			
	$\boldsymbol{\Lambda}$	Dynamic Excremes, rigometric Excremes	CO1, CO2,			

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В	Isokinetic Exercises, Kinetic chain exercises	CO1, CO2
С	Manipulative Techniques	CO1, CO2
Unit 3	Mobilization and Strengthening Techniques	
A	Types of Muscle Contractions and Muscle work, Strength of Muscle Contraction in terms of Motor units, Group action of muscles and its implication in designing an exercise program.	CO1, CO2, CO3
В	Causes of muscle weakness. Prevention of disuse atrophy, Principles of treatment to increase muscle strength and function, Techniques of strengthening with respect to regional consideration.	CO1, CO2, CO3
С	Various methods of progressive resisted exercise, Aquatic therapy in sports.	CO1, CO2 CO3
Unit 4	Neuromuscular Training in sports	
A	Neuromuscular Training: Neuromuscular control, methods for improving neuromuscular control, proprioception and Kinesthetic sensation following different sport injuries.	CO1, CO2, CO4
В	Principles and application of neuromuscular facilitation techniques including PNF in sports.	CO1, CO2, CO4
C	Health club & fitness: Concept, group therapy	CO1, CO2, CO4
Unit 5	Techniques in sports	
A	Functional Bandages & Orthotic Aids: History and uses of functional bandages, classification according to the time of application, types of bandages, Bandaging techniques and bandaging material, Indications, contraindications athletic shoes and modifications, common orthotic aid and appliances in Sports.	CO1, CO2, CO5
В	Manual Therapy: Introduction to manual therapy techniques, joint techniques, manual joint therapy, traction, basic principles of manipulation for various disorders of the spine and extremities. Muscle energy techniques(MET)-definition, elements of MET procedures, clinical utilization of MET.	CO1, CO2, CO5
С	RecentAdvancementinElectrotherapy,Electrodiagnosis and its implications to SportsPhysiotherapy, Cryotherapy:Physiological effects,Use of cold therapy in acute phase, rehabilitative	CO1, CO2, CO5



	phase, preventive of application, Indic	3	
Mode of examination	Theory		
Weightage	CA	ETE	
Distribution	20%	80%	100
Text book/s*	<ol> <li>Sinha A.G.: Prin Massage – Jaypee B Dena: The Princip Publishers, Delhi.</li> <li>Kisner and C Foundations and Tea 4. Basmajian John V &amp; Wilkins.</li> <li>Thomson et al –T Heinmann.</li> <li>Wood &amp; Baker: E 7. Kendall: Mus Williams &amp; Wilkins 8. Daniels and W Techniques of Manu 9. First Aid to Association.</li> <li>William E. Pre Mosby.</li> <li>Werner Kupris W.B. Saunders.</li> <li>Norkin &amp; Whit A Guide to Gonio Bates and Norm H W.B. Saunders.</li> <li>Norkin &amp; Whit A Guide to Gonio Bates and Norm H W.B. Saunders.</li> <li>Hartley: Praction Medicine Manual, u quadrants, C.V.</li> <li>Kennedy: Mosby.</li> <li>Albert: Eccentr Orthopeadics, W.B.</li> <li>Voss et al Facilitation – Pattern</li> </ol>	ciple and Practices of Therapeutic rothers, New Delhi 2. Gardiner M les of Exercise Therapy – CBS Colby: Therapeutic Exercises – chniques, F.A. Davis. V.: Therapeutic Exercise, Williams idy's Physiotherapy: Butterworth – Beard's Massage, W.B. Saunders. Scles – Testing and Function – Vorthinghams: Muscle Testing – tal Examination, W.B. Saunders. Injured: St. John's Ambulance ntice: Rehabilitation Techniques – an: Physical Therapy for Sports e: Measurement of Joint Motion – metry – F.A. Davis. 13. Andrea anson: Aquatic Exercise Therapy cs: Muscle Testing, Interpretation tions, W.B.	

*	SHARDA
1	UNIVERSITY Beyond Boundaries

	Williams & Wilkins.	
Other		
References		

School: SAHS		Batch : 2020-22						
Pro MP	gram: T(Sports)	Current Academic Year: 2021-22						
Bra	nch:	II Year						
1	Course Cod	MPT239						
2	Course Title	Sports physiotherapy methods(Practical)						
3	Credits							
4	Contact Hours (L-T-P)							
	Course Type	Compulsory						
5	Course	1.To provide knowledge about rehabilitation and Therap	eutic Exercises					
	Objective	2. To educate about effects and uses of therapeutic exerc	ises.					
		3. To develop skills in mobilization and strengthening Te	echniques					
		4. To provide neuromuscular training and use of various in sports	techniques					
6	Course	CO1. To learn about rehabilitation and Therapeutic Exer	cises					
	Outcomes	CO2. To know about effects and uses of therapeutic exer	cises					
		CO3: To use techniques of mobilization and strengthenir	ng for					
		rehabiltation	C					
		CO4: Enable the students to apply knowledge of neurom	uscular					
		training in players						
		CO5: Enable the students use various techniques in sport	ts for					
		rehabilitation of injuries						
7	Course	The course will enable the students to gain knowledge a	about techniques					
	Description	of rehabilitation and therapeutic exercises in various sp	peutic exercises in various sports injurie. This					
		will help them to formulate and design physiotherapy tre	eatment program					
		following sports injuries.						
8	Outline syllabus		CO Mapping					
	Unit 1	Rehabilitation and Therapeutic Exercises						
	A	Define Rehabilitation, Goals and Objectives of	CO1,CO2,					
		Rehabilitation in Sports, Clinical Evaluation phases of						
		rehabilitation. (multidisciplinary approach)						
	В	Prehabilitation, Modern concepts in rehabilitation	CO1,CO2					
	С	Factors affecting the joint range of motion prevention	CO1,CO2					



	of stiffness, methods of joint mobilization, Testing for tightness and contracture of soft–tissue structures,.					
	Techniques of mobilizing the various joints of the body.					
Unit 2	Definition, details of effects and uses of therapeutic exercises.					
А	Dynamic Exercises, Plyometric Exercises	CO1,CO2,				
В	Isokinetic Exercises, Kinetic chain exercises	CO1, CO2				
С	Manipulative Techniques	CO1, CO2				
Unit 3	Mobilization and Strengthening Techniques					
A	Types of Muscle Contractions and Muscle work, Strength of Muscle Contraction in terms of Motor units, Group action of muscles and its implication in designing an exercise program.	CO1, CO2, CO3				
В	Causes of muscle weakness. Prevention of disuse atrophy, Principles of treatment to increase muscle strength and function, Techniques of strengthening with respect to regional consideration.	CO1, CO2, CO3				
С	Various methods of progressive resisted exercise, Aquatic therapy in sports.	CO1, CO2 CO3				
Unit 4	Neuromuscular Training in sports					
A	Neuromuscular Training: Neuromuscular control, methods for improving neuromuscular control, proprioception and Kinesthetic sensation following different sport injuries.	CO1, CO2, CO4				
В	Principles and application of neuromuscular facilitation techniques including PNF in sports.	CO1, CO2, CO4				
С	Health club & fitness: Concept, group therapy	CO1, CO2, CO4				
Unit 5	Techniques in sports					
A	Functional Bandages & Orthotic Aids: History and uses of functional bandages, classification according to the time of application, types of bandages, Bandaging techniques and bandaging material, Indications, contraindications athletic shoes and modifications, common orthotic aid and appliances in Sports.	CO1, CO2, CO5				
В	Sports.BManual Therapy: Introduction to manual therapy techniques, joint techniques, manual joint therapy, traction basic principles of manipulation for various					

		SHARDA UNIVERSITY
	disorders of the spine and extremities. Muscle energy techniques(MET)-definition, elements of MET procedures, clinical utilization of MET.	
С	RecentAdvancementinElectrotherapy,Electrodiagnosis and its implications to SportsPhysiotherapy, Cryotherapy:Physiological effects,Use of cold therapy in acute phase, rehabilitativephase, preventive phase of athletic injury, Methodsof application, Indications and contraindications.	CO1, CO2, CO5
Mode of examination	Theory	
Weightage	CA ETE	
Distribution	20% 80%	100
Text book/s*	<ol> <li>Sinha A.G.: Principle and Practices of Therapeutic Massage – Jaypee Brothers, New Delhi 2. Gardiner M. Dena: The Principles of Exercise Therapy – CBS Publishers, Delhi.</li> <li>Kisner and Colby: Therapeutic Exercises – Foundations and Techniques, F.A. Davis.</li> <li>Basmajian John V.: Therapeutic Exercise, Williams &amp; Wilkins.</li> <li>Thomson et al –Tidy's Physiotherapy: Butterworth – Heinmann.</li> <li>Wood &amp; Baker: Beard's Massage, W.B. Saunders.</li> <li>Kendall: Muscles – Testing and Function – Williams &amp; Wilkins</li> <li>Daniels and Worthinghams: Muscle Testing – Techniques of Manual Examination, W.B. Saunders.</li> <li>First Aid to Injured: St. John's Ambulance Association.</li> <li>William E. Prentice: Rehabilitation Techniques – Mosby.</li> <li>Werner Kuprian: Physical Therapy for Sports, W.B. Saunders.</li> <li>Norkin &amp; White: Measurement of Joint Motion – A Guide to Goniometry – F.A. Davis. 13. Andrea Bates and Norm Hanson: Aquatic Exercise Therapy, W.B. Saunders.</li> <li>Dvir: Isokinetics: Muscle Testing, Interpretation and Clinical Applications, W.B. Saunders.</li> <li>Hartley: Practical Joint Assessment, A Sports Medicine Manual upper and lower</li> </ol>	



		Beyond Boundaries
	quadrants, C.V. Mosby.	
	16. Kennedy: Mosby's Sports Therapy Taping Guide.	
	17. Malone: Orthopeadic and Sports Physical Therapy,	
	C.V. Mosby.	
	18. Albert: Eccentric Muscle Training in Sports and	
	Orthopeadics, W.B. Saunders.	
	19. Voss et al – Proprioceptive Neuromuscular	
	Facilitation – Patterns & Techniques –	
	Williams & Wilkins.	
Other		
References		

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
CO1	2	2	2	2	2	2	2	2	2	2
	5	5	5	5	5	5	5	Z	5	Ζ
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



School: SAHS		Batch : 2020-22					
Prog	gram:	Current Academic Year: 2021-22					
MPT(Sports)							
Brai	nch:	II Year					
1	Course Code	MPT 236					
2	Course Title	Current concepts in sports medicine					
3	Credits						
4	Contact Hours						
	(L-T-P)						
	Course Type	Compulsory					
5	Course	1. To educate students about Segmental Stabilization Co	oncepts of				
	Objective	Spine					
		2. To provide knowledge about Physical activity in yout	h				
		3. To provide training about Precision heart rate training	g				
		4. To provide knowledge about Current concepts in spor	rts				
6	Course	CO1. Understand about the Concepts of Segmental Stabilization of					
	Outcomes	Spine					
		CO2. To plan exercise program for young individuals.					
		CO3: Provide the Precision heart rate training to players and sedentary					
		individuals					
		CO4: Enable the students to apply the role of exercise in obesity					
		CO5: Enable the students to gain knowledge about current concepts in					
	~	sports					
7	Course	The course will enable the students to gain knowledge	about the role of				
	Description	exercise in managing various conditios. It will also allow them to learn					
		about segmental stabilization of spine and the use of current concepts in					
	<u> </u>	sports	~~				
8	Outline syllabus		CO Mapping				
	Unit 1	Segmental Stabilization Concepts of Spine					
	•		<u> </u>				
	A	Muscle function in spinal stabilization	COI				
	В	Contribution of various muscles to spinal stabilization,	CO1				
		Local Muscle dysfunction in Low back pain					

		*	SHARDA UNIVERSITY		
С	Principles of clinical mana system for segmental stabil	agement of deep muscle ization	CO1		
Unit 2	Unit 2 Physical activity in youth				
A	Emergency Medical Plann Events	CO2			
В	Exercise for growing bones	CO2			
С	Effect of Physical activi youth	CO2			
Unit 3	Precision heart rate train	ing			
Α	Heart rate monitoring and zones	training , Training in heart	CO3		
В	Precision heart rate training	Precision heart rate training for specific sports			
С	Multi Activity training, Mor	CO3			
Unit 4	Current concepts in obesi				
A	Childhood obesity etiology	CO4			
В	B Obesity correlation with lipidogram				
С	Intra-abdominal obesity obesity	Intra-abdominal obesity hazards, Management of obesity			
Unit 5	Current concepts in sport	.s			
A	Electromyography and Rel EMG Rehab, Muscular tone influences, EMG in the e	CO5			
В	Current concepts in examination for the instabili	comprehensive physical ties of knee.	CO5		
С	C Current concepts in tendinopathies, Current concepts in plasma rich platelet therapy in sports				
Mode of examination	Theory				
Weightage	СА				
Distribution	20%	100			
Text book/s*	<ol> <li>Mallarkey: Managing Ob</li> <li>Burke: Precision Hea</li> <li>Kinetics</li> <li>Jull: Segmental Stabiliza</li> </ol>	esity, Adis Publications art rate training, Human tion of Spine			



			Beyond Boundaries
	4. Mishra: Clinical Neurophysiology, B.I. Chu Livingstone.	ırchill	
Other References			

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
CO1	2	3	2	3	3	3	3	3	3	3
CO2	-	3	~	3	3	3	5	3	3	3
02	2	2	3	2	3	3	2	3	3	3
CO3	2	2	3	2	3	3	3	3	3	2
CO4	2	2	2	3	3	2	3	3	3	2
CO5										
	3	3	3	3	3	2	3	3	3	2



Scho	ool: SAHS			Batch : 2020-22					
Prog	gram:			Current Academic Yea	r: 2021-22				
MP	Γ(Sports)								
Bra	nch:	II Year							
1	Course Cod	MPT 205							
	e								
2	Course Title	Journal Club	and Clinical C	Case Presentation					
3	Credits								
4	Contact Hours (L-T-P)								
	Course Type	Compulsory							
5	Course	The objective	of the course	is that, the student will be ab	le to				
	Objective	1. To develop confidence and presentation skill.							
		2. To dev	2. To develop decision making and reasoning skills in patient						
		manag	gement.	2					
		3. To dev	velop efficient	methods of study of research	n journals.				
6	Course	After complet	ion of the cou	rea the students will be able	to				
0	Outcomes	CO1: Assess	the nationt and	document their records	10,				
	Outcomes	CO1. Assess	the latest reserved	arch in journal presentation					
		CO2. Present	the various ca	ses and design the treatment	programme for				
		the pati	ents	ses and design the treatment	programme for				
		CO4 Underst	and Evidence	based implementation of var	ious research				
		protoco	ls.						
		CO5.Reasonin	ng and decisio	n making regarding diagnosi	s. treatment and				
		follow-u	p of patients		~,				
7	Course	This course is	to design and	develop the in-depth thinkin	g ability,				
	Description	presentation s	kill, reasoning	and decision making, analyt	ical skills and				
	1	deep exploration of various topics and cases among the students. It will							
		enhance the re	esearch ability	of the students hence will he	elp in uplifting				
		the new rays of	of therapeutic	skills.					
	Mode of	Practical							
	examination								
	Weightage	CA							
	Distribution	50			50				



DO	DO1	DOJ	DO2	DO4	DO5	DOC	DO7	DCO1	DCOD	DCO2
POs	POI	PO2	PO5	P04	POS	POo	PO/	PS01	PS02	PS05
COs										
CO1										
	3	3	3	3	3	3	3	3	3	3
CO2										3
	3	3	3	3	3	3	3	3	3	-
CO3										3
	2	2	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	-

Sch	ool: SAHS	Batch : 2020-22
Prog	gram:	Current Academic Year: 2021-22
MP	Γ(Sports)	
Bra	nch:	II Year
1	Course Cod	MPT 206
	е	
2	Course Title	Dissertation
3	Credits	
4	Contact Hours	
	(L-T-P)	
	Course Type	Practical
5	Course	The objective of the course is that, the student will be able to
	Objective	1. Apply the evidences for the search of new knowledge.
		2. To develop efficient research methodology.
		3. To improve the scientific literature writing.
6	Course	After completion of the course, the students will be able to;
	Outcomes	CO1:Gain knowledge about formulation of research protocol
		CO2: Apply research Methodology and skills to complete the research
		dissertation



		CO3:Develop the skill to pu	blish and present the researc	h							
		CO4: Methods of scientific	CO4: Methods of scientific literature review and writing.								
		CO5:Evidence based implementation of various research protocols.									
7	Course	This course is to design and	develop the in-depth thinking	g ability,							
	Description	presentation skill, reasoning	and decision making, analyti	ical skills and							
		deep exploration of various	topics and cases among the st	tudents. It will							
		enhance the research ability	of the students hence will he	lp in uplifting							
		the new rays of therapeutic s	skills.								
	Mode of	Practical									
	examination										
	Weightage	CA ETE									
	Distribution	20%	80%								

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
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	-



## **Program Structure Template**

# School of Allied Health Sciences Master of Physiotherapy (Cardiopulmonary)

Batch - (2020-22)

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

Note: Detailed Mission Statements of University can be used for developing Mission Statements of Schools/ Departments.



1.2 Vision and Mission of the School

## Vision of the School

To produce skilled man power in different areas of biomedical science for better

healthcare delivery

### Mission of the School

1. To strengthen the main line medical and health services.

2. To become effective assisting and support system to medical and health

personnel.

**Core Values** 

1. Skilled professional

2. Multidimensional

3. Compassion

4. Management



#### **1.3** Programme Educational Objectives (PEO)

PEO1: To gain knowledge of the human body related basic medical and physiotherapeutic sciences relevant to cardiopulmonary conditions.

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 cardiopulmonaryphysiotherapy assessment by relevant And current physiotherapeutic concepts.

PEO4: To plan and implement appropriate Physiotherapeutic interventions for cardiopulmonaryconditions 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	School
	Mission 1	Mission 2
PEO1:	3	3
PEO2:	2	3
PEO3:	3	3
PEO4:	3	3
PEO5:	3	3
PEO6:	2	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 relevant to cardiopulmonary conditions.

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 forcardiopulmonary conditions assessment in order to identify, examine and distinguish between the same.

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 cardiopulmonary 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.



	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	3	3
	3	3	3	3	3	3
PO4						
PO5	3	3	3	3	3	3
PO6	3	3	3	3	3	3
PO7	3	3	3	3	3	3
PSO1	3	3	3	3	3	3
PSO2	3	3	3	3	3	3
PSO3	3	3	3	3	3	3

## 1.3.4 Mapping of Program Outcome Vs Program Educational Objectives

1. Slight (Low)

2. Moderate (Medium)

3. Substantial (High)



## **1.3.5 Program Outcome Vs Courses Mapping Table¹:**

Program Outcome Courses	Course Name	PO 1	PO 2	PO 3	PO $4$	PO 5	PO 6	PO 7	PSO 1	PSO 2	PSO 3
1 st 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 Physiotherapeut ics(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 Physiotherapeut ics(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
2 ND 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

¹ Cel value will contain the correlation value of respective course with PO.

Prepared by : SU/SAHS/MPT.

										SHAF JNIVE	RDA RSITY
Course 2.3	Cardiopulmona ry Physiotherapy I (Medical) Theory	3	3	2	2	3	2	3	2	3	3
Course 2.4	Cardiopulmona ry Physiotherapy II (Surgical) Theory	3	3	2	2	3	2	3	2	2	2
Course 2.5	Cardiopulmona ry Physiotherapy I (Medical) Practical	3	3	2	2	3	2	3	2	3	3
Course 2.6	Cardiopulmona ry Physiotherapy 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 MATRIX²

Program Outcome Courses	Course code	Course Name		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO2	PSO3
Year-1													
Theory													
Course 1.1	MPT 111	Research Methodology and Evidence Based	CO1	2	2	2	2	2	2	2	2	2	2
		Practice	01	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	CO1	3	3	3	3	3	2	3	3	3	2
		and Diomeentanies	$\frac{cor}{cor}$	2	2	2	2	2	2	2	2	2	2
			<u>CO2</u>	3	3	3	2	3	3	3	3	2	3
			<u>CO3</u>	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	CO1	3	3	3	3	3	3	3	2	3	2

² Each course outcome (Based on Blooms Taxanomy-CO1, CO2, CO3, CO4, CO5, and CO6) of the course needs to map with PO. This table evolves once faculty has mapped each course outcomes of their respective course with PO's.



													0 8 1 1 6 3
		Physiotherapeutics											
			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
Practical													
Course 2.1	MPT 107	Advanced											
	MI 1 107	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
Course 2.2		Physiotherapy											
		assessment and											
	MP1 106	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		Journal Club and											
	MPT 105	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		Pedagogy in											
	MPT 221	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

												SHAR	DA
			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 213	Cardiopulmonary 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 214	Cardiopulmonary 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

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												Beyond Boun	daries
			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		Cardiopulmonary											
	MPT 215	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		Cardiopulmonary											
	MPT 216	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(Cardiopulmonary) Batch: 2020-2022 TERM: I Year

S.	Paper ID	Subject	Subjects	Т	eaching	Load		<b>Core/Elective</b>	
No.	-	Code		L	T	Р	Credits	Pre-Requisite/ Co Requisite	Type of Course ³ : 1. CC 2. AECC 3. SEC 4. DSE
THE	ORY SUBJ	ECTS					11		
· · · · · · · · · · · · · · · · · · ·	35395	MPT 111	Research Methodology and Evidence Based Practice					Core	CC
	7926	MPT 102	Basic Sciences and Biomechanics					Core	CC
3.	7928	MPT 103	Physiotherapy Assessment and Clinical Decision Making					Core	CC
4.	7929	MPT 104	Advanced Physiotherapeutics					Core	SEC
Practi	cal/Viva-V	oce/Jury	·						
5.	7930	MPT 105	Journal Club and Clinical Case Presentation					Core	DSC
6.	35396	MPT 106	Physiotherapy Assessment and Clinical Decision Making					Core	SEC
7.	35397	MPT 107	Advanced Physiotherapeutics					Core	SEC
8.	35398	MPT 108	Clinical Training					Co-requisite	SEC

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

								SH UN Berry	HARDA
			TOTAL CREDITS						
			Program Struct School of Allied H MPT(Cardiop Batch: 202 TERM: 1	ure Te lealth oulmoi 20-202 I Year	emplat Scienc nary) 2	e ees			
S.	Paper ID	Subject	Subjects	Т	eaching	Load		<b>Core/Elective</b>	
No.		Code		L	Τ	Р	Credits	Pre-Requisite/ Co Requisite	Type of Course ⁴ : 1. CC 2. AECC 3. SEC 4. DSE
THEC	DRY SUBJ	ECTS	1			-	1		
ð	8. 35399	MPT 221	Pedagogy in Physiotherapy Education					Core	CC
(	9. 35400	MPT 202	Administration, Management and Ethical Issues					Core	DSC
10.	35408	MPT 213	Cardiopulmonary Physiotherapy I (Medical)					Core	CC
11.	35409	MPT 214	Cardiopulmonary Physiotherapy II (Surgical)	_				Core	CC
Practi	cal/Viva-V	oce/Jury							
12.	35410	MPT 215	Cardiopulmonary Physiotherapy I (Medical)					Core	DSC
13.	35411	MPT 216	Cardiopulmonary Physiotherapy II (Surgical)					Core	DSC

⁴ CC: Core Course, AECC: Ability Enhancement Compulsory Courses, SEC: Skill Enhancement Courses, DSE: Discipline Specific Courses

							ARDA VERSITY
14.	7939	MPT 205	Journal Club and Clinical case Presentation			Core	DSC
15.	7940	MPT 206	Dissertation			Core	DSC
16.	35407	MPT 230	Clinical Training			Co-requisite	SEC
	TOTAL CREDITS						



# C. Course Templates



Scho	ol: SAHS	Batch: 2020-2022				
Prog	ram:	Current Academic Year: 2020-21				
MPT	(Cardionulmonary)					
Bran	ch:	I Year				
1	Course Code	MPT 111				
2	Course Title	Research Methodology and Evidence Based P	ractice			
3	Credits					
4	Contact Hours					
	(L-T-P)					
	Course Type	Compulsory				
5	Course Objective	1. To explain the basic concepts, terms and	d 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 a	and its use in			
		Physiotherapy research and select best samplin	ig method for the			
		chosen design and estimate sample size $\cdot$	and intermed findings			
		4. Carry out simple analysis of collected data	and interpret findings			
6	Course Outcomes	The student will be able to:				
0	Course Outcomes	CO1 Understand the basic concepts terms as	nd definitions used in			
		health	na acminions used m			
		research methodology				
		$CO^2$ To acquire the skills of reviewing literati	ire formulate a			
		hypothesis, collecting data, writing researchproposal.				
		CO3. Describe the importance and use of Bios	statistics for research			
		work.				
		CO4: To identify different scales of measurem	ent 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 knowl	edge of research,			
		biostatistics which can be used to understand its sp	becial needs in relation			
		to interventions in physiotherapy. The coursewill	provide a			
	methodologies, and foundational research theories and protocols					
8	Outline syllabus	methodologies, and foundational research theo	CO Manning			
0	Unit 1					
	A		CO1. CO2			
		Research in physiotherapy –				
		Introduction, Research for				
		Physiotherapist: Why? How?				
		AndWhen?, Research – Definition,				

## 2.1 Template A1: Syllabus for Theory Subjects (SAMPLE)

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	concept, purpose, approaches, Internet sites forPhysiotherapist	
В	Research Fundamentals, Define measurement, Measurement framework, Scales of measurement, Pilot Study, Types of variables, Reliability & Validity, Drawing Tables, graphs, master chartetc	CO1, CO2,CO4
С	Writing a Research Proposal, Critiquing a research article, Defining aproblem	CO1, CO2,CO5
Unit 2		
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
В	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
С	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	CO1,CO2



	consent for research	
Unit 3		
A	Biostatistics- Introduction, Definition, Types, Application inPhysiotherapy; Data – Definition, Types, Presentation, Collectionmethods	CO1, CO3,CO4
В	Measures of central value- Arithmetic mean, median, mode. Relationship between them, Partitioned values- Quatertiles, Deciles, Percentiles, Graphicaldetermination	CO1, CO3,CO4
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		
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
В	Sampling- Methods of Sampling, Sampling distribution, Standard error, Types I & Ilerror, Probability (inBrief),Hypothesis Testing, Null Hypothesis, Alternative hypothesis, Acceptance & rejection of nullHypothesis, Level of significance	CO1, CO3,CO4
С	Parametric & non parametric tests-	CO1, CO3,CO4

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	Chi square test, Wilcoxo Wallis test test/student ofvariance	test, Mani on Signed , Friedna T test	n-Whitney U test, Kruskal- m test, T- t, Analysis		
Unit 5	Estimate ha	1 1 141.	····· ·········		
A	practices	Evidence–based health care, evidence–based practices			
В	evidence-base management	CO1, CO2			
С	Types of evid	Types of evidence - Definition of evidence.			
	Forms of evi	idence, Ra	ndomized controlled		
	trials, Case-c				
Mode of examination	Theory				
Weightage	CA		ETE		
Distribution	20%		80%		
Text book/s*	<ol> <li>Recent Methods for Clinical Therapists: applied</li> <li>Project Design and analysis by Carolyn</li> <li>Hicks</li> <li>Elements of Research in Physical Therapy: Dean P.</li> <li>Currier</li> <li>Physical therapy Research: Principles and Applications- Elizabeth Domholdt</li> <li>Research Methology: Kothari, C.P.</li> <li>Methods in Biostatistics: Mahajan B.K.</li> <li>Martin Dawes, Philip Davies, and Alistair Gray,</li> <li>Evidence–Based Practice: A Primer for Health Care</li> <li>Professionals. Elsevier Publication</li> </ol>				
Other References	<ol> <li>Albert R. F</li> <li>Evidence–</li> <li>Based Practic</li> <li>Outcome</li> <li>Measures in F</li> <li>Oxford</li> <li>University Propring</li> <li>Allen Rubi</li> <li>Research</li> </ol>	Roberts and e Manual: Health and ess n, Practitio	Kenneth R. Yeager, Research and Human Services, ner's Guide to Using		



								<b>S</b>	🥟 Beyond Bo	undaries
		for Evidence–Based Practice. John Willey &					ey &			
				Sons						
				Publicatio	on					
	<u> </u>							·		
POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
CO1	2	2	2	2	2	2	2	2	2	2
	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 : 2020-22				
Program:		Current Academic Year: 2020-21				
<b>MPT</b> (Cardiopulmonary)						
Branch:		I Year				
1	Course Code	MPT 102				
2	Course Title	Basic Sciences and Biomechanics				
3	Credits					
4	Contact Hours					
	(L-T-P)					
	Course Type	Compulsory				
5	Course Objective	1. To provide detailed introduction on basic anatomy, physiology, structure and function of the cardiopulmonary system.				
		2. To educate the students about the concept of cardiorespiratory mechanics and its applications				
		3. To encourage the students to apply the cardiopulmonary				
		physiologyconcepts in training and Physiotherapy.				
		4. To educate the students about the concepts of Biomechanics and				
		their use in Physiotherapy.				

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6	Course Outcomes	The student will be able to: CO1:Knowledge on basic anatomy,physiology, structure and function of the cardiopulmonary systems. CO2:Better understanding of cardio physiology of exercise and energy transfer that allows humans to engage in physical activity. CO3:Knowledge about basic concepts of biomechanics of cardiopulmonary 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 a anatomical knowledge and clinical application of Anatomy in Physiotherapy treatment. It also enables the student to have a better understanding of the principles of biomechanics and their application in cardiopulmonary- respiratory and various other dysfunctions well as knowledge of basic and applied cardio physiology				
8	Outline syllabus	CO Mapping				
	Unit 1	Structure & function of the various components of cardiopulmonary system				
	A	Basic Science: Anatomy and physiology of cardio- vascular and respiratory systems, Biomechanics of respiration.	CO1			
	В	Intrauterine development of cardiopulmonary system and difference between the adult and pediatric cardiopulmonary system.	CO1			
	С	Epidemiology, Symptomatology and pathophysiology of the cardio-respiratory disorders.	CO1			
	Unit 2	Basic Exercise Physiology				
	Α	Introduction to exercisephysiology, Nutrition andPerformance	CO2			
	В	Energytransfer, Measurement of human energyexpenditure	CO2			
	C	Systems of energy delivery andutilization in	CO2			

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Unit 3 A B C	Pulmonarysystem,Cardiovascularsystem,Musculoskeletal,NervousSystemandEndocrinesystemAndEndocrinesystemApplied Exercise PhysiologyAerobic powertraining, Anaerobic powertraining,Special aids in performance andconditioningExercise at differentaltitudes, Exercise at variousclimaticconditions, Sport divingObesity and weightcontrol, Exercise andaging,Clinical exercisephysiologyClinical exercise	CO2 CO2 CO2 CO2
Unit 4	Mechanics I	
A	Biomechanics Fundamental Mechanics: Forces, Moments, Newton's lows, Composition and resolution of forces, Static Equilibrium. Dynamic Equilibrium, Force system, Lever, Pulley systems, Density & Mass, Segmental dimensions Kinetics- Definition of forces, Force vectors, Naming of force, Force of gravity and Cog, Stability, Reaction force, Equilibrium, Linear force system, Friction and its various parameters, Parallel force system, Concurrent force system, Work power and energy, Moment arms of force, Force component, Equilibrium of force	CO3
B	Fluid Mechanics : Various laws governing the flow of fluids, Various laws governing the volume of fluid, Various laws governing the pressure of fluid, Various laws governing the energy of fluid, Various parameters explaining the flow, Various parameters describing the fluid, Clinical applications. Muscles Mechanics- Structure & composition of muscles, Fiber length & cross section area, Mechanical propertied, EMG changes during fatigue & contraction, Changes in mechanical properties because of ageing and Exercise & Immobilization. Clinical applications	CO3
C	Measurement Instrument : EMG Electro physiology of muscle contraction Recording processing relationship between EMG and Biomechanical variables. Mechanical Energy Work and Power : Definition,	CO3

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	Positive and	Negative wor	k of muscle, Muscle of	
	mechanical p	ower, Causes	of inefficient movement,	
	Co-contractio	on, Isometric o	contraction, Energy	
	generation at	one joint and	absorption at another,	
	Energy flow,	Energy storag	ge	
Unit 5	Mechanics II			
А	Ergonomics I	Biomechanics	in Cardiopulmonary	CO3
	Conditions :T	This course in	volves application of	
	biomechanica	al principles to	o cardiopulmonary	
	conditions.			
В	Orthosis & Pi	rosthesis- Ort	hosis of spine,	CO3
	Prescriptions	checkout & p	proper fitting, Bio-	
	mechanical p	rinciples gove	erning them, Aids used in	
	management	of disability		
C	Cardiopulmo	nary Mechani	cs- Biomechanics of	CO3
	Respiration, O	Cardiac Mech	anics, Pulmonary,	
	Mechanics, R	lib Cage Mov	ement	
Mode of	Theory			
examination		[		
Weightage	CA		ETE	
Distribution	20%	1	80%	
Text book/s*	I. Clinical Bi	mechanics of	the spine: white,	
	2 Exercise P	hysiology by	Mc Ardle Katch & Katch	
	(Lippincott W	Villiams and V	Wilking	
	2 Evencies D	hypiology	WIIKIIIS,	
	5. Exercise P	ications by A	Poberts	
	4 Clinical Appl	natomy for M	edical Students	
	5. Textbook of	of Medical Ph	vsiology	
	6. Joint Struc	ture and Func	tion - A Comprehensive	
	Analysis		*	
	7. Clinical kin	nesiology by I	Brunnstrom	
Other References				

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

									SHA UNIVE	RDA RSITY		
CO3	3	3	3	3	3	3	3	3	3	3		
CO4	3	3 2	3	3	3	2	2	3	2	2		
CO5	2	3	2	3	3	2	2	3	2	1		
	1-Sl 2-M 3-St Sch Pro MP rv)	light (Low) Ioderate (Medi ubstantial (Hig ool: SAHS gram: T(Cardiopulm	ium) gh) B C nona	atch: 2020 urrent Ac	-2022 ademic Y	Year: 202(	)-21					
	Bra	nch:	I	Year								
	1	Course Code	M	IPT 103								
	2	Course Title	P	hysiothera	py Asses	sment and	Clinical De	cision Ma	king (Theo	ory)		
	3	Credits										
	4 Contact Hours (L-T-P)											
		Course Type	С	Compulsory								
	5 Course Objective			<ol> <li>To provide the knowledge and skills about cardiopulmonary system assessment and evaluation of patients.</li> <li>To provide skills to develop clinical decision making for cardiopulmonaryconditions.</li> <li>To provide knowledge and skills to rationalise the outcomes of assessment.</li> <li>To train the students to accurately record the assessment and design individualized goals for patient.</li> </ol>								
	6	Course Outcomes	C C C C pa C	<ul> <li>CO1.Perform thorough physiotherapy assessment and list deficiencies</li> <li>CO2. Design individualized goal for patients</li> <li>CO3. Rationalize the outcome of assessment</li> <li>CO4. Document systematic, meaningful, accurate written records of patients</li> <li>CO5: To use assessment methods in designing treatment.</li> </ul>								
	/       Course         Description       This Course Supplements the Knowledge of assessment and diag in cardiopulmonary conditions. This will help form base of professional practice with the evidence based practice and enable student to have a better understanding of the subject along with t application in cardiopulmonary condition and various other dysfunctions.         8       Outline cullebus					gnosis es the their						
	8	Outline syllab	ous						CO M	lapping		



Unit 1	Cardiopulmonary assessment	
А	Review of General assessment, Sensory assessment, Motor Control assessment, Muscle Length Testing	CO1,CO2
	Postural assessment Limb length measurement	
B	Range of Motion Balance assessment Coordination	CO1 CO4
D	assessment Clinical Gait assessment Functional	01,004
C	Physical disability evaluation	CO1 CO2 C
C	Thysical disability evaluation	03
Unit 2		
А	Respiratory muscle assessment, Clinical assessment	CO1,CO2
В	Rationale of laboratory investigations and differential diagnosis	CO3
С	Evaluation of respiratory dysfunctions, lung function tests – volumetric, analysis of blood gases, X-ray chest.	CO1,CO4
Unit 3		
A	Evaluation cardiac dysfunction. [ECG, exercise ECG testing, Holter monitoring etc., Echocardiogram, X- Ray, Imaging techniques etc.]	CO1,CO2,C O3
В	Evaluation of peripheral vascular disorders: clinical,	CO1,CO2,C
	blood flow studies, temperature plethysmography	03
С	A.N.S dysfunction testing.	CO1,CO2,C O3
Unit 4		
А	Intensive care assessment	CO1,CO3
В	Risk factor assessment	CO1,CO3
С	Pain management (neurobiology, various theories, modulation and management of pain)	CO2
Unit 5		
А	Preventive measures in cardio respiratory conditions	CO1,CO2
В	Risk factor assessment	CO1
С	Physical Disability evaluation in detail. ICFclassification	CO1,CO3
Mode of examination		
Weightage	CA ETE	
Distribution	20% 80%	
Text book/s*	1. Cardiovascular and Pulmmonary Physical therapy: Evidence to practice5th ed Doona Frown felter	



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	2.	Jim, Electrodiagnosis in disease of muscle: Kumara	
	3.	Physiotherapy for respiratory and cardiac problems	
		: Adults And Pediatrics3rd ed / 4th ed. Pryor, J A	
		&Prasad, S Ammani	
Other References			

DO	DO 1	DOO	DO2		DOC	DOC	D07	DCO1	DCOO	DCO2
POs	POI	PO2	PO3	PO4	POS	PO6	PO/	PSOI	PSO2	PSO3
COs										
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)

Scho	ool: SAHS	Batch: 2020-2022
Prog	gram:	Current Academic Year: 2020-21
MP	<b>F</b> (Cardiopulmonary)	
Brai	nch:	I Year
1	Course Code	MPT 106
2	Course Title	Physiotherapy Assessment and Clinical Decision Making
		(Practical)
3	Credits	
4	Contact Hours	
	(L-T-P)	
	Course Type	Compulsory
5	Course Objective	1. To provide the knowledge and skills about cardiopulmonary
		system assessment and evaluation of patients.
		2. To provide skills to develop clinical decision making for
		cardiopulmonary 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 deficiencies CO2. Design individualized goal for patients CO3. Rationalize the outcome of assessment CO4. Document systematic, meaningful, accurate w of patients CO5: To use assessment methods in designing treatments	nd list vritten records ment.
7	Course Description	This Course Supplements the Knowledge of assessind diagnosis in cardiopulmonary conditions. This will be of professional practice with the evidence based pra- enables the student to have a better understanding of along with their application in cardiopulmonary con- various other dysfunctions.	nent and help form base ctice and f the subject dition and
8	Outline syllabus		CO Mapping
	Unit 1	Cardiopulmonary assessment	
	A	Review of General assessment, Sensory assessment, Motor Control assessment, Muscle Length Testing, Postural assessment, Limb length measurement	CO1,CO2
	В	Demonstration of Range of Motion, Balance assessment, Coordination assessment, Clinical Gait assessment, Functional assessment, Environmental assessment	CO1,CO4
	С	Demonstartion of Physical disability evaluation	CO1,CO2,CO3
	Unit 2		
	A	Respiratory muscle assessment, Clinical assessment	CO1,CO2
	В	Overviewing Rationale of laboratory investigations and differential diagnosis	CO3
	С	Evaluation of respiratory dysfunctions, lung function tests – volumetric, analysis of blood gases, X-ray chest.	CO1,CO4
	Unit 3		
	Α	Evaluation cardiac dysfunction. [ECG, exercise ECG testing, Holter monitoring etc., Echocardiogram, X-Ray, Imaging techniques etc.]	CO1,CO2,CO3
	В	Evaluation of peripheral vascular disorders:	CO1,CO2,CO3



	clinical, blood flow studies, temper plethysmography	ature
С	A.N.S dysfunction testing.	C01,C02,C03
Unit 4		
А	Intensive care assessment	CO1,CO3
В	Risk factor assessment	CO1,CO3
С	Pain management (neurobiology, various theo modulation and management of pain)	ries, CO2
Unit 5		
A	Enculcate practically the preventive measure cardio respiratory conditions	es in CO1,CO2
В	Risk factor assessment	CO1
С	Physical Disability evaluation in detail. ICFclassification	CO1,CO3
Mode of examination	Practical	
Weightage	CA ETE	
Distribution	20% 80%	
Text book/s*	<ol> <li>Cardiovascular and Pulmmonary Physical therapy: Evidence to practice5th ed Dou Frown felter</li> <li>Electrodiagnosis in disease of muscle: Kur ,Jim</li> <li>Physiotherapy for respiratory and cardiac problems : Adults And Pediatrics3rd ed ed. Pryor, J A &amp;Prasad, S Ammani</li> </ol>	ona nara / 4th
Other References		

Scho	ol: SAHS	Batch : 2020-22
Prog	ram:	Current Academic Year: 2020-21
MPT	(Cardiopulmonary)	
Branch:		I Year
1	Course Code	MPT 104
2	Course Title	Advanced Physiotherapeutics (Theory)
3	Credits	
4	Contact Hours	
	(L-T-P)	
	Course Type	Compulsory
5	Course Objective	1. To provide knowledge about various techniques used in
		cardiopulmonaryPhysiotherapy.



		2. To analyse and classify various cardiorespiratory pulmonary				
		conditions and their management.				
		3. Compare & contrast the outcome of various physiotherapy				
	~ ~ ~	treatment approaches.				
6	Course Outcomes	CO1. Learn various techniques of Physiothera	py.			
		CO2. To formulate a rationalized physiotherap	y treatment plan for			
		the patient.	e in dividuale			
		CO3: Use various skills for renabilitation of the $CO4$ : Compare & contrast the outcome of variation of the contrast state state of the contrast state of the contrast state	e marviauais.			
		treatment approaches	ous physiotherapy			
7	Course Description	The course will enable the students to learn ski	ills and techniques to			
	-	be used in Physiotherapy management of cardi	opulmonary			
		conditions				
8	Outline syllabus		CO Mapping			
	Unit 1					
	A	Intensive care unit – Concept and set-up,	CO1,CO2,CO3,CO4			
		equipment for advanced methods of				
		resuscitation monitoring and patent				
		management: artificial airways ventilators				
		management. artificiar an ways, ventilators,				
	D	puise –oximetry etc	CO1 CO2 CO2			
	В	Cardio-pulmonary resuscitation	01,002,005			
	С	Cardiac and Pulmonary Rehabilitation.	CO1,CO2,CO3			
	Unit 2					
	А	Respiratory physiotherapy techniques –	CO1,CO2,CO3,			
		Techniques to improve lung volume:	CO4			
		techniques to reduce the work of breathing				
		and techniques to clear secretions.				
	B	Body positioning Airway Clearance	CO1 CO2 CO3 CO4			
	D	Techniques. Postural Drainage. Forced	001,002,003,001			
		Expiratory technique, Breathing Exercise,				
		Percussion and vibration				
	С	Respiratory Muscle training, Techniques for	CO1,CO2,CO3,CO4			
		facilitating ventilator pattern				
	Unit 3					
	A	Physiotherapy management for common	CO2,CO3			
		conditions in the ICU. Humidification and				
		Aerosol therapy. Oxygen therapy. PT in				
		neonatal ICU. Respiratory therapy equipment				
		and adjuncts to Cardiopulmonary therapy				
		Respiratory Pharmacology Deisoning Drug				
1		Respiratory Filarmacology, Poisoning, Drug				



	overdose, and Drowning	
В	Applying and Evaluating Bronchial Hygiene therapy	CO2,CO3
С	Exercise testing, planning and prescription: Aerobic and anaerobic exercise training. And Physiotherapy modalities used for wound healing, Bio feedback	CO2,CO3
Unit 4		
A	Principal and prescription of cardiac Rehabilitation & pulmonary Rehabilitation	CO2
В	Exercise Prescription for health promotion and fitness for special populations- DM, Obesity, IHD, COPD, HTN	CO2,CO3
С	C.B.R in Cardio-vascular and respiratory conditions,	CO2
Unit 5		
А	Prevention of Morbidity and Mortality with the use of physical aids	CO1,CO2,CO3
В	Outcomes measure in pulmonary & cardiac Rehabilitation and Functional Adaptations	CO2,CO3
С	Recent advances in Cardio respiratory physiotherapy	CO2,CO3
Mode of examination	Theory	
Weightage	CA ETE	
 Distribution	20% 80%	
Text book/s*	<ol> <li>Egan's Fundamentals of Respiratory Care</li> <li>Exercise prescription- ACSM 9th edition</li> <li>Aerobic exercise prescription Harris/Brooks</li> <li>Clinical Application of Mechanical Ventilation3rd ed Chang, David</li> </ol>	
Other References		

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



								<u> </u>	🧈 Beyond Bo	undaries
CO3										
005	2	3	2	3	3	2	3	3	3	2
CO4										
	3	2	3	3	3	2	2	3	3	2

Sch	ool: SAHS	Batch : 2020-22				
Pro	gram:	Current Academic Year: 2020-21				
MP	T(Cardiopulmonary)					
Bra	nch:	I Year				
1	Course Code	MPT 107				
2	Course Title	Advanced Physiotherapeutics (Practical)				
3	Credits					
4	Contact Hours					
	(L-T-P)					
	Course Type	Compulsory				
5	Course Objective	1.To provide knowledge about various techniq cardiopulmonary Physiotherapy.	1.To provide knowledge about various techniques used in cardiopulmonary Physiotherapy.			
		2. To analyse and classify various cardiorespir	atory pulmonary			
		conditions and their management.	1			
		3. Compare & contrast the outcome of various	s physiotherapy			
6	Course Outcomes	treatment approaches.				
0	Course Outcomes	CO2. To formulate a rationalized physiotherap	py. Ny treatment plan for			
		the patient	by treatment plan for			
		CO3 Use various skills for rehabilitation of th	e individuals			
		CO4: Compare & contrast the outcome of vari	ous physiotherapy			
		treatment approaches				
7	Course Description	The course will enable the students to learn ski be used in Physiotherapy management of card conditions.	ills and techniques to iopulmonary			
8	Outline syllabus		CO Mapping			
	Unit 1					
	А	Demonstration of Intensive core whit	CO1,CO2,CO3,CO4			
		Demonstration of intensive care unit –				
		Concept and set-up, equipment for advanced				
		methods of resuscitation, monitoring and				
		patent management: artificial airways,				
		ventilators, pulse –oximetry etc				
	В	Demonstration of Cardio-pulmonary	CO1,CO2,CO3			
		requesitation of Cardio-pullionary				
	<u> </u>	Disasting and analigation (Continue to				
		Planning and application of Cardiac and	01,002,003			
		Pullionary Kenadilitation.				



Unit 2		
A	Demonstration of Respiratory physiotherapy techniques – Techniques to improve lung volume; techniques to reduce the work of breathing and techniques to clear secretions,	CO1,CO2,CO3, CO4
В	Demonstration of Body positioning, Airway Clearance Techniques, Postural Drainage, Forced Expiratory technique, Breathing Exercise, Percussion and vibration	CO1,CO2,CO3,CO4
С	Respiratory Muscle training, Techniques for facilitating ventilator pattern	CO1,CO2,CO3,CO4
Unit 3		
A	Demonstration of Physiotherapy management for common conditions in the ICU, Humidification and Aerosol therapy, Oxygen therapy, PT in neonatal ICU, Respiratory therapy equipment and adjuncts to Cardiopulmonary therapy, Respiratory Pharmacology, Poisoning, Drug overdose, and Drowning	CO2,CO3
В	Applying and Evaluating Bronchial Hygiene therapy	CO2,CO3
C	Training of Exercise testing, planning and prescription: Aerobic and anaerobic exercise training. And Physiotherapy modalities used for wound healing, Bio feedback	CO2,CO3
Unit 4		
A	Demonstrate Principal and prescription of cardiac Rehabilitation & pulmonary Rehabilitation	CO2
В	Giving Exercise Prescription for health promotion and fitness for special populations- DM, Obesity, IHD, COPD, HTN	CO2,CO3
C	Performing C.B.R (Community based rehabilitation) in Cardio-vascular and respiratory conditions,	CO2
Unit 5		

					SHARDA UNIVERSITY
A	Learn to pre with the use	CO1,CO2,CO3			
В	Measuring & cardiac R Adaptations	Outcomes m Rehabilitatior	CO2,CO3		
С	Learn to Cardio resp	enculcate l iratory physi	CO2,CO3		
Mode of examination	Practical				
Weightage	CA		ETE		
Distribution	20%		80%		
Text book/s*	1. 1.Egan's	Fundamental	ls of Respira	tory Care	
	2. Exercise	prescription-	ACSM 9th e	dition	
	<ol> <li>Aerobic exercise prescription Harris/Brooks</li> <li>Clinical Application of Mechanical</li> </ol>				
	Ventilati	ion3rd ed Cl	nang, David		
	Livingstone	e London 199	95		
Other References					

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

Scho	ool: SAHS	Batch :2020-22			
Prog	gram:	Current Academic Year: 2020-21			
MPT	<b>(Cardiopulmonary)</b>				
Bran	ich:	IYear			
1	Course Cod	MPT 105			
	e				
2	Course Title	Journal Club and Clinical Case Presentation			
3	Credits				
4	Contact Hours				
	(L-T-P)				
	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. Presen	CO3. Present the various cases and design the treatment programme						
		for							
		the patients							
		CO4. Unde	rstand Evide	nce based	implementati	on of various			
		research							
		protocols.							
		CO5.Reason	ing and decisi	ion making	regarding diag	nosis, treatment			
		and	-	-					
		follow-up of	patients						
7	Course Description	This course i	s to design an	d develop tl	ne in-depth thir	nking ability,			
		presentation	skill, reasonir	ig and decis	ion making, an	alytical skills			
		and deep exp	oloration of va	rious topics	and cases amo	ong the			
		students. It w	vill enhance th	ne research a	bility of the st	udents hence			
		will help in uplifting the new rays of therapeutic skills.							
	Mode of	Practical							
	examination								
	Weightage	СА							
	Distribution	50				50			

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



School: SAHS		Batch : 2020-22					
Prog	ram:	Current Academic Year: 2021-22					
MPT	C(Cardiopulmonary)						
Bran	ch:	II Year					
1	Course Cod	MPT 221					
	e						
2	Course Title	Pedagogy in Physiotherapy Education					
3	Credits						
4	Contact Hours						
	(L-T-P)						
	Course Type	Compulsory					
5	Course Objective	1. To educate the students about the conce	1. To educate the students about the concepts of teaching and				
		learning.					
		2. To enable them to learn about the philosoph	ies of education.				
		3. To provide knowledge about curriculu	im, techniques, and				
		methods of teaching.					
6	Course Outcomes	CO1. Understand the dynamics of teaching and	CO1. Understand the dynamics of teaching and learning.				
		CO2. Plan effective teaching sessions in Physic	otherapy.				
		CO3: Learn method and techniques of teaching					
		CO4: Learn meaning and concept, basis of curriculum formulation					
		COS: To know the use of various teaching aids					
7	Course Description	This course presents knowledge and emplication	n of different				
/	Course Description	tasshing methodology to the students. The sou	n of unferent				
		teaching methodology to the students. The cou	rse begins with core				
		topics of Concepts of Teaching and learning, Current topics of Guidance and	cululli, various				
•8	Outline syllabus	reaching methods and concept of guidance and	CO Manning				
.0	Unit 1						
			CO1 CO2				
	Λ	Education: - Introduction, Educational	01,002				
		Philosophy- Idealism Naturalism,					
		Pragmatism					
	В		CO1.CO2				
		Aims of Education, Functions of					
		Education, Formal, informal and					
		non-formalEducation,Agencies of					
		Education					
	С	Current issues and Trends in Higher	CO1,CO2				
		Education, Issue of quality in Higher					
		Education					
	Unit 2						
	А	Magning and scope of Educational	CO1,CO2				
		Preschala and scope of Educational					
		Psychology					

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В	Dynamics of behavior, Individual differences	CO1,CO2
С	Method and techniques of teaching: - Lecture, Demonstration, Discussion, Seminar, Assignment, Project, CaseStudy	CO1,CO2,CO3
Unit 3		
A	Curriculum: - Meaning and concept, Basis of curriculum formulation, Process of curriculum development and factors involved, Evaluation of curriculum	CO1,CO2,CO4
В	Framing objectives for curriculum, Bloom's taxonomy of instructional objectives, Writing instructional objectives in behavioral terms	CO1,CO2,CO3,CO4
C	Unit planning, Lesson planning	CO1,CO2,CO3
Unit 4		
A	Teaching aids, Types of teaching aids, Principles of selection, preparation and use of audio- visualaides,	CO1,CO2,CO4,CO5
В	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		
A	Guidance and counseling, Meaning & concepts of guidance and counseling, Principles of guidance and counseling	CO1,CO2
В	Awareness Programme, awareness and guidance to the common people about health and disease	CO1,CO2
С	Autonomy and Accountability, Privatization of Education	C01,C02



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Mode of examination	Theory		
Weightage	CA	ETE	
Distribution	20	80	100
Text book/s*			
Other References			

Pos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
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)

Scho	ol: SAHS	Batch: 2020-2022
Program:		Current Academic Year: 2021-22
MPT	C(Cardiopulmonary)	
Bran	ch:	II Year
1	Course Cod	MPT 202
	e	
2	Course Title	Administration, Management and Ethical Issues
3	Credits	
4	Contact Hours	
	(L-T-P)	
	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	<ul> <li>CO1. Understand the basic issues of management and administration.</li> <li>CO2. Practice as an informed professional on legal and ethical issues in</li> <li>Physiotherapy.</li> <li>CO3 To understand the basic principle of Management and its importance.</li> <li>CO4:To understand the importance of hospital and how it works in different departments.</li> <li>CO5:To understand the role of Physiotherapy and its benefits to the society.</li> </ul>						
7	Course Description	The course will enable the students about the rules conduct, code of ethics and legal ethical issues in Pl the standards of practice for physiotherapists. It w Practice as an informed professional on management functions.	s of professional hysiotherapy and vill help them to nt process and its					
8	Outline syllabus	1	CO Mapping					
	Unit 1							
	A	Management: Introduction, Evolution of management, Functions of management	CO1,CO3					
	В	Management process – planning, organization, direction, controlling,Decision- making.	CO1,CO3					
	С	Personnelmanagement:Staffing,Recruitmentselection,Performanceappraisal,Collectivebargaining,Jobsatisfaction.	CO1,CO3					
	Unit 2							
	A	Marketing: Market segmentation, Channels of distribution, Promotion, Consumerbehavior	CO1,CO2,CO3					
	В	Total Quality Management: Basics of quality management, Quality control, Quality assurance Programme in hospitals	CO1,CO2,CO3					
	С	Medical audit, International qualitysystem.	CO1,CO2					
	Unit 3							
•	-							

		SHARDA UNIVERSITY Beyond Boundaries
A	Hospital as an organization - Functions and types of hospitals	CO1,CO2,CO4
В	Roles of Physical therapist, Physical therapy Director, Physiotherapy supervisor, Physiotherapy assistant,Physiotherapy aide, Home health aide, Volunteer.	CO1,CO2,C5
С	Rules of Professional Conduct.	CO1,CO2
Unit 4		
A	Legal responsibility, Code of ethics	C01,C02
В	Functions of Physiotherapy associations	CO1,CO2
С	Role of the International Health Agencies	CO1,CO2
Unit 5		
А	Standards of practice for physiotherapists	CO1,CO2
В	Liability and obligations in the case of medical legal action, Law of disability & discrimination	CO1,CO2
С	Confidentially of the Patient's status, Consumer protection law, health law, MCI, DCP	CO1,CO2
Mode of examination	Theory	
Weightage	CA ETE	
Distribution	20% 80%	
Text book/s*	<ol> <li>Healthcare System and management: Goel, S.L.</li> <li>Documenting physical therapy: Baeten, Angla</li> <li>Physical Therapy Administration &amp; Management by</li> <li>Hickik</li> <li>Management Principles for physiotherapists by Nosse Lorry J.</li> <li>Textbook of Healthcare ethics: Loeuy, Erich H</li> </ol>	
Other References		

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
							•			

									SHA UNIVE	RDA RSITY
COs										
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)

Scho	ool: SAHS	Batch: 2020-2022				
Program:		Current Academic Year: 2021-22				
MP	<b>F</b> (Cardiopulmonary)					
Brai	nch:	II Year				
1	Course Cod	MPT 213				
2	Course Title	CardiopulmonaryPhysiotherapy I (Medical) Theory				
3	Credits					
4	Contact Hours (L-T-P)					
	Course Type	Compulsory				
5	Course Objective	<ol> <li>To educate students about etiology, pathophysiology, clinical presentation and physiotherapy manangement of general cardiopulmonary disorders.</li> <li>To provide knowledge about epidemiology, patho physiology and clinical conditions affecting condition of body.</li> <li>To educate students about physiotherapy management for various cardiopulmonarydisorders.</li> </ol>				
6	Course Outcomes	<ul> <li>CO1. Understand about etiology, pathophysiology, clinical presentationand physiotherapy management of general cardiopulmonarydisorders.</li> <li>CO2. Understand about epidemiology, patho physiology and clinical conditions affecting various condition of body</li> <li>CO3. Plan physiotherapy management for cardiopulmonary disorders.</li> <li>CO4: To learn about various regional cardiopulmonaryconditions</li> <li>CO5: To learn about various investigative procedures used in cardiopulmonarydisorders</li> </ul>				



7	Course Description	This course is designed to develop and enhance the	knowledge of
		Medical management for various cardiopulmonaryd	isorders and
8	Outline syllabus	Physiotherapy for the same.	CO Manning
0	Unit 1		
	A		C01,C02,C05
		Cardiac Disorders: Cardiac Catheterization,	
		Radionuclide scanning, (stress testing, ABG,	
		Labs etc.) and medical management of disorders	
		of the cardiac system	
	В	Assessment of symptoms of heart disease.	CO1.CO2.
			CO5
	С	Disorder of cardiac rate, Rhythm and condition,	CO1,CO2,
		Cardiac Arrest, Cardiac failure, Shock, Rheumatic	CO5
		fever, Congenital heart disease, Disease of the	
		heart valve, Infective Endocarditis, Ischemic heart	
		Dericarditis Heart disease in programey	
		Degenerative arterial disease. Inflammatory	
		arterial disease, Raynaud's disease, Venous	
		thrombosis, Peripheral Vascular disease, Cardio	
		myopathy, Disease of the pericardium.	
	Unit 2		
	Α	Degenerative arterial disease, Inflammatory	CO1,CO2,
		arterial disease,	CO5
	В	Raynaud's disease, Venous thrombosis, Peripheral	CO1, CO2,
		Vascular disease	CO5
	С	Cardio myonathy Disease of the	CO1, CO2,
		pericardium	CO5
	Unit 3	pericardium	
	A	Pulmonology Disorders : Epidemiology patho-	CO1. CO2
		mechanics, clinical presentation, relevant	CO5
		diagnostic tests (PFT, Labs etc.)	
	В	Medical management of disorders of the	CO1, CO2
		pulmonary system	CO5
	~		
	C	Disorders like : Obstructive pulmonary disease,	CO1, CO2,
		Infection of the Respiratory system, Interstitial	005
		and infiltrative pulmonary disorders, Pulmonary	
		disorders due to exposure to Organic and	
		inorganic pollutants, Pulmonary disorders due to	
		systemic inflammatory disease, Pulmonary	



	vascular disease, Disease of pleura, Respiratory failure	
Unit 4		
А	Supplemental Oxygen and Oxygen deliv devices in Chronic Respiratory Disease	ery CO1, CO2,CO3,CO4
В	Neuromuscular and Skeletal disorders leading Global Alveolar Hypoventilation Myopath Spinal muscular Artophies Poliomyelitis Mo Neuron Disease HSMN Kyphoscoliosis Peo Carinatum Pectus Excavatum	g to ies, otor ctus
C	Respiratory care of neurological conditions in ICU: spinal cord injury, diaphragm palsy, GBS, Myasthenia gravis, increased intracranial pressure	CO1, CO2,CO3, CO4
Unit 5		
A	Pathophysiology of paralytic – Restrictive pulmonary syndromes	CO1, CO2, CO4
В	Conventional Approaches to managing n-M Ventilatory failure, Mechanical ventilatior Concept, Physiological effect an complications	I- CO1, n: CO2,CO4 d
С	Role of Physiotherapy in mechanical ventilation & weaning from ventilator	CO1, CO2,CO4
Mode of examination	Theory	
Weightage	CA ETE	
Distribution	20% 80%	
Text book/s*	<ol> <li>Tidy's Physiotherapy Porter, Stuart</li> <li>Cash's TB of Chest, Heart and vascular disord for Physiotherapists4th ed Downie, P A</li> <li>Exercise physiology &amp; practical applicat Alexander B.S.</li> </ol>	lers
Other Reference	<ul> <li>es 1.Recent advances in cardiopulmonary</li> <li>2. Textbook of Orthopaedic &amp; Trauma</li> <li>3. Watson Jones fracture join &amp; injuries</li> </ul>	



POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
Cos										
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

Sch	ool: SAHS	Batch: 2020-2022					
Prog	gram:	Current Academic Year: 2021-22					
MP	T(Cardiopulmonary)						
Bra	nch:	II Year					
1	Course Cod	MPT 215					
2	Course Title	Cardiopulmonary Physiotherapy I (Medical) Practical					
3	Credits						
4	Contact Hours (L-T-P)						
	Course Type	Compulsory					
5	Course Objective	<ol> <li>To educate students about etiology, pathophysiology, clinical presentation and physiotherapy manangement of general cardiopulmonary disorders.</li> <li>To provide knowledge about epidemiology, patho physiology and clinical conditions affecting condition of body.</li> <li>To educate students about physiotherapy management for various cardiopulmonarydisorders.</li> </ol>					
6	Course Outcomes	<ul> <li>CO1. Understand about etiology, pathophysiology, clinical presentation and physiotherapy management of general cardiopulmonary disorders.</li> <li>CO2. Understand about epidemiology, patho physiology and clinical conditions affecting various condition of body</li> <li>CO3. Plan physiotherapy management for cardiopulmonary disorders.</li> <li>CO4: To learn about various regional cardiopulmonaryconditions</li> <li>CO5: To learn about various investigative procedures used in cardiopulmonarydisorders</li> </ul>					
7	Course Description	This course is designed to develop and enhance the knowledge of					



		Medical management for various cardiopulmonarydisorders and Physiotherapy for the same.					
8	Outline syllabus		CO Mapping				
	Unit 1						
	A	Demonstration of Cardiac Disorders: Cardiac Catheterization, Radionuclide scanning, (stress testing, ABG, Labs etc.) and medical management of disorders of the cardiac system	CO1,CO2,CO5				
	В	Demonstration of Assessment of symptoms of heart disease.	CO1,CO2, CO5				
	C	Planning treatment of disorder of cardiac rate, Rhythm and condition, Cardiac Arrest, Cardiac failure, Shock, Rheumatic fever, Congenital heart disease, Disease of the heart valve, Infective Endocarditis, Ischemic heart disease, Hypertension & Orthostatic hypotension, Pericarditis, Heart disease in pregnancy, Degenerative arterial disease, Inflammatory arterial disease, Raynaud's disease, Venous thrombosis, Peripheral Vascular disease, Cardio					
	Unit 2						
	A	Planning treatment of Degenerative arterial disease, Inflammatory arterial disease,	CO1,CO2, CO5				
	В	Planning treatment of Raynaud's disease, Venous thrombosis, Peripheral Vascular disease	CO1, CO2, CO5				
	С	Planning treatment of Cardio myopathy, Disease of the pericardium	CO1, CO2, CO5				
	Unit 3						
	A	Pulmonology Disorders : Epidemiology, patho- mechanics, clinical presentation, relevant diagnostic tests (PFT, Labs etc.)	CO1, CO2, CO5				
	В	Medical management of disorders of the pulmonary system	CO1, CO2 CO5				
	C	Planning treatment of disorders like : Obstructive pulmonary disease, Infection of the Respiratory system, Interstitial and infiltrative pulmonary disorders, Pulmonary disorders due to exposure to	CO1, CO2, CO5				

		SHARDA UNIVERSITY Beyond Boundaries
	Organic and inorganic pollutants, Pulmonary disorders due to systemic inflammatory disease, Pulmonary vascular disease, Disease of pleura, Respiratory failure	
Unit 4		
A	Application of Supplemental Oxygen and Oxygen delivery devices in Chronic Respiratory Disease	CO1, CO2,CO3,CO4
B	Managing Neuromuscular and Skeletal disorders leading to Global Alveolar Hypoventilation Myopathies, Spinal muscular Artophies Poliomyelitis Motor Neuron Disease HSMN Kyphoscoliosis Pectus Carinatum Pectus Excavatum	CO1, CO2, CO4
С	Respiratory care of neurological conditions in ICU: spinal cord injury, diaphragm palsy, GBS, Myasthenia gravis, increased intracranial pressure	CO1, CO2,CO3, CO4
Unit 5		
A	Planning treatment of paralytic – Restrictive pulmonary syndromes	CO1, CO2, CO4
В	Demonstration of Conventional Approaches to managing n-M-Ventilatory failure, Mechanical ventilation: Concept, Physiological effect and complications	CO1, CO2,CO4
С	Demonstration of Role of Physiotherapy in mechanical ventilation & weaning from ventilator	CO1, CO2,CO4
Mode of examination	Practical	
Weightage	CA ETE	
Distribution	20% 80%	
	<ol> <li>Figs Figstomerapy Porter, Stuart</li> <li>Cash's TB of Chest, Heart and vascular disorders for Physiotherapists4th ed Downie, P A</li> <li>Exercise physiology &amp; practical application</li> </ol>	



			Beyond Boundaries
	А	lexander B.S.	
Other Re	eferences 1.Rec	cent advances in cardiopulmonary	
	2. Te	xtbook of Orthopaedic & Trauma	
	3. Wa	atson Jones fracture join & injuries	

-										
POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
Cos										
005										
CO1										
	3	3	3	3	3	3	3	2	3	2
CO2										
002	3	3	3	3	3	3	2	3	3	3
CO2										
005	2	2	2	2	2	2	2	2	2	2
	3	3	2	3	3	3	3	3	3	3
CO4										
	2	2	3	3	3	2	3	3	3	2
CO5										
005	3	1	3	3	2	2	2	3	3	2
I	J		5	5	2	2	2	5	5	Ζ

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

Scho	ool: SAHS	Batch : 2020-22
Prog	gram:	Current Academic Year: 2021-22
MPT	(Cardiopulmonary)	
Bran	ich:	II Year
1	Course Code	MPT 214
2	Course Title	CardiopulmonaryPhysiotherapy II (Surgical) Theory
3	Credits	
4	Contact Hours	
	(L-T-P)	
	Course Type	Compulsory
5	Course Objective	1. To educate students about orientation and general principles of
		cardiopulmonary surgeries.
		2. To provide knowledge about the physiotherapy management
		following surgical procedures
6	Course Outcomes	CO1. Understand about the orientation and general principles of
		cardiopulmonary surgeries.
		CO2. Assess the patients following surgical procedures.
		CO3:Provide the physiotherapy management
		following surgical procedures
		CO4: Enable the students to gain knowledge aboutcardiac implants
		CO5: Enable the students to gain knowledge aboutheart transplant,



		cardiac surgeriesandgrafting					
7	Course Description	The course will enable the students to gain knowledge about orientation and general principles of cardiac surgeries. This will help them to formulate and design physiotherapy treatment program following surgical procedures.					
8	Outline syllabus		CO Mapping				
	Unit 1						
	А	Cardio-Thoracic Surgery: - General Principles of cardiac & pulmonary surgery	C01,C02,C03				
	В	Surgical management of the Various cardiopulmonary conditions, indication, contraindications for surgery	CO1,CO2,CO3				
	С	Precautions after surgery.	CO1,CO2, CO3				
	Unit 2						
	А	Close v/s open heart surgery,	CO1,CO2,CO3				
	В	Incisions	CO1, CO2, CO3,CO4				
	С	Management	CO1, CO2, CO3,CO4				
	Unit 3						
	A	Preoperative Assessment of Patient, Pre and post op blood gas exchange, Hemodynamics performance of CTVS Patients,	CO1, CO2, CO3				
	В	Emergencies in CTVS, A-V Shunt, Heart Transplant, Left Ventricular Assistive devices	CO1, CO2, CO3,CO4				
	С	Procedure on Sternum, Chest wall, diaphragm, mediastinum, oesophagus	CO1, CO2 CO3,CO5				
	Unit 4						
	А	Cardiopulmonary Bypass	CO1, CO2, CO3				
	В	Maintaining and Removing Artificial Airways	CO1, CO2, CO3				
	С	Pulmonary & Cardiac rehabilitation – Conservative and post-operative management	CO1, CO2, CO3				
	Unit 5						
	А	Physiotherapy management general Surgical conditions	CO1, CO2, CO3				

		SHARDA UNIVERSITY
В	Cardio-respiratory emergencies and management	CO1, CO2,
	principles – medication, critical care,	CO3
С	Indications of surgical intervention, stabilization	CO1, CO2,
	of vital functions defibrillation.	CO3
Mode of examination	Theory	
Weightage	CA ETE	
Distribution	20% 80%	100
Text book/s*	<ol> <li>Cash's TB of General medical &amp; Surgical condition for Physiotherapists2nd ed Downie, P A</li> <li>Physiotherapy in Respiratory Care Alexondra Houg</li> <li>Cardio Pulmonary Physical Therapy 6th ed Scoot Irwin</li> <li>Physiotherapy in cardio-vascular rehabilitation Webber</li> <li>Cardiopulmonary Rehabilitation (position statement-AACVPR)</li> <li>Pulmonary Rehabilitation Guidelines ATS</li> </ol>	
Other References	Trauma Secrets byNaudee	

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
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



School: SAHS		Batch : 2020-22	
Prog	ram:	Current Academic Year: 2021-22	
MPT	C(Cardiopulmonary)		
Bran	ich:	II Year	
1	Course Code	MPT 216	
2	Course Title	Cardiopulmonary Physiotherapy II (Surgical)Practi	cal
3	Credits		
4	Contact Hours		
	(L-T-P)		
	Course Type	Compulsory	
5	Course Objective	1. To educate students about orientation and general	principles of
		cardiopulmonary surgeries.	
		2. To provide knowledge about the physiotherapy m	anagement
		following surgical procedures	
6	Course Outcomes	CO1. Understand about the orientation and general	principles of
		cardiopulmonary surgeries.	
		CO2. Assess the patients following surgical procedu	ires.
		CO3:Provide the physiotherapy management	
		following surgical procedures	
		CO4: Enable the students to gain knowledge about of	cardiac implants
		CO5: Enable the students to gain knowledge about h	neart transplant,
		cardiac surgeries andgrafting.	
7	Course Description	The course will enable the students to gain k	nowledge about
		orientation and general principles of cardiac surg	geries. This will
		help them to formulate and design physiotherapy tre	eatment program
		following surgical procedures.	
8	Outline syllabus		CO Mapping
	Unit 1		
	A	Cardio-Thoracic Surgery: - General Principles of	CO1,CO2,CO3
		cardiac & pulmonary surgery	
	В		CO1.CO2.CO3
	-	Surgical management of the Various	001,002,000
		cardiopulmonary conditions, indication,	
		contraindications for surgery	
	С	Precautions after surgery.	CO1,CO2,
			CO3
	Unit 2		
	A	Close v/s open heart surgery,	CO1,CO2,CO3
	В	Incisions	CO1, CO2,
			CO3,CO4

		SHARDA
С	Management	CO1, CO2, CO3,CO4
Unit 3		
A	Preoperative Assessment of Patient, Pre and post op blood gas exchange, Hemodynamics performance of CTVS Patients,	CO1, CO2, CO3
В	Emergencies in CTVS, A-V Shunt, Heart Transplant, Left Ventricular Assistive devices	CO1, CO2, CO3,CO4
С	Procedure on Sternum, Chest wall, diaphragm, mediastinum, oesophagus	CO1, CO2 CO3,CO5
Unit 4		
A	Cardiopulmonary Bypass	CO1, CO2, CO3
В	Maintaining and Removing Artificial Airways	CO1, CO2, CO3
С	Pulmonary & Cardiac rehabilitation – Conservative and post-operative management	CO1, CO2, CO3
Unit 5		
A	Physiotherapy management general Surgical conditions	CO1, CO2, CO3
В	Cardio-respiratory emergencies and management principles – medication, critical care,	CO1, CO2, CO3
С	Indications of surgical intervention, stabilization of vital functions defibrillation.	CO1, CO2, CO3
Mode of examination	Practical on	
Weightage	CA ETE	
Distributio	n 20% 80%	100
Text book/	<ul> <li>1. Cash's TB of General medical &amp; Surgical condition for Physiotherapists2nd ed Downie, P A</li> <li>2. Physiotherapy in Respiratory Care Alexondra Houg</li> </ul>	
	<ol> <li>Cardio Pulmonary Physical Therapy 6th ed Scoot Irwin</li> <li>Physiotherapy in cardio-vascular rehabilitation Webber</li> <li>Cardiopulmonary Rehabilitation (position statement-AACVPR)</li> </ol>	



		<u> </u>	Beyond Boundaries
	6. Pulmonary Rehabilitation Guidelines ATS		
Other References	Trauma Secrets byNaudee		

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
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

Scho	ool: SAHS	Batch : 2020-22
Prog	gram:	Current Academic Year: 2021-22
MPT	<b>(Cardiopulmonary)</b>	
Bran	ich:	I Year
1	Course Cod	MPT 205
	e	
2	Course Title	Journal Club and Clinical Case Presentation
3	Credits	
4	Contact Hours	
	(L-T-P)	
	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



								5 6 7 6 11 4	
		CO4. Unde	erstand	Evider	nce	based	implementati	on of	various
		research							
		protocols.							
		CO5.Reason	ing and	decisio	on n	naking	regarding diag	nosis, t	treatment
		and	-			•			
		follow-up of	patient	ts					
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 v	vill enh	ance the	e res	search a	bility of the stu	idents	hence
		will help in	uplifting	g the ne	w ra	iys of tł	nerapeutic skill	<b>S.</b>	
	Mode of	Practical							
	examination								
	Weightage	CA							
	Distribution	50						50	

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



School: SAHS		Batch : 2020-22					
Prog	gram:	Current Academic Year: 2021-22					
MP	<b>F</b> (Cardiopulmonary)						
Brar	nch:	II Year					
1	Course Cod	MPT 206					
	e						
2	Course Title	Dissertation					
3	Credits						
4	Contact Hours						
	Course Type	Practical					
5	Course Objective	<ul> <li>The objective of the course is that, the student will be able to</li> <li>1. Apply the evidences for the search of new knowledge.</li> <li>2. To develop efficient research methodology.</li> <li>3. To improve the scientific literature writing.</li> </ul>					
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.					
7         Course Description         This course is to design and develop the in-depth this presentation skill, reasoning and decision making, at and deep exploration of various topics and cases am students. It will enhance the research ability of the stimulation of the state			king ability, alytical skills ng the idents hence s.				
	Mode of examination	Practical					
	Weightage	CA	ETE				
	Distribution 20% 80%						

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
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

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⁵ 3	3	3	3	3	3	3	3	3 3
Prena	red by · SII/SA	HS/MPT						Ροσο 56



### **Program Structure Template**

### School of Allied Health Sciences Master of Physiotherapy (Orthopaedics)

Batch - (2020-22)

**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

Note: Detailed Mission Statements of University can be used for developing Mission Statements of Schools/ Departments.



1.2 Vision and Mission of the School

#### Vision of the School

To produce skilled man power in different areas of biomedical science for better

healthcare delivery

#### **Mission of the School**

1. To strengthen the main line medical and health services.

2. To become effective assisting and support system to medical and health personnel.

**Core Values** 

1. Skilled professional

- 2. Multidimensional
- 3. Compassion
- 4. Management


#### **1.3 Programme Educational Objectives (PEO)**

- PEO1: To gain knowledge of the human body related basic medical and physiotherapeutic sciences relevant to orthopaedics.
- 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 musculoskeletal physiotherapy assessment by relevant and current physiotherapeutic concepts.
- PEO4: To plan and implement appropriate Physiotherapeutic interventions for musculoskeletal 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	School
	Mission 1	Mission 2
PEO1:	3	3
PEO2:	2	3
PEO3:	3	3
PEO4:	3	3
PEO5:	3	3
PEO6:	2	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 relevant to orthopaedics.
- 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 musculoskeletal assessment in order to identify, examine and distinguish between various musculoskeletal 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 musculoskeletal 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.



	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	3	3
	3	3	3	3	3	3
PO4						
PO5	3	3	3	3	3	3
PO6	3	3	3	3	3	3
PO7	3	3	3	3	3	3
PSO1	3	3	3	3	3	3
PSO2	3	3	3	3	3	3
PSO3	3	3	3	3	3	3

#### **1.3.4 Mapping of Program Outcome Vs Program Educational Objectives**

1. Slight (Low)

2. Moderate (Medium)

3. Substantial (High)



Progra m Outco me Course s	Course Name	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PSO 1	PSO 2	PSO 3
I st 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(The ory)	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(Prac tical)	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
2 ND 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	Musculoskeletal Physiotherapy I (Medical) Theory	3	3	2	2	3	2	3	2	3	3

¹ Cel value will contain the correlation value of respective course with PO.

									S U B	HAR	A SITY
Course 2.4	Musculoskeletal Physiotherapy II (Surgical) Theory	3	3	2	2	3	2	3	2	2	2
Course 2.5	Musculoskeletal Physiotherapy I (Medical) Practical	3	3	2	2	3	2	3	2	3	3
Course 2.6	Musculoskeletal Physiotherapy 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 MATRIX²

Program Outcome Course codeCourse NamePO1PO2PO3PO3PO4PO5PO6PO7PSO1PSOYear-1 Theory	PSO3
Year-1     Image: Constraint of the second sec	
Theory	
Course 1.1 MPT 111 Research Methodology and Evidence Researd Practice CO1 2 2 2 2 2 2 2 2 2 2 2 2	2
Dased Flactice         CO1         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5	
	2
CO3     2     2     3     3     3     3     3	3
CO4     2     1     2     2     3     2     2     1	3
CO5         1         2         2         2         3         3         1         2	3
Course 1.2     Basic Sciences and       MPT 102     and	
Biomechanics         CO1         3         3         3         3         2         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3	2
CO2       3       3       3       2       3       3       3       2	3
CO3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3	3
CO4     3     2     3     3     2     2     3     2	2
CO5         2         3         2         3         2         2         3         2	1
Course 1.3     Physiotherapy assessment and clinical decision     Physiotherapy assessment and clinical decision	2
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	3
CO2         2         3         2         3         2         2         3	2
CO3     2     2     3     3     2     3     2	2
CO4     3     3     2     3     3     2	2
CO5         3         3         3         3         2         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3	2

² Each course outcome (Based on Blooms Taxanomy-CO1, CO2, CO3, CO4, CO5, and CO6) of the course needs to map with PO. This table evolves once faculty has mapped each course outcomes of their respective course with PO's.

												ARDA VERSITY	s
Course 1.4		Advanced											
	MPT 104	Physiotherapeuti	<b>G A A</b>										
		CS	<u>CO1</u>	3	3	3	3	3	3	3	2	3	2
			<u>CO2</u>	3	3	3	3	3	3	3	3	3	3
			<u>CO3</u>	2	3	2	3	3	2	3	3	3	2
Draatiaal			CO4	3	2	3	3	3	2	2	3	3	2
Course 2.1		Advanced											
Course 2.1	MPT 107	Physiotherapeuti											
	WII I 107	r hysiotherapeuti	CO1	3	3	3	3	3	3	3	2	3	2
		0.5	$\frac{CO1}{CO2}$	3	3	3	3	3	3	3	3	3	3
			$\frac{CO2}{CO3}$	$\frac{3}{2}$	3	2	3	3	2	3	3	3	2
			$\frac{CO3}{CO4}$	3	2	3	3	3	2	2	3	3	2
Course 2.2		Physiotherapy	001	5	2	5	5	5	2	2	5	5	
Course 2.2		assessment and											
	MPT 106	clinical decision											
		making	CO1	3	3	2	3	3	3	2	3	3	3
		6	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		Journal Club and											
	MPT 105	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													
<u>Ineory</u>		Dedegogy in											
Course 5.1	MDT 221	Physiotherapy											
	1011 1 221	Education	CO1	2	3	3	3	3	2	2	2	3	2

											SH UNI	ARDA VERSITY	7
			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	<b>G</b> Q 1										
		Issues	COI	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 237	Musculoskeletal 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 238	Musculoskeletal 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										5	5		
Course 4.1	MPT 205	Journal Club and Clinical Case	001										2
		Presentation	CO1	3	3	3	3	3	3	3	3	3	3
			<u>CO2</u>	3	3	3	3	3	3	3	3	3	3
			CO3	3	3	3	3	3	3	3	3	3	3

Page 12

												I ARDA	s
			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 207	Musculoskeletal 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 208	Musculoskeletal 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(Orthopaedics) Batch: 2020-2022 TERM: I Year											
S. No.	Paper ID	Subject Code	Subjects	L	eaching T	Load P	Credits	Core/Elective Pre-Requisite/ Co Requisite	Type of Course ³ : 1. CC 2. AECC 3. SEC 4. DSE			
THE	DRY SUBJ	ECTS	I									
	35395	MPT 111	Research Methodology and Evidence Based Practice					Core	CC			
	7926	MPT 102	Basic Sciences and Biomechanics					Core	CC			
3.	7928	MPT 103	Physiotherapy Assessment and Clinical Decision Making					Core	CC			
4.	7929	MPT 104	Advanced Physiotherapeutics					Core	SEC			
Pract	ical/Viva-V	oce/Jury		· ·								
5.	7930	MPT 105	Journal Club and Clinical Case Presentation					Core	DSC			
6.	35396	MPT 106	Physiotherapy Assessment and Clinical Decision Making					Core	SEC			

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

	35397	MPT 107	Advanced Physiotherapeutics					Core	SEC
3.	35398	MPT 108	Clinical Training					Co-requisite	SEC
		I	TOTAL CREDITS	I					
			Program Structu School of Allied H MPT(Ortho Batch: 202 TERM: D	ire Te lealth paedi 20-202 I Year	emplat Scienc cs) 2	e ces			
S.	Paper ID	Subject	Subjects	Te	eaching	Load		Core/Elective	
.10.		Coue		L	I	r	Credits	Co Requisite	Course ⁴ : 1. CC 2. AECC 3. SEC 4. DSE
'HEC	RY SUBJ	ECTS							
	3. 35399	MPT 221	Pedagogy in Physiotherapy Education					Core	CC
è) . 35400	MPT 202	Administration, Management and Ethical Issues					Core	DSC
	55100		Musculoskeletal Physiotherapy I					Core	CC
10.	35401	MPT 237	(Medical)						

⁴ CC: Core Course, AECC: Ability Enhancement Compulsory Courses, SEC: Skill Enhancement Courses, DSE: Discipline Specific Courses

						ARDA VERSITY
12.	35405	MPT 207	Musculoskeletal Physiotherapy I		Core	DSC
13.	35406	MPT 208	Musculoskeletal Physiotherapy II (Surgical)		Core	DSC
14.	7939	MPT 205	Journal Club and Clinical case Presentation		Core	DSC
15.	7940	MPT 206	Dissertation		Core	DSC
16.	35407	MPT 230	Clinical Posting		Co-requisite	SEC
			TOTAL CREDITS			



C. Course Templates



2.1 Template A1: Syllabus for Theory Subjects (SAMPLE)

School: SAHS		Batch: 2020-2022				
Prog	gram:	Current Academic Year: 2020-21				
MP	Γ (Orthopaedics)					
Brai	nch:	I Year				
1	Course Code	MPT 111				
2	Course Title	Research Methodology and Evidence Based Practice				
3	Credits					
4	Contact Hours					
	(L-T-P)					
	Course Type	Compulsory				
5	Course	1. To explain the basic concepts, terms and definitions us	sed in health			
	Objective	research.				
	5	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	od for the			
		chosen design and estimate sample size \cdot				
		4. Carry out simple analysis of collected data and interp	oret findings			
		appropriately ·				
6	Course	The student will be able to:				
	Outcomes	CO1. Understand the basic concepts, terms and definition	ns used in health			
		research methodology				
		CO2. To acquire the skills of reviewing literature, formul	late a			
		hypothesis, collecting data, writing research propo	sal.			
		CO3. Describe the importance and use of Biostatistics for	or research			
		work.	_			
		CO4: To identify different scales of measurement used in	n research			
		CO5: To read published research critically and to know h	now to publish a			
-		paper				
/	Course	This source is designed to develop the basic knowledge of res	aanah			
	Description	This course is designed to develop the basic knowledge of research,				
		interventions in physiotherapy. The course will provide a c	comprehensive			
		introduction to research proposal writing research metho	dologies and			
		foundational research theories and protocols	dologies, and			
8	Outline syllabus		CO Mapping			
	Unit 1					
	A		CO1, CO2			
		Research in physiotherapy – Introduction,	,			
		Research for Physiotherapist: Why? How?				
		And When?, Research – Definition, concept,				
		purpose, approaches, Internet sites for				
		Physiotherapist				

			SHARDA UNIVERSITY
	В	Research Fundamentals, Define measurement, Measurement framework, Scales of measurement, Pilot Study, Types of variables, Reliability & Validity, Drawing Tables, graphs, master chart etc	CO1, CO2,CO4
	С	Writing a Research Proposal, Critiquing a research article, Defining a problem	CO1, CO2,CO5
	Unit 2		
	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
	В	Research Design- Principle of Designing, Design, instrumentation & analysis for qualitative research, Design, instrumentation & analysis for quantitative research Design, instrumentation & analysis for quasi-experimental research, Design models utilized in Physiotherapy	CO1, CO2,CO3,CO4
	С	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		
	A	Biostatistics- Introduction, Definition, Types, Application in Physiotherapy; Data –Definition, Types, Presentation, Collection methods	CO1, CO3,CO4
	В	Measures of central value- Arithmetic mean, median, mode. Relationship between them, Partitioned values- Quatertiles, Deciles, Percentiles, Graphical	CO1, CO3,CO4



	determination				
	С	Measures of Dispersion- Standard Deviation, Non Properties of normal distribution, Transformation variables. Inverse the approximation of Bioaxi	CO1, CO2,CO3,CO4		
	Unit 4				
	A	Correlation analysis- Scatter Diagram, Coer Calculation & interpre coefficient, T-test, Z-te analysis- Lines of reg Regression coefficient	CO1, CO3,CO4		
	В	mpling, Sampling or, Types I & II error, oothesis Testing, Null ypothesis, Acceptance & sis, Level of significance	CO1, CO3,CO4		
	C	CO1, CO3,CO4			
	Unit 5				
	А	Evidence-based health ca	re, evidence-based practices	CO1, CO2	
	В	evidence-based decision r	naking and management	CO1, CO2	
	С	CO1, CO2			
	Mode of	Theory			
	examination				
	Weightage	ETE			
	Distribution	20%	80%		
	Text book/s*	1. Recent Methods for Clin Project Design and anal	nical Therapists: applied ysis by Carolyn Hicks		

		SHARDA UNIVERSITY
	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	1. Albert R. Roberts and Kenneth R. Yeager,	
References	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	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
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: 2020-2022				
Prog	gram:	Current Academic Year: 2020-21				
MP	Γ(Orthopaedics)					
Brai	nch:	I Year				
1	Course Code	MPT 102				
2	Course Title	Basic Sciences and Biomechanics				
3	Credits					
4	Contact Hours					
	(L-T-P)					
	Course Type	Compulsory				
5	Course	1. To provide a detailed introduction on basic anatomy, phy	ysiology,			
	Objective	structure and function of the musculoskeletal system.				
	-	2. To educate the students about the concept of exercise ph	ysiology and			
		its applications.				
		3. To encourage the students to apply the exercise physiolo	gy concepts			
		in training and Physiotherapy.				
		4. To educate the students about the concepts of Biomechan	nics and their			
		use in Physiotherapy.				
6	Course	The student will be able to:				
	Outcomes	CO1: Knowledge on basic anatomy, physiology, structure a	nd function of			
		the musculoskeletal systems.				
		CO2: Better understanding of physiology of exercise and en	nergy transfer			
		that allows humans to engage in physical activity.				
		CO3: Knowledge about basic concepts of biomechanics of				
		musculoskeletal structures with respect to physiotherapy				
		CO4: To understand the physiological needs of training and				
		conditioning.				
		CO5: Assessment of biomechanical aspect of various dysfu	inctions			
7	Carrier					
/	Course	I his course is designed to develop a anatomical knowledge	e and clinical			
	Description	application of Anatomy in Physiotherapy treatment. It also a	enables the			
		student to have a better understanding of the principles of b	lucification			
		and their application in musculoskeletal and various other of				
		as well as knowledge of basic and applied exercise physiol	logy			
8	Outline syllabus		CO Manning			
0	Unit 1	Structure & function of the various components of				
		musculoskeletal system				
	Δ	וועסכעוססגכוכומו סיסוכווו	CO1			
	A	Bone structure, blood supply, and growth; Cartilage,	COI			
		Ligament, Muscle structure, functional & classification.				



	Origin, insertion, action and nerve supply, Major nerves – Course, branches & distribution. Implication of nerve injuries.	
В	Joints – classification, structure of joints, movements, range, limiting factors, stability, blood supply, nerve supply, its applied anatomy.	CO1
C	Spine – Vertebral column development, structure, joints, muscles of back, applied and functional anatomy, brief description of Upper & lower extremity, abdomen, pelvis, head, neck and brain.	CO1
Unit 2		
A	Introduction to exercise physiology, Nutrition and Performance	CO2
В	Energy transfer, Measurement of human energy expenditure	CO2
C	Systems of energy delivery and utilization in Pulmonary system, Cardiovascular system, Musculoskeletal, Nervous System and Endocrine system	CO2
Unit 3	Applied Exercise Physiology	CO2
А	Aerobic power training, Anaerobic power training, Special aids in performance and conditioning	CO2
В	Exercise at different altitudes, Exercise at various climatic conditions, Sport diving	CO2
C	Obesity and weight control, Exercise and aging, Clinical exercise physiology	CO2
Unit 4	Kiematics and Kinetics	
A	Types of motion (accessory and joint play of axial and peripheral skeletal), Location of motion (instantaneous axis of movement ,shifting axis of movement), Magnitude of motion (factors determining it), Direction of motion, Angular motion and its various parameters, Linear motion and its various parameters, Projectile motions	CO3
В	Kinetics, Definition of forces, Force vectors (composition, resolution, magnitude), Naming of Force	CO3

		SHARDA
	(gravity and anti-gravity force,JFR), Force of gravity and COG, Stability, Reaction forces, Equilibrium & balance, Linear forces system, Friction and its various parameters, Parallel force systems, Concurrent force systems, Work power and energy, Moment arms of force & its application, Force components, Equilibrium of force	
С	Mechanical energy, work and power, Definitions, Positive and Negative work of muscles, Muscle mechanical power, Causes of inefficient movement: Co- contractions, Isometric contraction against gravity jerky movement, Energy generation at one joint and absorption at another, Energy flow and Energy system used by the body, Energy storage	CO3
Unit 5	Muscle, Joint, Ligament mechanics	
A	Structure and composition of muscle. Physiology of musculoskeletal systems, Fiber length and cross section area, Mechanical properties of various muscles, EMG changes during fatigue and contraction, Changes in mechanical and physiological properties because of ageing, exercise and immobilization ,dystrophies and pathological conditions. Ligament & Tendon mechanics:-Structure and composition, Mechanical properties and physiological properties, Cross sectional area measurements, Muscle tendon properties, Temperature sensitivity, Changes in physical and mechanical properties because of aging, exercise and Immobilization and position, Mechanoreceptors, its types, distribution with respect to joint, structure and function, Clinical applications	CO3
В	Joint mechanics, Joint design, Joint categories, Joint function, Arthrokinematics, Osteokinematics, Kinematic chains , Open, Closed, Joint forces, equilibrium and distribution of these forces, Degenerative changes in weight bearing joints and compensatory actions, Joint stability and its mechanics, Clinical applications	CO3

			SHARDA JNIVERSITY			
С	Gait:- Norma	l gait and its parameters, Kinetics,	CO3			
	Kinematics,	Time-Space, Pathological gait				
	with empl	with emphasis on polio, cerebral palsy,				
	dystrophies,	dystrophies, hemi paresis, Para paresis				
	Running, St	air climbing, Changes in gait				
	following	various surgeries/ diseases/				
	disorders,	Basic wheelchair skills and				
	assessment tr	aining, Transfer skill training				
Mode of	Theory					
examination						
Weightage	CA	ETE				
Distribution	20%	80%				
Text book/s*	1. Clinical Bir	nechanics of the spine: White, Augustus				
	2. Exercise P	hysiology by Mc Ardle, Katch & Katch				
	(Lippincott W	illiams and Wilkins,				
	3. Exercise Ph	ysiology:Exercise, Performance and				
	clinical Applic	cations by A Roberts				
	4. Clinical An	atomy for Medical Students				
	5. Textbook o	f Medical Physiology				
	6. Joint Struct	ure and Function - A Comprehensive				
	Analysis					
	7. Clinical kin	esiology by Brunnstrom				
Other						
References						

-										
POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
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: 2020-2022					
Prog	gram:	Current Academic Year: 2020-21					
MP	F (Orthopaedics)						
Brai	nch:	I Year					
1	Course Code	MPT 103					
2	Course Title	Physiotherapy Assessment and Clinical Decision Makin	g (Theory)				
3	Credits						
4	Contact Hours						
	<u>(L-T-P)</u>						
	Course Type	Compulsory					
5	Course	1. To provide the knowledge and skills about musculoske	eletal system				
	Objective	assessment and evaluation of patients.					
		2. To provide skills to develop clinical decision making for					
		3 To provide knowledge and skills to rationalize the outcomes of					
		assessment.					
		4. To train the students to accurately record the assessme	nt and design				
		individualized goals for patient.	C				
6	Course	CO1. Perform thorough physiotherapy assessment and list	st deficiencies				
	Outcomes	CO2. Design individualized goal for patients					
		CO3. Rationalize the outcome of assessment					
		CO4. Document systematic, meaningful, accurate writte	n records of				
		patients					
		CO5: To use assessment methods in designing treatment					
7	Course						
	Description	This Course Supplements the Knowledge of assessment	and diagnosis in				
		Orthopaedic conditions. This will help form base of profe	essional practice				
		with the evidence based practice and enables the student	to have a better				
		understanding of the subject along with their application	in Orthopaedic				
		and various other dystunctions.					
8	Outline syllabus		CO Mapping				
	Unit 1	Musculoskeletal assessment	e e mapping				
	A		CO1,CO2				
		Review of General assessment: Patient's history,	, ,				
		observation, palpation, examination, Sensory					
		assessment, Motor assessment, Assessment of Tone,					
		flexibility, tightness of musculoskeletal tissues, -					
		Muscle Length Testing and special tests for the same,					
		Reflex testing					
	В	Limb length measurement, Range of Motion, Various	CO1,CO4				
		disease specific and functional outcome measures and	-				
		their administration					
	C	Evaluation methods. Special tests and Scales used in	CO1 CO2 CO2				
	C	Evaluation methous, special tests and scales used in	01,002,005				



	musculoskel			
Unit 2				
A	Recent met application	CO1,CO2		
В	Electrodiagn Evoked pote	osis : Use of E ntial studies	Electromyography and	CO3
С	Assessment of and disability	of locomotor in y evaluation.	pairments, disabilities	CO1,CO4
Unit 3				
А	Balance asse	ssment		CO1,CO2,CO3
В	Postural asse from the nor	essment method mal, examination	ls and common deviations on of movements	CO1,CO2,CO3
С	Clinical Gait EMG gait an	t assessment (o alysis)	bservational methods and	C01,C02,C03
Unit 4				
A Pain assessment and scales for evaluation in acute and chronic pain				CO1,CO3
В	Clinical asso investigations	essment and along with diff	rationale of laboratory erential diagnoses.	CO1,CO3
С	Clinical decis	ion making in E	Electrotherapeutics.	CO2
Unit 5				
A	Functional as ADL, Occupa	sessment (Handitional work)	d function, Gait, Posture,	CO1,CO2
В	X-Ray, MRI	CT report read	ling and analysis	CO1
С	Physical Dis classification	ability evaluation	on in detail. ICF	C01,C03
Mode of examination				
Weightage	CA]	ETE	
Distribution	20%		80%	
Text book/s*	 Orthopaedi Orthopaedi Essential of Ebnezar Orthopaedi Churchill I 			
Other References				



POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
CO1	з	3	2	з	3	3	2	3	3	3
CO2	,			3	3					
	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)

Scho	ool: SAHS	Batch: 2020-2022
Prog	gram:	Current Academic Year: 2020-21
MP	F(Orthopaedics)	
Bra	nch:	I Year
1	Course Code	MPT 106
2	Course Title	Physiotherapy Assessment and Clinical Decision Making (Practical)
3	Credits	
4	Contact Hours (L-T-P)	
	Course Type	Compulsory
5	Course Objective	 To provide the knowledge and skills about musculoskeletal system assessment and evaluation of patients. To provide skills to develop clinical decision making for musculoskeletal conditions. To provide knowledge and skills to rationalise the outcomes of assessment. 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

			SHARDA UNIVERSITY
		Orthopaedic conditions. This will help form base of profe with the evidence based practice and enables the student understanding of the subject along with their application and various other dysfunctions.	essional practice to have a better in Orthopaedic
8	Outline syllabus		CO Mapping
	Unit 1	Musculoskeletal assessment	
	А	Review of General assessment: Patient's history, observation, palpation, examination, Sensory assessment, Motor assessment, Assessment of Tone, flexibility, tightness of musculoskeletal tissues, - Muscle Length Testing and special tests for the same, Reflex testing	CO1,CO2
	В	Technique to assess limb length, Range of Motion, To teach various disease specific and functional outcome measures and their administration.	CO1,CO4
	С	Evaluation methods, Special tests and Scales used in musculoskeletal disorders	CO1,CO2,CO3
	Unit 2		
	А	Training for recent methods for assessment and its clinical application	CO1,CO2
	В	Interpretation and use of electromyography and Evoked potential studies	CO3
	С	Assessment of locomotor impairments, disabilities and disability evaluation.	CO1,CO4
	Unit 3		
	Α	Demonstration of balance assessment	C01,C02,C03
	В	Demonstration of postural assessment methods and common deviations from the normal, examination of movements	CO1,CO2,CO3
	С	Clinical Gait assessment (observational methods and EMG gait analysis)	CO1,CO2,CO3
	Unit 4		
	А	Pain assessment and scales for evaluation in acute and chronic pain	CO1,CO3
	В	Clinical assessment and rationale of laboratory investigations along with differential diagnoses.	CO1,CO3



С	Clinical decis	ion making in	Electrotherapeutics.	CO2
Unit 5				
А	Functional as	sessment (Ha	nd function, Gait, Posture,	CO1,CO2
	ADL, Occupa	tional work)		
В	X-Ray, MRI	, CT report rea	ading and analysis	CO1
С	Physical Dis	ability evaluat	ion	CO1,CO3
Mode of examination	Practical			
Weightage	СА		ETE	
Distribution	20%		80%	
Text book/s*	 Orthopaedic physical assessment by David J. Magee Orthopaedic Rehabilitation by Brokman Essential of Orthopaedic for physiotherapists by Ebnezar Orthopaedic Physical therapy by Donatteli, London Churchill Livingstone 			
Other References				



School: SAHS		Batch: 2020-2022				
Program:		Current Academic Year: 2020-21				
MP	F(Orthopaedics)					
Brai	nch:	I Year				
1	Course Code	MPT 104				
2	Course Title	Advanced Physiotherapeutics (Theory)				
3	Credits					
4	Contact Hours (L-T-P)					
	Course Type	Compulsory				
5	Course Objective	 To provide knowledge about various techniques musculoskeletal Physiotherapy. To analyse and classify various sports injuries an management. Compare & contrast the outcome of various phy treatment approaches. 	used in d their siotherapy			
6	Course Outcomes	 CO1. Learn various techniques of Physiotherapy. CO2. To formulate a rationalized physiotherapy trepatient. CO3. Use various skills for rehabilitation of the ind CO4: Compare & contrast the outcome of various p treatment approaches 	atment plan for the ividuals. hysiotherapy			
7	Course Description	The course will enable the students to learn skills as used in Physiotherapy management of musculoskel	nd techniques to be etal conditions			
8	Outline syllabus		CO Mapping			
	Unit 1					
	А	Manual therapies: different schools of thought	C01,C02,C03,C04			
	В	Soft tissue manipulations and mobilizations	CO1,CO2,CO3			
	С	Neural mobilization	CO1,CO2,CO3			
	Unit 2					
	A	Joint manipulation – Peripheral joints and vertebral joints.	CO1,CO2,CO3, CO4			
	В	Mobilization techniques like Cyriax, Maitland, Butler, Mc Kenzie, Kaltenborn, Mulligan	C01,C02,C03,C04			
	С	Myofascial release technique, Muscle energy technique and Neuromuscular taping technique	C01,C02,C03,C04			



Unit 3		
A	Analysis and classification of sports and sports specific injuries and it management	CO2,CO3
В	Principles of injury prevention, environmenta modifications	CO2,CO3
C	Exercise planning and prescription, Recen advances in Musculoskeletal disorders and Sports Physiotherapy	CO2,CO3
Unit 4		
A	Electrodiagnosis: Electromyography and evoked potential studies	CO2
В	Gait Training, Biofeedback, Hydrotherapy Patient & family education, Relaxation Techniques, massage therapy	CO2,CO3
C	Pain (neurobiology, various theories, modulation and management of pain)	CO2
Unit 5		
А	Wheelchair skills- Basic & Advanced	CO1,CO2,CO3
В	Prosthetics and Orthotics, External aids, appliances, adaptive self-help devices, prescription, biomechanical compatibility, check out and training.	CO2,CO3
C	Community Based Rehabilitation in musculo skeletal disorders, Rehabilitation of hand Industrial health and ergonomics	CO2,CO3
Mode of examination	Theory	
Weightage	CA ETE	
Distribution	20% 80%	
Text book/s*	 Management Principles for Physiotherapist by Nosse, Lorry J Myofascial and pain dysfunction by Travell, Villimans and Wilkins, Baltimore 1983 Vertebral Manipulation by Matiland G.D. Boston, Butterworth & Co. Boston , 1997 Peripheral Manipulation Matiland G.D. 	
	boston, Butterworth & Co. Boston, 1997	



		🥿 🌽 Beyond Boundaries
	5. Hand Rehabilitation by Christine, Churchcill,	
	Livingstone London 1995	
Other		
References		

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
CO1	3	3	3	3	3	3	3	2	3	2
	5	5	5	5	5	5	5	2	5	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

School: SAHS		Batcn: 2020-2022	
Prog	gram:	Current Academic Year: 2020-21	
MP	F(Orthopaedics)		
Brar	nch:	I Year	
1	Course Code	MPT 107	
2	Course Title	Advanced Physiotherapeutics (Practical)	
3	Credits		
4	Contact Hours		
	(L-T-P)		
	Course Type	Compulsory	
5	Course	1. To provide knowledge about various techniques	used in
	Objective	musculoskeletal Physiotherapy.	
		2. To analyse and classify various sports injuries an	d their
		management.	
		3. Compare & contrast the outcome of various phy	siotherapy
		treatment approaches.	
6	Course	CO1. Learn various techniques of Physiotherapy.	
	Outcomes	CO2. To formulate a rationalized physiotherapy tre	atment plan for the
		patient.	
		CO3. Use various skills for rehabilitation of the ind	ividuals.
		CO4: Compare & contrast the outcome of various p	ohysiotherapy
		treatment approaches	
7	Course		
	Description	The course will enable the students to learn skills and	nd techniques to be
		used in Physiotherapy management of musculoskel	etal conditions
8	Outline syllabus		CO Mapping
	Unit 1		

		SHARDA UNIVERSITY
A	Demonstration of Manual therapies: different schools of thought	CO1,CO2,CO3,CO4
В	Demonstration of soft tissue manipulations and mobilizations	CO1,CO2,CO3
С	Demonstration of Neural mobilization	CO1,CO2,CO3
Unit 2		
А	Demonstration of Joint manipulation – Peripheral joints and vertebral joints.	CO1,CO2,CO3, CO4
В	Demonstration of Mobilization techniques like Cyriax, Maitland, Butler, Mc Kenzie, Kaltenborn, Mulligan	CO1,CO2,CO3,CO4
C	Demonstration of Myofascial release technique, Muscle energy technique and Neuromuscular taping technique	CO1,CO2,CO3,CO4
Unit 3		
A	Assessment of sports and sports specific injuries and it management	CO2,CO3
В	Training for principles of injury prevention, environmental modifications	CO2,CO3
С	Demonstration of Exercise planning and prescription	CO2,CO3
Unit 4		
А	Demonstration of electromyography and evoked potential studies	CO2
В	Demonstration of Gait Training, Biofeedback, Hydrotherapy	CO2,CO3
С	Demonstration of Relaxation Techniques, massage therapy	CO2
Unit 5		
A	Demonstration of Wheelchair skills- Basic & Advanced	CO1,CO2,CO3
В	Training for use of Prosthetics and Orthotics, External aids, appliances, adaptive self-help devices, prescription, biomechanical compatibility, check out and training.	CO2,CO3



			🥿 🌽 Beyond Boundaries
C	Training fo	r rehabilitation of hand, Industrial	CO2,CO3
	health and en	rgonomics	
Mode of	Practical		
examination			
Weightage	CA	ETE	
Distribution	20%	80%	
Text book/s*	1. Managem	ent Principles for Physiotherapist by	
	Nosse, Lo	orry J	
	2.Myofascia	l and pain dysfunction by Travell,	
	Villimans	and Wilkins, Baltimore 1983	
	3. Vertebral	Manipulation by Matiland G.D.	
	Boston, B	utterworth & Co. Boston , 1997	
	4. Periphera	l Manipulation Matiland G.D.	
	Boston, B	utterworth & Co. Boston, 1997	
	5. Hand Reh	abilitation by Christine, Churchcill,	
	Livingsto	ne London 1995	
Other			
References			

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

School: SAHS		Batch : 2020-2022			
Prog	gram:	Current Academic Year: 2020-21			
MP	Γ(Orthopaedics)				
Brai	nch:	I Year			
1	Course Cod	MPT 105			
	e				
2	Course Title	Journal Club and Clinical Case Presentation			
3	Credits				
4	Contact Hours				
	(L-T-P)				
	Course Type	Compulsory			
5	Course	The objective of the course is that, the student will be able to			
	Objective	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	After completion of the course, the students will be able to;			
	Outcomes	CO1: Assess the patient and document their records.			
		CO2. Present the latest research in journal presentation.			



		CO3. Present	the various ca	ses and design the treatment	programme for						
		the pati	the patients								
		CO4. Underst	O4. Understand Evidence based implementation of various research								
		protoco	protocols.								
		CO5.Reasonin	ng and decision	n making regarding diagnosi	s, treatment and						
		follow-u	up of patients								
7	Course	This course is	his course is to design and develop the in-depth thinking ability,								
	Description	presentation s	presentation skill, reasoning and decision making, analytical skills and								
		deep explorat	leep exploration of various topics and cases among the students. It will								
		enhance the re	enhance the research ability of the students hence will help in uplifting								
		the new rays of	he new rays of therapeutic skills.								
	Mode of	Practical									
	examination										
	Weightage	CA									
	Distribution	50			50						

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
CO1	3	3	3	3	3	3	3	3	3	3
	5	5	5	3	3	3	5	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

Scho	ool: SAHS	Batch : 2020-2022
Program:		Current Academic Year: 2021-22
MPT (Orthopaedics)		
Branch:		II Year
1	Course Cod	MPT 221



	e							
2	Course Title	Pedagogy in Physiotherapy Education						
3	Credits							
4	Contact Hours							
	(L-T-P)							
	Course Type	Compulsory						
5	Course	1. To educate the students about the concepts of tea	ching and learning.					
	Objective	2. To enable them to learn about the philosophies o	f education.					
		3. To provide knowledge about curriculum, techni	ques, and methods of					
		teaching.						
6	Course	CO1. Understand the dynamics of teaching and lear	rning.					
	Outcomes	CO2. Plan effective teaching sessions in Physiother	apy.					
		CO3: Learn method and techniques of teaching	C 1.					
		CO4: Learn meaning and concept, basis of curricult	um formulation					
		COS: To know the use of various teaching aids						
7	Course	This course presents knowledge and application of	different teaching					
/	Description	methodology to the students. The course begins with	th core topics of					
	Description	Concepts of Teaching and learning Curriculum variou	us teaching methods					
		and concept of guidance and counselling etc	us touching motious					
:8	Outline syllabus		CO Mapping					
	Unit 1							
	А	Education Interdention Educational	CO1,CO2					
		Education: - Introduction, Educational						
		Philosophy- Idealism Naturalism, Pragmatism						
	В	Aims of Education, Functions of	CO1,CO2					
		Education Formal informal and non-						
		formal Education Agencies of						
		Education						
	C	Current issues and Trands in Hisber Education	CO1 CO2					
	C	Lique of quality in Higher Education,	01,002					
	Unit 2	issue of quality in frigher Education						
			CO1 CO2					
	7 x	Meaning and scope of Educational Psychology	01,002					
	В	Dynamics of behavior, Individual differences	CO1,CO2					
	C	Method and techniques of teaching: Lecture	CO1 CO2 CO3					
	C	Demonstration Discussion Seminar	01,002,005					
		Assignment Project Case Study						
	Unit 3							
	A		C01.C02.C04					
		Curriculum: - Meaning and concept, Basis of	- , ,					
		curriculum formulation, Process of curriculum						
		development and factors involved, Evaluation of						



											🦝 seyond Bo	oundaries	
				curr	riculum								
		В		Fran taxo inst	ming obj onomy of ructionalol	ectives instruct bjectives	for curric ional obje in behavio	eulum, Blo ectives, Wr ral terms	om's riting	CC	01,CO2,CO	D3,CO4	
		С		Uni	t planning,	, Lesson j	planning			CC	01,CO2,CO	03	
		Un	it 4										
		A		Tea Prin of a	ching aid nciples of udio- visua	ls, Type selection al aides,	s of tead , preparati	ching aids, ion and use		CC	01,CO2,CO	D4,CO5	
		В		Mea educ type and	asurement cational es of tests, its analysi	and measurer Construc	Evaluation nent: me ption of an	n, Nature aning, pro achievemen	of ocess, it test	CC	01,CO2,CO	03	
		С		Star stan inte Con	ndardized dardized lligence, ntinuous ar	test, tools, aptitud nd compre	Introductio importan le, and ehensive e	on of so nt tests personal valuation	ome of lity.	CC	01,CO2		
		Un	it 5										
		A		Gui con Prin	dance and cepts of nciples of g	d counse guidance guidance	eling, Me e and co and counse	aning & ounseling, eling		CC	01,CO2		
	В			Aw gui and	Awareness Programme, awareness and guidance to the common people about health and disease						CO1,CO2		
		С		Aut Edu	onomy an	nd Accou	ıntability,	Privatizatio	on of	CC	01,CO2		
		Mo exa	de of mination	The	ory								
		We	ightage	CA			ETE						
	Distribution			20	20 80)		
		Tex	kt book/s*										
		Oth Ret	ner ferences										
Pos COs	PO	1	PO2	PO3	PO4	PO5	PO6	PO7	PSO	01	PSO2	PSO3	

									SHA UNIVE	RDA
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)

Sch	ool: SAHS	Batch: 2020-2022							
Prog	gram:	Current Academic Year: 2021-22							
MP	T(Orthopaedics)	1							
Bra	nch:	II Year							
1	Course Cod e	MPT 202							
2	Course Title	Administration, Management and Ethical Issues							
3	Credits								
4	Contact Hours (L-T-P)								
	Course Type	Compulsory							
5	Course Objective	 To provide knowledge about the management process and its functions. To educate about the marketing and total quality management. To educate the students about the role of hospital as an organisation 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	an informed professional on management process and its	CO Mapping				
0	Unit 1						
	A	Management: Introduction, Evolution of management, Functions of management	CO1,CO3				
	В	Management process – planning, organization, direction, controlling, Decision-making.	CO1,CO3				
	С	Personnel management: Staffing, Recruitment selection, Performance appraisal, Collective bargaining, Job satisfaction.	CO1,CO3				
	Unit 2						
	A	Marketing: Market segmentation, Channels of distribution, Promotion, Consumer behavior	CO1,CO2,CO3				
	В	Total Quality Management: Basics of quality management, Quality control, Quality assurance Programme in hospitals	CO1,CO2,CO3				
	С	Medical audit, International quality system.	CO1,CO2				
	Unit 3						
	A	Hospital as an organization - Functions and types of hospitals	CO1,CO2,CO4				
	В	Roles of Physical therapist, Physical therapy Director, Physiotherapy supervisor, Physiotherapy assistant, Physiotherapy aide, Home health aide, Volunteer.	CO1,CO2,C5				
	С	Rules of Professional Conduct.	CO1,CO2				
	Unit 4						
	A	Legal responsibility, Code of ethics	C01,C02				
	В	Functions of Physiotherapy associations	CO1,CO2				
	С	Role of the International Health Agencies	CO1,CO2				
	Unit 5						

				SHARDA UNIVERSITY			
А	Standards of p	CO1,CO2					
В	Liability and action, Law of	Liability and obligations in the case of medical legal action, Law of disability & discriminationConfidentially of the Patient's status, Consumer protection law, health law, MCI, DCPConsumer					
С	Confidentially protection law						
Mode of examination	Theory						
Weightage	CA]	ETE				
Distribution	20%		80%				
Text book/s*	 Healthcare Documenting Physical The Hickik Manageme Nosse Lorn Textbook communication 	 Healthcare System and management: Goel, S.L. Documenting physical therapy: Baeten, Angla Physical Therapy Administration & Management by Hickik Management Principles for physiotherapists by Nosse Lorry J. Textbook of Healthcare ethics: Loeux Erich H 					
Other References							

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
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)



Scho	ool: SAHS	Batch: 2020-2022							
Prog	gram:	Current Academic Year: 2021-22							
MP.	F(Orthopaedics)								
Brai	nch:	II Year							
1	Course Cod	MPT 237							
	e								
2	Course Title	Musculoskeletal Physiotherapy I (Medical) Theory							
3	Credits								
4	Contact Hours								
	(L-T-P)								
	Course Type	Compulsory							
5	Course	1. To educate students about etiology, pathophysiology,	clinical						
	Objective	presentation and physiotherapy manangement of gener	ral						
		musculoskeletal disorders.							
		2. To provide knowledge about epidemiology, patho phy	siology and						
		clinical conditions affecting various joints of body.							
		3. To educate students about physiotherapy management	for various						
		musculoskeletal disorders.							
	Carrier	CO1 Understand sharet stickers with share's laser slice	1						
0	Course	col. Understand about etiology, pathophysiology, clinic	cal presentation						
	Outcomes	disorders	Oskeletal						
		CO2 Understand about epidemiology patho physiology	and clinical						
		conditions affecting various joints of body	and enniedi						
		CO3 Plan physiotherapy management for various musci	ıloskeletal						
		disorders.	noshcietai						
		CO4: To learn about various regional orthopaedic conditions							
		CO5: To learn about various investigative procedures used in	musculoskeletal						
		disorders							
7	Course	This course is designed to develop and enhance the knowledge of							
	Description	Medical management for various musculoskeletal disord	ers and						
0		Physiotherapy for the same.	CO 14						
8	Outline syllabus	l	CO Mapping						
	Unit I		<u></u>						
	A	Congenital malformations	CO1,CO2,CO5						
	В	Rheumatic disorders: - Rheumatoid arthritis	CO1,CO2,						
		Ankylogia Spondylogia Daitar'a diagona	CO5						
		Ankylosis Spondylosis, Rener s disease,							
		r orymyaigia meumatica, r sofiasis							
	С		CO1.CO2.						
	-	Infections of musculoskeletal system, Acute,	CO5						
		Chronic							



Unit 2		
A	Metabolic and endocrine disorders, Calcium metabolism, Osteoporosis, Osteomalacia and ricket, Hyper parathyrodism	CO1,CO2, CO5
В	Tumors of the musculoskeletal system, Classification, Benign, Malignant	CO1, CO2, CO5
C	Neuromuscular disorders, Poliomyelitis, Cerebral palsy, Arthrogryposis multiplex Congenita, Muscular dystrophy, Osteoarthritis and crystal deposition diseases	CO1, CO2, CO5
Unit 3		
A	Investigations, Orientation and Introduction, physical basis, normal result & common abnormal response of the procedures done for musculoskeletal conditions (in brief)	CO1, CO2, CO5
В	X- ray, Computerized Tomography, Magnetic Resonance Imaging	CO1, CO2 CO5
C	Bone Scan, Laboratory tests, FNAC, Bone biopsy	CO1, CO2, CO5
Unit 4		
A	The shoulder, rotator cuff lesions, Instability, Rheumatoid disease of shoulder, Tuberculosis. The Elbow, Tennis elbow, Golfer's elbow, Myositis ossificans	CO1, CO2,CO3,CO4
В	The Wrist, Carpal tunnel syndrome, Ganglion, Wrist instabilities and special tests, The Hand, Peripheral nerve injuries, Tendon lesions and transfer surgeries, Deformity in rheumatoid arthritis, peripheral nerve injuries, Hemiplegia, SCI and leprosy	CO1, CO2, CO4
С	Cervical Spine, Discogenic pain, Whiplash injuries, Thoracic outlet syndrome, Brachial plexus injury and plexopathies, Torticollis and wry neck in pathologies of cervical spine; Back, Intervertebral disc, Discogenic pain, Spondylolysis & listhesis, Scoliosis &	CO1, CO2,CO3, CO4



	kyphosis, Tuberculosis, Musculoskeletal causes of low back pain			
Unit 5				
A	The Hip- Avascular necrosis of femoral head., Osteoarthritis; Knee, Osteoarthritis, Meniscal / ligament injuries, Genu valgum / varum	CO1, CO2, CO4		
В	B Ankle and foot, Metatarsalgia, Flat foot, Carsus foot, Hallax valgus, CTEV, Ankle sprains			
C	Fractures and joint injuries, Principles of acute fracture care, Conservative management of the following: Pediatric fractures, Injuries of shoulder, upper arm and elbow, Injuries of forearm and wrist, Injuries of Spine, Injuries of Pelvis, Injuries of Hip and Femur, Injuries of Knee, Leg Injuries, Injuries of ankle and foot	CO1, CO2,CO4		
Mode of	Theory			
Weightege				
Distribution	CA EIE 20% 80%			
Text book/s*	20%80%1.Essential of Orthopaedic for Physiotherapist by Ebnezar2.Cash'TB for Ortho and rheumatology for physiotherapist by Downie3.Principles and Practice of orthopedics and sports medicine by Garret4. Orthopaedic rehabilitation by Brokmen 5.Treatment and rehabilitation fractures by Hoppenfield			
Other References	 Recent advances in Orthopaedic Musculoskeletal Trauma Textbook of Orthopaedic & Trauma Watson Jones fracture join & injuries 			

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



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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

School: SAHS		Batch: 2020-2022				
Prog	gram:	Current Academic Year: 2021-22				
MP	Γ(Orthopaedics)					
Brai	nch:	II Year				
1	Course Cod	MPT 207				
	e					
2	Course Title	Musculoskeletal Physiotherapy I (Medical) Practical				
3	Credits					
4	Contact Hours (L-T-P)					
	Course Type	Compulsory				
5	Course Objective	 To educate students about etiology, pathophysiology, clinical presentation and physiotherapy manangement of general musculoskeletal disorders. To provide knowledge about epidemiology, patho physiology and clinical conditions affecting various joints of body. To educate students about physiotherapy management for various musculoskeletal disorders. 				
6	Course Outcomes	 CO1. Understand about etiology, pathophysiology, clinical presentation and physiotherapy management of general musculoskeletal disorders. CO2. Understand about epidemiology, patho physiology and clinical conditions affecting various joints of body CO3. Plan physiotherapy management for various musculoskeletal disorders. CO4: To learn about various regional orthopaedic conditions CO5: To learn about various investigative procedures used in musculoskeletal disorders 				
7	Course Description	This course is designed to develop and enhance the knowledge of Medical management for various musculoskeletal disorders and Physiotherapy for the same.				
8	Outline syllabus		CO Mapping			
	Unit 1					
	A	Demonstration of physiotherapy management for Congenital malformations	CO1,CO2,CO5			

		SHARDA UNIVERSITY Beyond Boundaries
В	Demonstration of physiotherapy management in Rheumatic disorders: - Rheumatoid arthritis, Ankylosis Spondylosis, Reiter's disease, Polymyalgia rheumatica, Psoriasis	CO1,CO2, CO5
С	Demonstration of physiotherapy management for Infections of musculoskeletal system, Acute, Chronic	CO1,CO2, CO5
Unit 2		
A	Demonstration of physiotherapy management for metabolic and endocrine disorders, Calcium metabolism, Osteoporosis, Osteomalacia and ricket, Hyper parathyrodism	CO1,CO2, CO5
В	Demonstration of physiotherapy management in tumors of the musculoskeletal system, Classification, Benign, Malignant	CO1, CO2, CO5
C	Demonstration of physiotherapy management in neuromuscular disorders, Poliomyelitis, Cerebral palsy, Arthrogryposis multiplex Congenita, Muscular dystrophy, Osteoarthritis and crystal deposition diseases	CO1, CO2, CO5
Unit 3		
A	Investigations, Orientation and Introduction, physical basis, normal result & common abnormal response of the procedures done for musculoskeletal conditions (in brief)	CO1, CO2, CO5
В	Interpretation of X- ray, Computerized Tomography, Magnetic Resonance Imaging	CO1, CO2 CO5
С	Interpretation of Bone Scan, Laboratory tests, FNAC, Bone biopsy	CO1, CO2, CO5
Unit 4		
A	Demonstration of physiotherapy management in shoulder, rotator cuff lesions, Instability, Rheumatoid disease of shoulder, Tuberculosis.	CO1, CO2,CO3,CO4

				SHARDA UNIVERSITY			
	The Elbow, ossificans	Tennis elbow	r, Golfer's elbow, Myos	sitis			
В	Demonstration injuries of W Wrist instal Peripheral no surgeries, b peripheral no	Demonstration of physiotherapy management for injuries of Wrist, Carpal tunnel syndrome, Ganglion, Wrist instabilities and special tests, The Hand, Peripheral nerve injuries, Tendon lesions and transfer surgeries, Deformity in rheumatoid arthritis, peripheral nerve injuries, Hemiplegia, SCI and leprosy Use of Physiotherapy in Cervical Spine, Discogenic pain, Whiplash injuries, Thoracic outlet syndrome, Brachial plexus injury and plexopathies, Torticollis and wry neck in pathologies of cervical spine; Back, Intervertebral disc, Discogenic pain, Spondylolysis & listhesis, Scoliosis & kyphosis, Tuberculosis, Musculoskeletal causes of low back pain					
C	Use of Ph Discogenic outlet syndro plexopathies pathologies Intervertebra Spondylolys kyphosis, causes of low						
Unit 5							
A	A Demonstration of physiothera in Avascular necrosis of Osteoarthritis; Knee, Osteoarth ligament injuries, Genu valg			CO1, CO2, CO4			
В	Demonstration Ankle and foot, Hallax	on of physio foot, Metatars valgus, CTEV	therapy management i salgia, Flat foot, Carsu , Ankle sprains	in CO1, Is CO2,CO4			
С	Demonstration Fractures and fracture care following: shoulder, up forearm and Pelvis, Injur Knee, Leg	Demonstration of physiotherapy management in Fractures and joint injuries, Principles of acute fracture care, Conservative management of the following: Pediatric fractures, Injuries of shoulder, upper arm and elbow, Injuries of forearm and wrist, Injuries of Spine, Injuries of Pelvis, Injuries of Hip and Femur, Injuries of Knee, Leg Injuries, Injuries of ankle and foot					
Mode of	Practical	Practical					
examination			DOD				
Weightage Distribution	CA 2004		ETE 80%				
Distribution	20%		00%				

		SHARDA UNIVERSITY
Text book/s*	1.Essential of Orthopaedic for Physiotherapist by	
	Ebnezar	
	2.Cash'TB for Ortho and rheumatology for	
	physiotherapist by Downie	
	3.Principles and Practice of orthopedics and sports	
	medicine by Garret	
	4. Orthopaedic rehabilitation by Brokmen	
	5.Treatment and rehabilitation fractures by	
	Hoppenfield	
Other	1.Recent advances in Orthopaedic	
References	2. Musculoskeletal Trauma	
	3. Textbook of Orthopaedic & Trauma	
	4. Watson Jones fracture join & injuries	

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
Cos										
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)

Scho	ool: SAHS	Batch: 2020-2022
Prog	gram:	Current Academic Year: 2021-22
MP	Γ(Orthopaedics)	
Brai	nch:	II Year
1	Course Cod	MPT 238
	e	
2	Course Title	MusculoskeletalPhysiotherapy II (Surgical) Theory
3	Credits	
4	Contact Hours	
	(L-T-P)	
	Course Type	Compulsory
5	Course	1. To educate students about orientation and general principles of



	Objective	orthopaedic surgeries.								
		 To provide knowledge about the physiotherapy management 								
		following surgical procedures								
6	Course	CO1. Understand about the orientation and general principles of orthopaedic surgeries.								
	Outcomes	orthopaedic surgeries.								
		CO2. Assess the patients following surgical procedures.								
		CO3: Provide the physiotherapy management								
		following surgical procedures								
		CO4: Enable the students to gain knowledge about ortho	paedic implants							
		CO5: Enable the students to gain knowledge about tendo	on transfers,							
		nerve suturing and grafting								
7	Course	The course will enable the students to gain knowledge a	about orientation							
	Description	and general principles of orthopaedic surgeries. This w	ill help them to							
		formulate and design physiotherapy treatment pro	gram following							
		surgical procedures.								
8	Outline syllabus		CO Mapping							
	Unit 1									
	A	Arthrodesis	CO1,CO2,CO3							
	В		CO1.CO2.CO3							
		Osteotomy	, ,							
	C		CO1 CO2							
		Arthroplasty	CO3							
			005							
	Unit 2		G01 G02 G02							
	A	Bone grafting	CO1,CO2,CO3							
	В	Internal and external fixations. Orthonaedic implants	CO1, CO2,							
		Internal and external fixations, Orthopaedic implants-	CO3,CO4							
		designs, materials, indications, post-operative								
		assessment								
	C		CO1 CO2							
		Distraction and limb reconstruction	CO1, CO2, CO3 CO4							
	Unit 3									
	A		CO1. CO2							
	11	Correction of bone deformities and joint contractures	CO3							
	В	I endon transfers	CO1, CO2,							
	C	Name automing and an film	CO3,CO4							
	C	iverve suturing and gratting.	CO1, CO2							
	Tinit 4		003,005							
	A	Operations on joints, Menisectomy, laminectomy,	CO1, CO2,							
			003							



			🥕 Beyond Boundaries
	patellectomy		
В	Total knee and hip replace	CO1, CO2, CO3	
С	Amputations for upper and	CO1, CO2, CO3	
Unit 5			
А	Malformations of spine &	CO1, CO2, CO3	
В	Neurosurgery of spine Surgeries for disc disorder	CO1, CO2, CO3	
С	Surgical management of injuries	CO1, CO2, CO3	
Mode of examination	Theory		
Weightage	СА	ETE	
Distribution	20%	80%	100
Text book/s*	1. Campbell's Orthopaedic	surgery	
	2. Watson Jones fracture jo		
	3. Advanced reconstruction	foot and ankle	
	4. Orthopaedic rehabilitatio		
	5. Principles and Practice of	f Orthopaedics and Sports	
	Medicine by Garret		
Other	Trauma Secrets by Naudee		
References			

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
CO1	a	3	3	3	3	3	3	2	3	2
000	5	5	5	5	5	5	5	2	5	2
02	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



School: SAHS		Batch: 2020-2022						
Prog	gram:	Current Academic Year: 2021-22						
MP	F (Orthopaedics)							
Brai	nch:	II Year						
1	Course Cod	MPT 208						
	e							
2	Course Title	Musculoskeletal Physiotherapy II (Surgical)Practical						
3	Credits							
4	Contact Hours							
	(L-T-P)							
	Course Type	Compulsory						
5	Course	1. To educate students about orientation and general prin	ciples of					
	Objective	orthopaedic surgeries.						
		2. To provide knowledge about the physiotherapy manag	ement					
		following surgical procedures						
6	Course	CO1. Understand about the orientation and general princ	iples of					
	Outcomes	orthopaedic surgeries.						
		CO2. Assess the patients following surgical procedures.						
		CO3: Provide the physiotherapy management						
		following surgical procedures						
		CO4: Enable the students to gain knowledge about orthopaedic implants						
		CO5: Enable the students to gain knowledge about tendo	n transfers,					
		nerve suturing and grafting						
7	Course	The course will enable the students to gain knowledge a	about orientation					
	Description	and general principles of orthopaedic surgeries. This will help them to						
		formulate and design physiotherapy treatment program following						
		surgical procedures.						
8	Outline syllabus		CO Mapping					
	Unit 1							
	А	To demonstrate physiotherapy management following	CO1,CO2,CO3					
		arthrodesis						
	В		CO1.CO2.CO3					
	2	To demonstrate physiotherapy management in	001,002,000					
		Osteotomy						
	~		<u> </u>					
	С	To demonstrate physiotherapy management for	CO1,CO2,					
		Arthronlasty	CO3					
		I numopuory						
	Unit 2							
	A		CO1.CO2.CO3					
		To demonstrate physiotherapy management after bone	201,202,203					
		grafting						

		SHARDA UNIVERSITY						
В	To demonstrate the use of internal and external fixations, Orthopaedic implants- designs, materials, indications, post-operative assessment							
С	To demonstrate physiotherapy management for distraction and limb reconstruction	CO1, CO2, CO3,CO4						
Unit 3								
A	A To demonstrate physiotherapy management following correction of bone deformities and joint contractures							
В	To demonstrate physiotherapy management after tendon transfers	CO1, CO2, CO3,CO4						
С	To demonstrate physiotherapy management after nerve suturing and grafting.	CO1, CO2 CO3,CO5						
Unit 4								
A	To demonstrate physiotherapy management after operations on joints, Menisectomy, laminectomy, patellectomy	CO1, CO2, CO3						
В	To demonstrate physiotherapy management for total knee and hip replacement	CO1, CO2, CO3						
С	To demonstrate physiotherapy management following amputations for upper and lower extremities	CO1, CO2, CO3						
Unit 5								
A	To demonstrate physiotherapy management for malformations of spine & spinal cord	CO1, CO2, CO3						
В	To demonstrate physiotherapy management after neurosurgery of spine & peripheral Nerves, Surgeries for disc disorders	CO1, CO2, CO3						
С	To demonstrate physiotherapy management for surgical management of fractures & other injuries	CO1, CO2, CO3						
Mode of examination	Practical							
Weightage	CA ETE							



			Beyond Boundaries					
Distribution	20%	80%	100					
Text book/s*	1. Campbell's Orthopaedic s	surgery						
	2. Watson Jones fracture joi	2. Watson Jones fracture join & injuries						
	3. Advanced reconstruction	foot and ankle						
	4. Orthopaedic rehabilitation	4. Orthopaedic rehabilitation by Brokmen						
	5. Principles and Practice of	Orthopaedics and Sports						
	Medicine by Garret							
Other	Trauma Secrets by Naudee							
References								

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
CO1	2	2	2	2	2	2	2	2	2	2
	3	3	3	3	3	3	3	2	3	2
CO2	2	2	2	2	2	2	n	2	2	2
	3	5	5	5	5	5	Ζ	3	5	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

Scho	ool: SAHS	Batch : 2020-2022					
Prog	gram:	Current Academic Year: 2021-22					
MP	Γ(Orthopaedics)						
Brai	nch:	II Year					
1	Course Code	MPT 205					
2	Course Title	Journal Club and Clinical Case Presentation					
3	Credits						
4	Contact Hours						
	(L-T-P)						
	Course Type	Compulsory					
5	Course	The objective of the course is that, the student will be able to					
	Objective	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	After completion of the course, the students will be able to;
	Outcomes	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	This course is to design and develop the in-depth thinking ability,
	Description	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	Practical
	examination	
	Weightage	CA
	Distribution	50 50

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
COs										
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	2	2	2	2	2	2	2	3
	2	2	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	



School: SAHS		Batch: 2020-2022					
Program:		Current Academic Year: 2021-22					
MPT(Orthopaedics)							
Branch:		II Year					
1	Course Code	MPT 206					
2	Course Title	Dissertation					
3	Credits						
4	Contact Hours (L-T-P)						
	Course Type	Practical					
5	Course Objective	 The objective of the course is that, the student will be able to 1. Apply 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	СА	ETE				
	Distribution	20%	80%				

DO	DO1	DOJ	DO2	DO4	DOS	DOC	DO7	DCO1	DCO2	DCO2
POs	POI	PO2	PO3	PO4	P05	PO6	PO/	PS01	PS02	PS03
COs										
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	C C
CO4										3
	3	3	3	3	3	3	3	3	3	C C
CO5										3
	3	3	3	3	3	3	3	3	3	-